WORKING TOGETHER TO PROMOTE ACADEMIC INCLUSION OF STUDENTS WITH EXTENSIVE SUPPORT NEEDS: A CULTURAL HISTORICAL ACTIVITY THEORY APPROACH TO EXAMINING INTER-PROFESSIONAL COLLABORATIVE PRACTICE IN INCLUSIVE EDUCATION

by

Sarah Yvonne Skinner

B.Sc.OT, The University of Alberta, 2004

M.A., The University of British Columbia, 2018

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

(Special Education)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

March 2024

© Sarah Yvonne Skinner, 2024

The following individuals certify that they have read, and recommend to the Faculty of Graduate and Postdoctoral Studies for acceptance, the dissertation entitled:

Working Together to Promote Academic Inclusion of Students with Extensive Support Needs: A Cultural Historical Activity Theory Approach to Examining Inter-professional Collaborative Practice in Inclusive Education

submitted by	Sarah Yvonne Skinner	in partial fulfilment of the requirements for
the degree of	Doctor of Philosophy	
in	Special Education	

Examining Committee:

Dr. Jennifer Katz, Associate Professor, Educational and Counselling Psychology, and Special Education, UBC Supervisor

Dr. Janet Jamieson, Professor Emeritus, Educational and Counselling Psychology, and Special Education, UBC

Supervisory Committee Member

Dr. Owen Lo, Associate Professor, Educational and Counselling Psychology, and Special Education, UBC

Supervisory Committee Member

Dr. Kim Zebehazy, Professor, Educational and Counselling Psychology, and Special Education, UBC University Examiner

Dr. Leyton Schnellert, Associate Professor, Curriculum & Pedagogy, UBC University Examiner

Abstract

Despite the promise of inclusive and equitable learning opportunities for all students, many students with extensive support needs (ESNs) are not included in grade-level curricular activities (Rao et al., 2017). Students with ESNs are more likely to experience academic inclusion when multi-disciplinary school professionals engage in inter-professional collaborative practice (IPP; Bowman et al., 2020). However, IPP rarely occurs in schools (Bose & Hinojosa, 2008). The present study examined how multi-disciplinary school professionals engaged in IPP as they collaboratively designed learning materials and activities for a grade-level curricular unit that were accessible to an elementary school-aged student with ESNs.

This qualitative study followed the multiple-case study method (two cases) outlined by Yin (2018), and data collection and analysis were guided by Cultural Historical Activity Theory (Engeström, 2000, 2014). School professionals who provided support to a student with ESNs were selected as participants. In each case, participants included: a classroom teacher, an education assistant, at least one learning support teacher, and a speech-language pathologist. Participants attended a half-day workshop where they took part in a presentation about inclusive education for students with ESNs and Universal Design for Learning (UDL). Next, they developed curricular materials and learning activities for a science unit that were accessible to the student with ESNs, using principles of UDL to guide their planning. Sources of data included direct observations, focus groups, semi-structured interviews, and documents. Within-case analysis was conducted using a process of reflexive thematic analysis (Braun & Clarke, 2006, 2022). Findings across cases were compared to an initial set of propositions using a pattern matching technique (Yin, 2018). Consistent with previous literature, findings demonstrated that as participants engaged in IPP, their collective expertise resulted in participants sharing both the workload and the responsibility of the design of an accessible curricular unit. Furthermore, some participants experienced a shift in perspective with respect to students with ESNs and a reexamination of their professional roles and responsibilities, including prioritizing opportunities for collaboration with classroom teachers. Finally, findings from Case 2 demonstrated how participants used principles of UDL to include a student with ESNs in curricular grade-level curricular activities.

Lay Summary

Inter-professional collaborative practice (IPP) supports inclusive education for students with extensive support needs (ESNs), who are often excluded from participating in learning activities with peers. This study examined how education professionals from different disciplines (e.g., classroom teachers, speech-language pathologists) engaged in IPP as they worked toward the shared goal of collaboratively designing learning activities and materials for a science unit that were accessible to a student with ESNs. Findings showed that as participants engaged in IPP, their collective expertise resulted in sharing the workload and responsibility in the design of an accessible science unit. Furthermore, some participants demonstrated a shift in both their perspective of students with ESNs and in how they fulfilled their own professional roles and responsibilities. Consistent with previous literature, findings indicate IPP has the potential to promote inclusive education by facilitating access to general education curriculum for students with ESNs in British Columbia.

Preface

This dissertation is the original, unpublished, independent work of the author, Sarah Y. Skinner, and was supervised by Dr. Jennifer Katz. This research was approved by the University of British Columbia's Behavioural Research Ethics Board (certificate number H22-01388). I developed the research proposal, including the research design, participant recruitment strategy, and methods of data collection and analysis. I was responsible for participant recruitment, data collection, and data analysis. In both half-day workshops during data collection, I developed and delivered the presentation on academic inclusion for students with extensive support needs and the brief introduction to Universal Design for Learning; Dr. Katz facilitated both of the planning meetings, following the Protocol for the Facilitated Planning Meetings that I developed (see Appendix F: Protocol for Facilitated Planning Meetings). I also was responsible for the writing of this dissertation, in collaboration with my research committee members, Dr. Katz, Dr. Janet Jamieson, and Dr. Owen Lo. A draft of the first four chapters, including preliminary findings from the analysis of the first case, was presented at a national conference, with the following citation: Skinner, S.Y. (2023, May 27-June 1). Inter-professional collaborative practice and universal design for learning: Promoting academic inclusion of students with intellectual disabilities [Paper presentation]. Canadian Society for the Study of Education Annual Conference, Toronto, ON, Canada.

Table of Contents

Abstract	iii
Lay Summary	V
Preface	vi
Table of Content	s vii
List of Tables	xvi
List of Figures	xvii
List of Abbreviat	ionsxviii
Acknowledgemen	ntsxx
Dedication	xxii
Chapter 1: Intro	duction1
1.1 Stateme	nt of Problem and Rationale for the Study5
1.2 Theoret	ical Framework7
1.3 Research	h Question9
1.4 Signific	ance of the Study9
Chapter 2: Litera	ature Review11
2.1 Overvie	w11
2.2 Students	s with Extensive Support Needs
2.2.1 Un	iversal Design for Learning and Academic Inclusion of Students with ESNs .13
2.3 Inter-Pre	ofessional Collaboration between Multi-Disciplinary School Professionals16
2.3.1 His	storical Models of Service Delivery17
2.3.2 Inte	er-Professional Collaboration Models of Service Delivery19 vii

	2.3	3.2.1 Outcomes of IPP	20
	2.3	3.2.2 Barriers to Collaborative Practices	21
	2.3	3.2.3 Facilitators of IPP	23
	2.3.3	8 Multi-disciplinary Collaboration to Support Inclusive Education for S	Students with
	ESI	Ns	24
	2.3.4	Multi-disciplinary Collaborative Approaches to Implementing UDL.	26
	2.4	Cultural Historical Activity Theory	30
	2.4.1	CHAT in Special Education Research	34
	2.5	Purpose of the Study	
С	hapter 3	3: Method	
	3.1	Overview	
	3.2	Philosophical Underpinnings	
	3.3	Researcher and Researcher Positioning	41
	3.4	Participants	43
	3.4.1	Inclusion Criteria	44
	3.4.2	Exclusion Criteria	46
	3.4.3	Participant Recruitment	46
	3.4.4	Consent	48
	3.4.5	Privacy	49
	3.4.6	Participant Profiles	50
	3.4	4.6.1 Case 1: Maya	50
		3.4.6.1.1 Student: 'Maya'	50
		3.4.6.1.2 Classroom Teacher (CT)	51
			viii

	3.4.6.	1.3	Learning Support Teacher A (LST A).	51
	3.4.6.	1.4	Learning Support Teacher B (LST B).	52
	3.4.6.	1.5	Educational Assistant (EA)	53
	3.4.6.	1.6	Speech-language Pathologist (SLP).	53
	3.4.6.2	Ca	ase 2: Florence	54
	3.4.6.	2.1	Student: 'Florence'	54
	3.4.6.	2.2	Classroom Teacher (CT)	55
	3.4.6.	2.3	Learning Support Teacher (LST)	55
	3.4.6.	2.4	Educational Assistant (EA)	56
	3.4.6.	2.5	Speech-Language Pathologist (SLP).	57
3.5	Settin	ıg		57
3.6	Desig	;n		58
3	.6.1 (Case	Study	58
	3.6.1.1	M	ultiple-case Study: Replication Logic.	59
3	.6.2 U	Unit	of Analysis	60
	3.6.2.1	De	efinition	60
	3.6.2.2	Co	ontext	60
	3.6.2.3	Ti	me	61
3.7	Propo	ositio	ons	62
3.8	Data	Colle	ection	63
3	.8.1 5	Sour	ces of Data	64
	3.8.1.1	Di	rect Observation	64
	3.8.1.2	Do	ocument Review.	64
				ix

3.8.1.3 Focus Groups and Interviews.	65
3.8.2 Data Collection Timeline	66
3.8.2.1 Background Information	67
3.8.2.2 Facilitated Planning Meeting	67
3.8.2.3 Focus Group #1	73
3.8.2.4 Implementation of Curricular Unit	74
3.8.2.5 Focus Group #2	75
3.9 Data Analysis	75
3.9.1 Within-Case Analysis	75
3.9.1.1 Case 1: Maya.	78
3.9.1.1.1 Phase One: Familiarization of the Data and Writing Familiarization	
Notes	78
3.9.1.1.2 Phase Two: Coding	78
3.9.1.1.3 Phase Three: Generating Initial Themes	79
3.9.1.1.4 Phase Four: Developing and Reviewing Themes	82
3.9.1.1.5 Phase Five: Refining, Defining, and Naming Themes and Member	
Checks	85
3.9.1.1.6 Phase Six: Writing the Report.	86
3.9.1.2 Case 2: Florence.	86
3.9.1.2.1 Phase One: Familiarization of the Data and Writing Familiarization	
Notes	86
3.9.1.2.2 Phase Two: Coding	86
3.9.1.2.3 Phase Three: Generating Initial Themes	87
	х

3.9.1.2.4 Phase Four: Developing and Reviewing Themes	90
3.9.1.2.5 Phase Five: Refining, Defining, and Naming Themes and Member	
Checks	92
3.9.1.2.6 Phase Six: Writing the Report.	93
3.9.2 Between-Case Analysis	93
3.10 Quality of Study	94
3.10.1 Construct Validity	94
3.10.2 Internal Validity	96
3.10.3 External Validity	97
3.10.4 Reliability	97
3.11 Summary of Chapter	98
Chapter 4: Results	99
4.1 Overview	99
4.2 Case 1: Maya	101
4.2.1 Academic Inclusion: Wondering if It Can Be Done	101
4.2.1.1 Perception that Participation in Curricular Activities is Not Important.	102
4.2.1.2 Expectation of Professional Roles	103
4.2.1.3 Perception that UDL is not an Appropriate Approach to Meet the Goal.	106
4.2.1.4 Addressing Contradictions	107
4.2.1.4.1 Sharing and Listening to Perspectives	107
4.2.1.5 Summary	110
4.2.2 Academic Inclusion: Wondering if I Can Do It	111
4.2.2.1 Perception of a Lack of Professional Expertise	111
	xi

4.2.2.2 Perception of a Lack of Knowledge to Apply UDL	113
4.2.2.3 Perception of a Lack of Capacity to Implement New Practices	114
4.2.2.4 Confusion about Roles and Responsibilities in Inclusive Education	116
4.2.2.5 Addressing Contradictions	117
4.2.2.5.1 Sharing the Load	
4.2.2.5.2 Sharing Expertise	
4.2.2.6 Summary	
4.2.3 Valuing (But not Prioritizing) Collaboration	
4.2.3.1 Tendency of Classroom Teachers to Work Independently	
4.2.3.2 Lack of Time for Meaningful Collaboration.	
4.2.3.3 Difficult Task of Integrating Recommendations from Multiple Pro-	fessionals
into the Student's Education Program.	
4.2.3.4 Addressing Contradictions	
4.2.3.4.1 Being Creative with Time	
4.2.3.4.2 Shifting Priorities	130
4.2.3.4.3 Integrating Multiple Perspectives.	130
4.2.3.5 Summary	
4.3 Case 2: Florence	
4.3.1 Building Collaborative Partnerships	
4.3.1.1 Lack of Time for Collaborative Work	
4.3.1.2 Tendency of Classroom Teachers to Work Independently	
4.3.1.3 Lack of Connection Between Recommendations from District	Resource
Professionals and Curriculum.	
	xii

4.3.1.4 Addressing Contradictions	136
4.3.1.4.1 Being Creative with Time	136
4.3.1.4.2 Building Trust.	138
4.3.1.4.3 Considering Other Perspectives	139
4.3.1.5 Summary	140
4.3.2 Making Inclusive Teaching Easy and Efficient	141
4.3.2.1 Absence of Participation in Curricular Activities	141
4.3.2.2 Diverse Learning Needs in the Classroom	142
4.3.2.3 Need to Juggle Multiple Tasks and Responsibilities	144
4.3.2.4 Lack of Knowledge and Experience with UDL	145
4.3.2.5 Addressing Contradictions	145
4.3.2.5.1 Using UDL to Focus on Inclusion	146
4.3.2.5.2 Sharing Expertise	151
4.3.2.5.3 Sharing the Workload	154
4.3.2.6 Summary	155
4.4 Summary of Findings	156
Chapter 5: Discussion	162
5.1 Overview	162
5.2 Comparison of Cases	163
5.2.1 Similarities Between Cases	163
5.2.2 Differences Between Cases	164
5.3 Key Patterns Across Cases	168
5.3.1 Contradictions with the Object	170
	xiii

5.3.1.1 Addressing Contradictions with the Object	171
5.3.2 Contradictions with the Rules	174
5.3.2.1 Addressing Contradictions with the Rules.	176
5.4 Contributions and Implications	179
5.4.1 Theoretical Contributions	179
5.4.2 Methodological Contributions	181
5.4.3 Practical Implications	183
5.4.3.1 Facilitating IPP in Education.	183
5.4.3.2 Promoting a Shift in Perspective of Abilities of Students with ESNs	184
5.4.3.3 Clarification of Rules and Responsibilities in Inclusive Education	185
5.5 Limitations	186
5.6 Recommendations for Future Research	188
5.7 Conclusion	189
References	190
Appendix A: Introductory Letters and Consent Forms	212
Appendix B: Background Information Questionnaire	237
Appendix C: Running Record for Direct Observations	240
Appendix D: Guiding Questions for Focus Groups	241
Appendix E: Guiding Questions for Semi-Structured Interviews	243
Appendix F: Protocol for Facilitated Planning Meetings	245
Appendix G: Agenda for Facilitated Planning Meetings	248
Appendix H: Case 1: Key Ideas from Reflexive Memos	249
Appendix I: Case 1: Member Check	250
	xiv

Appendix J: Case 2: Key Ideas from Reflexive Memos	257
Appendix K: Case 2: Member Check	258

List of Tables

Table 1 Summary of Curricular Units Designed During the Facilitated Planning Meetings	71
Table 2 Case 1 Candidate Themes (Thematic Analysis Phase Four)	84
Table 3 Case 2 Candidate Themes (Thematic Analysis Phase Four)	91
Table 4 Summary of Key Contradictions and Collaborative Interactions in Case 1: Maya1	58
Table 5 Summary of Key Contradictions and Collaborative Interactions in Case 2: Florence10	60

List of Figures

Figure 1 The Structure of Human Activity
Figure 2 Model of Mediated Action
Figure 3 CHAT in the Context of the Present Study
Figure 4 Contradictions in an Activity System
Figure 5 Stratified Reality in CR Ontology
Figure 6 Timeline of Data Collection: Case 1
Figure 7 Timeline of Data Collection: Case 2
Figure 8 Process of Data Analysis: Within-Cases
Figure 9 Concept Map (Reflexive Thematic Analysis Phase Three): Case 1
Figure 10 Concept Map (Reflexive Thematic Analysis Phase Four): Case 1
Figure 11 Concept Map (Reflexive Thematic Analysis Phase Three): Case 2
Figure 12 Concept Map (Reflexive Thematic Analysis Phase Four): Case 292
Figure 13 Key Contradictions in the Activity System Evident Across Cases169
Figure 14 Third-Generation Activity Model: Two Interacting Activity Systems

List of Abbreviations

- AAC Augmentative and Alternative Communication
- AT assistive technology
- B.C. British Columbia
- CAST Center for Applied Special Technology
- CHAT Cultural Historical Activity Theory
- CR critical realism
- CT classroom teacher
- DWR Developmental Work Research
- EA-educational assistant
- ESNs extensive support needs
- FM frequency modulation
- ID intellectual disability
- IEP Individual Education Program
- $IPP-Inter-professional\ collaborative\ practice$
- LIF -- Learning Improvement Fund
- LST learning support teacher
- M.A. Master of Arts
- MTSS multi-tiered system of supports
- OT occupational therapist
- P4C Partnering for Change
- PECS Picture Exchange Communication System
- PIOP Provincial Inclusion Outreach Program

- PT physical therapist
- SBT school-based team
- SCAT Sociocultural Activity Theory
- $SLP-speech-language\ pathologist$
- SMS Synthesized Member Checking
- UDL Universal Design for Learning
- U.S. United States

Acknowledgements

There are a number of people who have been instrumental in helping me complete this dissertation.

I would like to acknowledge the participants of this study:

Thank you for welcoming me into your schools and for sharing your experiences, thoughts, and stories with me. I want to acknowledge the dedication you have to the students in your district and the work you are all doing to promote equitable access to education and create inclusive learning environments. It was an absolute pleasure to be invited into your lives, and I thank you for your willingness to be vulnerable, open, and honest as you participated in my research study.

I would like to thank my committee, Dr. Janet Jamieson, Dr. Jennifer Katz, and Dr. Owen Lo:

Janet, you have been part of my academic journey for a decade, from my application to the MEd program to this doctoral dissertation – thank you for your on-going support and mentorship and for holding the bar high! I truly could not have done this without you.

Jen, your perspective on inclusion has had a profound impact on my work, not only in this dissertation but in all aspects of my career – you have pushed me to be a better teacher and to speak out against inequities in education. Thank you.

Owen, I have learned so much from your expertise in qualitative research – your guidance, advice, and feedback has pushed me to become a better researcher and a better writer.

I would like to acknowledge the Social Sciences and Humanities Research Council (SSHRC) and the University of British Columbia.

Thank you for the awards and scholarships that supported my graduate studies and made this research possible.

Finally, I would like to thank my family:

Mom and Dad – thank you for your never-ending support, for raising me to be ask questions, for encouraging me to take risks, and for loving me no matter what.

Cass – my hope is that you grow up in a world that celebrates diversity and that you look to include those who are left out. Stay curious, find joy every day, and be kind. I will always love you.

Tom – I could not have done this without you. Thank you for continuing to make coffee every morning, for supporting me through (another) degree, and for getting us on bikes and into the forest when we need it. You are still my favourite.

Dedicated to the memory of Pam Skinner,

who taught me about pushing boundaries, lifting up others, and doing hard things with courage and grace. And that one should buy the five-year cheddar, open the good wine, and keep a well-stocked supply of chocolate.

Chapter 1: Introduction

In Canada, all students have the right to a quality education from their neighbourhood schools, including students with disabilities. Decades of literature and research have highlighted several benefits for disabled students¹ when they are included in general education classrooms, such as greater academic achievement, increased independence, more opportunities to interact with others, and the formation of friendships with peers (e.g., Downing et al., 2004; Foreman et al., 2004). However, many students with extensive support needs (ESNs) are not fully included (Agran et al., 2020; Timmons & Wagner, 2008).

Students with ESNs typically have support needs across multiple domains, including academic, communication, behaviour, and social (Kurth et al., 2019). Historically, students with ESNs have been referred to as having a moderate to severe/profound intellectual disability (ID) or significant disabilities. In the United States (U.S.), students with ESNs are currently defined as having support needs that span over multiple areas, qualify to take their state's alternate assessment, and have disability labels that include ID, autism, or multiple disabilities (Taub et al., 2017.). In Canada, all school districts must abide by the *Canadian Charter of Rights and Freedoms*, which provides "equal protection and equal benefit of the law without discrimination based on race, national or ethnic origin, colour, religion, sex, age, or mental or physical disability" (Government of Canada, 2023). However, education policy is the responsibility of

¹ I will use **person-first** language (e.g., students with disabilities) and **identity-first** language (e.g., disabled students) interchangeably when referring to the general disability community, to align with disability rights and justice movements (American Psychological Association, 2020). I recognize there are people in the disability community who prefer person-first language and there are people who prefer identify-first language and I want to acknowledge and respect both perspectives. However, many people with intellectual disabilities, including those with extensive support needs (ESNs), prefer person-first language; thus, I will use person-first language when referring to students with ESNs (National Center of Disability and Journalism, 2021).

each province and/or territory (Sokal & Katz, 2015). Therefore, there is not a unified definition of students with ESNs for students in Canada.

In British Columbia (B.C.), for example, the Ministry of Education developed 'special needs' categories to assist school districts to identify the educational needs of students. Special needs categories are established to assist school districts in identifying the needs of students and providing appropriate education programs to them. These categories are designed to focus on the educational needs of students regardless of the original cause(s) of those needs. In the context of the present study, a student with ESNs has a moderate to profound ID and a co-morbid physical disability and/or sensory impairment and has been assigned to one of the following special needs categories: a) Category A – physically dependent – multiple needs; b) Category C – moderate to profound intellectual disability; c) Category D – Physical Disability or Chronic Health Impairment; or d) Category G – Autism Spectrum Disorder (British Columbia Ministry of Education, 2016). In B.C., students with ESNs have an Individual Education Program (IEP) that outlines adapted or modified learning outcomes that are related to learning outcomes in the general curriculum. As well, students with ESNs often receive support from district resource staff, including occupational therapists (OTs), speech-language pathologists (SLPs), physical therapists (PTs), and itinerant specialists such as Teachers of the Deaf and Hard of Hearing (British Columbia Ministry of Education, 2016).

There is growing evidence of positive outcomes when students with ESNs are included in general education classrooms (e.g., Agran et al., 2020; Morningstar et al., 2015). Ideally, full inclusion means that all students participate in both the social and academic life of the classroom (Katz et al., 2012). Social inclusion exists when students hold valued social roles and take part in daily classroom routines; academic inclusion refers to participation in tasks related to grade-level

curriculum and interactive learning with peers (Katz et al. 2012). In Canada, the social aspects of inclusive education tend to be prioritized (Bota, 2023). While there is national legislation and polices on inclusive education in the U.S. that require school districts to assess and report on progress of all students, including those with disabilities, in grade-level curriculum (e.g., *Individuals with Disabilities Education Act*; Thurlow, 2000), there are no equivalent policies on inclusive education in Canada (Köpfer & Óskarsdóttir, 2019; Moore, 2023). While there is evidence to indicate that students with ESNs may experience social inclusion (e.g., Downing et al., 2004), evidence suggests that these students are usually excluded from academic classroom activities (Rao et al., 2017).

In recent years, best practices for promoting academic inclusion of students with ESNs in general education classrooms have been well-documented in the literature. Evidence-informed practices include the integration of individualized student supports into general education classrooms (Kurth et al., 2015), the implementation of Universal Design for Learning (UDL; Dymond et al., 2006), and collaboration between multi-disciplinary school professionals, including educators and district resource staff (Fuchs et al., 2010),

In terms of the first practice, many students with ESNs require individualized classroom supports to facilitate access to opportunities for learning (Kurth et al., 2015). Individualized student supports address the unique needs of a specific student and are designed to enable the student to participate and learn in the classroom. Examples of individualized student supports include communication strategies (e.g., Augmentative and Alternative Communication [AAC] systems, visual symbols), specialized seating, Assistive Technology (AT; e.g., adapted computer systems, accessible switches), instructional technologies that support academic learning of students with ESNs (e.g., systematic instruction), behaviour supports (e.g., positive behaviour

supports), and/or sensory supports (e.g., closed captioning or subtitling, Frequency Modulation [FM] listening systems). Although these supports are designed for specific students, they can benefit many students. For example, closed captioning may be designed for a student who is deaf or hard or hearing but also benefits students who are learning English or students who have difficulty processing auditory information.

With regard to the second practice, UDL refers to an educational framework that facilitates the design of flexible learning environments and activities, allowing diverse learners, including students with ESNs, to access grade-level curriculum (Center for Applied Special Technology [CAST], 2018a; Meyer et al., 2014). UDL was designed by CAST to guide teachers in the selection and application of learning tools, methods, and environments using three guiding principles: multiple means of engagement, multiple means of representation, and multiple means of expression (CAST, 2018a). *The principle of Multiple Means of Engagement* recognizes that all students are engaged or motivated to learn in different ways. The principle of *Multiple Means of Representation* addresses the diversity in how learners perceive and understand information. Finally, the principle of *Multiple Means of Expression and Action* acknowledges the various ways students navigate a learning environment and express what they have learned.

The third practice, collaboration of multi-disciplinary school professionals, promotes academic participation of students with ESNs, as district resource staff play a role in assisting educators to identify and implement individualized supports (British Columbia Ministry of Education, 2016; Turnbull et al., 2007). In the context of the present study, collaboration is defined as an interactive problem-solving process whereby professionals with unique areas of professional expertise work together to address mutually defined problems and shared goals

(Villeneuve, 2009). The B.C. Ministry of Education (2016) suggested that a successful collaborative process includes the following factors:

...it is voluntary; there is mutual trust and open communication among the people involved; identification/clarification of the problem to be addressed is a shared task; the goal is shared by all participants; each participant's contribution is valued equally; all participants' skills are employed in identifying and selecting problem-solving strategies; and there is shared responsibility for the program or strategy initiated (p. v).

1.1 Statement of Problem and Rationale for the Study

Current literature has documented a clear need to better understand how inclusive education practices, such as UDL and individualized student supports, are integrated in general education classrooms to foster the academic inclusion of students with ESNs (Kurth et al., 2015; Morningstar et al., 2015; Rao et al., 2017). As the purpose of UDL is to facilitate the design of learning environments that are accessible to all students, it provides a suitable framework for designing inclusive learning materials and activities for a general education classroom. Given the key roles that district resource staff play in designing and implementing individualized student supports (Turnbull et al., 2007), district resource staff will likely contribute to the integration of individualized supports for students with ESNs into curricular learning materials and activities. Thus, collaboration between general education professionals (e.g., classroom teachers) and district resource staff (e.g. SLPs) will likely facilitate the simultaneous implementation of both UDL and individualized supports in a general education classroom. In a summary of existing research on the application of UDL for students with ID, Rao et al. (2017) suggested that to foster academic inclusion, individualized supports for students with ESNs need to be integrated

into the UDL framework, yet there is limited research in this area. The present study addressed this particular issue through multi-disciplinary collaborative practice.

Empirical evidence and government policies indicate that multi-disciplinary school professionals should engage in collaborative practices to integrate supports into general education classrooms (British Columbia Ministry of Education, 2016; Morningstar et al., 2016; Sayers, 2008). Yet, collaboration of professionals from different disciplines rarely occurs in practice (Bose & Hinojosa, 2008). Successful collaboration is characterized by participants actively working toward a common goal by re-conceptualizing their own roles as they develop a better understanding of the roles other members play (Pfeiffer et al., 2019). This type of collaborative work can be described as inter-professional collaborative practice (IPP), where "two or more professions learn about, from, and with each other to enable effective collaboration" (Health Professions Networks Nursing & Midwifery, 2010, p.13). In other words, inter-professional learning occurs as individual roles are redefined in relation to the roles of all collaborative partners and the nature of the collaborative work (Martin, 2008). Multi-disciplinary school professionals who engage in IPP "share knowledge, skills, and responsibilities on an ongoing basis...[and] recognize how their efforts can impact the greater educational system" (Pfeiffer et al., 2019, p. 640). Thus, examining transformative, inter-professional collaboration among multi-disciplinary school professionals has the potential to inform our conceptual understanding of successful collaborative practices.

In 2016, TASH² published an inclusive education national research advocacy agenda

² TASH is an international organization that advocates for equity, opportunity, and inclusion for people with significant disabilities and support needs. TASH was previously known as *The Association for the Severely Handicapped*. In 1995, the full name of the organization was discontinued, as it no longer represented the values of the organization; due to its wide recognition, the acronym, TASH, was maintained (TASH, 2023).

identifying 15 priority areas for research in education for students with ESNs (Morningstar et al., 2016). Priority areas for research were developed by an Inclusive Education Workgroup made up of TASH Inclusive Education National Committee members, after they had engaged in an iterative and multi-phase process that included data collection from focus groups with different stakeholders (e.g., researchers, practitioners, advocates, and family members) and roundtable sessions at TASH's annual conferences over three consecutive years. The present study addressed two of the recommended priority areas for research, including: a) research that enhances our understanding of how educators implement UDL, modifications, and individualized student supports in general education classrooms; and b) research that examines collaborative practices of school-based teams (Morningstar et al., 2016).

1.2 Theoretical Framework

The present study examined the IPP of multi-disciplinary school professionals as they worked toward the outcome of designing a curricular unit for a general education classroom that was accessible to a student with ESNs. Collaborative work is dependent on the relationship between individuals as they work toward a shared problem or goal, and is characterized by transformative learning of each participant (Martin, 2008; Yamagata-Lynch, 2010). Thus, Cultural Historical Activity Theory (CHAT) provided a highly appropriate theoretical framework for this study, as it conceptualizes the inter-professional learning of individuals in an activity system and includes contextual factors that influence collaborative work (Martin, 2008).

CHAT is based on the work of Vygotsky (1981), who suggested that human activity occurs when individuals (subjects) use tools to achieve a mutually desired goal (object). However, CHAT extends Vygotsky's work to include the social and historical factors that exist in a collaborative relationship, and considers the following elements of the human activity

system: a) the subject; b) the object of activity (leading to a desired outcome); c) the tools (e.g., instruments or approaches) being used; d) the community of others who are involved; e) the rules (e.g., policies and professional expectations); and f) the division of labour (Engeström, 2014) (see Figure 1).

Figure 1

The Structure of Human Activity (adapted from Engeström, 2000)



CHAT offers a framework that shifts the focus from an individual's experience to collaboration with others to build new knowledge or interventions aimed at developing practices, and considers the tools or methods, rules, and routines employed within the process. As well, in the context of CHAT, IPP occurs through the iterative process of subjects addressing *contradictions* or tensions between the components in the activity system through *collaborative interactions* (Martin, 2008). Collaborative interactions have an impact on both the outcome of the activity system and on the subject(s) themselves, as subjects re-conceptualize their own professional roles and responsibilities as they engage in the collaborative process (Martin, 2008; Villeneuve, 2011). Thus, IPP leads to transformative learning, which, in the context of the present study, can be characterized as a change in both perspective and conception of professional identity, including the perception of one's professional roles and responsibilities

(Illeris, 2014). CHAT has been used to study multi-agency professional relationships and has recently been applied to examine IPP in schools in a handful of studies (e.g., Leadbetter, 2004; Martin, 2008; Villeneuve & Hutchinson, 2012; Villeneuve & Shulha, 2012). CHAT is a suitable framework for studying collaborative practices in an educational context, as it has the potential to inform our understanding of IPP while considering the specific, contextual factors pertaining to inclusive education (Edwards & Daniels, 2004)

1.3 Research Question

The present qualitative, multiple-case study examined how multi-disciplinary school professionals engaged in IPP as they took part in a facilitated planning meeting with the desired outcome of collaboratively designing learning materials and activities for a grade-level, curricular unit that were accessible to a student with ESNs. Specifically, the study addressed the following research question:

During a facilitated planning meeting in which multidisciplinary school professionals use principles of UDL to design activities for an inclusive, grade-level science unit that are accessible to an elementary school-aged student with ESNs:

How do the professionals engage in IPP?

- a. What contradictions arise?
- b. How are contradictions addressed?

1.4 Significance of the Study

The purpose of the present study was to examine the IPP of multi-disciplinary school professionals when they used principles of UDL to collaboratively design learning materials and activities for a grade-level science unit that were accessible to a student with ESNs. One of the goals of this research was to make theoretical contributions to the field of inclusive education; thus, the present study addressed the following reflective objective:

 To enhance the theoretical understanding of IPP among multi-disciplinary school professionals when they participated in a facilitated meeting with the goal of designing a grade-level, curricular unit that was accessible to a student with ESNs.

A second goal of this research was to make applied contributions that add to an exisiting body of research in the field of inclusive education; thus, the present study addressed the following transformative objectives:

- To demonstrate how IPP may have the potential to foster a change in perspective among education professionals, with respect to including students with ESNs in grade-level curricular activities.
- To shed light on how IPP may have the potential to serve as a catalyst for education professionals to re-conceptualize their own professional roles and responsibilities, and to better support academic inclusion of students with ESNs.

Chapter 2: Literature Review

2.1 Overview

The purpose of the present study was to examine the inter-professional collaborative practices (IPP) of multi-disciplinary school professionals when they used principles of Universal Design for Learning (UDL) to collaboratively design learning materials and activities for a science unit that were accessible to a student with extensive support needs (ESNs). The present study is guided by literature on academic inclusion of students with ESNs, IPP in inclusive education, and Cultural Historical Activity Theory (CHAT). In the following sections, I will begin by reviewing literature on students with ESNs, including literature regarding the implementation of the UDL framework to facilitate academic inclusion of students with ESNs in general education classrooms. Next, I will review literature concerning IPP, including multi-disciplinary collaborative approaches to: a) supporting the education programs of students with ESNs; and b) implementing UDL. Finally, I will review literature that discusses CHAT in educational research. I will conclude this chapter by re-stating the purpose of the study and specific research question.

2.2 Students with Extensive Support Needs

Students with ESNs have support needs that span over multiple areas and typically have a disability label of an intellectual disability (ID), autism, or multiple disabilities (Taub et al., 2017.). In the context of the present study, students with ESNs have a moderate to profound ID and a co-morbid physical disability and/or sensory impairment An ID is typically present from the time a person is born and has an impact on their development in both intellectual and adaptive functioning (American Psychiatric Association, 2021). Intellectual functioning refers to learning, problem solving, and judgement; adaptive functioning includes a person's social skills,

communication, and ability to participate in activities of daily living (American Psychiatric Association, 2021). Students with sensory impairments include students who are deaf or hard of hearing and/or students who have a visual impairment.

Students with ESNs in B.C. have the right to receive an equitable and quality education, learning alongside and with their neurotypical peers in their neighbourhood schools (British Columbia Ministry of Education, 2016). A growing body of evidence highlighting the benefits of inclusive education for students with ESNs is evident in current literature (e.g., Agran et al., 2020; Morningstar et al., 2016). For example, Rafferty et al. (2003) compared academic and social outcomes for students with severe disabilities, including students with ESNs, to outcomes for students with mild-to-moderate disabilities, based on placement type (i.e., inclusive or segregated placement). Findings indicated that students with severe disabilities who attended inclusive education programs showed greater social and language development compared to students with severe disabilities who attended segregated programs. Other researchers have reported that benefits of inclusive education for students with ESNs include improved academic learning (Kurth & Mastergeorge, 2010), increased self-determination skills (Hughes et al., 2013), development of friendships (Meyer, 2001), and improved communication skills (Foreman et al., 2004).

An equitable and quality education goes beyond placement in general education classrooms and includes opportunities to engage with curricular content and show progress in academic learning (Agran et al., 2010). However, although many students with ESNs are placed in general education classrooms, they are typically given separate educational programs monitored by an educational assistant (EA), rather than being included in the instructional activities of the classroom (Giangreco et al., 2009). This means that the most vulnerable learners

are taught by the least trained personnel, may be denied opportunities to participate in interactive learning with peers, and may have limited opportunities to engage in grade-level curriculum (Kurth et al., 2014). In fact, the disconnect between individualized programs and grade-level content is a major barrier to academic inclusion (Fisher & Frey, 2001), and efforts to engage students with ESNs in grade-level curriculum are critical to ensure their full participation at school.

There is evidence in current literature suggesting that students with ESNs can participate in academic learning (e.g., Browder et al., 2017; Knight et al., 2020; Smith et al., 2013). However, much of the research targeting academic learning of students with ESNs occurred in segregated settings, not inclusive classrooms (Bowman et al., 2020). While a few studies examining academic learning of students with ESNs in inclusive settings have been published in the past decade (e.g., Bowman et al., 2020), further research in this area of inclusive education is warranted. In terms of the existing research, one approach to promoting access to general education curriculum for students with ESNs is the implementation of UDL in general education classrooms (Spooner et al., 2006).

2.2.1 Universal Design for Learning and Academic Inclusion of Students with ESNs

UDL was developed by the Centre for Applied Special Technology (CAST) using neuroscience research (Smith et al., 2019) and promotes inclusive education by acknowledging that students have diverse learning styles and abilities (Meyer et al., 2014). The UDL framework consists of nine guidelines that assist educators to design a learning environment and curricular activities that address student diversity (Meyer et al., 2014). The guidelines fall under the three guiding principles of UDL: multiple means of engagement, multiple means of representation, and multiple means of expression (CAST, 2018a).

The first principle of UDL, Multiple Means of Engagement, recognizes that each student is motivated to learn in a unique way, and all students engage in learning through different means; guidelines for this principle include: a) provide multiple means of recruiting interest in the learning material; b) ensure measures are in place to sustain effort and persistence; and c) promote self-regulated learning (CAST, 2018b). The second principle of UDL, Multiple Means of Representation, acknowledges that not all learners perceive and understand information in the same way; guidelines for this principle include: a) provide multiple ways for students to interact with learning materials; b) ensure all students have a common understanding of language and symbols in the classroom and learning activities; and c) provide support to enhance comprehension of new information (CAST, 2018c). Finally, the third principle of UDL, Multiple Means of Expression and Action, addresses the diversity in how students navigate a learning environment and express what they have learned; guidelines for this principle include: a) provide multiple ways for students to physically access the learning material; b) allow students to use various forms of communication to share ideas; and c) promote executive functioning skills during learning activities (CAST, 2018d).

UDL facilitates the design of flexible learning environments and activities, allowing diverse learners, including students with ESNs, to access grade-level curriculum (CAST, 2018a; Meyer et al., 2014). For example, UDL can be used to assist educators to integrate teaching practices that are effective in teaching students with ESNs (e.g., systematic instruction, visual supports) into general education classrooms (Rao et al., 2017). Therefore, it is an appropriate framework to guide the design of a curricular unit that would be accessible to a student with ESNs.
The prevalence of UDL in both educational research and policy has increased over the past two decades (Smith et al., 2019), including research addressing educational outcomes for disabled students. For instance, Ok et al. (2017) conducted a systemic review of 13 studies that investigated academic outcomes for students with disabilities when the UDL framework was implemented in pre-K to grade 12 classrooms. Results suggested that academic outcomes resulting from the use of the UDL framework included gains in literacy and math skills, improved reading comprehension, greater understanding of curricular content, and improved rates of academic participation of disabled students. However, this review was limited by a small sample size (n = 13). Additionally, although the review examined outcomes of UDL for disabled students, only three of the articles (i.e., Browder et al., 2008; Coyne et al., 2012; Dymond et al., 2006) included in the analysis specifically addressed academic outcomes of students with ESNs. Of those three articles, one study, a qualitative case study conducted by Dymond et al. (2006), explored the experience of school personnel involved in Participatory Action Research involving the use of the UDL framework to redesign a high school science course to foster academic inclusion of eight students with severe cognitive disabilities. Findings indicated an increase in engagement in science content among students with ESNs, a shift from goals emphasizing social and functional skills to goals addressing academic learning on students' Individual Education Programs (IEPs), and more instances of interactive learning with peers. Although the research base that specifically addresses the application of UDL to facilitate academic inclusion of students with ESNs is limited to a small number of studies, findings consistently support the use of UDL as an effective approach to designing curricular learning activities in general education classrooms that are accessible to this population (Rao et al., 2017).

Understanding how UDL can be implemented in general education classrooms that include students with ESNs is critical in enhancing our overall knowledge of how UDL facilitates academic inclusion of students with ESNs (Smith & Lowrey, 2017a). Education professionals from different disciplines (e.g., speech-language pathologists [SLPs]) are typically involved in identifying appropriate individualized supports for students with ESNs (Turnbull et al., 2007). Therefore, the present study addressed the issue of embedding individualized supports in a UDL framework by bringing together multi-disciplinary education professionals to use the guiding principles of UDL to collaboratively design a curricular unit that was accessible to a student with ESNs.

2.3 Inter-Professional Collaboration between Multi-Disciplinary School Professionals

Current research establishes that placement in general education classrooms leads to better academic inclusion for students with ESNs when effective supports for learning and participation are provided (e.g., Kurth et al., 2015). Although the classroom teacher (CT) is obligated to provide an educational program where a student with an ID can be successful (Sokal, 2012), full participation in academic learning requires CTs and other school professionals (e.g., district resource staff, special educators) to collaboratively develop and implement supports for students with ESNs (e.g., embedded instruction) that are accessible in the general education classroom (Bowman et al., 2020). In B.C., students with ESNs typically receive support from special educators (e.g., learning support teachers [LSTs]), district resource staff (e.g., occupational therapists [OTs], physical therapists [PTs], SLPs), and itinerant specialists (e.g., Teacher for the Deaf and Hard of Hearing; British Columbia Ministry of Education, 2016).

Special educators, district resource staff, and itinerant specialists play important roles in both identifying appropriate individualized supports for students with ESNs and in supporting

CTs to implement supports in the classroom (Turnbull et al., 2007). However, access to support and interventions provided by multi-disciplinary school professionals does not guarantee that a student with ESNs will experience academic learning and participation; it is the collaboration between the district resource staff and CT that is considered an essential support for full inclusion (Morningstar et al., 2015). Ideally, multi-disciplinary school professionals work with the CT to identify and implement individualized supports through a process of collaborative consultation (British Columbia Ministry of Education, 2016). From this perspective, collaboration among multi-disciplinary school professionals may be considered as foundational to identifying and implementing individual supports that facilitate participation in grade-level curricular learning activities.

2.3.1 Historical Models of Service Delivery

Traditionally, district resource staff provided individual, direct services to students referred for specific support (e.g., motor skill development, communication support). This form of direct service delivery often occurred in a pull-out model, where students would leave the class to participate in individual or small-group sessions with the specialist, with or without an EA (Kennedy et al., 2018; Tracy-Bronson et al., 2019). For example, an OT may complete an assessment of fine motor skills with a student, then provide direct, one-to-one intervention in a separate setting to address identified fine motor delays. The focus of direct service is skill improvement; in other words, the student changes so that they can meet the demands of the environment (Bundy, 1995).

Another means of service delivery that has been adopted by district resource staff is the indirect service model, where specialists teach a procedure to an implementor, typically a teacher, EA, or parent (Bundy, 1995). For example, a PT might teach an EA how to safely

transfer a child from a wheelchair to their desk. In indirect service delivery models, the focus of service is on both student skill development or maintenance of function and the implementor learning how to implement a procedure (Bundy, 1995). In some instances, direct or indirect service are the most appropriate and effective means of service delivery. For example, a student would benefit from one-to-one, direct therapy service from a communication specialist when learning how to use a new Augmentative and Alternative Communication (AAC) device. As well, students who are dependent on others for support with mobility rely on implementors who have been trained to safely assist them.

However, there are issues when direct and/or indirect models of service delivery are the only models being used. First, district resource staff often have high numbers of students on their caseloads, and individual, direct service delivery is not feasible (Staskowski & Rivera, 2005). Second, the traditional, pull-out model is based on a medical model of service delivery, where the challenges students face are perceived to stem from problems within the child (e.g., fine motor delay), rather than as a response to their environment. In this model, the focus of intervention is on 'fixing' the problem (Staskowski & Rivera, 2005). However, Skinner et al. (2022) suggested that factors in the classroom environment play a stronger role than individual student factors (i.e., student skills and abilities) when it comes to facilitating school participation of students with ESNs. They argued that the classroom environment determines whether individual student characteristics enable or limit participation, supporting the social model of disability (Shakespeare, 2016). Third, when students are pulled out of the classroom to work on specific skills, opportunities to learn and practice these skills in their natural context are missed, limiting students' ability to become proficient at using these skills in daily activities (Archibald, 2017). For example, Calculator (2009) acknowledged that students who use AAC devices to

communicate need to be taught specific communication skills, but also must be provided with numerous opportunities to use AAC in daily activities in order to become skilled communicators. Fourth, Skinner (2021) suggested that when specialists focus on specific skill development, the overall curricular goals can easily be lost, and the outcome of the intervention is likely to be improvement in specific skills that do not necessarily translate to an increase in academic participation or learning. Finally, with pull-out models of service delivery, teacher expertise is excluded from the process, students are excluded from curricular content, and opportunities to socialize and learn from peers are missed (Gallagher et al., 2018). Although there is a time and a place for direct and indirect forms of service delivery, the student outcomes associated with these models are student skill improvement or maintenance of function (Bundy, 1995), not participation and inclusion. Therefore, to ensure segregated educational programs are not perpetuated, a different approach to providing specialized support for students with ESNs is warranted (Gallagher et al., 2018).

2.3.2 Inter-Professional Collaboration Models of Service Delivery

To address the issues when only direct and indirect models of service delivery are implemented, district resource staff have attempted to shift their practice in schools to a collaborative model (Gallagher et al., 2018; Villeneuve, 2009). Ideally, collaborative models of practice between multi-disciplinary school professionals is described as engaging in IPP. There are several key elements that are indicative of IPP. First, an inter-professional model of collaboration requires all members to share values (Pfeiffer et al., 2019). Second, members must understand the roles and responsibilities of all team members (Pfeiffer et al., 2019; Villeneuve, 2009). Third, members rely on their collective expertise as they engage in an interactive problem-solving process and work toward a mutual goal (Villeneuve, 2009). Fourth, members

engage in collaborative work through a range of interactive activities involving at least two professionals. For example, service delivery may occur by district resource staff: a) working with students in a general education classroom; b) coaching classroom teachers to implement strategies to support disabled students; c) co-teaching with general educators; and/or d) engaging in joint planning of curriculum and activities and/or problem-solving processes with general educators to identify and implement individualized student supports (Archibald, 2017; Causton & Tracy-Bronson, 2014; Mitchell et al., 2020; Schraeder, 2017). Indeed, Mitchell et al. (2020) described the range of collaborative practices as a "working together continuum," with "no interaction" at one end and "shared-creating collaboration" at the other (p. 734). Finally, "joint professional learning" is a key feature of successful IPP, where members from each profession learn about, from, and with each other, and share knowledge, skills, and responsibilities to provide a comprehensive service (Mitchell et al., p. 733; Pfeiffer et al., 2019). In summary, school-based IPP is characterized by multi-disciplinary school professionals engaging in a variety of interactive activities as they work toward a shared goal, and, as a result, experience inter-professional, transformative learning.

2.3.2.1 Outcomes of IPP. In recent years, evidence to support a collaborative approach to delivering school-based services to support students with disabilities has increased in rehabilitation health (e.g., occupational therapy, speech-language pathology) literature. For example, Archibald (2017) reviewed 49 papers on the topic of collaboration in school-based speech-language pathology services, to provide a broad and critical review of existing evidence of collaborative service delivery models used by SLPs in schools. Results of their review suggested that collaborative approaches to service delivery were associated with positive outcomes in terms of student vocabulary, phonological awareness, narrative language, and

curriculum-based language and writing. As well, in a critical examination of collaborative consultation practices of school-based OTs, Villeneuve (2009) reported that an educational outcome of a collaborative service delivery model was an increased number of disabled students meeting their individualized goals. Furthermore, evidence indicates that IPP contributes to improvements in literacy and skill generalization for students with disabilities, as a result of more opportunities to learn and practice skills in the natural context of the classroom (Tracy-Bronson et al., 2019).

Collaborative models of service delivery have been associated not only with positive outcomes for disabled students, but also with benefits to the education professionals engaging in collaborative practices. For example, district resource staff, including PTs, OTs, and SLPs, reported that collaborative models of practice provided a more efficient and effective approach to service delivery than pull-out models of therapy alone (Tracy-Bronson et al., 2019). Villeneuve (2009) reported that teachers demonstrated more awareness of the needs of the disabled students in their classrooms when collaborative models of practice were implemented. Furthermore, teachers have been found to be more likely to implement recommendations from district resource staff when collaboration occurs (Sayers, 2008). As the aforementioned studies indicate, evidence implies collaborative models of service delivery in inclusive education lead to positive outcomes for both students and staff.

2.3.2.2 Barriers to Collaborative Practices. Despite the benefits of collaborative service delivery and evidence suggesting teachers and district resource staff prefer collaborative models of practice (Campbell et al., 2012; Missiuna, Pollock, Campbell, et al. 2012), collaboration rarely occurs in practice (Bose & Hinojosa, 2008; Brandel & Loeb, 2011; Kennedy & Stewart, 2012). Instead, district resource staff work with students, often with EAs, outside of the classroom

(Kurth et al., 2015). In their critical review of literature on collaborative consultation in schoolbased occupational therapy, Villeneuve (2009) identified several barriers to collaborative practices, including: a) the therapists' lack of understanding of the education system (i.e., knowledge of curriculum and classroom practices); b) the educators' lack of clarity on the needs of individual students with disabilities and the roles and responsibilities of the therapist; c) a tendency of therapists to take on an expert role rather than engaging in a true partnership with educators; d) the infrequent presence of therapists in the school; e) a lack of administrative support; and f) a lack of dedicated time for collaboration. Pfieffer et al. (2019) collected survey data from 474 SLPs certified to practice in the United States, to examine barriers to IPP. Results suggested that the three most common barriers to collaboration included: a) a lack of time and difficulty scheduling time to meet; b) resistance from other professionals (e.g., OTs, CTs, LSTs); and c) a lack of support from employers and/or administration. Other barriers that were identified in the data included resistance from peers (i.e., other SLPs in their workplace), a lack of training in collaborative work, and teamwork not being prioritized in their workplace.

Although the abovementioned studies do not focus specifically on collaborative relationships that support students with ESNs, findings shed light on some of the barriers to IPP that professionals working with disabled students face in the education system. Furthermore, members of different disciplines must be registered with their professional colleges and adhere to the standards of practice outlined by their respective college. Despite empirical evidence to support collaborative practices and provincial policies that recommend collaboration among mutil-discplinary school professionals to support students with ESNs in general education classrooms, little research exists documenting how such a collaboration might unfold. To strengthen the quality of academic participation of students with ESNs in general education

classrooms, research into how multi-disciplinary school professionals engage in IPP is necessary (Tracy-Bronson et al., 2019; Villeneuve, 2009).

2.3.2.3 Facilitators of IPP. Research on IPP in education tends to focus on key characteristics, outcomes, and barriers to collaborative practices (Villeneuve, 2009). However, recently a small amount of literature has identified some factors that facilitate effective collaborative relationships between educators and district resource staff. For example, using Developmental Work Research Methods (an interventionist methodology based on SCAT), Villeneuve and Shulha (2012) worked with multi-disciplinary members of school-based teams (SBTs) to develop guiding principles for collaborative, school-based occupational therapy practice. Key findings suggested that facilitating factors to effective IPP included: a) effective case conferences that promote opportunities for interactive problem-solving between educators and therapists; b) time for therapists to complete comprehensive assessments prior to the case conferences; and c) outcomes of the collaborative process that extend beyond the individual student as the focus of the collaborative process. Other factors that were noted to facilitate IPP between educators and district resource staff included effective communication between participants and a shared understanding and agreement of service delivery, methods, and goals. The importance of a key educator in the collaborative relationships assuming a leadership role in the student's educational program was also stressed, as was the overall focus of the collaboration being on educational programming and inclusion (Villeneuve & Shuha, 2012).

Regular, structured meetings between therapists and educators is frequently cited as a facilitator of IPP. Mitchell et al. (2020) highlighted two studies (i.e., Starling et al. [2012]; Hadley et al. [2000]) that exemplify successful IPP between SLPs and educators. In both cases, regular (i.e., weekly or biweekly) meetings occurred outside of class time. Also, in both cases, a

university researcher facilitated the team meetings. In another study, Pfeiffer et al. (2019) identified predictive factors of whether SLPs would engage in interprofessional collaborative relationships with educators. Results indicated that a key factor that determined whether SLPs were likely to work collaboratively with educators was if they received training on IPP.

In summary, a number of factors have been found to facilitate IPP between district resource staff and educators. However, a common theme between factors listed in each of the aforementioned studies is external support to the collaborative process, either in the form of training (Pfeiffer et al., 2019) or facilitated meetings (e.g., Hadley et al., 2000; Starling et al., 2012; Villeneuve & Shulha, 2012). This notion is reflected in Hung et al. (2006), who discovered that for expansive learning to occur in individuals who are new to collaborative work, both an environment that is conducive to collaboration and facilitation of the collaborative process were required. Therefore, not only is it critical to ensure that all participants agree on the focus of collaboration and have time to meet, but structured and facilitated opportunities for collaboration appear to be important to increase the likelihood that IPP will occur.

2.3.3 Multi-disciplinary Collaboration to Support Inclusive Education for Students with ESNs

Current literature suggests IPP is a critical component of inclusive education for students with ESNs (Bowman et al., 2020). While there is a growing body of research that addresses collaborative practices between educators and district resource staff (e.g., Archibald, 2017; Gallagher et al., 208; Leadbetter 2004; Pfeiffer, 2019; Villeneuve 2009), very few studies have focused on collaborative practices that support inclusive education for students with ESNs. In two of these few studies, Olson et al. (2016) and Villeneuve and Hutchinson (2012) provided a better understanding of key collaborative practices of multi-disciplinary educational

professionals that promote academic inclusion of students with ESNs in general education classrooms. For example, Olson et al. conducted a case study to explore how members of a multi-disciplinary team in a school that had been identified as an exemplar of inclusive education worked together to ensure students with ESNs had access to the general education curriculum. One of their findings suggested that general educators often assumed roles and responsibilities that were typically associated with special educators, which supports the assumption that effective collaboration is characterized by inter-professional learning. However, participants of the collaborative process included administrators, general educators, special educators, and education assistants, but not district resource staff (e.g., OTs, SLPs). As students with ESNs typically receive support from district resource staff, research that includes these other disciplines is essential to enhance our understanding of multi-disciplinary collaborative practices in inclusive education for this population of students.

Villeneuve and Hutchinson (2012) used Sociocultural Activity Theory (SCAT) and a multiple-case study design to explore collaborative interactions between OTs and teachers with regards to the educational programming and outcomes of two students with ESNs who attended general education elementary classrooms. Over an 8-month period, the authors collected data from classroom observations, a review of documents (e.g., IEPs), and interviews with members of the school team, including parents, EAs, LSTs, CTs, administrators, case managers, and OTs. Cross-case analysis suggested that key practices that facilitate IPP included: a) educationally relevant goals that are shared by all members of the team and drive the focus of occupational therapy services; b) regular formal meetings, where all members engage in interactive communication and develop strategies to promote participation in classroom activities by sharing information; and c) leadership in the student's education program coming from the special

educator, with the special educator also serving as the main point of contact for the team, not the EA.

Although research examining collaborative practices that support inclusion of students with ESNs in general education settings is sparse, the two aforementioned studies collectively suggest that the term *inter-professional collaboration* is a more apt term for the collaborative consultative process involved than multi-disciplinary collaboration, which does not reflect the inter-professional, transformative learning that has been noted.

2.3.4 Multi-disciplinary Collaborative Approaches to Implementing UDL

UDL has gained increasing popularity as a promising approach to service delivery for district resource staff, such as school-based OTs and SLPs. For example, a multi-disciplinary research team including experts in special education, occupational therapy, and speech-language pathology from CanChild at McMaster University in Hamilton, Ontario, developed Partnering for Change (P4C), a model of service delivery based on collaborative partnerships between educators, OTs, and families (Missiuna, Pollock, Levac, et al., 2012). According to these researchers, in the P4C model, instead of providing direct, pull-out services for individual students with disabilities, therapists provide three tiers of support to promote development of motor-based skills (e.g., written output) through classroom activities. First, they work with teachers in their classrooms, implementing UDL to enable participation in the classroom for all students by addressing changes to the physical and social environment. Next, OTs work with teachers to modify teaching practices for individual students, using differentiated instruction. Finally, the therapists provide individual assessment and recommend individualized supports or accommodations for students who continue to have difficulty with motor-based skills. Benefits to using the P4C model to support students with motor challenges include: a) an increase in

teacher knowledge and implementation of strategies that foster participation of students who struggle with motor-based skills (Missiuna, Pollock, Campbell, et al., 2012); b) teacher preference for the P4C style of service delivery compared to traditional pull-out models (Missiuna, Pollock, Campbell, et al., 2012); and c) an improved sense of efficacy in supporting students in general education classes, as reported by OTs (Campbell et al., 2012).

Although the P4C model was initially developed to address students who have motorbased difficulties (specifically, students who have been diagnosed or present symptoms of Developmental Coordination Disorder; Missiuna, Pollock, Levac, et al., 2012), the model has been used by therapists to support students with other diagnoses. For example, Wilson and Harris (2018) implemented P4C in an elementary school to provide support to students with a range of cognitive, affective, and physical abilities, and conducted a descriptive, qualitative study to explore teachers' experiences with the P4C service delivery model. The authors collected qualitative data from two focus groups with participants (n = 11); one focus group took place immediately after participants received 13 weeks of P4C occupational therapy services, and the second focus group took place a month later, after four more weeks of P4C. Data were analyzed using a grounded theory approach. Results suggested that teachers preferred the occupational therapy service delivery model based on P4C, compared to previous traditional, pull-out models of practice. Furthermore, teachers indicated that they were able to embed strategies recommended by the therapist to support students with various disabilities into classroom activities and routines.

The P4C model is only one example of how UDL is being implemented in schools by district resource staff, in collaboration with CTs. To establish a better understanding of the application of UDL by district resource staff in school settings, Kennedy et al. (2018) conducted

a scoping review to synthesize evidence on the use of UDL by school-based rehabilitation health professionals (i.e., district resource staff). The authors reviewed 45 articles published between 1990 and 2016 that referenced the implementation of UDL by OTs, PTs, and SLPs to support K-12 disabled students. Results suggested that only 10 articles explicitly defined UDL; most of the 10 articles referenced elements of UDL described by CAST. However, although the 35 remaining articles did not explicitly define UDL, the descriptions of the approach used by professionals were consistent with CAST's definition of UDL. The authors suggested that if the fields of education and rehabilitation are to be integrated to promote inclusion of students with disabilities, rehabilitation health professionals should consider adopting the CAST UDL framework and language. Results of the review by Kennedy et al., as well as the development and subsequent research of the P4C model, suggest that UDL is an effective framework to assist district resource staff to work collaboratively with CTs to design inclusive education programs for students with disabilities. However, none of the studies specifically focused on the implementation of UDL to promote academic inclusion of students with ESNs.

Indeed, UDL provides an ideal model for collaborative instructional planning among general educators, special educators, and other members of multi-disciplinary SBTs (Wu, 2010). Wu (2010) suggested that UDL endorses the development of shared goals, creates opportunities for teams to collaboratively reduce barriers to learning, allows teams to design learning activities that are accessible to all students, and encourages shared responsibility in evaluating the outcomes of the UDL model. Furthermore, it should be noted that multi-disciplinary SBTs in B.C. face unique and complex challenges to collaborative work, due, in part, to the fact that the responsibility for funding and service provision is shared by multiple ministries (British Columbia Ministry of Education et al., 2013; Villeneuve, 2009). As such, it may be beneficial for

members of SBTs to adopt an approach that is used simultaneously by all team members when they engage in collaborative work. For example, using an inclusive educational framework, such as UDL, to guide problem-solving processes has the potential to facilitate IPP between multidisciplinary school professionals as they work towards the shared goal of designing a grade-level curricular unit that is accessible to a student with ESNs. Thus, the UDL framework has the potential to promote IPP.

IPP between multi-disciplinary school professionals is key when it comes to the application of UDL to promote inclusion of students with ESNs in general education classrooms (Smith & Lowrey, 2017a). However, although there is evidence to suggest that UDL can foster collaborative practices between educators and district resource staff (e.g., Missiuna, Pollock, Levac, et al., 2012), UDL does not necessarily lead to collaborative practice. For example, findings from Kennedy et al. (2018) indicated that SLPs typically addressed two of the nine UDL guidelines: "provide options for language, mathematical expressions, and symbols" and "provide options for expression and communication (CAST, 2018c, 2018d). On the other hand, the guidelines that were most often addressed by OTs included: "provide options for physical action" and "provide options for recruiting interest" (CAST, 2018b; 2018d). Given the tendency of OTs and SLPs to address different principles of UDL, the authors recommended that therapists take an inter-professional collaborative approach to implementation, rather than individual disciplines addressing different guidelines. Ideally, to truly bridge the fields of education and rehabilitation, an inter-professional collaborative approach should also include educators. Furthermore, we should see evidence of inter-professional learning (e.g., coconfiguration, expansive learning and distributed expertise, boundaries and boundary crossing, and knotworking) between members when they engage in a collaborative approach to

implementing UDL (Martin, 2008). Thus, it appears that the use of the UDL framework may be facilitative of but is not sufficient to ensure effective collaboration. Further research is needed to shed light on the specifics of effective interprofessional collaboration when UDL is used by multi-disciplinary school professionals to design inclusive curricular units.

2.4 Cultural Historical Activity Theory

One of the aims of the present study was to enhance our understanding of interprofessional collaboration when multi-disciplinary school professionals used mediating actions (i.e., took part in a facilitated planning process, used principles of UDL) to achieve a desired outcome (i.e., a collaboratively designed, grade-level curricular unit that was accessible to a student with ESNs). Cultural Historical Activity Theory (CHAT), which has also been referred to as Sociocultural Activity Theory (SCAT), assumes that learning is influenced by social, historical, and cultural contexts and occurs when an individual or group of individuals engage in mediated action (i.e., action through the use of mediating tools or artifacts) toward a collective goal or outcome (Bal, 2021; Martin, 2008; Williams, et al., 2007). Thus, CHAT provided an apposite theoretical framework to guide the present research.

CHAT is based on the work of Russian scholars and builds on Vygotsky's concept of mediated action (see Figure 2). Mediated action assumes that human activity is the process of constructing meaning or learning by an individual(s) (*subjects*) when "mediating means (*tools*)" are used to resolve a problem (*object*), to reach a goal or *outcome* (Martin, 2008, p. 176). Tools, which may be material, organizational, or conceptual, are shaped by sociocultural contexts and form the foundation of human activity (Martin, 2008).

Figure 2

Model of Mediated Action (adapted from Vygotsky, 1981)



Over the past three decades, Vygotsky's basic model of mediated action has evolved to reflect the collective nature of human activity. Engeström (2000, 2014), a Finnish researcher, expanded Vygotsky's model so that it can be applied to organizational analysis. In Engeström's second-generation of Activity Theory (see Figure 1, Chapter 1), the *subject* continues to represent the individual(s) whose actions are the focus of the interactive processes of the activity system. *Tools* refer to the mediating instruments that the subject(s) engage(s) with as they work toward the object. However, as the activity system is embedded within a sociocultural context, the *object* is now understood to represent the shared focus of the activity system and leads to the *outcome* or mutually desired goal of the human activity (Williams et al., 2007; Yamagata-Lynch, 2010). The process of learning can be considered 'object-oriented activity,' as it is driven by the goals of the participants of the activity system (Yamagata-Lynch, 2010). Furthermore, Engeström's 'second-generation' of Activity Theory includes social and contextual factors (i.e.,

rules, the community, and division of labour) that influence the activity system. *Rules* are the regulations that provide the subject(s) with guidance on how to act within the system, the *community* refers to the larger social group that the activity system exists in, and the *division of labour* is how tasks are shared among subjects (Engeström, 2014).

In the context of the present study, multi-disciplinary school professionals were the subjects. The object or focus of the activity was a grade-level, curricular science unit and the outcome was to collectively design learning activities and materials for the science unit that facilitated the participation of a student with ESNs. Mediating tools included: a) the facilitated planning meeting, where subjects addressed potential barriers to the student's participation and designed activities that were accessible; and b) UDL, an evidence-based approach to planning classroom activities that are accessible to a diverse student population, including students with ESNs. The community refers to the social contexts of collaborative consultation including the student with ESNs, other members of the classroom (e.g., peers), and members of the school community (e.g., administration). The rules included: a) how subjects fulfilled their disciplinary roles; b) how subjects interpreted and applied provincial and school district policies on inclusive education for students with ESNs to their professional practice; c) models of service delivery that have been adopted by the school district; and d) student learning objectives (e.g., provincial standards and individual student learning objectives on the student's IEP). Finally, the division of labour included the professional working relationships between subjects, including how tasks and responsibilities were divided between subjects. CHAT in the context of the proposed study is depicted in Figure 3.

Figure 3

CHAT in the Context of the Present Study (adapted from Engeström, 2000)



Engeström suggested that activity systems are dynamic, relying on *contradictions* that exist when changes in one element of the system have an impact on another (Dracup et al., 2020). Contradictions can be defined as the "tensions and dilemmas...that arise from the struts and processes within and between components in the activity system" (Martin, 2008, p. 177). Collaboration occurs through the iterative cycle of subjects addressing and resolving contradictions in their efforts to achieve a desired outcome (Martin, 2008). Subjects identify and prioritize contradictions that are creating barriers to achieving the collective goal, then shift their focus to negotiating possible resolutions (Martin, 2008). For example, if a CT did not receive information on what the symbols on a student's AAC device represent, they are not likely to integrate the symbols into academic lessons and activities; this may cause a contradiction in promoting the student's participation in an academic lesson and possibly indicate a disconnection between the CT and SLP. According to CHAT, the iterative process of continuously resolving contradictions occurs through *collaborative interactions*, which can be characterized as interactions that not only influence the outcome of the system, but have a transformative effect on the subject(s) and their environment (Martin, 2008; Villeneuve, 2011). In other words, transformative learning, as evidenced by practitioners re-conceptualizing their own professional roles and responsibilities in their collective effort to work toward the shared goal, occurs through this process of identifying and resolving contradictions between components of the activity system (Villeneuve, 2011). As such, contradictions are seen as catalysts for change. Figure 4 illustrates the concept of contradictions (represented by crooked blue lines) in a second-generation activity system.

Figure 4



Contradictions in an Activity System (adapted from Engeström, 2000)

2.4.1 CHAT in Special Education Research

Although there is very little reference to CHAT in Western literature before 1990, there is currently an increasing interest in using CHAT as a framework in special education research (Bal et al., 2020; Williams et al., 2007). For example, Bal et al. (2020) recently published a systematic review of empirical studies that utilized CHAT to examine the contributions of CHAT to disability research in education. Their review included 10 articles that used CHAT to examine learning during collaboration between professionals as they engaged in work that supported disabled students in the classroom. Their findings indicate that with the shift toward inclusive education, interventions for students with disabilities are now provided in collective activity systems, such as a classroom (e.g., UDL) or school-wide (e.g., Positive Behavioural Interventions and Supports) context, often with support from multi-disciplinary school professionals. Therefore, it is not surprising to see an increasing number of studies that used CHAT as a theoretical framework being published in inclusive education literature.

In one study, Martin (2008) used SCAT and Developmental Work Research methodology to examine inter-professional learning that occurred when speech and language therapy staff (subjects) taught school staff to integrate speech and language supports into an inclusive classroom (object) in two secondary schools in England. Findings are presented as four key concepts of inter-professional learning, including: a) co-configuration; b) expansive learning and distributed expertise; c) boundaries and boundary crossing; and d) knotworking. Coconfiguration refers to "negotiated partnerships," where service providers co-design supports for students, rather than working in silos, each addressing a different aspect of the students' programs (Martin, 2008, p. 182). Expansive learning occurs when participants learn from each other's knowledge, roles, and skills, and use the resulting "distributed expertise" to direct their focus to the shared goal (Martin, 2008, p. 184). Boundary crossing exists as participants from different disciplines learn to overlap their practices and develop new understandings of how each other works. Finally, knotworking describes a key worker engaging in leadership practices to

support the interactive work that promotes a successful outcome. As transformative, interprofessional learning is a key element of IPP (Mitchell et al., 2020; Pfeiffer et al., 2019), findings from Martin (2008) are particularly relevant to the present study.

Several other studies published in the past two decades that have used CHAT as a theoretical framework identified facilitators and barriers to IPP in special education. For example, Leadbetter (2004) used CHAT as a theoretical framework and discourse analysis methodology to examine systems of communication as mediating artifacts when educational psychologists (subjects) consulted with CTs regarding support for students who were struggling in school (object). Findings suggested that a successful outcome of the collaborative process was more likely when approaches to communication (e.g., conversations, questions, dialogues) were shared and developed by all subjects. In another study, Villeneuve and Hutchinson (2012) used ethnographic case study methods and SCAT as a theoretical framework to describe the nature of collaborative work between OTs and educators (subjects) as they provided support for students with developmental disabilities (object) in Ontario, Canada. Findings suggested that collaborative practices between OTs and teachers were facilitated when: a) a focus for educational programming was clearly established; b) effective communication practices were utilized; and c) the teacher assumed a leadership role. In yet another study, Dracup et al. (2020) used CHAT to examine factors that enabled and restricted the collaborative process of professional staff from the Library, Student Support Services, Faculty Education Services, and the Equity and Diversity Unit and teaching staff from an undergraduate program at an Australian university, from the point of view of UDL. Results suggested evidence of inter-professional learning among participants and reported that the collaborative process was relatively smooth once the participants were aware that the process would not be linear but would involve constant

shifts in their roles and responsibilities. Furthermore, one of the biggest barriers to the collaborative process was the "culturally entrenched 'normal' patterns of activity" of the institution (Dracup et al., 2020, pp. 896-897).

Collectively, the previously cited research that used CHAT in an educational context supports its adoption as the theoretical framework for the present study. For example, Martin (2008) demonstrated how CHAT provides an ideal framework for studying interprofessional learning of multi-disciplinary school professionals. As well, the aforementioned studies by Leadbetter (2004), Villeneuve and Hutchinson (2012), and Dracup et al. (2020) support the use of CHAT to investigate contextual factors that influence the IPP of multi-disciplinary school professionals. Furthermore, the study by Dracup et al. (2020) provides evidence that UDL is an appropriate meditating tool to facilitate a collective problem-solving process between multi-disciplinary professionals in an inclusive education context.

2.5 Purpose of the Study

Although many students with ESNs attend general education classrooms, they are continuously denied opportunities to participate in grade-level curricular activities (Smith & Lowrey, 2017b). Previous research in the field of inclusive education has examined this exact problem of exclusion, but there are some gaps that exist in current literature. First, literature suggests both UDL and individualized student supports promote academic inclusion for students with ESNs (Kurth et al., 2015), but there is a need to explore how the use of individualized supports can be used simultaneously with the UDL framework in general education classrooms (Rao et al., 2017). As district resource staff (e.g., OTs, SLPs) are typically involved in developing individualized supports and CTs are responsible for creating learning materials and activities for general education classrooms, an inter-professional collaborative approach to

designing a curricular unit that is guided by principles of UDL may address this gap in the literature. Second, although evidence suggests UDL leads to an increase in academic participation of students with ESNs (e.g., Browder et al., 2008), few studies have used UDL as a mediating approach to the collaborative design of a curricular unit that is accessible to a student with ESNs in a general education classroom (Rao et al., 2017). Third, despite evidence indicating district resource staff (e.g., OTs, SLPs) often use UDL in practice (Tracy-Bronson et al., 2019), there is a tendency for individual members to address different principles of UDL (Kennedy et al., 2018). Thus, examining an inter-professional collaborative approach to the implementation of UDL is warranted (Kennedy et al., 2018). Finally, although several positive outcomes of IPP for both students with disabilities and staff have been reported (e.g., Villeneuve, 2009), there is overwhelming evidence in the literature indicating IPP between multi-disciplinary school professionals rarely occurs in practice (Bose & Hinojosa, 2008). Furthermore, few studies have focused on collaborative practices that support inclusive education for students with ESNs (Villeneuve & Shulha, 2012).

The present study aimed to examine IPP between multi-disciplinary school professionals when they applied principles of UDL to guide the collaborative design of a grade-level curricular unit that was accessible to a student with ESNs. The following research question was addressed: *During a facilitated planning meeting in which multidisciplinary school professionals use principles of UDL to design activities for an inclusive, grade-level science unit that are accessible to an elementary school-aged student with ESNs:*

How do the professionals engage in IPP?

- a. What contradictions arise?
- b. How are contradictions addressed?

Chapter 3: Method

3.1 Overview

The purpose of the present study was to examine how multi-disciplinary school professionals engaged in inter-professional collaborative practice (IPP) during a facilitated planning meeting where they used principles of Universal Design for Learning (UDL) to design curricular activities and materials for a general education science unit that was accessible to a student with extensive support needs (ESNs). Using Cultural Historical Activity Theory (CHAT; Engeström, 2000, 2014) as a theoretical framework, this qualitative study followed the multiple-case study method (two cases) outlined by Yin (2018) to address the following research question: *During a facilitated planning meeting in which multidisciplinary school professionals use principles of UDL to design activities for an inclusive, grade-level science unit that are accessible to an elementary school-aged student with ESNs:*

How do the professionals engage in IPP?

- a. What contradictions arise?
- b. How are contradictions addressed?

In this chapter I will discuss my research methods, including philosophical underpinnings and researcher positionality, a description of the participants and setting, details of the research design, and procedures for data collection and analysis. I will conclude the chapter by addressing the quality and rigor of the study.

3.2 Philosophical Underpinnings

This qualitative study is underpinned by a philosophical framework of critical realism (CR). CR ontology combines elements from both positivism and constructivism, and posits that reality is stratified into three levels: a) the *empirical level*, where events are perceived through

human experience and understood through interpretation; b) the *actual level*, where events are factual occurrences that take place whether or not they are experienced by humans and exist without the interpretation that occurs at the empirical level; and c) the *real level*, which consists of the social products (considered causal forces) that are responsible for the events appearing at the empirical level (Fletcher, 2017). An iceberg metaphor for CR ontology is often cited in the literature (e.g., Fletcher, 2017), where only a fraction of reality is observable at the empirical level, just as the tip of an iceberg is the only part visible above the surface of the water. The actual level exists just below the surface, and the real level is found deep below (see Figure 5).

Figure 5

Stratified Reality in CR Ontology (adapted from Fletcher, 2017)



Events at the actual level can be investigated by analyzing events at the empirical level through qualitative research methods (Stutchbury, 2022). At the same time, exploring phenomena at the empirical level results in a better understanding of the underlying causal mechanisms existing at the real level (Fletcher, 2017). Theories (e.g., CHAT) assist in the identification and conceptualization of the 'real' underlying mechanisms that influence events at the empirical level; thus, CR considers reality to be "theory-laden, but not theory-determined" (Fletcher, 2017, p. 182). Through a process of qualitative data analysis that relies on abduction (theoretical redescription) and retroduction (comparing theoretical propositions against evidence in the data), theories are subsequently refined, making CR useful for contributing to a deeper understanding of complex social phenomena, such as IPP, and has the potential to facilitate social change (Fletcher, 2017; Stutchbury, 2022).

3.3 Researcher and Researcher Positioning

As a researcher, I am interested in educational theories and practices that support inclusive education for students with ESNs, and want to highlight the perspectives and lived experiences of people in the field. As a practitioner, I am a registered occupational therapist (OT) and have more than a decade of experience providing consultative services to schools in British Columbia (B.C.). The role of a school-based OT is to facilitate opportunities for disabled students to access, initiate, and sustain active participation in meaningful relationships and contexts at school (Causton & Tracy-Bronson, 2014; Egan & Restall, 2022). Before attending graduate school, I worked with the B.C. Provincial Inclusion Outreach Program (PIOP). PIOP is funded by the Ministry of Education and exists to provide support to students with ESNs across B.C. In my role with PIOP, I worked on a multi-disciplinary team that supported local school teams to design and implement education programs for students with ESNs. As well, I had the opportunity to learn about the educational programs of students with ESNs across B.C. It was a privilege to work with professionals on the PIOP team and in local school districts who were passionate about advancing equitable access to education for students with ESNs. It was also a privilege that I was able to observe students with ESNs engaging in general education classrooms with their peers in several different ways. However, the focus of the education

programs for students with ESNs was primarily social inclusion wherein I noticed there was a lot of uncertainty about how to include students with ESNs in the academic life of their classrooms. I believe full inclusion means a student is included socially and academically and I entered graduate school with a desire to engage in research that promotes equitable access to all aspects of education. This desire led me to pursue an M.A. in Special Education, where I conducted a qualitative case study to examine how a student with ESNs participated in a general education classroom that implemented highly inclusive practices. Findings from the case study were consistent with evidence in the literature (and my own experience) that a student with ESNs had limited opportunities to engage with grade-level curricular content, even in an inclusive setting. Furthermore, findings indicated that the classroom teacher played a key role in whether a student with ESNs could access social and academic classroom activities. Thus, I became especially interested in examining IPP with CTs in an inclusive education context.

In my work with PIOP, I worked with a team of professionals that engaged in IPP. For example, educational goals that were shared by all members were the focus of shared problemsolving processes, each members' individual expertise contributed to the work, and we refined our own professional roles as we learned from and about each other. The local school teams we supported reported positive outcomes to the collaborative planning process and I experienced a great deal of job satisfaction. On the other hand, I also worked as an OT for a program that provided therapy services to elementary schools in a local school district. My experience in the school district was quite different from my work with PIOP; members of the multi-disciplinary school-based team (SBT) tended to work in silos, with each member focusing on specific student goals that were often driven by therapists, not educators. In this service delivery model, I struggled to see a connection between the service I was providing and a student's academic

participation in grade-level curricular activities. In my opinion, the lack of a collaborative approach to designing and implementing an education program for students with disabilities was a barrier to full inclusion in general education classrooms, especially for students who had ESNs.

I believe district-level SBTs can adopt IPP models that are similar to the work I did with PIOP. However, in my experience, the shift to an IPP model is difficult to achieve in practice. Therefore, it was my aim to investigate collaborative practices of multi-disciplinary teams when the desired outcome of the collaborative process was the participation of a student with ESNs in grade-level curricular learning activities. My hope was to contribute to theory and knowledge of IPP in inclusive education and to offer practical solutions that may support SBTs to adopt IPP. When I made the decision to enter graduate studies, I wanted to engage in work that promoted inclusion of students with disabilities in general education. I chose to study in the Faculty of Education at the University of British Columbia, because their Supporting Inclusive Education concentration allowed me to integrate my occupational therapy perspective on meaningful participation with current research and practices in inclusive education. My scholarly expertise in two fields that are integral in facilitating inclusion of disabled students in general education classrooms (i.e., occupational therapy and inclusive education) provides a unique and valuable perspective on IPP. My scholarly expertise, various professional experiences on multidisciplinary SBTs, and my strong belief in collaborative practice inspired and contributed to the development of the present study and influenced how I approached data collection and analysis.

3.4 Participants

The present multiple-case study consisted of two, parallel cases from different schools in the same school district. Participants in each case included school professionals who supported the education program of a student with ESNs. In B.C., SBTs may include the student, parent(s),

school administrator, learning support teacher (LST) or resource teacher, the classroom teacher (CT), school counsellor, and district resource staff (e.g., speech-language pathologists [SLPs], OTs; British Columbia Ministry of Education, 2016). However, as the focus of the present study was *inter-professional* collaboration, only the professional members of the student's SBT were invited to participate (i.e., I did not include parents/guardians or the students as participants). I attempted to invite all professional members of each student's SBT to participate in the study.

3.4.1 Inclusion Criteria

I selected cases where participants were geographically accessible to me and willing and available to engage in the process, using a convenience selection strategy (Sparkes & Smith, 2013). I also used a criterion-based strategy, using the following inclusion criteria to select participants for each case:

- Each case consisted of participants who were school professionals working with elementary-age students (i.e., Kindergarten-Grade 7) in the lower mainland of B.C. (e.g., Vancouver, North Vancouver, West Vancouver, Richmond, Burnaby, Surrey, or New Westminster). I selected elementary-age students as the population for this study for the following reasons: a) elementary-age students with disabilities are more likely to attend inclusive education classrooms, compared to secondary-age students with disabilities (Williamson et al., 2020); and b) district resource staff tend to be more involved in the education program of elementary-age students compared to that of secondary-age students (Spencer et al., 2006).
- As the focus of the study was inter-*professional* collaboration, I included only *school professionals* who supported the student's educational program (e.g., CT, LST, SLP).

- As the focus of the research was to examine *inter-professional* collaborative practice, participants included school professionals representing at least two disciplines:
 - At least one of the participants was the CT, as they are responsible for the learning activities in a general education classroom.
 - At least one of the participants was a district resource professional from a different discipline (e.g., SLP).
- As the focus was on inter-professional collaborative practice between multi-disciplinary professionals, not partnerships, at least three school professionals on each SBT had to agree to participate in the study.
- The two cases were from different schools, which allowed me to examine two different groups of professionals using the same mediating approach to achieve the same outcome, allowing for a literal replication.
- Each case included school professionals who supported the educational program of a student who met all of the following criteria:
 - \circ was enrolled in a classroom from Kindergarten to Grade 7
 - attended an inclusive, general education classroom and spent the majority of their day in the same classroom as their same-age peers
 - had a diagnosis of a moderate to profound intellectual disability (ID) and a comorbid physical disability and/or sensory impairment
 - had a level 1 or level 2 low incidence special education designation of "physically dependent multiple needs," "moderate to profound intellectual disability,"
 "physical disability or chronic health impairment" or "Autism Spectrum Disorder" (designated by the British Columbia Ministry of Education)

- Participants agreed to use a specific approach (i.e., principles of UDL) to collaboratively design learning activities that would be accessible to the student with ESNs to facilitate participation in a curricular unit.
- The CT agreed to teach the curricular unit for at least three weeks (but no more than one school term).

3.4.2 Exclusion Criteria

School professionals who supported students who did not meet the diagnostic criteria listed in the inclusion criteria, did not have one of the special education designations listed in the inclusion criteria, and/or did not spend the majority of their day in general education classrooms with same-age peers were excluded from the study. As well, school professionals who did not agree to use UDL to guide the development of curricular learning activities were excluded. Members of the SBT who were not involved in a professional role (e.g., parents, the student) were also excluded, as the focus of the study was inter-*professional* collaboration.

3.4.3 Participant Recruitment

After obtaining approval from both the University of British Columbia's Behavioural Research Ethics Board and from the school district, participant recruitment commenced. To identify prospective participants, I used a third-party recruitment strategy. The school district connected me with a district administrator and, after speaking to them on the phone and discussing my research study, I provided them with written information about the study via email (see *Recruitment Letter for District Administrators* in Appendix A). The letter asked the district administrators to identify schools where students with ESNs who met inclusion criteria were enrolled and forward a consent form that included the research team's contact information and an invitation to participate in the study to the principal at each of those schools (see *Introductory Letter and Consent: Principal* in Appendix A).

Principals from two schools contacted me and, after a phone call discussing details of the study, agreed to participate and returned signed consent forms to me via email. Each principal then forwarded a consent form that included the research team's contact information and an invitation to participate in the study (see *Introductory Letter and Consent: Professional Members of School Team* in Appendix A) to the CT and all professional members of the SBT (e.g., LST, educational assistant [EA], and district specialists, such as SLPs, OTs) who supported the student with ESNs. Professional members of the SBT who were interested in participating in the study returned a signed consent form to me via email. As I received signed consent forms from potential participants, I contacted them via email and offered to set up a time to discuss the study and answer any questions they had about the study over the phone.

With both cases, once I received consent from one CT, one team member from a different discipline, and at least one other team member, I asked the CT to forward an introductory letter describing the study, a consent form, and the research team's contact information to the parent or guardian of the student with ESNs (see *Introductory Letter and Consent: Guardian* in Appendix A). In both cases, I also requested and received permission from the respective student's parent or guardian to obtain a copy of the student's Individual Education Plan (IEP). As well, I asked the CT to forward an assent form for the student to review and sign with their parent or guardian (see *Letter of Assent: Student* in Appendix A). If the student was not able to sign or make a mark on the assent form, the form directed parents or guardians to ask their child to communicate assent verbally or via a communication system; I received assent forms for both students indicating the child assented to the study.

A multiple-case study involving two cases allowed for literal replication of cases, thereby strengthening analytical generalizations (Yin, 2018), while keeping data collection manageable for a doctoral dissertation. I selected the first two groups of participants from different schools to return consent forms for at least three members of the school team, including the CT and another professional from a different discipline, and the student's parent or guardian. A third principal expressed interested in participating in the study after I had recruited participants for both cases. As per the instructions I included on the consent forms, I contacted this principal, thanked them for their interest, but informed them that I had already recruited participants for two cases.

3.4.4 Consent

I obtained signed consent from all participants, as well as the parents or guardians of the students with ESNs, before I began collecting data. All participants were provided with information about the study prior to data collection, including the research team's contact information, so that anyone could contact us with questions or concerns about the study at any time. I also obtained assent from each participant throughout the process of the study. For example, I ensured each participant verbally assented to interviews and observations and asked for permission to review documents that were not publicly available from the author or creator.

Because the study revolved around a child, consent from their parent or legal guardian was required for their involvement in the study; however, it is equally as important that the student had the right to refuse their involvement even if their parent or guardian had consented (Phelan & Kinsella, 2013). Therefore, as previously noted, I obtained assent from the students with ESNs by providing their parent or guardian with a student assent form that explained the purpose of the study and asked them to review it with their child in a way the child could

understand (e.g., using visual supports, Augmentative and Alternative Communication [AAC] system); the methods of communication were decided on by the student's family.

3.4.5 Privacy

To protect participant identities, participant responses were kept confidential and all identifying information (including participant names, school name, city) were given pseudonyms; in addition, participants were informed that all identifying information would remain confidential in any publication of the research. The schools did not have access to individual participant responses, and transcripts of all recordings (audio and video) included only information provided by study participants and were labelled with codenames. I also used codes instead of names on all documents I collected or notes I made throughout data collection (e.g., in interviews, on fieldnotes) and redacted identifying information on documents. The key to the codes was stored in a locked drawer in my advisor's research lab at the University of British Columbia. All hard data (e.g., fieldnotes) were stored in a separate locked filing cabinet in my advisor's research lab at the University of British Columbia. All electronic files, including audio and video recordings, were encrypted and stored on a password-protected laptop and backed up on the University of British Columbia's OneDrive cloud services for faculty, undergraduate, and graduate research, which is compliant with the Freedom of Information and Protection of Privacy Act. Furthermore, documents containing confidential information that were collected or exchanged via email were password-protected. All data will be destroyed five years after publication of the research; digital files will be destroyed using encrypting software and hard copies will be shredded.

3.4.6 Participant Profiles

Each case revolves around a student with ESNs, and participants included professionals who contributed to the respective student's education program. The students were given the pseudonyms 'Maya' and 'Florence' and are described below, with information taken from their IEPs. Participants are also described below, with information taken from the background questionnaires (see Appendix B, *Background Information Questionnaire*) they completed, prior to taking part in the facilitated planning meetings. The information I collected on the background questionnaire was provided in short answer form, and included years of experience in the respective participant's current role and their perspectives on: a) how they fulfilled their role on the SBT; b) how they had previously collaborated with other participants; and c) how work was divided among SBT members at the school. As well, participants described their knowledge of UDL and experience of using UDL in practice.

3.4.6.1 Case 1: Maya

3.4.6.1.1 Student: 'Maya'. Although she was not a participant in the study, 'Maya' (a pseudonym) was at the center of the collaborative planning process. Maya is a student with ESNs, including a moderate to profound ID and hearing and visual impairments. She had hearing aids and glasses, but didn't often wear them. At the time of data collection, she was enrolled in grade six and spent most of her school day in a general education classroom with same-age peers. According to her IEP, Maya was very social, loved to move, enjoyed music, and responded to choices. She primarily communicated non-verbally, using pictures, signs, and gestures, and at the time the study was conducted, she was about to trial an AAC device. She used a wheelchair (pushed by someone else) as her primarily means of moving around the environment.
The Ministry of Education has "special needs categories...to assist districts in identifying the needs of students and providing appropriate education programs to them" (British Columbia Ministry of Education, 2016, p. 40). Under this categorization system, Maya had a Category A designation of "physically dependent – multiple needs" and had a modified education program directed by her IEP. Maya met criteria for the level 1 low incidence funding category, which meant the school district received the highest level of supplementary funding to support her education program. At the time of data collection, she was receiving support from PIOP, SET-BC (a Provincial Outreach Program that provides assistive technologies to students with ESNs in B.C.), district AAC-SLP, district OT, district physical therapist (PT), district teacher for the deaf and hard of hearing, district visual impairment teacher, nursing support, EA, and two LSTs.

3.4.6.1.2 *Classroom Teacher (CT).* At the time the study was conducted, the classroom teacher had 18 years of teaching experience. From her perspective, her role with respect to Maya was to support the implementation of Maya's program in her classroom, under the guidance of the LSTs. Her previous experience in collaborating with other participants was through formal collaboration meetings (e.g., SBT meetings) and one-on-one meetings with the resource team (e.g., LSTs) or the EA. She noted that SBT members were flexible and worked cooperatively as a team. She had previously attended workshops on UDL early in her career.

3.4.6.1.3 Learning Support Teacher A (LST A). At the time the study was conducted, LST A had three years of experience as an LST. She had previously worked as an EA and a behaviour interventionist, and became a teacher to train as an LST. At the time of data collection, she worked full-time as an LST at the case study site. From her perspective, her role was to coordinate with district staff (e.g., SLP) and other agencies involved in Maya's education, including provincial programs, such as PIOP. She shared case management with LST B and

described her previous experience of collaboration with other participants as frequent communication between team members, noting that the focus of these collaborative interactions was joint problem-solving to ensure Maya was socially engaged with her peers. She explained that members of the SBT typically provided support in their disciplinary areas of expertise. She noted that in her experience, CTs did not always want support from LSTs or were not able to make time to collaborate. She also noted that when she made recommendations or modelled a strategy for an EA to implement in the classroom, it was rare for the recommendation or strategy to be carried out when she was not in the room. She had recently completed several professional development workshops on UDL, but had not had the opportunity to see UDL implemented in practice.

3.4.6.1.4 *Learning Support Teacher B (LST B).* At the time the study was conducted, LST B had been working as an LST for two months. She provided learning support services to the school four days a week. From her perspective, her role with respect to Maya was to schedule and lead SBT meetings and co-case manage Maya's education program. She described her previous experience of collaborating with other participants as sporadic individual check-in meetings and communication with the whole support team (e.g., nursing support, OT, PT, PIOP, SET-BC), with the focus of creating and implementing an inclusive education program for Maya. She noted that when it came to Maya's education program, the planning was typically done by the LSTs in collaboration with wrap-around services (i.e., district resource staff), and implementation was typically done by the EA, CT, and LSTs. She had recently completed her diploma in inclusive education and attended several workshops on UDL, and was passionate about supporting classroom teachers to use UDL in classroom settings.

3.4.6.1.5 Educational Assistant (EA). At the time the study was conducted, the EA had been working with Maya for two years, and had six years of experience as an EA. She had a child with disabilities and experience as a parent advocate for support in education. From her perspective, she noted that she played a role in providing input on Maya's learning outcomes during IEP meetings. Her role also included teaching Maya and implementing and executing her IEP goals. She described her experience in collaboration with other participants as meeting with the CT and LSTs to plan, discuss, and share ideas and successes, and noted that district resource staff (e.g., Teacher for the Visually Impaired, PT, SLP) provided resources and helped to set up the classroom. She was introduced to UDL at the facilitated planning meeting.

3.4.6.1.6 Speech-language Pathologist (SLP). At the time the study was conducted, the SLP had 10 years of experience as an SLP. However, this was only her second year working with this school district, in the role of district AAC-SLP. From her perspective, her role was to work with students with complex communication needs who need AAC to communicate, and also to train the school staff (and parents) on how best to support the student in learning to use that system. She also provided consultation around IEP goals, learning activities in the classroom, and language and literacy intervention. She described her previous experience of collaborating with the LSTs as focused on IEP goals and her experience of collaborating with the EA as focused on daily activities that supported Maya's communication skills. She noted that it was the LSTs who were responsible for case management and setting up Maya's IEP, but noted that all members provided input regarding IEP goals, alongside Maya's parents. According to the SLP, the CT provided daily learning instruction, and the EA supported Maya in the classroom and school. She further noted that most of the workload associated with Maya's education program fell on the EA (e.g., modifications to the curriculum and accommodations). Furthermore, she noted that in

general, CTs did not contribute to academic or communication goals for students with complex support needs and that there was an overreliance on "experts" such as SLPs to set goals. She had experience with a Multi-Tiered System of Support (MTSS) model and understood how SLP services could support all students at a universal (tier 1) level. She had recently attended several presentations on UDL.

3.4.6.2 Case 2: Florence.

3.4.6.2.1 Student: 'Florence'. Similar to Maya, 'Florence' (a pseudonym) was not a participant in the study, but the collaborative planning process focused on her. Florence was also a student with ESNs, including a moderate to profound ID, physical disability, and chronic health impairment. At the time of data collection, she was enrolled in grade two and spent most of her day in a combined grade 1/2 general education classroom with same-age peers. According to her IEP, Florence was sweet, happy, and easy-going. She loved to play with balls, especially with her peers. She also loved to walk, climb, and crash into things; enjoyed music and movement; and liked to play outside and in the school's sensory room. Florence communicated clearly when she liked or disliked something, and was learning to use Picture Exchange Communication System (PECS); at the time of data collection, she was at level one on the PECS program. Florence had recently learned to walk independently, but required adult supervision to safely navigate stairs. She had difficult coordinating her movements and often threw items. She also had a limited diet and only ate pureed foods, and at the time of data collection, was learning to feed herself during mealtimes. Her IEP also noted that she had a tactile aversion to several textures, had a very short attention span, and was not motivated to participate in most classroom tasks, especially those that involved pencils and paper.

Under the British Columbia Ministry of Education's (2016) special needs categorization system, Florence had a Category D designation of "physical disability or chronic health impairment" and had a modified education program directed by her IEP. Florence met criteria for the level 2 low incidence funding category, which meant that the school district received midlevel supplementary funding to support her education program. At the time of data collection, she was receiving support from the district SLP, district OT, district PT, an EA, and LSTs.

3.4.6.2.2 Classroom Teacher (CT). At the time the study was conducted, the classroom teacher had 28 years of teaching experience and had been teaching at the school for 24 years. From her perspective, her role on the SBT was to bring concerns to the SBT and share strategies that she was using or had recently trialed to support Florence in the classroom. She described her previous collaboration with other participants as having occurred during SBT meetings, informal and formal meetings with the LST, and regular check-ins with the EA. She noted the resource team (i.e., LSTs and district resource staff) was responsible for providing ideas and helping to implement ideas to include Florence in the classroom, the EA was responsible for implementing ideas and adapting them as needed, and her role as the CT was to help support the implementation of ideas. She described collaboration on the SBT as being helpful in providing suggestions to support student needs. Her experience with UDL was very limited, although she had participated in a professional development workshop on UDL several years previously.

3.4.6.2.3 *Learning Support Teacher (LST).* At the time the study was conducted, the learning support teacher had 10 years of experience as a learning support teacher and had been working at the case study site school for five years. From her perspective, her role on the SBT was to chair SBT meetings, including leading the meetings and taking minutes. She noted that brainstorming and creative thinking were encouraged during SBT meetings. She noted that

collaboration with other participants occurred formally during weekly SBT meetings and informally when members of the SBT were in the resource room. She also noted that each member of the SBT brought their own expertise to the development and implementation of strategies that supported Florence's education program, and she explained that communication was key to working collaboratively. She had been using UDL for many years, in two different school districts, and preferred to use MTSS for designing and implementing student supports.

There were two LSTs at the school; one LST was the case manager for students in Kindergarten and grade one, and the other LST was the case manager for students in grade two to grade five. At the time the study was conducted, this participant was the LST assigned to support students in Kindergarten and grade one, so she was not Florence's assigned LST for the 2022-2023 school year. However, she had been Florence's LST for the previous two school years. Florence's current LST had also agreed to participate in the study, but had to withdraw prior to data collection for personal reasons, so LST who had worked with Florence previously agreed to participate in the study in her place.

3.4.6.2.4 Educational Assistant (EA). At the time the study was conducted, the EA had almost two years of experience as an education assistant and had just started working at the case study site school in September 2022. From her perspective, her role on the SBT was to support Florence with all her educational, physical, social, and emotional needs during the school day. She noted she shared feedback about what she thought Florence could work on and what she did to support Florence's IEP goals with the other members of the SBT. She described her previous experience of collaborating with other participants as sharing her perspective on student learning needs with other members as they developed learning goals and activities. She noted that the SBT members engaged in collaborative practices by talking about student stretches and

strengths, as well as challenges and successes in their education program. She noted that the other members of the SBT provided insight into Florence's education program based on their disciplinary experience and expertise; for example, the SLP supported Florence's communication, the CT engaged Florence in classroom activities as much as possible, and the LST created curricular learning activities and provided resources and strategies to facilitate Florence's participation. The EA indicated she had limited experience with UDL but noted she thought it was an appropriate way to create a learning plan for students with diverse needs.

3.4.6.2.5 Speech-Language Pathologist (SLP). At the time the study was conducted, the SLP had four or five years of experience as an SLP and had been working at the school for the previous two years. From her perspective, her role on the SBT was to be available upon request for consultation on differentiation, goals and strategies, and learning materials. She described her previous experience of collaboration with other participants as having occurred through informal consultation with the LST. Shed noted that her experience with collaboration on SBTs had been generally positive, but that it had been limited by a lack of time and resources. She also noted that she had adopted an MTSS model of service delivery and indicated she had some background knowledge of UDL.

3.5 Setting

The study was conducted in a school district in a large urban centre in the lower mainland of British Columbia, Canada. This district included elementary schools (K-grade 5), middle schools (grades 6-8), and secondary schools (grades 9-12). The setting for the first case was a middle school and the setting for the second case was an elementary school. In this district, students with disabilities could attend district special education classrooms in general education schools or inclusive general education classrooms in their neighbourhood schools. Most

elementary-aged students (K-grade 7) with disabilities were registered in inclusive placements. The school district had made a commitment to providing education on UDL and supporting staff to implement the UDL framework in their practice.

3.6 Design

3.6.1 Case Study

Case study methodology allows for the study of complex phenomena in a natural setting, when the behaviour of the participants cannot be manipulated (Yin, 2018). As the aim of the present study was to deepen our understanding of the complex phenomenon of IPP between multi-disciplinary school professionals (i.e., the case) during a facilitated planning meeting where they used principles of UDL to design learning activities for a grade-level science unit that were accessible to a student with ESNs, case study methodology is an ideal choice. Case study work promotes an appreciation for the complexity of a single case and fosters a deep understanding of its activities within specific circumstances (Stake, 1995). Evidence in the literature indicates that working toward a shared goal is a key facilitator to IPP (Villeneuve & Shulha, 2012) and CHAT suggests that subjects (e.g., multi-disciplinary school professionals) work toward a mutual goal via mediating tools or approaches (Engeström, 2014). In the context of this study, the mediating tools or approaches (i.e., the facilitated planning meeting and the UDL framework) can be considered the specific circumstances under which IPP is being examined. I elected to use a facilitated planning meeting, because there is evidence in the literature that suggests that dedicated time to collaborate (Villeneuve & Shulha, 2012) and external supports to the collaborative process, such as facilitated meetings, promote IPP (Hadley et al., 2000). I selected UDL as a mediating approach because there is a large body of evidence that suggests the use of UDL to design curricular activities could increase academic participation

of students with ESNs (e.g., Browder et al., 2008). As well, the mediating approach served as a common framework or 'language' to guide participants in the planning process; as several disciplines working in inclusive education, including teachers, SLPs, and OTs, implement elements of UDL in their professional practices, it was likely that participants from different disciplines would be familiar with the UDL framework (Kennedy et al., 2018) To summarize, case study methodology provides an opportunity for an in-depth study exploring the phenomena in question, in this case, the IPP of multi-disciplinary school professionals, under specific circumstances (i.e., the use of the UDL principles during a facilitated planning meeting) and considers the contextual factors of each case.

3.6.1.1 Multiple-case Study: Replication Logic. The present study followed the multiplecase study method outlined by Yin (2018). Case study research can be used to develop analytical generalizations through the comparison of the findings of the study to previously developed theory (Sparkes & Smith, 2014), supporting this study's goal of informing current theory of IPP between multi-disciplinary school professionals. A multiple-case study design increases the strength of the study's analytic conclusions (Yin, 2018). Therefore, I included two cases that I predicted would result in similar findings, to allow for literal replication of cases, thereby providing support for the study's initial theoretical propositions (Yin, 2018). For example, the research settings for both cases are located in the same school district; thus, I predicted similar values, policies, and practices regarding inclusive education would be present in both research sites. As well, the students at the center of the collaborative planning processes both had ESNs, including a moderate to profound ID; therefore, I predicted that teams would identify similar barriers to designing accessible curricular learning activities and similar goals for the students' respective education programs.

3.6.2 Unit of Analysis

In the context of the present study, the unit of analysis refers to the IPP between multidisciplinary school professionals. This study can be defined as instrumental, meaning the cases were not the primary interest, but studying them provided further insight into the phenomenon (Stake, 2005). In other words, studying the IPP of multi-disciplinary school professionals during a facilitated planning meeting where principles of UDL were used to guide the design of activities for a grade-level science unit that were accessible to a student with ESNs contributed to our overall understanding of IPP in inclusive education, particularly with respect to academic inclusion of students with ESNs. Yin (2018) suggested "bounding the case" to help focus the study by placing boundaries on what the case is and what the case is not (p. 31). In the present study, cases were bounded by definition, context, and time.

3.6.2.1 Definition. Cases were bounded by the definition of IPP from the perspective of CHAT. According to CHAT, IPP is defined as a process of addressing contradictions that arise between components of the activity system as subjects work toward a mutual outcome through collaborative interactions, which are characterized as interactions that result in transformative learning, as evidenced by practitioners re-conceptualizing their own professional roles and responsibilities (Martin, 2008; Villeneuve, 2011). Therefore, I directed my data collection to include the contradictions that arose and the collaborative interactions that participants used to address them.

3.6.2.2 Context. Cases were bounded by the outcome of the facilitated planning meeting relevant to the proposed study. Therefore, I collected only data related to IPP between

participants when the focus was on the collaborative design of a curricular unit that was accessible to the student with ESNs. Thus, other outcomes related to the facilitated planning meetings (e.g., student participation, the social life of the classroom, progress made on student learning goals) were considered to be outside the bounds of the case. Furthermore, the context of each case was not bound to a physical location or activity. For example, data were collected during observations of participants taking part in a planning process where they designed activities for a grade-level curricular unit (i.e., the facilitated planning meetings), but also included examples of how contextual factors (e.g., participants' professional roles) influenced the collaborative process.

3.6.2.3 Time. Each case was bounded by time. At a micro level, cases were bounded by a set timeframe where data collection occurred. Data collection for each case started with a facilitated planning meeting and continued throughout the teaching of the selected curricular unit. This length of time focused data collection with each case for at least three weeks, during one curricular unit. This timeframe allowed participants to engage in IPP during the development of learning activities and materials for the unit and reflect on the collaborative process as the curricular unit was taught in the classroom. As well, the study did not exceed more than one school term. Bounding the case by these parameters ensured the amount of data collected was manageable for analysis. As well, limiting the scope of the study to one curricular unit decreased the chance of attrition (i.e., participants withdrawing consent to participate).

On a macro level, cases were bounded by the time in history the study took place and the climate of inclusive education at that time. For example, data collection occurred in the fall of 2022. At that time, the vision of the Ministry of Education in B.C. was to "provide inclusive and responsive learning environments that recognize the value of diversity and provide equity of

access, opportunity and outcome for all students including students with disabilities and diverse abilities" (British Columbia Ministry of Education, n.d.-b). More broadly, there was a call in the field of education for an increase in knowledge regarding the application of UDL and individualized student supports to promote inclusion of students with ESNs (e.g., Morningstar et al., 2016; Rao et al., 2017) and examine effective collaborative practices for multi-disciplinary school-based teams (e.g., Morningstar et al., 2016; Tracy-Bronson et al., 2019).

3.7 Propositions

Propositions developed from existing literature and previously established theory served to focus data collection and analysis. Each proposition "direct[ed] attention to something that should be examined within the scope of the study" by "reflecting an important theoretical issue...and tell[ing] you where to look for relevant evidence" (Miles & Huberman, 1994; Yin, 2018, p. 27-28). The following are based on the British Columbia Ministry of Education's (2016) definition of collaborative consultation and on existing literature on IPP:

- 1. Members will share values and goals (Pfeiffer et al., 2019).
- Members will share the task and responsibility of identifying and implementing goals (Barnes & Turner, 2001; British Columbia Ministry of Education, 2016; Fairbairn & Davidson, 1993).
- Members will learn from and about the roles and responsibilities of all team members (Pfeiffer et al., 2019; Tracy-Bronson et al., 2019; Villeneuve, 2009; Wehrmann et al., 2006)
- 4. Members will experience transformative, inter-professional learning, including:

- (a) engaging in co-configuration, where participants co-design supports for students (i.e., engage in interactive problem-solving) rather than addressing different aspects of a student's educational program (Martin, 2008; Villeneuve, 2009)
- (b) demonstrating expansive learning, where participants learn from each other's knowledge and use the distributed expertise to work toward the shared goal (Engeström, 2000; Martin, 2008; Pfeiffer et al., 2019)
- (c) engaging in boundary crossing, where participants from different disciplines overlap their practices, blurring the lines of professional roles and responsibilities (Martin, 2008).
- (d) a key member of the group engaging in leadership practices, also known as knotworking (Martin, 2008; Villeneuve, 2011).
- 5. IPP will result in:
 - (a) district resource staff developing a good understanding of the education system(Fairbairn & Davidson, 1993)
 - (b) classroom teachers developing a good understanding of their students' specialized learning needs (Wehrmann et al., 2006)
- Members will demonstrate mutual trust and open communication (Bose & Hinojosa, 2008; British Columbia Ministry of Education, 2016; Gallagher et al., 2018; Tracy-Bronson et al., 2019).

3.8 Data Collection

Case study work is characterized by the collection and analysis of multiple sources of data, which allow for a complex study of a phenomenon through multiple perspectives and "converging lines of inquiry" (Yin, 2018, p. 127).

3.8.1 Sources of Data

Case study research relies on multiple sources that are used to corroborate the data (Yin, 2018). Data collection was determined by the study's research question, theoretical framework, and propositions (Yin, 2018). In the present study, I collected data using direct observation, document review, focus groups, and individual interviews.

3.8.1.1 Direct Observation. Observations promote data collection in the natural context of the case (Yin, 2018). In each case, I conducted formal observations during a facilitated planning meeting where participants designed learning activities and materials for a grade-level science unit that were accessible to a student with ESNs. I also recorded direct observations during focus groups. The facilitated planning meetings and focus groups were video and audio recorded, allowing me to collect observation data after the fact. I collected data in the form of narrative fieldnotes, using a running record (see Appendix C, *Running Record for Direct Observations*) to record everything I saw and heard during the course of the meetings and focus groups. I also transcribed the audio recordings from the facilitated planning meetings and focus groups and used the transcripts as a source of data.

3.8.1.2 Document Review. Document review was an important source of data for the present study, as document review provided contextual information and helped focus attention to how participants engaged in IPP. Specifically, the British Columbia Ministry of Education's *Special Education Services: A Manual of Policies, Procedures and Guidelines* (2016), *Roles and Responsibilities of Teachers and Teacher Assistants/Education Assistants* (BC Teachers Federation and Canadian Union of Public Employees BC, 2009), and the collective agreement between the school district and the BC Teachers' Federation (2022) provided critical contextual information regarding rules, policies, and professional expectations of participants and offered

integral insight into influential factors of collaborative work (Engeström, 2000). The students' IEPs are collaborative planning tools that "describe individualized goals, adaptations, modifications, and the services to be provided... [and] documents the relationships between any support services being provided and the student's educational program" (British Columbia Ministry of Education, p. 16), and were another important source of data. The IEPs provided information on student strengths and interests, proposed student learning objectives, general supports, and services being provided.

Other documents that were reviewed included documentation produced during the facilitated planning meeting (e.g., participant notes). As well, the background information questionnaires that participants completed prior to the UDL presentations and facilitated planning meetings also served as documents for review, as they provided background information on participants' professional experience and perspectives on roles and responsibilities on the SBT.

3.8.1.3 Focus Groups and Interviews. Focus groups allow researchers to collect data on a specific topic in a group format, allowing participants to share and learn from each other (Plummer-D'Amato, 2008). For each case, I conducted focus groups with all participants in that respective case. I used a list of guiding questions to facilitate the focus groups (see Appendix D, *Guiding Questions for Focus Groups*). Each focus group lasted 60-90 minutes.

I also conducted an individual interview with each participant. Individual interviews can be more intimate and personal than focus groups, providing an opportunity to gain insight from each individual participant's perspective on a topic (Hermanowicz, 2002). Interviews provided insight from the participants' perspectives on collaborative practices. I used a semi-structured interview format guided by open-ended questions, thus encouraging fluid, flexible conversations

(Hermanowicz, 2002). I used a list of guiding questions for each semi-structured interview (see Appendix E, *Guiding Questions for Semi-Structured Interviews*), which were conducted in person or over via audio or video call. Individual interviews were approximately 30-60 minutes in length. Focus groups were audio and video recorded; interviews were audio and/or video recorded; focus groups and interviews were transcribed verbatim.

3.8.2 Data Collection Timeline

This dissertation consists of two parallel case studies of the IPP between multidisciplinary school professionals who support the education program of a student with ESNs. Data collection took place in the fall, during the first school term, between October and December 2022. Data were collected over approximately eight weeks. See Figure 6 and Figure 7 for diagrams depicting data collection timelines.

Figure 6



Timeline for Data Collection: Case 1

Figure 7





Data collection activities are described in detail in the following sections:

3.8.2.1 Background Information

Data collection at this stage of the study included document review (e.g., review of background information questionnaire, IEPs, and formal documents). At the beginning of the term, I collected background information from all participants via a questionnaire, including experience working with the current school-based team (see Appendix B, *Background Information Questionnaire*). I contacted the school principals and requested that a password-protected copy of the students' IEPs be forwarded to me via email. After receiving IEPs for both students, I reviewed the IEPs, along with the other documents I had selected as sources of data.

3.8.2.2 Facilitated Planning Meeting

Training in UDL supports collaboration in developing inclusive learning activities (Courey et al., 2013). Therefore, participants in each case attended and took part in a half-day

session that included a presentation on academic inclusion of students with ESNs and the Center for Applied Special Technology (CAST) model of UDL (approximately 45 minutes). The presentation was immediately followed by a facilitated planning meeting (approximately 2.25 hours), as external support, such as facilitated meetings, promote IPP (Hadley et al., 2000). The half-day sessions took place during work hours, at each respective student's school, in a private, empty classroom. I led the presentations and the planning meetings were facilitated by my advisor, Dr. Jennifer Katz. Both the presentations and the facilitated planning meetings were video and audio recorded. Refreshments were provided for participants; I adhered to the school district's Covid-19 Safety Protocols regarding sharing of food. Both sessions took place in the fall, around the time the fall IEP meetings took place. This time period was selected for the facilitated planning meetings, as the fall IEP meetings typically involve education professionals setting student learning goals for the year (British Columbia Ministry of Education, 2016), and I hoped that the individual student learning goals that participants developed during the facilitated planning meetings would be included on the students' IEPs.

The focus of the planning meetings was to guide participants through a planning process to design learning activities for one curricular unit, previously selected by the classroom teacher, that were accessible to the student with ESNs, using B.C. curricula and principles of UDL. In the context of the present study, a curricular unit is considered to be a group of learning activities and assessments that typically fall under a specific theme and are designed to address specific educational goals from the curriculum. In B.C., teachers combine three elements of the curriculum model, *Content, Curricular Competencies*, and *Big Ideas*, in the teaching and assessment of the students in their classroom (British Columbia Ministry of Education, n.d.-a). *Content* refers to what the students are expected to know; *Curricular Competencies* refer to what

students are expected to do, and *Big Ideas* include what students are expected to understand (British Columbia Ministry of Education, n.d.-a). As well, a set of *Core Competencies* are embedded within the learning standards of B.C.'s curriculum, and include "sets of intellectual, personal, and social and emotional proficiencies that all students need to develop in order to engage in deeper learning" (British Columbia Ministry of Education, n.d.-a).

The following is an outline of the facilitated planning meeting (please see Appendix F, *Protocol for Facilitated Planning Meetings* and Appendix G, *Agenda for Facilitated Planning Meetings* for a more detailed description of the meeting):

- Prior to the planning meeting, the CT selected a subject and unit they were planning to teach that term, designed from B.C. curriculum. This unit would be the focus of the facilitated planning meeting. Both of the CTs chose science units: the CT from Case 1 (Maya) chose a unit on the scientific method; the CT from Case 2 (Florence) chose a unit on matter.
- At the facilitated planning meeting, the CT shared an outline of the curricular unit, including:
 - Class goals based on Big Ideas from the B.C. curriculum
 - Brief description of learning activities
- Next, participants were instructed to develop 1-3 individual learning goals for the student with ESNs, based on the Big Ideas, Core Competencies, and/or Curricular Competencies.
- Participants then spent the remainder of the meeting designing learning activities and materials that would promote participation of the student with ESNs, using principles of UDL to guide the process. For example, participants considered how: a) activities could be designed so that they were accessible to Maya or Florence; or b) supports for Maya or

Florence could be embedded into learning activities that all the students would take part in. In other words, supports that were embedded in the learning activities were designed with Maya or Florence in mind, but were accessible to all students in the classroom.

Participants were provided with blank sheets of paper to record notes during the planning meeting. Copies of participant notes were collected by the research team for analysis. Data collection at this stage of the study included field notes from direct observations of the meetings (including review of the video recordings), transcripts of the planning meetings, and a review of participants notes that were produced during the facilitated planning meetings. Participant notes for Case 1 (Maya) were provided by LST B; participants notes from Case 2 (Florence) were provided by the CT. Specific details of each curricular unit are provided in Table 1.

Table 1

Summary of Curricular Units Designed During the Facilitated Planning Meetings

Case 1: Maya's Team **Case 2: Florence's Team** The Scientific Method Matter Class goals understand matter is useful because of its • understand that everyday materials are often • properties mixtures • understand materials can be changed • understand that elements consist of one type through physical and chemical process of atom, and compounds consist of atoms of make predictions and observations different elements chemically combined Individual learning • make simple predictions when given two demonstrate a sustained interest about a • goals scientific topic choices communicate purposefully with peers and • observe and measure data • adults (i.e., yes/no; make choices; ask for • co-operatively design projects help; ask for a break) Learning activities • students will watch a video; option for • students will watch a video; option for and materials for students to watch it individually on iPad students to watch it individually on iPad all students • students will play a movement predication • CT will introduce concepts using pictures, words, concrete items, and demonstrations game: students who predict X, move right; • Students will learn a weekly poem and/or students who predict Y, move left song about matter • students will create a flip-book to practice key • CT will include visuals from Florence's AAC vocabulary, using words and visuals device on vocabulary list • students will be responsible for gathering • students will create a flip-book to practice key materials from around the class and handing vocabulary them out to peers • CT will provide real objects or pictures of • students will use Yes/No cards or a low-tech real objects for sorting activities Assistive Technology (AT) device to make predictions

		 students will bake a cake or cookies: make predictions and observations about states of matter
		• students will create a structure out of pipe cleaners and tin foil to demonstrate physical changes
Embedded supports	 students will use a switch-activated spinner (i.e., AT device) to make random choices (e.g., members in groups, order of group presentations) CT will provide visual supports, including visuals that represent core words on Maya's AAC device for flip-books 	 CT will provide options for group or partner activities, instead of individual activities CT will provide visual supports, including visuals that represent key words on Florence's AAC device for flip-books CT will provide visual supports for actions students can use to create pipe cleaner/tin foil structures (e.g., roll, scrunch, bend) or adjectives (e.g., tall, wide) CT will provide flexible seating options

• CT will provide in-class sensory breaks

The CT selected the subject and unit for the facilitated planning meeting, and the exact length of the data collection period for each case was determined by the length of time the CT had set aside for the unit (approximately three to eight weeks long). Data were collected at the facilitated planning meetings, and data collection continued as the CT taught the unit and implemented the learning activities and materials that were designed during the facilitated planning meetings.

3.8.2.3 Focus Group #1

After the planning meeting, participants were invited to take part in a focus group that lasted approximately 60-90 minutes. Focus Group #1 for Case 1 (Maya) took place three weeks after the planning meeting; Focus Group #1 for Case 2 (Florence) was scheduled to take place one week after the planning meeting but was cancelled due to a severe winter storm that resulted in school closures. Focus Group #1 for Case 2 was not rescheduled; thus, participants in the second case participated in only one focus group, Focus Group #2, which took place toward the end of the data collection period, whereas participants from Case 1 took part in two focus groups (one before implementation of the curricular unit and one toward the end of the data collection period).

All participants from Case 1 took part in Focus Group #1. I facilitated the focus group, using a list of guiding questions (see Appendix D, *Guiding Questions for Focus Groups*). The focus group took place during work hours and was held in the school, in an empty classroom. The focus group was audio and video recorded. Refreshments were provided for participants, again adhering to Covid-19 Safety Protocols regarding sharing of food. Data collection at this stage of the study included focus group discussions and direct observations (including review of the recordings) taken from the focus group meeting.

3.8.2.4 Implementation of Curricular Unit

Ideally, the classroom teacher would have started teaching the curricular unit immediately after participating in the facilitated planning meeting so that the collaboratively designed learning materials and activities were remembered clearly. In the first case, the teacher started teaching the unit approximately four weeks after the facilitated planning meeting, as she had to adapt her original schedule to accommodate for extra-curricular school activities. In the second case, the teacher started teaching the unit three days after the facilitated planning meeting. Participants implemented the materials and learning activities that had been designed during the facilitated planning meeting in a natural context, as the students in the class took part in the curricular unit (i.e., without any direction from the research team). Participants were provided with a template for collaboration notes and were asked to record any communication among themselves regarding the implementation of learning activities and materials, but none of the participants elected to do so. As well, I asked for copies of any documents related to the curricular unit (i.e., lesson plans) to be shared with the researchers, but no other documents were received.

During the time the curricular unit was being taught in the classroom, all participants participated in an individual interview at a time that was mutually agreed upon between the interviewer and interviewee, which occurred during work hours. I conducted all semi-structured interviews, using a list of guiding questions (see Appendix E, *Guiding Questions for Semi-Structured Interviews*). Participants chose to be interviewed via audio or video call or in person (at the school, in a private room provided by the principal). Interviews took 30-60 minutes and were audio or video recorded. Data collection at this stage of the study included individual interviews and document review (e.g., lesson plans, collaboration notes).

3.8.2.5 Focus Group #2

Participants were invited to take part in a second focus group that lasted approximately 60-90 minutes. Ideally, the curricular unit would have been completed at the time of the second focus group, but in both cases, participants requested that the focus group take place before schools closed for the winter break. In the first case, the teacher was planning to continue teaching the unit when students returned to school in January; in the second case, the teacher planned to wrap up the unit before the break.

All participants from each case took part in their respective focus group. Again, I facilitated the focus groups, using a list of guiding questions (see Appendix G, *Guiding Questions for Focus Groups*). Because the first focus group for the second case (Florence) was cancelled, guiding questions for both the first and second focus groups were utilized. Focus groups took place during work hours and were conducted in an empty classroom in the school. As with the first focus group, the second focus groups were audio and video recorded. Refreshments were provided for participants, and we once again adhered to Covid-19 Safety Protocols regarding sharing of food. Data collection at this stage of the study included focus group discussions and direct observations (including review of the recordings) taken from the focus group meetings.

3.9 Data Analysis

3.9.1 Within-Case Analysis

My analytic approach to within-case analysis can be considered an integration of both inductive and abductive reasoning (Lo, 2016). Induction allowed for the generation of codes and themes to come from the data itself, and abduction supports the use of prior theory to make sense of the data (Braun & Clarke, 2022). To the best of my knowledge, very few studies examining

IPP between multi-disciplinary members of SBTs have been published in current literature. Furthermore, the facilitated, collaborative use of the UDL framework by multi-disciplinary school professionals to guide the design of a curricular unit that was accessible to a student with an ID has not been studied. Therefore, the present study is exploratory, and I used an inductive analytic strategy of "working [the] data from the 'ground up'" (Yin, 2018, p. 169), which allowed me to explore all possible interpretations of the data. However, there are substantial bodies of research on IPP in education, as noted in my literature review and the theoretical propositions, that guided my research design. Therefore, I made attempts to "bracket [myself] out from possible preconceptions" throughout within-case analysis (e.g., reflexive journaling, ongoing discussions with a critical friend), but acknowledge that my interpretation of the data was influenced by what I already knew about IPP and UDL (Lo, 2016, p. 179). This analytic approach aligns with CR, as it acknowledges the 'real' underlying causal mechanisms influencing observable events, yet embraces a relativistic epistemology by taking a constructivist approach to data analysis.

I analyzed data with respect to each research question using an analytic process of examining, categorizing, and recombining evidence through the six phases of reflexive thematic analysis outlined by Braun and Clarke (2006; 2022). Please refer to Figure 8 for a visual representation of the process of within-case data analysis.

Figure 8

Process of Data Analysis: Within Cases



Case study research is an iterative process where data collection and analysis occur at the same time (Baxter & Jack, 2008), and phase one of the reflexive thematic process started as I began data collection for each case. However, I wanted to keep my analysis of data from Case 1 separate and distinct from my analysis of data from Case 2; therefore, I waited until data collection was completed before moving on to phase two. As well, I completed phases two through five for the first case before commencing with phase two for the second case. The first case to be analyzed (i.e., Case 1: Maya) was the first case that participated in the facilitated planning meeting. I engaged in member checks for both cases at the same time, after phases one

through five were completed for both datasets. Finally, I moved on to complete phase six (writing the report) for Case 1, followed by phase six for Case 2. The six phases of reflexive thematic analysis (Braun & Clarke, 2006; 2022) for each case are described in detail below:

3.9.1.1 Case 1: Maya.

3.9.1.1.1 Phase One: Familiarization of the Data and Writing Familiarization Notes. Phase one began during data collection. As soon as I returned from observing a facilitated planning meeting or conducting a focus group or individual interview, I wrote a reflection memo. I also wrote a reflection memo as I transcribed each audio or video item. These reflection memos contain key concepts, ideas, or statements that stood out for me during the data collection activity. Memos also served as a space where I critically engaged with the data by asking analytical questions, such as "why might this participant be making sense of things in this way?" and recorded my reactions, questioning why I might be responding in a certain way, to maintain reflexivity throughout this phase of analysis (Braun & Clarke, 2022, p. 44). As each piece of evidence was collected, including data collected from direct observations (i.e., running record), scanned copies of documents, and focus group and interview transcripts, it was uploaded to NVivo (Release 1.0), a qualitative data analysis software program. Before moving on to phase two, I wrote a summary reflection memo related to the entire dataset, to capture the initial patterns of meaning I was observing and made note of the key questions I was asking about the data (Braun & Clarke, 2022). Memos also served as an initial form of data analysis, as they provided an initial direction for data interpretation (Yin, 2018).

3.9.1.1.2 *Phase Two: Coding.* In phase two, I began coding. As noted earlier, I took an inductive approach to data analysis during this phase, using "a process of coding the data without trying to fit it into a pre-existing coding frame, or [my] analytic preconceptions" (Braun &

Clarke, 2006, p. 83). Coding ranged from semantic, where codes depicted explicit meanings in the data, to latent, where codes captured "underlying ideas, assumptions, and conceptualizations – and ideologies – that inform the semantic content of the data" (Braun & Clark, 2006, p. 84). At the end of my first round of coding, I had assigned 564 codes to my entire dataset.

In a subsequent round of coding, I reviewed my list of codes against items in my dataset to ensure each code captured an interesting idea, concept, or meaning. This process included a review of data extracts that were coded under each code label and merging, recoding, and revising code labels. For example, I focused on broadening codes that were too fine-grained and expanding on codes that were too general. If the codes were very similar, I merged them together (e.g., 'offers strategies' and 'offers options' were merged together and renamed, 'resolving conflicts: focus on solutions'). However, most codes were cut and pasted as 'child codes' to maintain transparency. For example, when I reviewed the transcript from the facilitated planning meeting, I noticed a number of fine-grained codes that reflected specific problem-solving processes participants used during the collaborative process. I grouped those codes together under a broader concept and renamed them using 'conflict resolution' as part of the code labels. I also noticed a number of fine-grained codes that reflected perceived barriers to implementing the UDL curricular plan and collated those codes together using 'perceived barriers to implementation' as the code label. At the end of my second round of coding, 532 code labels remained, covering all extracts in the dataset.

3.9.1.1.3 *Phase Three: Generating Initial Themes.* Before I began collating my codes and forming code groups and candidate themes, I reviewed the reflexive memos I wrote during data collection and during phase one of my analysis (familiarization of the data). I made a list of the main ideas in the memos as a starting point for theme development, and used this list to loosely

guide my initial code groupings (see Appendix H, *Case 1: Key Ideas from Reflexive Memos*). Some of my initial groupings (e.g., 'professionalism: evolving practice', '(mis)perception that inclusion is hard work') were conceptual and included several child codes representing various elements (Braun & Clarke, 2022). However, at this stage, there were some codes that were put into topic summary groups (e.g., 'barriers to implementation' and 'issues related to study design'). At this point, I was not entirely sure about how some of the topic summary group codes fit into the code groupings that reflected an organizing concept and the topic groupings were created as an organizational tool. I also had a short list of codes that did not fit into any of the groupings, including: 'burnout,' 'conflict between how I want to fulfill my role and how I actually fulfill my role,' 'in-house vs external facilitator,' 'LSTs have to be diplomatic,' and 'relationship importance depends on role.' I grouped these codes under a 'miscellaneous' candidate theme. The following is a list of the candidate themes and sub-themes from the end of phase three:

- (mis)perception that inclusion is hard work
 - o ableism in education
 - o inclusion is idealistic, not reality
 - making inclusion work
 - we are all on the same page...aren't we?
- eyes on the prize: staying focused
 - \circ using UDL
- professionalism
 - evolving practice
 - o what guides or influences professional practice

- o self-efficacy
- \circ role confusion
- \circ spread thin
- o current system
 - working in silos
 - too many cooks in the kitchen
- sharing perspectives
 - resolving conflicts
 - thought changers
 - thought stoppers
 - blurring professional boundaries
 - o efficient
- facilitators of IPP
 - o openness
 - building relationships
 - equal partnership
 - o respect
- we value time to meet and collaborate
 - o school culture
 - conflict between wanting to meet and being able to meet

At the end of Phase three, I created visual representations of how I had organized data, as a tool to assist me in finding patterns in meaning (Braun & Clarke, 2022). This included a concept map, which was a conceptual representation of early patterns in the data, as depicted in Figure 9.

Figure 9

Concept Map (Reflexive Thematic Analysis Phase Three): Case 1



3.9.1.1.4 *Phase Four: Developing and Reviewing Themes.* At the beginning of phase four, I first reviewed candidate themes to ensure: a) they were organized around a key organizing concept; and b) they addressed my research question (Braun & Clarke, 2022). Throughout this process I once again set aside codes that did not necessarily fit within the narrative I was

developing, placing them in a group labelled 'miscellaneous.' Next, I examined the candidate themes alongside the coded data extracts and with respect to the dataset as a whole. At this stage, my goal was to develop distinct and robust themes that captured different patterns of meaning that were relevant to my research question and spanned the entire dataset (Braun & Clarke, 2022). This stage of analysis involved deleting codes that were redundant or irrelevant to the research question. For example, the code 'UDL takes time' was deleted, as the same data extract was coded 'inclusion takes time' and was a better fit. I used the coding panel and the coding stripes function in NVivo to examine the data extracts alongside candidate themes, which assisted me to regroup codes into final themes. At the end of phase four, I had constructed the following candidate themes and sub-themes, presented in Table 2. I also had a group of codes labelled 'hard to be accountable with implementation,' which was important, but at this stage I was not sure which theme it fit into and left it separate.

Table 2

Case 1 Candidate Themes (Thematic Analysis Phase Four)

Candidate Themes	Sub-Themes	Main Code Groups
Academic inclusion:		• conflicting beliefs
Wondering if it can it be		• I need to see it to believe it
done?		 perceived lack of access to resources
		and supports
		• (mis)perception that inclusion is hard
		work
	Yes, it can be	 resolving conflicts
	done	 presuming competence
		 sharing perspectives
Academic inclusion:		 lack of self-efficacy
Wondering if I can do it?		• professionalism (do I want to do it?)
		• role confusion
		• spread thin
	Yes, I can do it	• keep supports simple
		• our own expertise
		• sharing the load
Classroom teacher as		
gatekeeper to inclusion		
Storing forward		
Staying locused		• staying on track
		• sharing perspectives
		• UDL as a tool
		• using UDL
Working in silos		• too many cooks in the kitchen
		• we don't get to meet
		 collaboration: Valued not prioritized
	Breaking down	 blurring professional boundaries
	silos	 building relationships

During this phase, I again created a concept map to serve as a visual representation of

how I had organized my data and to assist me in exploring relationships between themes, which are represented in Figure 10.

Figure 10



Concept Map (Reflexive Thematic Analysis Phase Four): Case 1

3.9.1.1.5 Phase Five: Refining, Defining, and Naming Themes and Member Checks.

Analysis at phase five was more interpretative than the previous phases. I wrote a short summary describing key points highlighted in each theme and labeled each theme with a name that reflected the overarching concept of the theme. Themes included: a) *Academic Inclusion: Wondering If It Can Be Done*; b) *Academic Inclusion: Wondering If I Can Do It;* and c) Valuing (But Not Prioritizing) Collaboration.

After phase five was complete, I followed the Synthesized Member Checking (SMS) procedure described by Birt et al. (2016). I prepared a summary of the initial themes and direct data quotes to represent the themes. The summary included boxes providing space for participants to provide feedback (see Appendix I, *Case 1: Member Check*). I emailed a copy of the summary to each participant, along with a cover letter, asking participants to read, comment, and return the completed SMS document to me within two weeks. In my email, I asked participants to: a) think about if the summary matched their experience; b) provide feedback on any changes; and c) provide any additions (Birt et al., 2016). However, I did not receive feedback from any of the participants from Case 1.

3.9.1.1.6 *Phase Six: Writing the Report.* At this stage, a detailed narrative (see Chapter 4: Results) was written to make sense of the patterns in the data and ensure the themes told a story that was based on, and about, the data (Terry et al., 2017).

3.9.1.2 Case 2: Florence.

3.9.1.2.1 Phase One: Familiarization of the Data and Writing Familiarization Notes. As with Case 1, phase one for Case 2 began during data collection and followed the exact same process as previously described (see Section 3.9.1.1.1, *Phase One: Familiarization of the Data and Writing Familiarization Notes*). Again, memos provided an initial direction for data interpretation (Yin, 2018).

3.9.1.2.2 Phase Two: Coding. Following the same protocol used with Case 1 (see Section 3.9.1.1.2, *Phase Two: Coding*), I began coding the data. At the end of my first round of coding, I had assigned 618 codes to my entire dataset.

In a subsequent round of coding, I reviewed my list of codes against items in my dataset to ensure each code captured an interesting idea, concept, or meaning. This process included a
review of data extracts that were coded under each code label and merging, recoding, and revising code labels. For example, I again focused on broadening codes that were too finegrained and expanding on codes that were too general. If the codes were very similar, I merged them together (e.g., 'all schools have different models of service delivery' merged into 'different schools divide workload differently' and 'breaks for sensory-motor input' merged with 'accommodate desire to move vs teaching classroom expectations'). However, as in phase two for Case 1, most codes were cut and pasted as 'child codes' to maintain transparency. For example:

- 'accommodate desire to move vs teaching classroom expectations' is a child code to
 'balance: expectations vs meaningful engagement'
- 'best part for EA = being part of lesson plan' is a child code to 'Aha EA sees connection to curriculum'
- 'connect AAC to curriculum,' 'connect assessment to curricular competencies' and
 'connecting curriculum to IEP' were grouped together under a new parent code, called
 'connecting to curriculum'

At the end of my second round of coding, 587 code labels remained, covering all extracts in the dataset.

3.9.1.2.3 *Phase Three: Generating Initial Themes.* Following the same protocol I used for phase three during analysis of the dataset from the first case (see Section 3.9.1.1.3, *Phase Three: Generating Initial Themes*), I reviewed the reflexive memos I wrote during data collection and during phase one of my analysis (familiarization of the data) before I began collating my codes and forming code groups and candidate themes. I made a list of the main ideas in the memos as a

starting point for theme development, and used this list to loosely guide my initial code groupings (see Appendix J, *Case 2: Key Ideas from Reflexive Memos*).

Again, at the end of Phase three, I created visual representations of how I had organized data, as a tool to assist me in finding patterns in meaning (Braun & Clarke, 2022). This included a concept map, which was a conceptual representation of early patterns in the data (see Figure 11).

Figure 11

Concept Map (Reflexive Thematic Analysis Phase Three): Case 2



The following is a list of the candidate themes and sub-themes from the end of phase three:

- building partnerships
 - time to collaborate
 - current system has limited time for collaborating
 - making time and making it count
 - respect for each other
 - sharing expertise and experiences
- making inclusive teaching easy and efficient
 - \circ UDL = common language
 - whole class approach to planning vs individual planning
 - focused, shared overall goal
 - sharing workload and responsibility
 - design is realistic
 - culture of inclusion
- transformations
 - new learning
 - new ways of practice
 - new ways of thinking
 - learning is co-constructed
 - o stepping outside usual role
- facilitators of change
 - trust and confidence
 - o feeling valued and included
 - o skills

- working in silos
 - SBTs ecosystems, not silos
 - o models of practice
 - o roles of SBT members
 - juggling all the things

3.9.1.2.4 *Phase Four: Developing and Reviewing Themes.* First, I reviewed candidate themes to ensure that: a) they were organized around a key organizing concept; and b) they addressed my research question (Braun & Clarke, 2022). Throughout this process I once again set aside codes that did not necessarily fit within the narrative I was developing, placing them in a group labelled 'miscellaneous.' Next, I examined the candidate themes alongside the coded data extracts and with respect to the dataset. This stage of analysis involved breaking code groups apart and deleting codes that were redundant or irrelevant to the research question. For example, the code group 'UDL' was split into 'using UDL for inclusion' and 'UDL as a common language.' Once again, I used the coding panel and the coding stripes function in NVivo to examine the data extracts alongside candidate themes, which assisted me to regroup codes into final themes. At the end of phase 4, I had constructed the following themes and sub-themes, presented in Table 3. During this phase, I again created a concept map to serve as a visual representation of how I had organized my data and to assist me in exploring relationships between themes (see Figure 12).

Table 3

Case 2 Canalaate Themes (Thematic Analysis Phase Fo

Candidate Themes	Sub-Themes	Main Code Groups
Building partnerships		 working in silos
		 challenges to collaboration
	Why build partnerships?	• collaboration = share workload
		and responsibility
		• I felt valued and included
		• working with people you can form
		partnerships with
		• EA working with CT = inclusion
	How to build	• UDL as a common language
	partnerships	• making time to collaborate (and
		making it count)
		building trust
Engaging in		 learning is co-constructed
transformative		• we can do this!
learning		 change takes time
	Experiencing new	 understanding myself
	learning	 understandings others
		 understanding the student
	Engaging in new ways	 UDL changes your perspective on
	of thinking	how you view the class
		 new perspective of inclusive
		education
	Developing new ways	 working collaboratively
	of practice	 CT making changes to practice
		 goal of keeping Florence in the
		classroom
		 stepping outside usual role
Making inclusive		• culture of inclusion
teaching easy and		 design needs to be realistic
efficient		 shared goal is key
		 problem-solving
		 using UDL for inclusion
Working in an		• what is best for everyone?
eco(system)		 contextual factors
		 models of practice
		 roles of SBT members

Figure 12





3.9.1.2.5 Phase Five: Refining, Defining, and Naming Themes and Member Checks. As I did during phase five of the analysis of the first dataset, I once again wrote a short summary describing key points highlighted in each theme and labeled each theme with a name that reflected the overarching concept of the theme. Themes included: a) *Building Collaborative Partnerships*; b) *Making Inclusive Teaching Easy and Efficient*; and c) *Engaging in Transformative Learning*.

After phase five was complete, I engaged in member checks, following the SMS procedure described by Birt et al. (2016). I prepared a summary of the initial themes and direct data quotes to represent the themes. The summary included boxes providing space for participants to provide feedback (see Appendix K, *Case 2: Member Check*). I emailed a copy of the summary to each participant, along with a cover letter, asking participants to read, comment, and return the completed SMS document to me within two weeks. In my email, I asked participants to: a) think about if the summary matched their experience; b) provide feedback on any changes; and c) provide any additions (Birt et al., 2016). I received a response from two participants, who both indicated initial findings was an accurate reflection of their experience. I integrated comments from the member checks forms into the analysis at phase six (i.e., writing the report). For example, in the theme, *Making Inclusive Teaching Easy and Efficient*, the SLP clarified how "traditional, pull-out models" of service delivery create barriers to inclusive teaching (see Section 4.3.2.3, for details).

3.9.1.2.6 *Phase Six: Writing the Report.* At this stage, a detailed narrative (see Chapter 4: Results) was written to make sense of the patterns in the data and ensure the themes told a story that was based on, and about, the data (Terry et al., 2017).

3.9.2 Between-Case Analysis

Between-case analysis was conducted with an abductive analytic orientation, as data was used to build on existing theory (Braun & Clarke, 2022). Using a pattern-matching technique (Yin, 2018), I identified key patterns evident in findings from the analysis of the first dataset (Case 1: Maya) and compared those empirically based patterns to pre-established theoretical propositions. I uploaded the narrative report (i.e., Chapter 4, Section 4.2 *Case 1:* Maya) to NVivo (Release 1.0) and coded deductively, using my initial theoretical propositions as codes. I

repeated this process with the findings from the analysis of the second dataset (Case 2: Florence), thus establishing a literal replication and thereby strengthening the study's analytic generalizations.

As I engaged in the pattern-matching technique with both datasets, I used a second analytic strategy described by Yin (2018) as "pattern matching for rival explanations" (p. 177). This strategy worked well with the first strategy of pattern matching and involved exploring themes in the data that were not related to the original propositions and identifying plausible rival explanations (i.e., those that appeared to be the most "threatening" to the original propositions; Yin, 2018, p. 172). To identify rival explanations, I coded data excerpts that did not align with the original propositions as 'other' and examined all 'other' codes as potential explanations for key patterns in the data that were not explained by the original propositions. Examining plausible rival explanations contributed to developing revised propositions (Atkinson, 2002). Revised theoretical propositions are presented in Chapter 5: Discussion.

3.10 Quality of Study

To ensure rigor and trustworthiness, I considered four areas that contribute to the establishment of a high-quality study: construct validity, internal validity, external validity, and reliability (Yin 2018).

3.10.1 Construct Validity

Yin (2018) described construct validity as "identifying correct operational measures for the concepts being studied" (p. 42). Several elements in the research design contributed to construct validity. First, a case study design was selected, because despite repeated research findings of the importance of IPP between multi-disciplinary school professionals (e.g., Pfeiffer et al., 2019) and literature outlining factors that influence collaboration (e.g., Mitchell et al.,

2020; Villeneuve, 2009), collaboration does not appear to occur in practice (Bose & Hinojosa, 2008). Thus, an in-depth study of collaborative practices in a natural context contributes to a deeper theoretical understanding of how multi-disciplinary IPP occurs in schools. To increase the likelihood that participants would engage in IPP during the facilitated planning meetings, I included evidenced-based practices that facilitate IPP in the research design, such as external support to the collaborative process in the form of facilitated meetings and (Villeneuve & Shulha, 2012) and designated time to meet (Villeneuve, 2009).

Second, the selection of participants contributed to construct validity. Although the perspectives and contribution of disabled students and their family members is critical and invaluable to research in inclusive education, the unit of analysis in present study was inter*professional* collaborative practice. Thus, to ensure I was indeed measuring IPP, only professional members of students' school teams were invited to participate. Furthermore, participants included at least two disciplines (e.g., educator and SLP) to ensure I was collecting and analyzing data regarding *inter-professional* interactions.

Third, findings relied on the triangulation of multiple sources of data (Tracy, 2010; Yin, 2018). For example, I conducted both focus groups and individual interviews. Focus groups provided a platform for participants to learn from and with each other, providing a valuable source of information. However, a format where participants shared their perspectives in front of their colleagues may have created a barrier to participants sharing certain thoughts or opinions, especially those that may be considered negative by their colleagues. Thus, individual interviews provided an opportunity for participants to share personal perspectives more freely. To ensure construct validity, documents selected for review and guiding questions for the focus groups and interviews were designed to address the three objectives of the study.

Finally, I engaged in member-checking with participants after completing phase five of reflexive thematic analysis (*Refining, Designing, and Naming Themes*; Braun & Clarke, 2022). For member checks, I followed the SMS procedure described by Birt et al. (2016). The purpose of the member checks was not to ensure I was 'right' in my analysis, but to allow participants the opportunity to provide feedback on whether they recognized findings as true, and allowed for researcher-participant collaboration in the interpretative process (Tracy, 2010).

3.10.2 Internal Validity

According to Yin (2014), internal validity refers to "the strength of a cause-effect link made by a case study....by showing the absences of spurious relationships and the rejection of rival hypotheses" (p. 239). The present case study was exploratory and a causal relationship was not being investigated; thus, internal validity referred to the "broader problem of making inferences" (Yin, 2018, p. 45). In other words, it was critical to be aware of rival explanations throughout the entire analytic process to ensure all potential explanations were considered (Baxter & Jack, 2008; Yin, 2018). For example, as I investigated how multi-disciplinary school professionals engaged in IPP when they used principles of UDL to collaboratively design a science unit that was accessible to a student with ESNs, I looked for alternative factors or explanations to IPP that went beyond the initial propositions of the study. To ensure I explored rival explanations, I engaged in reflexive journaling and ongoing consultation with my academic advisor and supervisory committee throughout the analytic process (Baxter & Jack, 2008). My advisor acted as a 'critical friend' and "provide[d] a theoretical sounding board to encourage reflection upon, and exploration of, multiple and alternative explanations and interpretations as these emerged in relation to the data and writing" (Smith & McGannon, 2018, p. 113). As well, pattern matching as an analytic technique contributed to internal validity, as each theoretical

proposition was critically examined in relation to the findings (Yin, 2018). Finally, in the case study report (see Chapter 4: Results), I used thick, rich descriptions in the narrative to provide the reader with an in-depth understanding of the phenomena (Tracy, 2010).

3.10.3 External Validity

External validity refers to the extent to which a study's domains can be generalized (Yin, 2018). In case study research, findings from the study can be compared to previously developed theory (e.g., CHAT) in order to develop analytical generalizations and contribute to an enhanced theoretical understanding of the phenomenon (e.g., IPP) being investigated (Baxter & Jack, 2008; Sparkes & Smith, 2014; Yin, 2018). To promote external validity, the present study's theoretical propositions guided data collection and analysis. An examination of theoretical propositions in relation to the data allowed me to situate my findings within existing theory. Furthermore, a multiple-case design allowed for literal replication of cases, which enhanced rigor and contributed to the strength of the study's analytic conclusions (Yin, 2018).

3.10.4 Reliability

In case study work, the goal of reliability is to reduce errors and bias by ensuring consistency in the research procedures and replicability of the design (Yin, 2018). This is especially critical when applying replication logic to a multiple-case study design. To address the present study's reliability, I followed a case study protocol (see Appendices) to guide data collection and analysis. Furthermore, I maintained transparency in my data collection and analysis procedures (Tracy, 2010; Yin, 2018). For example, I used NVivo (Release 1.0), a computer-assisted qualitative data analysis software program to help organize and analyze data and maintain a clear chain of evidence (Yin, 2018). This chain of evidence created an "audit trail" (Tracy, 2010) that included: focus group, interview, and field notes (i.e., running records),

a record of my initial thoughts about the data, taken after the first few readings of each transcript (i.e., reflexive memos), and detailed memos that documented my interpretative choices.

3.11 Summary of Chapter

The preceding chapter outlined my research methods for the present qualitative, multiplecase study, starting with how the philosophical underpinnings and my own positionality contributed to the research design and subsequent analysis. Next, I presented my participant recruitment strategy and described the students with ESNs around whom the research revolved, the multi-disciplinary professionals who participated in the study, and the research settings. I discussed the research design, including a list of initial propositions I developed based on the B.C. Ministry of Education's (2016) definition of collaborative consultation and on existing literature on IPP. As well, I provided details of each facilitated planning sessions and described my procedures of data collection and analysis. I concluded the chapter by addressing the quality and rigour of the study.

Chapter 4: Results

4.1 Overview

The present qualitative study examined inter-professional collaborative practices (IPP) of multi-disciplinary school professionals as they took part in a facilitated planning meeting designed to promote participation of an elementary school-aged student with extensive support needs (ESNs) in a grade-level science unit in a general education classroom. Cultural Historical Activity Theory (CHAT, Engeström, 2000, 2014) served as a theoretical framework for data collection and analysis. Activity Theory posits that human activity occurs as individuals (subjects) engage in goal-directed activities directed toward an object of attention (object) to achieve a desired outcome through the use of mediating means (tools); CHAT expands on basic Activity Theory to include contextual factors that shape collaborative work (Martin, 2008). In the context of the present study, the activity system consists of: a) subjects (participants); b) object (curricular unit); c) tools (Universal Design for Learning [UDL], facilitated planning session); d) rules (professional roles, district policies); e) community (school, school district); and f) division of labour (how participants share work and responsibilities).

According to CHAT, the purpose of the activity system is to work toward the desired outcome (in the context of this study, a collaboratively designed curricular unit that is accessible to a student with ESNs), through a process of identifying and addressing tensions, or *contradictions*, between the six aforementioned components of the expanded activity system (Martin, 2008). Thus, these contradictions become the focus of *collaborative interactions*, which are characterized as interactions that result in transformative learning, as evidenced by practitioners re-conceptualizing their own professional roles and responsibilities in their collective effort to work toward the shared goal (Villeneuve, 2011). Thus, the unit of analysis

was IPP, which is defined as a process of addressing contradictions that arise between components of an activity system through collaborative interactions.

Using a multiple-case study approach (Yin, 2018), the present study addressed the following research question: *During a facilitated planning meeting in which multidisciplinary school professionals use principles of UDL to design activities for an inclusive, grade-level science unit that are accessible to an elementary school-aged student with ESNs: How do the professionals engage in IPP?*

a. What contradictions arise?

b. How are contradictions addressed?

Data were collected from two cases and analyzed as two separate datasets; each dataset was analyzed through a process of reflexive thematic analysis (Braun & Clarke 2006; 2022; see Chapter 3: Method for a detailed description of the process of analysis).

In this chapter I will present results from each case as a separate, detailed narrative report, first for Case 1: Maya (Section 4.2), then for Case 2: Florence (Section 4.3). In each section, I will present the final themes with respect to the research question. First, I will present contradictions that arose between components in the activity system. Next, I will focus on how participants addressed those contradictions through collaborative interactions. I will conclude this chapter with a summary of findings. Between-case analysis relied on an analytic technique called pattern matching where empirically based patterns (i.e., key findings from within-case analysis) were compared to pre-established theory (i.e., initial theoretical propositions); thus between-case analysis will be presented in Chapter Five: Discussion.

4.2 Case 1: Maya

As mentioned earlier, participants in Case 1 supported the education program of Maya (a pseudonym), who, at the time of the study, was 11 years old and attending a grade six classroom in a middle school located in a large urban school district in the lower mainland of British Columbia (see Chapter 3, Sections 3.4.6.1 and 3.5 for a detailed description of participants and setting). Participants included Maya's classroom teacher (CT), her education assistant (EA), two learning support teachers (LST A and LST B), and her speech-language pathologist (SLP). The classroom teacher chose a science unit focusing on the scientific method as the curricular unit to design curricular activities for during the facilitated planning meeting. Themes constructed from the first case include: a) *Academic Inclusion: Wondering if It Can Be Done*; b) *Academic Inclusion: Wondering if I Can Do It*; and c) *Valuing (But not Prioritizing) Collaboration*.

4.2.1 Academic Inclusion: Wondering if It Can Be Done

The first theme suggests that participants were questioning the appropriateness of the goal of using principles of UDL to facilitate the collaborative design of a curricular unit that was accessible to Maya. Key contradictions evident in this theme include: a) the perception that Maya's participation in grade-level, curricular activities was not important; b) the expectation of professional roles not being conducive to supporting a student with ESNs to participate in a grade-level curricular unit; and c) the perception that UDL was not an appropriate framework for the design of curricular learning activities that were accessible to students with ESNs. In the following sections, I will first provide a narrative detail of the key contradictions that arose, with respect to this first theme. Then, I will discuss how participants addressed some of these challenges through collaborative interactions, including sharing and listening to different perspectives.

4.2.1.1 Perception that Participation in Curricular Activities is Not Important. During the facilitated planning meeting, participants came together to work toward a shared outcome: a collaboratively designed curricular unit on the scientific method that was accessible to Maya. Findings suggested that participants cared deeply about Maya and had the goal of supporting her inclusion at school. For example, the CT shared that "getting [students] included and feeling like [they have] a purpose and being part of the class and doing the same things that some of the other kids are doing, there is huge value in that...it's just that need to be included." However, it was evident that some participants held the perception that inclusive education for Maya did not include participation in grade-level academic activities and should, instead, prioritize social inclusion and participation in exploratory classes over opportunities to engage with core subject curriculum (i.e., Science, Social Studies, English Language Arts, and Math). For example, the EA noted a successful education program for Maya would result in Maya being able to "interact and make some friends, bring some kids into her circle, play games, go for a walk, whatever." Furthermore, the EA explained, "Yeah, the science is a little difficult...my personal thoughts for that were, hmmmm, I don't know if this is achievable...so I had a negative reaction to it."

A review of Maya's Individual Education Program (IEP) suggested that participation in grade-level curricular activities was not the focus of her education program. For example, her education goals were directed toward developing communication skills, improving coordination, increasing strength and endurance, and initiating actions that would allow her to participate in daily classroom routines (e.g., "using assistive technology to participate in activities with peers"; Maya's IEP, February 3, 2022). Although some of the learning objectives could be addressed in the context of curricular learning activities (e.g., "using assistive technology to participate in activities with peers," "learning to sign core words in American Sign Language"), for the most

part, the IEP did not indicate how strategies to facilitate achievement of the learning objectives could be integrated into classroom learning activities (Maya's IEP, February 3, 2022). Furthermore, there is no indication on the IEP that Maya would or should participate in curricular activities with her peers. Thus, it is not surprising that some participants would have the perception that academic inclusion was not a priority for Maya.

Not only did some participants appear to believe that participating in grade-level curricular learning activities was not an appropriate educational outcome for Maya, but some participants also had doubts about Maya's ability to participate in activities related to academic learning. Assumptions about Maya's abilities and limitations were evident in the data. For example, the EA explained, "I know what she can and cannot achieve, and trying to share that with the team who have these big grandiose goals for her. I'm sorry, she can't do this." The assumption that Maya would not be able to participate in curricular activities appeared to be a significant roadblock for participants as they attempted to work toward the goal of designing learning activities that were accessible to her. For example, the CT shared:

That could be a challenge, I guess, in working together, realizing, okay, well, here we have an idea of what we want to try. One person might be like, 'No, I don't think she can do that.' I think that's one of the things that has started to come up a bit.

In sum, the perception that Maya's education program should not include engagement with grade-level curriculum does not align with the collective goal of designing learning materials and activities that would promote her participation in a science unit, thus presenting a contradiction between the subjects and the object of the activity system.

4.2.1.2 Expectation of Professional Roles. Participant perceptions with respect to the appropriateness of Maya participating in a grade-level curricular unit appeared to be influenced

by the respective participant's professional role. For example, both learning support teachers indicated that academic inclusion was something that they were passionate about. LST B stated, "This is my jam! I love collaborating with people, this is what I am passionate about. I am passionate about inclusive education," and LST A noted, "So, when I became a teacher I became a teacher to be an LST...inclusion is really important to me." However, not all of the participants considered including students with ESNs in grade-level curricular activities to be part of their role or responsibility. For instance, according to LST A, there was a perception among EAs at the school that for "...students like this one, we're just going to go play and listen to music, and it's not really on their radar to be developing their skills and how important that is." In fact, both LSTs expressed having to gently persuade their colleagues to adopt inclusive practices. LST A explained, "You have to gently sort of float an idea because if you're too pushy about it, people kind of shut down and they don't want to work with you."

Designing a curricular unit that was accessible to a student with ESNs required participants to make changes to their professional practice, which did not seem feasible for some participants. Furthermore, there appeared to be a systemic perception that experienced classroom teachers should not have to make major changes to their practice, as they had already "put in that work" at the beginning of their career. For instance, LST A stated:

[Classroom teachers are] designing their units and sort of getting into a rhythm, tweaking their lessons year after year if they have been able to teach the same grade. It's almost easier for new teachers coming in who haven't put in that work yet. They have come straight out of university, that's how they learned it in university and they can sort of start doing it.

Another apparent source of the systemic underlying belief that inclusion was not realistic stemmed from training programs, including teacher education programs and educational assistant programs. LST A recalled how when she attempted to implement an inclusive teaching strategy in a fieldwork placement, she was met with resistance:

I remember one of my placements. I had learned all this great stuff and I was ready to implement it and [my supervisors] were super uncomfortable with it and wanted me to do the math worksheets and math booklet and whatever. And I'm like, 'But what about this exciting thing?' They were anxious about it, and, 'Oh well, that feels too "out there" and it doesn't feel like it's planned enough.' And I'm like, 'But we're doing inquiry'!' So there's that too, right? Which is kind of again, the idealistic [inclusive education] and then the real world, the balance.

Similarly, LST A noted that the actual role of the EA is different than the role that EA training programs depict for prospective students. She reflected:

Something I often complain about is that all of the community colleges and things that are offering EA programs right now, when they advertise they've got this picture of an EA next to a student who looks very capable and they're helping them write and they look like a tutor. And I'm like, if that's what people think they're getting into, that's not what this job is at all.

Overall, some of the participants' perceived expectations of what their professional role entailed did not include facilitating Maya's participation in a curricular unit, thus presenting a contradiction between the rules (i.e., professional roles) and the object of the activity system.

4.2.1.3 Perception that UDL is not an Appropriate Approach to Meet the Goal.

Participants held concerns that UDL did not provide an appropriate framework to guide the design of a curricular unit that was accessible to Maya. Maya had ESNs, and her diagnoses included: a) a moderate to profound ID; b) a physical disability; c) a visual impairment. Furthermore, she was hard of hearing. Participants suggested that focusing on a different student, one with less complex support needs, might have been more appropriate for using UDL (fieldnotes, Focus Group #1, November 17, 2022). In fact, the CT stated "UDL would be good, but...with her, there's so many barriers that it's a challenge...if it were a different child, maybe, that had less, you know, limitations or physical barriers, it might have been helpful and useful." As well, participants thought that using the UDL framework to design curricular activities took too long and was unrealistic in a busy school setting. For example, the CT noted, "I see the benefits, the purpose of trying to incorporate the other kids and use the UDL model. But you know, at the same time, it's time consuming." Furthermore, LST B suggested:

UDL is a lot of work [and takes time] at the beginning, which [teachers] don't get...There are a lot of things that need to get set up in advance, and so when you are given it at the last minute or you aren't given any time to prep, it's really hard to implement.

It is worth noting that as one of the participants, LST B, reflected on the process of designing a curricular unit that was accessible to Maya, she noted that participants did not actually follow the core philosophy behind UDL, suggesting they focused more on individual supports for Maya, rather than on designing universal supports that were accessible to her:

I think one of the messages that maybe I felt was unclear was that this is actually for the whole class, this is not specifically for Maya. And that's the point. Is that we are targeting her but then really it's meant to, with that target, we are going to get everybody.

Similar to the contradiction that was previously addressed in Section 4.2.1.2, *Expectations of Professional Roles*, the perception that UDL was an unsuitable approach to address the shared goal of designing curricular materials and activities that were accessible to Maya presented a contradiction with the object of the activity system; however, this contradiction existed between the object and tools.

4.2.1.4 Addressing Contradictions. Theme 1 highlights contradictions that contributed to a sense of doubt that the desired outcome, collaboratively designing a curricular unit that was accessible to a student with ESNs, was an appropriate goal. Participants addressed some of these contradictions through collaborative interactions, primarily by sharing and listening to different perspectives.

4.2.1.4.1 Sharing and Listening to Perspectives. Although participants held different perceptions regarding Maya's participation in curricular activities, they were willing to share and listen to each other's perspectives about inclusion and students with ESNs. For example, the SLP addressed concerns about the appropriateness of Maya participating in curricular activities by sharing her own beliefs regarding making assumptions about what students are capable of: "You know, treat her like she can do it. Give her the opportunity to do it. Then modify and provide other supports as possible...it's the least dangerous assumption. Right?" Participants noted that by listening to each other's perspectives about Maya and about inclusive education for students with ESNs, they formed a better understanding of her. For example, the CT shared, "As a classroom teacher, I don't know a lot of background knowledge about [Maya]...so to be able to

sit with the resource teachers and get the information and sit with the EA...it gave me a better understanding about her." LST B explained that the collaborative process "opened [her] eyes to different perspectives" and noted it made her re-evaluate her own ideas of how Maya might participate in a curricular unit, noting that she revised her suggestions based on the perspectives of others:

I have these ideas but then for someone to be like, 'yeah, but she can't even hear what you are saying.' Or, 'that's way too far.' Or, 'she won't even let me near her ears' or something like that. Those are things where I am like, 'oh, okay, well maybe we need to step back a little further' and then I can re-think my original plan.

Furthermore, sharing their perspectives helped them to understand each other better and reminded them of the importance of having conversations about goals and beliefs. For example, LST B noted, "Everyone's opinion of success [is] so different. That was an eye-opener for me...the EA stated what success looked like to her and that was so different than what I thought success was."

Sharing perspectives also created opportunities for participants to discuss the appropriateness of UDL as a planning tool for students with ESNs. For instance, LST B shared her knowledge of UDL, to offer a different perspective on how UDL has the potential to facilitate academic inclusion for students with ESNs (fieldnotes, Facilitated Planning Meeting, October 27, 2022). LST B finished her explanation by stating, "and so, that's one of the premises of UDL is to try to aim for that one [student] that could be the most challenging, [for supports for them] to be universal...and then you are going to catch everyone by doing that."

Sharing perspectives about UDL resulted in the classroom teacher reflecting on how she does hold some responsibility in including disabled students in her classroom:

I do think that it [UDL] has like made me just realize, like you always have to keep that particular kid in the back of your mind, about how to incorporate them in the class. So, I think that's the one thing I'm getting from it.

Although this quote reflects a small shift in the classroom teacher's conceptualization of her role in inclusive education, it is, indeed, a critical shift.

It should be noted that although participants were willing to share and listen to each other's perspectives regarding the appropriateness of including Maya in curricular learning activities, findings suggest that this contradiction was not actually resolved within the context of this study. At the end of the research study, participants appeared to continue to question the appropriateness of including Maya in grade-level science activities. For instance, during the individual interview, which took place after the facilitated planning meeting, the EA stated:

My viewpoint has not changed. I don't know if [participating in a science unit] is achievable. I like the idea of it. I love what they want to do. I love that they want [Maya] to socialize and they want her to participate. But like I said, knowing [her], I personally do not know if this can be achieved.

During the facilitated planning meeting, participants used principles of UDL to design several learning activities for the science unit that were accessible to Maya, including: a) allowing students to watch video content independently at their desk, as often as they wanted, after viewing content with the whole class (targeting Multiple Means of Engagement; CAST, 2018b); b) creating flip-books to learn science vocabulary, using words and symbols from Maya's Augmentative and Alternative Communication (AAC) device (targeting Multiple Means of Representation; CAST, 2018c); and c) using a 'Yes/No' board for making predictions, where students point to 'yes' or 'no' depending on their prediction (targeting Multiple Means of Action and Expression; CAST, 2018d; document review, LST B notes from Facilitated Planning Meeting, October 27, 2022). However, Maya was absent from school while the CT taught the unit, due to illness. Participants expressed feeling disappointed that they had put in the time and effort to create accessible materials and learning activities, yet Maya still did not participate. For example, LST A stated:

Because I am thinking, going forward, will we do this again? And thinking about the fact that, you know, if we managed to find the time again, get coverage for you to do planning together as a group, and then the result is, again, that she is not here. And then things that we made don't get used, that sort of thing. I just, I wonder how...whether we would do it again, knowing that she does have long stretches of absences and you can't really predict when those will be.

Feelings of disappointment led to a decrease in motivation to design inclusive lessons, as LST B noted: "That's the tricky part, when things don't happen immediately and you start to feel the barriers, then participation drops. And so to try and keep that motivation to keep the participation high is hard."

4.2.1.5 Summary. In summary, evidence suggests that participants were questioning the feasibility of the desired outcome of the collaborative process, leading to contradictions in the activity system. Contradictions included: a) perceptions that participation in curricular learning activities was not relevant for a student with ESNs; b) expectations of professional roles not being conducive to facilitating the participation of a student with ESNs in a grade-level curricular unit; and c) perceptions that UDL was not a suitable framework to facilitate the design of curricular learning activities that were accessible to a student with ESNs. Participants addressed some of the contradictions (i.e., perceptions about the relevance of including Maya in

curricular learning activities or the aptness of UDL to facilitate the design of an accessible curricular unit) by sharing and listening to each other's perspectives. Sharing and listening to each other's perspectives are considered collaborative interactions, as these activities lead to a slight shift in how some participants conceptualized and fulfilled their professional roles (e.g., the CT began to take more responsibility for Maya's education program, LST B reconsidered how she provides support to CTs). However, it is important to note that not all participants experienced transformative change, most notably the EA. Furthermore, I did not find evidence of how participants addressed the contradiction that arose from the issue that not all participants considered including Maya in grade-level curricular activities to be part of their professional role or responsibility.

4.2.2 Academic Inclusion: Wondering if I Can Do It

While the first theme reflects an underlying doubt that designing a curricular unit that is accessible to a student with ESNs was an appropriate goal, the second theme focuses on participants' perceptions of their own capacity to be successful in achieving this goal. This theme highlights the following contradictions: a) a self-perceived lack of professional expertise to design a curricular unit that was accessible to a student with ESNs; b) a perception of a lack of professional knowledge and experience regarding UDL; c) a perception of a lack of capacity to implement new practices, such as using UDL to design a curricular unit that was accessible to a student with ESNs; and d) confusion about roles and responsibilities with respect to including students with ESNs in grade-level curricular activities.

4.2.2.1 Perception of a Lack of Professional Expertise. At the facilitated planning meeting, participants came together with the goal of designing a grade-level curricular unit that was accessible to Maya, a student with ESNs. However, participants appeared to lack the professional

self-efficacy to feel confident in creating opportunities for Maya to participate in curricular activities in a grade-level science unit. For example, participants appeared to rely on the expertise of other experts in inclusive education, rather than their own expertise. When asked what supports or resources helped them to include students like Maya, LST A replied, "...people coming in who have experience with students like [Maya]. I think there's a lot of, like on our end, just, you don't want to not do anything for the student, but you don't know, like [how to conduct] assessment." The British Columbia Ministry of Education provides funding for experts in inclusive education through provincial resource programs, such as the Provincial Inclusion Outreach Program (PIOP; previously known as Provincial Integration Support Program), that are intended to build capacity within local school districts (British Columbia Ministry of Education, 2016). Maya received support from PIOP, but participants noted that although support from PIOP was beneficial, they did not feel as though they had the capacity to implement recommendations without continued direct support from the experts. LST A noted:

We're trying to follow what [PIOP] sort of provided us, because it was like, for us, really, we had no idea what to do with this student, like what she's capable of. So, [PIOP] was really helpful. But, the thing is, when the professionals leave, what they've given doesn't necessarily continue to happen.

The perception among participants that they lacked the expertise to design curricular materials and activities that were accessible to Maya presented a contradiction between the subjects and the object of the activity system. That is, in order to work towards the collective goal, participants had to address the issue that they did not appear to believe as though they had the individual knowledge or skills to contribute to the design of a curricular unit that was accessible to Maya.

4.2.2.2 Perception of a Lack of Knowledge to Apply UDL. As noted in the previous section, participants held the perception that they did not have the required expertise to design a curricular unit that was accessible to a student with ESNs. Similarly, participants also appeared to hold the perception that they did not have the knowledge and/or experience with UDL to feel confident in applying it in practice. According to the background questionnaires, participants' knowledge and experience of UDL ranged from very limited to fairly extensive: a) the CT had attended some workshops early in her career; b) the EA had heard it discussed at meetings and professional development workshops; c) LST A had learned about it during her teacher training program and had attended several professional development workshops, but had not "seen it in action;" d) LST B had learned about it while completing her diploma in Inclusive Education and had attended workshops on UDL; and e) the SLP had attended workshops, read about UDL, and had experience applying UDL concepts under a Multi-Tier Systems of Support (MTSS) model of practice. However, participants appeared to feel as though they did not have enough knowledge or experience to successfully use UDL to design curricular activities that were accessible to Maya. For example, the CT noted, "I wish I had some more background info about UDL and had been able to spend more time in the planning process, I guess, of the activities or the units." The SLP also noted:

So, teachers, maybe they do learn about UDL, but maybe they need more training. Like, the new teachers coming up, right? Maybe they need more training in that. I don't know. But there has to be more...it's not just about the bodies but it's also about knowing the kind of supports to provide and having the resources to actually do that.

Furthermore, participants shared that although they learned about inclusive education practices, such as UDL, they had limited opportunities to see them in practice. For example, LST A noted,

"When I was in my [teacher education] program, we learned about UDL, [but] we never saw it in action properly. Or even close."

It appears that the amount of participants' professional experience also had an impact on their confidence in applying UDL in practice. For example, one of the LSTs (LST B) was new to her role and commented on her lack of experience:

I guess I did know more about UDL than others, probably, because I am fresh out of doing my diploma in inclusive ed and we talked about UDL. But I am a newer teacher, I am a brand new LST. So I think that part, I felt like I shouldn't, I don't know enough to be able to implement all those things."

It is also worth noting that on multiple occasions, the EA expressed a fear that if the curricular activities did not go as planned, it would be perceived as her failure at her job. For example:

And I am still worried about [my own] fear of failure because of [Maya], I know her limitations. And I want this to be successful. But I don't know how successful it is going to be given how well I know Maya and, you know, can this work?"

The perception among participants that they did not have the individual knowledge or experience with respect to UDL presented a contradiction between the object and the tools in the activity system for participants to address in order to collectively use principles of UDL to contribute to curricular materials and activities that were accessible to Maya.

4.2.2.3 Perception of a Lack of Capacity to Implement New Practices. Participants expressed feeling a lack of capacity to make changes to their own professional practices, including implementing UDL. First, participants shared that the perceived workload associated with designing accessible curricular units was not manageable, given their current workload. For

instance, due to the large number of students who needed support, participants needed to prioritize services. The SLP noted that in her practice, she prioritized providing students with access to communication systems over participation in curricular learning activities:

And also, just generally, I have to look at the whole district, right? And I have students in the district that, you know, don't have any, like, there's no communication systems, there's really nothing there. And the team is not as knowledgeable about AAC. And so, kind of, for me to prioritize, those would be my priorities. And so for students like Maya, my priority would be, okay, getting the SET-BC application [for a communication system], talking to their SLP, talking to their educator, and that takes time. So, I would prioritize that, over doing the inclusion work, I suppose. And I can't, I can't do it all.

As participants struggled to balance large caseloads and multiple responsibilities, they had little capacity to implement new practices, such as using UDL to collaboratively design an accessible curricular unit. For example, the CT stated:

I think it [using UDL to co-plan with an LST] is great, but I think people are struggling with time. To find the time to plan it. Not to teach it. Like, if LST B wanted to come and co-teach and plan together, I think people would be open to that. But I think it's the time and energy into planning it.

It is interesting to note that several participants mentioned that classroom teachers did not have enough time to implement inclusive teaching practices, such as UDL. For example, LST B stated, "I think UDL is a lot of work at the beginning, which we don't get. And so as teachers, as a classroom teacher, you are, like this the whole year, just trying to stay above the water." Consistent with this, LST A shared, "I feel fairly comfortable with planning this way, but I don't

know how realistic it is. Just like, for classroom teachers to jump to that without being given the time."

Second, participants shared that having multiple responsibilities outside of their professional roles left limited energy to focus on a new way of doing their jobs, as noted by the CT: "For me, personally, I felt like, okay, I have a lot of stuff going on, I have young kids at home...I had only been back for about a year from maternity leave. And I am still trying to get my bearings."

The perception that participants did not have the capacity to engage in a new approach to including Maya in the classroom presented a contradiction between the shared goal and the division of labour. In other words, participants had to address the issue that they did not think they had the capacity to engage in the perceived workload that was associated with the shared goal as they worked toward it.

4.2.2.4 Confusion about Roles and Responsibilities in Inclusive Education. It appears that there was some confusion among participants around professional roles and responsibilities with respect to designing learning activities for students with ESNs. According to the BC Teachers Federation and Canadian Union of Public Employees BC's *Roles and Responsibilities of Teachers and Teacher Assistants/Education Assistants: A BCTF/CUPE Joint Paper* (2009), "...the teacher responsible for a student with special needs is responsible for designing, supervising, and assessing the educational program for that student" and education assistants "...perform functions which range from personal care to assisting the teacher with instructional programs. Under the direction of a teacher they may play a key role in implementing the program" (p. 4). However, the EA noted, "Sometimes I am kind of left to fend for myself, to kind of do certain things, or I have to wait for emails or I have to wait, a month, if not, like two

months, three months for certain people." In fact, LST A commented directly about the lack of clarity around who was responsible for Maya's education program:

With the classroom teacher, I think that there can be some confusion about whose responsibility it is to make sure that there's appropriate learning activities in place and that kind of thing. And I think, not necessarily, well, a little bit in this situation, but in general, for students who are similar to this one, the classroom teachers sometimes don't really feel like they know enough about what they're supposed to be doing and the EAs will often take the lead. And then the teachers don't really want to interfere, which is kind of an interesting dynamic. But then the EAs aren't always doing what they're supposed to be doing and stuff, when they should be in class.

Furthermore, there appears to be a lack of clarity regarding the role of the LST in the school district. For example, LST B shared that as a new LST, she was still trying to figure out what her role entailed, noting, "I am still figuring things out because I get bits and pieces from a lot of different people and the job description is very vague."

In general, participants did not appear to have a clear understanding of how to fulfill their professional roles with respect to Maya's education program; thus, when tasked with the shared goal of designing curriculum learning activities for Maya, participants experienced some uncertainty about how to divide tasks and responsibilities, suggesting a contradiction between rules (i.e., professional roles) and the division of labour.

4.2.2.5 Addressing Contradictions. The contradictions that were highlighted in Theme 2 reflected participants' doubts about their own capacity to design a curricular unit that was

accessible to a student with ESNs. Participants addressed contradictions with respect to this theme in two ways, including: a) sharing the load; and b) sharing their expertise.

4.2.2.5.1 Sharing the Load. As noted previously, participants shared that the demands of their caseloads resulted in a perception of having limited time to integrate new practices into their work. To address this contradiction, participants shared the workload as they collaboratively designed a curricular unit. For example, during the facilitated planning meeting, the SLP created visuals of the key vocabulary words in the science unit that were accessible to Maya and shared them with the other participants (fieldnotes, Facilitated Planning Meeting, October 27, 2022). Furthermore, participants felt as though the responsibility of designing materials and activities for the curricular unit was shared by all members. In the first focus group, LST A asked the EA and the CT, "Did you guys feel like, after we left [the facilitated planning meeting] that it was on you? Or did you feel like there's a team and we are going to help?" The CT responded:

I do feel, I mean I do feel that, but I also feel that you guys are totally willing to help, right? Like, the resources and co-teaching and stuff like that. So, I don't feel like it's just...it's just me trying to figure out...how it is possible, I guess.

Sharing the physical workload and responsibility associated with the design of an accessible unit are two examples of how participants engaged in collaborative interactions that resulted in the transformation of how some participants fulfilled their roles. For example, as the SLP linked her expertise in language and communication with grade-level curriculum, she engaged in a new way of supporting Maya's educational program. Although, as previously noted, she prioritized access to communication devices:

I've heard the idea before about where we can get access [to the curriculum] for her [Maya], right? And I never really understood what that exactly meant. I hadn't really seen it in practice. But you know, having us discuss that and kind of really look at you know, 'OK what specifically is the teacher teaching, what are the worksheets being used and how can I get Maya with her peers to do some of this work?'

LST B also expanded on her role as an LST as she took on a leadership role that was beneficial to the collaborative process, which was noted by the SLP: "Our learning support teacher was great with coming back to [UDL] and making sure that we were on topic with the things that we were talking about." As well, the CT and LST B discussed opportunities for co-teaching, something they had not done before.

Sharing the load included making sure that other team members felt like they had the emotional support to work toward a common goal. For example, when the EA expressed a fear of failure, LST B acknowledged her perspective and reassured her that if the learning activities did not work out, it would not be a sign that she had failed at her job:

EA: I mean, you are trying to get me to achieve something in such a short window.

LST B: Okay, I need to clarify, because I feel like you feel there is pressure for her to achieve the goals. There's not. She doesn't need to achieve them, okay?

Participants noted that sharing responsibility and providing emotional support to each other contributed to building stronger collaborative partnerships. For instance, LST B commented:

If you don't have that trust with someone, they are just going to wait until you actually prove that you are going to be able to implement what you are talking about. And then for people to feel that they are supported in this as well...That is a relationship piece.

Thus, providing emotional support and building trust are considered collaborative interactions, as participants noted that building trust facilitated a change in the professional partnerships they had with each other. For example, in the background information questionnaires, participants described collaborative work as, "meetings" where they "discuss and share ideas and plans" or "frequent communication with members of the school-based team (SBT)." However, after participating in the facilitated planning meeting, participants spoke about professional relationships that were more collaborative. For example, LST B explained:

But now I am hoping, like, 'Okay, well, now I am going to come into the class, [the CT and the EA and I] can work together.' Then I am hoping that builds a little bit of trust there so that the next time we go to work on something, we have that relationship.

4.2.2.5.2 Sharing Expertise. Participants shared their individual expertise to design learning activities for the science unit to address the following contradictions: a) a perceived lack of professional expertise; and b) a perceived lack of knowledge about UDL. First, sharing professional expertise led to greater collective expertise of supports and strategies that would contribute to the design of an accessible curricular unit. In fact, LST A noted, "Having everyone's perspective in that meeting [was] so helpful. And so to hear each team member's bit in helping plan that, I think makes it a stronger unit plan because you actually have input from an EA, the classroom teacher, an SLP, LST." For example, when barriers to integrating language and symbols from Maya's AAC device with key vocabulary from the science unit were presented, the SLP shared her expertise on "how we view vocabulary in the AAC world" and taught other participants about how to foster language development and generalization using "core and fringe vocabulary" (fieldnotes, Focus Group #2, December 15, 2022). Also, during the

facilitated planning meeting, the SLP explained how to use Maya's AAC device to facilitate her access to vocabulary that was relevant to that particular unit:

We wouldn't necessarily program [the science] vocabulary in the [AAC device]. What we would do, is we would talk about it. So, if we were teaching a volcano, we would say, 'It's big, it's hot.' If the word mountain is there we would use that. So, you are kind of using the words that are on the [AAC device] to talk about whatever this is. So, it's kind of like making a definition with simple words.

The SLP was not the only participant to share her expertise: the EA shared examples of Maya's interests, skills, and strategies that worked (or didn't work) in the past (fieldnotes, Facilitated Planning Meeting, October 27, 2022); the classroom teacher shared learning outcomes for the science unit (i.e., curricular competencies) and learning activities she was planning to include in the unit (fieldnotes, Facilitated Planning Meeting, October 27, 2022); and the LSTs connected curricular content with strategies that would make activities accessible to Maya (fieldnotes, Facilitated Planning Meeting, October 27, 2022). As participants shared their individual professional expertise, they engaged in collaborative interactions as professional boundaries began to blur. For example, during the facilitated planning meeting, the classroom teacher provided suggestions for "core" and "fringe" words for Maya's AAC system (fieldnotes, Facilitated Planning Meeting, October 27, 2022).

Second, although participants did not feel as though they had enough knowledge to effectively apply the UDL framework to their task of designing an accessible curricular unit, findings suggest that collectively using the framework allowed participants to learn about UDL from each other. For example, LST B noted:

When everyone kind of gives their opinion on what we can do and then you can see where strengths come in. So, for example, people who have actually worked with UDL before can provide a little more guidance at the beginning. And then when others, I noticed that when others felt a little bit more comfortable, 'Okay, that's UDL, now I will pitch in, now I will be able to give my opinion.'

As a result, participants began to see how they could potentially use UDL in practice, suggesting the potential for transformative change. For instance, LST A noted how UDL brought some clarity to how she could support classroom teachers in her role as an LST:

I think [UDL] is helpful because then I know, really specifically, exactly what the teacher is planning to do, all of the pieces. And I can sort of figure out where I might be helpful. And what I can support. Like, I can help you make these materials and I can come in with this part and support with whatever. Right? And so I don't know if that's UDL-specific or just again having a framework and having some clarity ahead of time about what's happening.

4.2.2.6 Summary. To summarize this theme, participants appeared to question their own abilities to achieve the outcome of designing a curricular unit that was accessible to Maya. This perception was reflected in the following contradictions: a) participants perceived they lacked the professional expertise to design a unit that was accessible to a student with ESNs; b) participants perceived they lacked the knowledge to apply UDL in practice; c) participants perceived they lacked the capacity to implement a new approach to planning; and d) participants experienced confusion about their professional roles and responsibilities, particularly with the role of the LST and responsibilities of the CT and the EA. Participants addressed the first three of the
aforementioned contradictions through collaborative interactions, including sharing the load and sharing their professional expertise. By sharing the load and sharing professional expertise, some participants appeared to re-examine their own professional roles and responsibilities, such as the SLP shifting her focus from providing access to communication to exploring how communication can facilitate participation in a curricular unit.

4.2.3 Valuing (But not Prioritizing) Collaboration

The final theme constructed from the first dataset suggests that although collaboration was valued, it did not often occur in practice. First, several participants described collaboration as something they considered highly important and valued in their professional practices. For instance, the CT explained there was a collaborative culture at the school, stating, "I have been at this school since 2006. For us, we are all pretty interested in collaborating with each other. We are always constantly talking to each other, going into people's classrooms, it just works in our school." Participants also noted how much they appreciated the opportunity to work collaboratively during the facilitated planning meeting. For example, LST A noted, "It was really nice to have the time to collaborate in a group, with all of us. Because we pretty much never get to make that happen.... I mean, if we could make it happen regularly, it would be so valuable." Similarly, the SLP reflected, "I really appreciated going through the process and having those discussions, because I haven't been able to have those discussions with the school teams before, certainly not with the classroom teacher," and the EA shared:

I have a lot of goals and I have a lot of things in my mind that I would like to see and [in the facilitated planning meeting] I could finally share it with everybody, and I thought that was really cool because we don't often get the opportunity.

Although it appears that collaboration was valued by participants, participants did not often engage in collaborative work. Theme 3 reflects some of the barriers to working collaboratively and highlights the following contradictions: a) a tendency for the classroom teacher to work independently; b) a lack of time for inter-professional collaboration; and c) the difficult task of integrating recommendations from multiple professionals into a cohesive education program for Maya.

4.2.3.1 Tendency of Classroom Teachers to Work Independently. As noted at the beginning of Theme 3, participants appeared to value the opportunity to work collaboratively. Furthermore, including a student with ESNs in a grade-level curricular unit in a general education classroom appeared to require collaboration with the CT, as the CT decided what learning activities students would participate in. LST B explained, "[For a CT], your classroom is your classroom and you really control what happens in it." Although participants seemed to value collaboration, and collaboration with the CT appeared to be critical, findings from the present study indicated that classroom teachers typically did not engage in IPP. For example, the SLP noted that she rarely collaborated with classroom teachers:

Because often I will make suggestions or I will get, usually from the EA, I'll get a worksheet and then I'll kind of be like, 'OK, well, this is how we can modify it.' And it's very difficult to have that conversation as a team. So, I haven't really had that experience. And I find I have, frankly, I have more contact with the EAs and LSTs than I do with [classroom] teachers.

In fact, the CT explained that classroom teachers did not necessarily see collaboration as part of their practice:

Some [teachers] are lone wolfs, they like to do their own thing. And then some [teachers] are more open to collaboration. I mean, you probably know which teachers are. So I think there would be [some teachers who] would be willing to [collaboratively plan with an LST].

Indeed, the CT may not have considered collaboration to be part of her practice. However, there were many different education and health professionals who worked with Maya, and while the CT was open to having several different professionals in her classroom to support Maya, professionals from other disciplines did not always consider collaborating with the CT. For instance, the CT shared:

Well, if it hadn't been for [the facilitated planning meeting], I wouldn't have probably known, like there are so many people on her team, I don't know anybody...there is a steady stream of adults that come in [my classroom], and I am like, 'Okay.' Or LST A will send me a message, 'So-and-so and So-and-so is coming,' and I'm like, 'Oh, that's great! I don't know what they look like, but feel free, come on in!'

The tendency for the CT to work independently presented a contradiction between the rules (i.e., how participants fulfilled their professional roles) and the object of collaboratively designed learning materials and activities for a science unit. In other words, in order for participants to work toward this collective goal, they needed to address this contradiction by reconceptualizing how they fulfilled their professional roles.

4.2.3.2 Lack of Time for Meaningful Collaboration. Although participants expressed feeling as though there was a collaborative culture in the school, findings from the present study suggest that opportunities to engage in meaningful collaboration within the school community appeared to be limited. First, participants noted that there was very little designated time in their

workload for multi-disciplinary collaboration. For example, the school district had designated collaboration days. However, collaboration days were limited to two half-days each year and were not designated to be multi-disciplinary collaboration days, so professionals were more likely to meet within their own disciplines (fieldnotes, Focus Group #2, December 15, 2022). Without designated time to collaborate, participants appeared to struggle to find time to meet with each other. Consistent with this, challenges related to finding time to meet as an SBT outside of 'designated collaborative time' included large caseloads and pay structures. For instance, in the following continuous exchange, the two LSTs noted some of these challenges:

LST B: For me, for all of us, to be available after school or at lunch and to be able to prioritize that one student, right? Like, the CT teaches the whole class, we have a whole caseload, we all have whole caseloads, right?

LST A: Well, and EA pay is a thing too. Like, this is something that has come up quite a few things. EAs are paid hourly and the rest of us are paid salary, so it's kind of expected we are going to take time outside the school day. But it's not fair to ask [EAs] to take time. And so then we are looking for, 'Okay, well, what money can we use to pay for [collaboration time].'

Furthermore, the SLP commented on the difficulty of finding time to work collaboratively with colleagues from other disciplines:

Like you said, when are you going to have this meeting? Like, for me, I am usually there at IEP meetings and that's when I can kind of contribute to the whole team. Aside from that, it's sporadic when I can come in. And also, just generally, I have to look at the whole district, right?

Second, participants held the perception that the school district did not prioritize multidisciplinary collaboration. For instance, one of the barriers to collaboration that participants shared was that the school district would not cover the funds required for multi-disciplinary members, including the CT, to meet:

LST B: The only barrier that I see to that...

EA: ... if it's possible...

LST B: ...Well, it's not possible in my opinion. There is no way that they are going to pay for all of us to meet for one student.

CT: I would agree with you, I would agree with you.

As well, opportunities to work collaboratively were often cancelled. The CT noted, "Well, even the meetings that they are having now with [an inclusive education consultant], they get cancelled because there is a [teacher-on-call] shortage." LST A agreed, "And that's actually a great point, because then, like in our position, we are being called to cover classes because there's no teachers."

The lack of time for meaningful collaboration presented a contradiction between the community (i.e., school, school district) and the rules (i.e., how subjects fulfilled their professional roles). In other words, the collective goal of the activity system did not align with the perception that participants had about the values and priorities of the community in which they worked. Thus, participants had to address this particular contradiction as they engaged in IPP.

4.2.3.3 Difficult Task of Integrating Recommendations from Multiple Professionals into the Student's Education Program. As noted in Chapter 3 (see Section 3.4.6.1.1), there are many different professionals and organizations involved in Maya's education program. The more

people involved, the more perspectives there are to integrate into the problem-solving process, which can be difficult to do. As LST A stated, "I think it would have been helpful to have other members of the team [at the facilitated planning meeting], but in some ways, when it's too many people then it starts to be difficult to actually get anything done." Furthermore, participants noted that some of the information they had about Maya from different professionals in the school district and provincial outreach programs was inconsistent, making it difficult to design accessible learning activities. For example, during the facilitated planning meeting, participants shared information about Maya's vision and hearing, and the information that the EA shared from Maya's nurse was different from the information that the LSTs shared from Maya's vision teacher (fieldnotes, Facilitated Planning Meeting, October 27, 2022). As well, the different organizations and professionals did not collaborate with each other, which left participants with multiple lists of recommendations for supports and strategies, rather than a comprehensive program. Consistent with this, LST A recalled a conversation she had with one of Maya's nurses:

And what she said to me last time, when SET-BC was here, she was like, you know, 'Who is this? Do you have permission to be here?' Like that kind of thing. And then she was saying, 'Well, new people keep coming in and throwing stuff at Maya and, you know, she can't do that.' And, it was like, "Yeah, people have tried this before, people have tried this before.' So she has that, understanding and I think frustration because it's a new person trying to do new things or implement something that maybe doesn't get implemented properly or for long enough. And then it's a new thing.

The difficult task of integrating multiple recommendations from several different professionals and organizations presented another contradiction between the community (i.e.,

other professionals and organizations involved in Maya's education program) and the object of the activity system (i.e., a collaboratively designed curricular unit that was accessible to Maya).

4.2.3.4 Addressing Contradictions. The contradictions that were highlighted in Theme 3 suggest that although participants valued collaboration, collaboration rarely occurred in practice. Participants addressed contradictions with respect to this theme in several ways, including: a) being creative with time; b) shifting priorities; and c) integrating multiple perspectives into curricular design.

4.2.3.4.1 *Being Creative with Time*. Participants were motivated to find meaningful opportunities to collaborate, particularly with the CT. For example, participants were creative with how they could use the time they had in order to engage in collaborative work. Being creative with time is an example of a collaborative interaction, as participants discussed making changes to the way they fulfilled their roles. For example, since collaboration with the CT appeared to be critical in the design of accessible curricular activities, LST B suggested that the CT set aside scheduled time to collaborate with EAs working with students in her class:

If you scheduled 15 minutes once a month – and you may have four of those in your class, for example – then you knew on so and so time we are going to check in for 15 minutes about that student. You probably wouldn't even have four, but I don't know how many kids you would have. But I did do that with an EA and it worked, it was great. Participants also discussed the importance of creating time for the CT and the SLP to collaborate. For example, LST A suggested:

Well, [it is important for] SLP to be working with CT, with the visuals, right? Because you have to have the understanding of how to use the visuals too, which makes me think, I don't know, listening to you say that you don't often get to meet with the CT and I'm thinking, 'Of course. You are working with the EA, you are working with [LSTs], but very infrequently with the CT.' And I am wondering, would it be helpful if LSTs were to cover CT's class so you could meet with her instead? Do you think that would be more effective?

4.2.3.4.2 *Shifting Priorities.* Participants, particularly the CT, started to shift their priorities with respect to multi-disciplinary collaboration. For example, at the end of the data collection period, the CT noted that she was planning to foster relationships with other participants:

My goal is to try to sit down and talk to [colleagues] more. Like, you know, one of the resource teachers wants to come and teach in my classroom on Wednesday...so, she said she's coming in, so I guess maybe try to collaborate a little bit more.

Furthermore, the CT also noted that prior to participating in the study, she had not considered the importance of collaborating with other members of the SBT. However, over the course of the data collection period, her mindset has shifted, and she noted that she will be looking for opportunities to collaborate with her colleagues in the future:

My first go-to is not to think about including [LSTs], which is my bad as a [classroom] teacher. Obviously, you know, you collaborate with us too. It's wonderful, you were like, 'Oh, let's co-teach.' And I was like, 'That's great.' So, it makes me...even this has made

Shifting priorities can be considered a collaborative interaction, an example of this being the CT experiencing a change in how she prioritized collaboration in her practice.

me open my eyes to try to incorporate you guys more into what we are doing.

4.2.3.4.3 *Integrating Multiple Perspectives.* Participants considered how they could integrate recommendations from multiple professionals into curricular activities, as they brainstormed during the facilitated planning meeting. For example, the SLP suggested integrating

recommendations from some of the professionals who worked with Maya, but who were not in attendance at the facilitated planning meeting:

I am also thinking back to when we had [PIOP], last year, come and see her. Remember that the educator that came with them, she was talking about making those high-contrast books and she made it really easy using Book Creator. So, there's a black background and then you have, whatever pictures. So, we could even make one of those books.

Although this is only one example of how participants integrated perspectives from the larger medical and educational community, it demonstrates one instance of a change in practice as a result of collaborative interactions.

4.2.3.5 Summary. In summary, evidence suggests that although collaboration is valued and, indeed, expected, collaboration does not often occur in practice. This theme highlights contradictions that reflect this disconnect between values/expectations and practice, including a) the tendency for classroom teachers to engage mostly in independent work; b) a lack of time to engage in collaboration with other disciplines; and c) the practice of multiple professionals contributing to Maya's education program.

Participants addressed identified contradictions through collaborative interactions, including being creative with time, shifting their priorities, and integrating multiple perspectives into the curricular activities that were designed to be accessible to Maya. As participants became creative with time, started to shift their priorities, and integrated recommendations from other professionals and organizations into the curricular program, they demonstrated transformative change as evidenced by a change in how they fulfill their professional roles (e.g., the CT making time for scheduled collaborative sessions with the EA).

4.3 Case 2: Florence

As previously noted, participants in Case 2 supported the education program of Florence (a pseudonym), a seven-year-old gil enrolled in a grade 1/2 combined classroom in an elementary school located in a large urban school district in the lower mainland of British Columbia (see Chapter 3, Sections 3.4.6.2 and 3.5 for a detailed description of participants and setting). Participants included Florence's classroom teacher (CT), her education assistant (EA), a learning support teacher (LST), and her speech-language pathologist (SLP). During the facilitated planning meeting, participants designed curricular activities for a science unit focusing on matter. Themes constructed from the second case include: a) *Building Collaborative Partnerships;* and b) *Making Inclusive Teaching Easy and Efficient*.

4.3.1 Building Collaborative Partnerships

The British Columbia Ministry of Education's *Manual of Policies, Procedures, and Guidelines for Special Education Services* (2016) indicates that a collaborative approach to providing inclusive education for students with intellectual disabilities, including students with ESNs, is recommended:

With sufficient training and experience, classroom teachers will be capable of including students with intellectual disabilities and providing programs in which they can be successful, provided that specialized support is available when needed. In-service training opportunities and a collaborative team approach are recommended (p. 44).

However, evidence from Case 2 suggests that multi-disciplinary, collaborative planning rarely occurs in practice. For example, the LST stated: "I mean, all of us sitting down at the same time for that amount of time, it never, never happens." This theme highlights some of the challenges to building collaborative relationships between education professionals from different

disciplines, which resulted in the following contradictions: a) a lack of time for participants to work collaboratively; b) the tendency of classroom teachers to work independently from other disciplines; and c) a lack of connection between recommendations from district resource professionals and curricular goals or activities.

4.3.1.1 Lack of Time for Collaborative Work. Participants noted that there was designated time for CTs to meet with other professionals, such as during IEP and SBT meetings. According to the British Columbia Ministry of Education (2016)'s *Special Education Services: A Manual of Policies, Procedures and Guidelines*, the IEP "serves as a tool for collaborative planning among the school, the parents, the student (where appropriate) and, as necessary, school district personnel, other ministries and/or community agencies" (p. 16). The manual also describes the SBT as:

...an on-going team of school-based personnel which has a formal role to play as a problem-solving unit in assisting classroom teachers to develop and implement instructional and/or management strategies and to co-ordinate support resources for students with special needs...the SBT includes a small group of regular members, usually including a school principal, a learning assistance or resource teacher, a classroom teacher and a counsellor...and, as appropriate, district resource staff (p. vi).

IEP and SBT meetings are opportunities for multi-disciplinary professionals to meet and discuss the education programs for specific students, such as Florence. However, participants noted that the structure and the designated time allotted to IEP and SBT meetings were insufficient for collaboratively designing curricular units. For example, the CT noted:

I guess because we don't really get to collaborate like that. When we when we do, like our SBT meetings, we have a very large school so we have a very limited time. And, so usually, we're all very pressured to just get to the point. You don't get a chance to kind of think about things, really. Like, you have to just present your thing and then like get it right to the point. There isn't time to really discuss.

The lack of time for meaningful collaboration presented a contradiction between the community (i.e., school, school district) and the rules (i.e., how participants fulfilled their professional roles), as the collective goal of the activity system did not align with the perceived values and priorities of the community in which they worked. Thus, participants had to address this particular contradiction as they engaged in IPP.

4.3.1.2 Tendency of Classroom Teachers to Work Independently. Even though the special education policy recommends a collaborative approach to designing inclusive education programs, (British Columbia Ministry of Education, 2016), findings suggested that the CT typically worked independently, especially when designing a unit plan. The LST explained, "Being a classroom teacher is a very different job, where if you chose to, you really wouldn't speak to another adult all day long, right? Like, you can just walk into your room and that's that." The CT shared a similar perspective:

I think teaching is quite an isolated, like we are kind of quite isolated in our own classrooms. And we often don't have a lot of time to collaborate like this. Or the collaboration is very structured and it might not really fit with what you're doing. So, to be able to have it specific to exactly what you're doing and everyone's talking about your student and your units. Yeah. We don't really get to do that normally.

In practice, collaborating with other disciplines on the design of a unit plan or learning activities was not something that classroom teachers typically did. In fact, the CT stated it had never occurred to her to collaborate with the EA, noting:

I don't know why I didn't think about it before, but you know how you have your LIF [Learning Improvement Fund] time and you're like, 'Oh, what can I do?' And now I am like, 'Well maybe we can use that time to talk.' Cause I don't really, I don't tell you what I am going to teach.

The tendency for the CT to work independently presented a contradiction between the rules (i.e., how participants fulfilled their professional roles) and the object of collaboratively designed learning materials and activities for a science unit. For participants to work toward this collective goal, they needed to address this contradiction by reconceptualizing how they fulfilled their professional roles.

4.3.1.3 Lack of Connection Between Recommendations from District Resource

Professionals and Curriculum. Participants noted that without collaboration with the CT, recommendations from district resource professionals (e.g., SLP) were often general and not related to classroom activities or curricular content. For instance, the SLP noted:

And so I felt like [the facilitated planning meeting] was really nice because I will often make recommendations. But without knowing, like the curricular topic or the content that's going to be taught, it's hard to get specific...And then I feel like that's often in the disconnect because teachers are probably thinking, 'Well, that's something extra now that I have to do.'

In other words, providing a list of general recommendations without a direct link to curricular learning activities was not the most effective approach to designing a curricular lesson that was accessible to a student with ESNs. Furthermore, when district resource staff (e.g., SLPs, occupational therapists) were asked to be part of an SBT for a student, there was a perception

that they needed to provide recommendations to solve a specific problem, rather than engage in collaborative problem-solving with other members of the SBT. The SLP reflected:

I think often because when I get brought into things or other district personnel or itinerants get brought into things, it's often at that, like, urgency level. And so I feel like when I come in, it's kind of like, 'OK, I'm here to deliver a message' or 'I've written a report, let me tell you about it.' And then I feel like there's sometimes not a lot of room for me to just listen, which is equally if not more valuable to me.

Indeed, the lack of connection between recommendations from district resource staff and grade-level curriculum presented a contradiction between how subjects typically fulfilled their professional roles (i.e., rules) and the collaborative design of a grade-level curricular unit (i.e., object). Thus, participants had to address this issue as they engaged in IPP.

4.3.1.4 Addressing Contradictions. Participants in the present study addressed the contradictions highlighted the first theme through the following collaborative interactions: a) being creative with time; b) considering other perspectives; and c) building trust.

4.3.1.4.1 *Being Creative with Time.* First, participants discussed how they could be creative with time to create opportunities for meaningful collaboration. For example, the LST stated:

It makes me want to try to get creative with scheduling with whole class groups or grade groups. To be able to...like, I am wondering if, within our school, if we got creative, if we do have the manpower to spell each other off.

Participants noted that it wasn't necessary for all members of the SBT to meet, but that it was critical for the CT to have opportunities to meet with colleagues from different disciplines. As well, they didn't necessarily need *more* time designated for collaboration, but needed to use the time they already had to engage in meaningful collaborative interactions. For example, in the

following continuous conversation, participants discussed how the CT and EA could carve out time in their regular schedule to collaborate on upcoming units by changing how the EA uses her LIF time (i.e., time that could be used for collaborative planning with other members of the SBT):

CT: That would be a time to talk about these are units coming up, how can you include Florence? Cause sometimes it's not possible, well it isn't possible for all of us to meet for every unit. But the EA in the classroom has the LIF time, what is it, every week? LST: Yeah, every week.

CT: Yeah. So even if we don't meet every week, but just as the new things come up. EA: Yeah.

LST: Yeah. Like, if once a month, the LIF time was, 'Okay, this is what is coming up. And the rest of the LIF time you are creating the things that you might need to, you know, help not only Florence, but other kids. Like, if we want some more visuals.

CT: Yeah, we could do what we did [during the research study].

Designated opportunities for collaborative planning would ensure that education professionals have the opportunity to engage in meaningful collaborative work, including taking the time to share, listen, and brainstorm together. The SLP explained:

We knew [at the facilitated planning meeting] there was a certain amount of time. And we could take our time, and we could brainstorm, and there wasn't a sense of pressure, I guess, for me. It was a luxury to have that time, you know, if only it could happen all the time when we wanted it. But I think that for me, personally anyway, that helped to really think through in detail and be careful and intentional and thoughtful. As opposed to just, 'Okay, I got to get this done, what's one thing I can just throw at you before I have to run down the hall to the next classroom?'

By thinking about how they could use their time differently, participants engaged in collaborative interactions. For example, after participating in the facilitated planning meeting, findings indicate that the EA and CT had the intention of using time in their day to collaboratively plan curricular units. As well, the SLP shared that during the collaborative process, she used the time to engage in meaningful, collaborative discussion with other participants (e.g., "brainstorm," "think through in detail") instead of just offering a recommendation.

4.3.1.4.2 Building Trust. Participants had to be willing to share and listen to different perspectives to build collaborative partnerships, but they also needed to trust that they were in safe and supportive professional relationships with each other. For example, the CT noted that because collaborative planning was new for her, she felt quite vulnerable at first:

At the very beginning, I was almost kind of defensive, kind of like, 'They're going to judge my unit' kind of thing. But then I was like, 'OK, no, you gotta.' I had to talk to myself and say, 'You have to let that go.' Because in order to get new ideas, you have to kind of be willing to hear other people. And when you're kind of in that, kind of, you feel you have to defend yourself, you can't really hear other people. So, I feel like that's an important part, is like being able to kind of let that go a bit and not feel like you're being judged and more like we're working together.

A trusting professional relationship also led to credibility. In other words, when participants trusted each other, they were more likely to listen to each other's perspectives and suggestions, as noted by the SLP: "If we have that trusting relationship, then I feel like there's more of a

chance that they'll be able or feel willing to take that on board or trust my opinion right, and vice versa." Furthermore, the SLP noted that having time to listen to other perspectives helped create a feeling of equal partnership among all members:

I feel like there's sometimes not a lot of room for me to just listen, which is equally if not more valuable to me. But it was so nice to be able to have that, like equal time and equal partnership and ability to listen and learn from the other people. As opposed to me sort of being the one coming into the room saying, 'OK, this is this is what I'm going to recommend.'

The sense of equal partnership resulted in members of the SBT feeling included and valued. For instance, the EA shared:

I feel more confident now, after having had that [facilitated planning] meeting. And just feeling and seeing how valued my opinion and ideas and perspective are. So, I think that just having that little bit more confidence, of feeling valued is like...it helps me to feel like I can contribute ideas and actually be heard.

Building trust appeared to be an important collaborative interaction, as it led to several transformations, including the CT being willing to allow her colleagues to contribute to the curricular unit she would be teaching. Furthermore, the SLP appeared to step away from an 'expert' role and the EA had more confidence in her contribution to the curricular design.

4.3.1.4.3 Considering Other Perspectives. Participants expressed that sharing and listening to other perspectives during the facilitated planning meeting helped them to see the value in collaborative planning. For instance, the CT explained, "I guess it really showed me that it really is true that it is that when you work with others that you know, you really do get to see other perspectives." Each participant had a different relationship with the student, and sharing their

individual experiences and perspectives contributed to a better collective understanding of the student across different contexts. For example, the SLP commented:

It was really nice to and informative, I guess I should say, to get the perspective of those staff members on the child and then also information about what's going on for that child in the classroom. And throughout the school day. Because again, I'm not there. I'm not in that room. So, that was helpful.

Not only did collaborative planning allow participants to learn from each other, but thorough the collaborative interaction of considering other perspectives, participants gained a better understanding of the impact their individual role had on their colleagues. For example, the SLP reflected:

Being mindful of all of the other, our counterparts, like, 'Is this [recommendation] going to be accessible for this person to implement? Or is this something that they feel, like I might be like, 'This will be great,' but it's like, 'Well I haven't seen that.'...So, I guess almost humbling ourselves and kind of being, I don't necessarily know it all or I know my expertise but everybody else has their own expertise.

4.3.1.5 Summary. Although the British Columbia Ministry of Education (2016)'s *Manual of Policies, Procedures, and Guidelines for Special Education Services* recommends a collaborative approach to providing inclusive education for students with ESNs, evidence from the present dataset indicates that collaboration in practice appears to be rare. Findings from analysis of the second dataset indicated that barriers to the collaborative design of a grade-level curricular unit that was accessible to a student with ESNs included the following contradictions: a) a lack of time to collaborate; b) the tendency of the CT to work independently, not collaboratively; and c) the lack of connection between recommendations from district resource professionals and grade-

level curriculum. Participants addressed the abovementioned contradictions through collaborative interactions, including: a) creating opportunities for meaningful collaboration with the time they had; b) sharing and listening to different perspectives; and c) building trust. With respect to this theme, addressing contradictions through collaborative interactions led to examples of transformative learning for some participants, such as the CT allowing her colleagues to contribute to the design of a curricular unit and the SLP stepping away from an expert role to establish equal partnerships with other participants.

4.3.2 Making Inclusive Teaching Easy and Efficient

In the context of the present study, inclusive education for a student with ESNs included participating in grade-level curricular learning activities. However, designing a curricular learning activity that was accessible to a student with ESNs was not necessarily easy to achieve. Theme 2 of the second dataset presents some of the challenges participants encountered as they worked collaboratively to design a curricular unit that was accessible to Florence. Key contradictions highlighted in this theme include: a) the absence of participation in curricular activities in Florence's current education program; b) the diversity of learning needs among students in the classroom; c) the need for participants to juggle multiple tasks and responsibilities; and d) a lack of knowledge and experience with UDL among participants.

4.3.2.1 Absence of Participation in Curricular Activities. At the beginning of the study, including Florence in curricular learning activities was not necessarily on the participants' radars. For example, the EA shared her perspective: "I would say with Florence, I typically. really before this meeting I wasn't really that much thinking about how I can include her in what the class is learning so much." A review of Florence's IEP indicated an absence of participation in curricular activities as a focus of her education program. For example, although her current

IEP did include a goal linked to classroom activities, namely, "I can follow daily classroom routines" (Florence's IEP, May 25, 2022), the measurable objectives under this goal were mostly linked to self-care skills (e.g., asking for help to hang her coat on the hook in her locker, increasing independence at meal time). Although one objective was loosely linked to the grade two curriculum (i.e., developing pre-printing skills), the strategies that were listed did not provide suggestions for how Florence could work on this learning objective within the context of classroom activities (Florence's IEP, May 25, 2022).

The lack of an expectation of participants that Florence participate in grade-level curricular activities presented a contradiction between the subjects and the object of the activity system, which participants addressed as they engaged in IPP.

4.3.2.2 Diverse Learning Needs in the Classroom. The BC Ministry of Education's special education policy on placement states that all districts "must provide a student who has special needs with an educational program in a classroom where the student is integrated with other students who do not have special needs, unless the educational needs of the student with special needs or other students indicate that the educational program for the student with special needs should be provided otherwise" (British Columbia Ministry of Education, 2016, p. 2). This policy implies that the schools and classrooms in British Columbia would include a diverse group of learners. Participants noted that one of the challenges to designing a curricular unit that was accessible to Florence and her peers was that the learning needs, strengths, and styles of the students in the CT's class were very varied. For example, the EA noted, "I think there are definitely a lot of good strategies that we can incorporate. But then I think some of them are just difficult to, um...like, with the whole class, because everyone's needs are so varied." It appeared that including a student with ESNs, like Florence, came with a unique set of challenges. For

instance, in general, it may be difficult to identify what engages a student with complex needs or what supports might work for them, and teaching often involves a great deal of trial and error. In this connection, the LST explained:

I think that's what [being an] LST is all about, it's just, 'We've tried this, OK? We've tried this. We've tried this. What else can we try?' And then, you know, sometimes it feels like banging your head against a wall, repeatedly. Then sometimes when you have a little breakthrough it's like, 'OK, OK. Now we can.'

Not only could it be difficult to determine how to facilitate participation and engagement for a student with ESNs, it could be also difficult to assess their learning. The EA shared:

Some of the things that I found challenging with Florence was like, even though the lesson was geared toward her, it was still hard to gauge whether, how much she really was accessing...and our capacity for monitoring progress. That's hard to know, how to monitor her progress.

As well, the LST noted that it could be frustrating when SBT members took time to design accessible learning activities that were not implemented because the student was away: "We have everything ready. We have it all ready. And then Florence is not here."

Another challenge to designing a curricular unit that was accessible to all students, including a student with ESNs, was that the CT may have been provided with individualized programs or a list of recommended adaptions to classroom activities for several students. The SLP stated that having multiple individualized programs was not a realistic expectation for a CT to implement:

[The CT] is having to plan out [one unit] for all of the different kids and then adapt. So, I guess for me it's important that I know this, but to really drive it home, like when we're

saying 'Ohh, the child needs adaptations' or you know, 'What are you doing to

differentiate the curriculum?' or 'How are we supporting access for the student?' Adapting materials or creating individualized learning activities for specific students took time, which participants noted they did not have. For example, as participants discussed how they could link the symbols on Florence's AAC device, the LST commented, "So, making numerous overlays for different lessons isn't something that we can probably realistically do [because of the time it would take]."

In sum, the students in the CT's class had a range of diverse learning needs, which presented a challenge to designing a curricular unit that was accessible to Florence but would also engage her peers. Thus, a contradiction arose between the community (i.e., students in the class) and the outcome of the activity system; participants addressed this contradiction as they engaged in IPP.

4.3.2.3 Need to Juggle Multiple Tasks and Responsibilities. A third challenge to designing an accessible curricular unit was that participants were already juggling many tasks and responsibilities. For example, participants described managing large caseloads, supporting 'unofficial' caseloads (i.e., students who had not been officially designated by the Ministry of Education, but who needed additional support to be successful at school), and supporting each other. The SLP explained how she used to manage her large caseload:

So, what I used to do is take on any name that was thrown at me and just run around and be like, 'OK, I can do six sessions and I'll work with you in term one and then I've got to pause you because I'm going to pick up another student.' It's just, you're not really effective.

She elaborated on this experience during the member-checking process, when she further explained why this previous, "traditional service model (or medical model)" was a barrier to a practice that included collaboratively designing curricular units: "Pull-out services are typically limited, and...providing services in isolation (outside of the classroom) means it is very challenging to connect newly acquired skills to curricular learning." Furthermore, the LST commented that while her job involved working with students, she also had to find time to ensure that members of the SBT were supported and on the same page: "As an LST teacher, while you're working a lot with kids, it's a lot of working with other adults as well, like EAs in particular. You're constantly communicating with the other adults in the building."

The issue of participants needing to juggle multiple tasks and responsibilities represents a contradiction between the rules (i.e., professional roles and responsibilities) and the object of the activity system, as participants were unsure of where they would find the time to work collaboratively to design a curricular unit.

4.3.2.4 Lack of Knowledge and Experience with UDL. A review of the background questionnaires indicated that the participants had varying experience with using UDL, ranging from very limited (e.g., CT and EA), to some background knowledge (e.g., SLP), to experience with using it for many years (e.g., LST). At the beginning of the study, the EA explained, "I don't know enough about UDL, really. I mean, this is just the first of really integrating it or using it or learning about it." The lack of experience in applying UDL to the design of a curricular unit presented a contradiction between the object and the tools in the activity system.

4.3.2.5 Addressing Contradictions. There were some challenges to collaboratively designing curricular activities and materials that were accessible to a student with ESNs. These challenges

led to contradictions that participants addressed in several ways, including a) using UDL to focus on inclusion; b) sharing expertise; and c) sharing the workload.

4.3.2.5.1 Using UDL to Focus on Inclusion. Participants valued a classroom that fostered a culture of inclusion. For example, participants discussed the benefit of students with different strengths and needs learning with and from each other. The following is an excerpt from a continuous conversation between participants:

EA: Florence could teach a lot of stuff.

LST: I agree.

CT: Yeah, that's pretty much it.

EA: And just provide those opportunities for [her peers] to understand the lesson even more by engaging with her.

CT: That's true, right. Yeah. Like, I can think of [another student], she really enjoys working with Florence, but she could use the extra support herself. So, as I learned, you know, sometimes if you don't know really well yourself, then you have to learn it in order to explain it, especially if you have to explain it in a more, just get the main ideas. So, I could see, you know [for this student] ...it would be helpful to her as well.

LST: Mm hmmm.

EA: Or [a different student in the class].

CT: Yeah. With his English, right? Like, learning some of the vocabulary. And he loves to work with Florence. They all do. I can't think of any student who really wouldn't want to [work with Florence].

The above excerpt highlights not only the advantages of students working and learning together, but also showcases the benefits of designing supports that made the lesson accessible to Florence and making them available to all the students, reflecting the basic philosophy behind UDL. For instance, in the above passage, participants noted that picture symbols for key vocabulary that were designed for Florence would also benefit two other students, one of whom was learning English. Furthermore, both the CT and the EA noted that when learning activities were designed to be accessible and inclusive, Florence was more engaged in class than usual. For instance, the SLP reflected:

I think that's a really great point and an interesting point that you are making, that she was engaged and she did want to participate and you didn't notice her protesting the activity. And I feel like, obviously you know Florence a lot better than I do, but I feel like she got the sense that you guys had created a really safe and welcoming and open and inclusive environment for her. And designed the task in the way where she was like, 'Yeah, I want to be part of this. And I don't feel like there is a reason why I don't want to be or it's going to be difficult for me. Or the way I want to engage is not going to be accepted.' So, I think that is totally a testament to the way you guys supported that and designed the activity and were really thoughtful about including her.

As reflected in the above example, UDL helped participants overcome some of the challenges related to teaching a diverse group of learners. Furthermore, the guiding principles of UDL helped to focus the facilitated planning meeting to design universal supports that would meet Florence's needs, but might also benefit several students, thus mitigating the need for individualized supports or adaptations for multiple students. The LST explained:

I think because [UDL] is so broad it can help you sort of cast that wider net, rather than baiting all these individualized hooks, which is not realistic whatsoever. But if you try to

provide sort of, like, 'Okay, I know these universal things will help everybody,' at least we are doing that.

The CT also noted:

That's how I felt like, the big idea of if I include Florence and I meet her needs, I am meeting everyone's needs. I think it's helped changed my thinking a little bit for all things. Like, if I meet these kids' needs, everyone's needs are met and I don't have to individualize every little thing.

Participants shared that the core concept of UDL (i.e., designing for a range of learning needs benefits all learners) shifted their view of the students in the classroom, and they began to see the class through a lens of inclusion. For example, instead of thinking about the classroom as a group of individual students, participants shifted their thinking to consider the diverse range of needs across all students. Along with this shift in thinking, participants also seemed to take on more responsibility for designing inclusive learning activities. For example, the CT shared:

I guess just the main thing is just to have a different perspective on how you see your classroom as a whole. Rather than, you know, 20 individual kids with individual needs, you see them kind of, as like a group, seeing this is the range. And then, 'Yeah, what do I need to do to meet all the kids' needs?'

Using UDL to view the class as a whole also shifted participants' views on how the resource team could support CTs to implement inclusive teaching practices that met the needs of all students efficiently and effectively. For example, during the member check process, the CT elaborated:

Usually when working with the resource team or EA, the focus is on the students receiving support rather than the class as a whole. It was helpful to hear others' ideas and

perspectives. It was a different way of thinking about how to support a teacher in a classroom. It felt more like looking at the class as a whole rather than each child individually. It feels more manageable to find ways that support the learning needs of the group that encompass all students.

The SLP also commented on how shifting the focus to the whole class, rather than just to an individual student, provided a new perspective on how she could better support classroom teachers:

In my job I am often very hyper-focused on individual students, and, you know, 'What is this person working on?' And so I totally can imagine as a classroom teacher it is very hard when you have a student with high support needs like Florence, but she is not your only focus. Of course, you have a lot of other things going on, you have a big group, you have curriculum. And so how do we all fit together and bring those perspectives and work as a team?

Participants, particularly the CT, the SLP, and the EA, shared that their new understanding of UDL not only influenced how they viewed students in the classroom, but also influenced their professional practice. For example, the CT explained that by viewing her class as a whole, with a range of needs, rather than as individuals, with individual needs, she planned and taught the science lesson differently. Furthermore, she noted that participating in the facilitated planning meeting inspired her to approach future lesson planning in a more inclusive way:

I guess it's the UDL part where I feel like if I include Florence and I meet her needs, I meet every student's needs. I think I remember hearing that, but now I understand it more, like now that I was actually part of creating something like that. And so now when

I do my other units I'm thinking about, 'OK, if I meet these kids' needs, I'm meeting the whole range of needs.' So yeah, I see it a little bit differently now. And I feel happy about that.

Using the principles of UDL to collaboratively design learning activities that were accessible to Florence also had an impact on how the SLP viewed her role in inclusive education. For example, she stated that typically, in her approach to planning, she focused on the UDL principles and guidelines that were explicitly linked to her discipline (e.g., Multiple Means of Expression) and hoped that they would support academic inclusion. However, she noted that when she used UDL in an inter-professional collaborative approach to planning, she focused on the goal of participation in a grade-level curricular unit and considered how her expertise connected to principles of UDL:

I guess from my angle, I often talk about the means of expression often, right? That's sort of where I go to. And also the means of representation. And so kind of laying that groundwork out in terms of thinking [about academic inclusion], so when the conversation went to her [AAC] device and how could we implement the device [in curricular activities], that was really helpful.

In other words, her planning approach shifted from what could be described as a 'bottom-up' approach to one that was 'top-down.' Furthermore, using UDL influenced how the SLP might make future recommendations to support students on her caseload. For example, she reflected: "...rather than these 50 recommendations for this child, maybe, 'What are the top three that the whole class will benefit from?' Right? And maybe one that we can tack on that's more specific and targeted." The EA also commented on how UDL encouraged her to make changes to her own practice:

I'll use [UDL] with the CT for the next plan, like, probably when we get back from the break. Whatever she is going to be teaching, I'll get her to go over the socials and the science stuff with me and then I'll give her whatever I can get from the [CAST] website or from using the guidelines. And then see if there's any of it that she would like to integrate, or wants to or feels like this would work, or this wouldn't. So, yeah, I think it feels like we've opened up a conversation now like, between each other. And I think that's great.

Thus, by using UDL to focus on inclusion, participants engaged in collaborative interactions that changed the way they designed activities to include a diverse group of students, including Florence; that is, instead of making several activities, they focused on designing activities and supports that would promote access for Florence, but would also be "good for everyone." Furthermore, they shifted their perceptions on how they viewed the class, which influenced how they viewed their role on the SBT.

4.3.2.5.2 Sharing Expertise. While focusing on activities and supports that were universally accessible addressed some of the challenges to designing an accessible curricular unit, participants also engaged in the collaborative interaction of sharing their professional expertise to design supports that were simple, easy to implement, and could be used in multiple contexts. For example, the SLP suggested including general concepts, such as 'tall/short,' 'up/down,' 'over/under' on Florence's AAC device and integrating those concepts across different subjects and units (fieldnotes, facilitated planning meeting, November 23, 2022). As well, during the facilitated planning meeting, participants built on pre-established activities and routines in the classroom (e.g., including songs about the science unit in daily routines) and used supports and strategies that already existed and were easily accessible, such as the *Autism Level UP!* templates 151

(fieldnotes, facilitated planning meeting, November 23, 2022). The CT acknowledged the value in sharing pre-existing supports and strategies, as she reflected: "...and sometimes it's the simple ideas that are the ones that are the best. And sometimes you think, why couldn't I have thought of that on my own? But sometimes you don't."

As participants shared their expertise, they experienced a shift in their perception of including a student with ESNs in a curricular unit. For example, designing a curricular unit that was accessible to Florence "stretched" the team's understanding of inclusive education for students with ESNs to include taking part in a curricular unit, not just social inclusion. The LST noted:

Shooting for Florence is a way, way, way, way, way outlier, right? So, it really, it stretched us all. I think it was necessary to think of it as like, 'OK, how can [Florence] access this?' Like, how can we ensure that? Or do our best to try to ensure that she is getting something out of this [activity].

The EA, in particular, experienced a shift in her perspective on including Florence in curricular learning activities with her peers, noting:

Maybe I just thought, maybe [Florence] wasn't going to benefit from [curricular learning activities] or something. But now I am kind of looking at things differently and I would like to try to help her integrate more into the different lessons and maybe support the rest of the class, and her too, as she continues learning things, concepts.

Interestingly, participants noted that the facilitator also played a role in fostering different ways of thinking in terms of students with ESNs participating in a curricular unit. For example, I shared my expertise to clearly define academic inclusion at the presentation on inclusion for

students with ESNs, and the CT noted that that helped her to see a new perspective on including Florence in curricular learning activities:

It was helpful at the beginning [of the presentation on academic inclusion] when you kind of went over what everything was. And then I think [the facilitator] kind of helped, she kind of gave a new perspective or she kind of asked a question and then make you kind of think a little bit of a different idea that maybe you wouldn't have thought of. So it was helpful.

As participants shared their expertise and experiences, evidence of new classroom practices that promoted inclusion were observed, such as the following excerpt from my fieldnotes, taken during the facilitated planning meeting (November 23, 2022):

Participants identified difficulties with self-regulation during circle time as a barrier to Florence's participation in the classroom. To address this barrier, participants (e.g., the SLP and the LST) shared their expertise in self-regulation and participants brainstormed strategies to facilitate Florence's ability to self-regulate, resulting in changes in the CT's expectations during circle time, how she set up circle time, and how the EA provides support to students during circle time.

While the above excerpt captures an example of how IPP during the facilitated planning meeting led to changes in daily classroom routines, participants also noted how participating in the research study led to more subtle changes in how they promoted inclusive education in their own practice. For example, the CT explained that by participating in the research study, she took time to intentionally learn about Florence and reflect on how she fit into in her classroom:

I thought I had read through Florence's IEP, but when I knew we were going to talk about her [at the facilitated planning meeting] and I did look more, I realized I had skimmed it, but not really absorbed. So, yeah, it gave me the chance to look in more detail and to think more about what her needs were...I was able to sit down a little bit longer and think about it a bit more, reflect on it.

The EA also made changes to her own practice, and moved toward prioritizing including Florence in classroom activities, rather than pull-out activities:

I think I was looking at more ways that I could keep Florence engaged in the classroom for that lesson. Because I maybe would not have otherwise. Like, I may have just gone with our regular prompts, like our schedule, like, 'Okay, 9:30, let's leave. We will come back, we will try and do some work, and then we will take another break.' You know? So, I tried and I have been this past week, the last week that she was here, I have been trying to keep her in the classroom more and use the [AAC device] for if she needs breaks.

In fact, one of the biggest changes in practice had less to do with supports or resources, but was based on the fact that activities were designed to be accessible to Florence and she was expected to participate in them. The LST noted that, "maybe the biggest change wasn't the visual supports and that, but [the EA and the CT] making that way more concerted effort to have her stay in [the classroom]."

4.3.2.5.3 Sharing the Workload. Findings from the second dataset suggest participants engaged in collaborative interactions that could be described as sharing the workload, leading to participants sharing the tasks and the responsibility of associated with planning the science unit during the facilitated planning meeting. For example, the SLP shared a resource on whole body listening that the classroom teacher could use to foster self-regulation in the classroom, and the LST volunteered to make visuals to be used during the science unit (fieldnotes, facilitated

planning meeting, November 23, 2022). As there was a team of professionals supporting the design and implementation of the curricular unit, the CT expressed feeling as though including Florence in academic learning was a shared responsibility: "It felt like everyone was helping [in the implementation], it's not like, here's all the ideas, good luck!" It is also noteworthy that participants relied on the LST to act as a coordinator for the SBT, to ensure that sharing the workload meant everyone worked together to create a cohesive education program for Florence. In fact, the SLP referred to the LST as "our chairperson." As participants shared the workload, they occasionally stepped outside of their 'traditional' disciplinary roles to contribute to the planning of the science unit. For example, the EA came up with activities for all students that supported curricular goals, the CT spoke about how the AAC device could facilitate inclusion in curricular activities, and the SLP talked about the curriculum (fieldnotes, facilitated planning meeting, November 23, 2022).

4.3.2.6 Summary. Evidence in the data highlights some of the contradictions that arose as participants came together to collaboratively design an accessible curricular unit, such as: a) the absence of participation in curricular activities in Florence's current education program; b) a range of diverse learning needs among students in Florence's classroom; c) the need for participants to juggle multiple tasks and responsibilities; and d) a lack of knowledge and experience with UDL. Participants addressed these contradictions through collaborative interactions, including: a) using the UDL framework to focus on inclusion; b) sharing professional expertise; and c) sharing the workload and responsibility associated with the curricular unit among team members. As participants engaged in said collaborative interactions,

they experienced transformative learning. For example, the EA shifted Florence's daily schedule to prioritize opportunities to take part in curricular activities with her peers.

4.4 Summary of Findings

In Chapter Four, I presented findings from reflexive thematic analysis of my two datasets, Case 1: Maya and Case 2: Florence, with respect to my research question.

Thematic analysis of the first case resulted in three key themes. The first theme, *Academic Inclusion: Wondering If It Can Be Done*, captures an underlying doubt that the overall outcome of the collaborative process (i.e., designing a curricular unit that was accessible to Maya) was possible and highlights some of the ways in which participants addressed this issue. The second theme, *Academic Inclusion: Wondering If I Can Do It*, focuses on participants' perceptions of their own capacity to be successful in fostering Maya's participation in a gradelevel science unit and describes how participants addressed some of these perceptions through collaborative interactions. The final theme, *Valuing (but not Prioritizing) Collaboration*, addresses the issue that despite the fact that collaboration was highly valued among participants, IPP rarely occurred in practice. The third theme also indicates how participants engaged in collaborative interactions to build collaborative partnerships.

Thematic analysis of the second case resulted in two key themes. The first theme, *Building Collaborative Partnerships*, highlights some of the challenges to building interprofessional collaborative partnerships and examines how participants built relationships with each other that were conducive to IPP. The second theme, *Making Inclusive Teaching Easy and Efficient*, identifies and addresses some of the barriers to designing a curricular unit that was accessible to Florence and highlights how participants addressed these barriers. For each theme, I first identified contradictions between different components of the activity system. Next, I presented evidence of how participants addressed these contradictions through collaborative interactions, which are characterized through transformative learning. A summary of the key contradictions, collaborative interactions, and examples of transformative learning for Case 1: Maya, is presented in Table 4. A summary of findings for within-case analysis, including the contradictions, collaborative interactions, and examples of transformative learning for Case 2: Florence, is presented in Table 5.

Table 4

Summary of Key Contradictions and Collaborative Interactions in Case 1: Maya

Contradiction	Collaborative Interaction to Address Contradiction	Example of Transformative Learning
Perception that participation in curricular activities is not important (theme 1)	 Sharing beliefs about providing opportunities for participation Sharing perspectives about Maya 	• Revising ideas for materials and activities (LST B)
Expectation of professional roles (theme 1)*		
Perception that UDL is not suitable to achieve mutual outcome (theme 1)	• Sharing perspectives and knowledge on UDL	• Changing views of role and responsibilities (CT)
Perception of a lack of professional expertise (theme 2)	• Sharing discipline expertise	• Blurring of professional boundaries (CT; SLP)
Perception of a lack of knowledge to apply UDL (theme 2)	• Sharing knowledge about UDL	• Using UDL as a tool to facilitate collaboration with CT (LST A)
Perception of a lack of capacity (theme 2)	 Sharing physical workload 	Creating curricular supports (SLP)Taking on new leadership role (LST B)
	• Sharing responsibility in design of curricular unit	• Planning to co-teach (CT and LST B)
	 Providing emotional support Building trust	• Change in professional relationships with each other (i.e., from exchanging information to collaborative planning)
Confusion about roles and responsibilities (theme 2)	• Sharing discipline expertise	• Blurring professional boundaries (CT; SLP)
	• Sharing knowledge about UDL	• Using UDL as a tool to facilitate collaboration with CT (LST A)
--------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------	---------------------------------------------------------------------------------
Tendency for classroom teacher to work independently (theme 3)	Being creative with timeShifting priorities	• Adjusting schedules to include time for IPP (CT and EA; CT and SLP)
Lack of time designated for meaningful collaboration (theme 3)		
Difficult task of integrating suggestions from multiple sources into education program (theme 3)	• Integrating multiple perspectives	• Including recommendations from other professionals in curricular design (SLP)

*Note**. Italics represent contradictions that were not addressed within the scope of the study.

Table 5

Summary of Key Contradictions and Collaborative Interactions in Case 2: Florence

Contradiction	Collaborative Interaction to Address Contradiction	Example of Transformative Learning
Lack of time (theme 1)	• Being creative with time	• Use LIF time to collaborate with CT (EA)
	• Taking time to listen and share	• Brainstorm vs give recommendations (SLP)
Tendency for classroom teachers to work independently (theme 1)	• Being creative with time	•LSTs provide coverage for CTs
	• Building trust	• Not taking on 'expert' role (SLP)
Disconnect between recommendations from district resource staff and curriculum (theme 1)	 Considering other perspectives about Florence Considering the impact of role on colleagues (SLP) 	• Develop equal partnerships (SLP; EA)
Absence of participation in curricular activities on current education program (theme 2)	Sharing expertiseListening to facilitator's expertise	• Shift goal of Florence's daily routines to staying in the classroom and interacting with peers (EA; CT)
Range of diverse learning needs among students in classroom (theme 2) Lack of knowledge of UDL (theme 2)	 Shifting thinking from providing adaptations to designing universal supports Sharing expertise 	 Take more responsibility for Florence's education (CT) Focus on goal of participation in curricular unit instead of discipline-specific area (SLP)

Need for participants to juggle multiple tasks and responsibilities (theme 2)	• Sharing expertise	• Integrate simple and/or pre-existing strategies into curricular activities
-	• Sharing the workload	• Take on leadership role (LST)

 Blur professional boundaries (EA; CT; SLP)

Chapter 5: Discussion

5.1 Overview

The purpose of the present study was to examine how multi-disciplinary school professionals engaged in inter-professional collaborative practices (IPP) during a facilitated planning meeting where they used principles of Universal Design for Learning (UDL) to design a grade-level, curricular unit that was accessible to a student with extensive support needs (ESNs). Guided by Cultural Historical Activity Theory (CHAT; Engeström, 2014), this qualitative study followed the multiple-case study method (two cases) outlined by Yin (2018) to address the following research question: *During a facilitated planning meeting in which multidisciplinary school professionals use principles of UDL to design activities for an inclusive, grade-level science unit that are accessible to an elementary school-aged student with ESNs: How do the professionals engage in IPP?*

- a. What contradictions arise?
- b. How are contradictions addressed?

Data were collected from two cases and analyzed as two separate datasets through a process of reflexive thematic analysis (Braun & Clarke 2006, 2022; see Chapter 4: Results, for findings of within-case analysis). Between-case analysis consisted of an analytic technique called pattern matching, where I compared research findings from both datasets to previously established theoretical propositions (see Chapter 3, Section 3.7, for a list of previously established theoretical propositions). Between-case analysis resulted in a set of revised propositions, which will be presented in Section 5.4.1.

In this chapter, I will discuss findings from my research in relation to pre-existing literature, with respect to my research question. First, I will present the similarities and

differences between cases. Second, I will discuss key patterns in the findings, using CHAT to frame the discussion regarding contradictions that were evident across both cases. Third, I will present theoretical and methodological contributions and practical implications of the research. Finally, I will discuss the study's limitations, recommendations for future research, and my concluding thoughts.

5.2 Comparison of Cases

Between-case analysis helps to determine if there is a replicative relationship (Yin, 2018). Thus, it is critical that differences between cases do not undermine findings from between-case analysis (Yin, 2018). Therefore, I examined both similarities and differences among cases, before engaging in the between-case analytic process.

5.2.1 Similarities Between Cases.

The cases selected for the present study had several similarities between them. First, the research site for each case was a school located in the same school district, in the same municipality, in the lower mainland of British Columbia (B.C.). Since both schools belonged to the same school district, it is reasonable to assume that the application of provincial policies should be shared between cases. This is particularly relevant with respect to how district resource staff fulfilled their roles on the school-based team (SBT). As well, I expected both sites to adhere to the school district values and policies regarding inclusive education for students with ESNs. A second similarity between cases is the subject of the unit the classroom teachers (CTs) chose to focus on during the facilitated planning meetings; interestingly, both CTs chose to focus on a science unit. Third, participants in both cases represented the same disciplines: CT, learning support teacher (LST), educational assistant (EA), and speech-language pathologist (SLP). Fourth, I used the same case study protocol to guide the structure of both of the half-day

sessions. For example, in both cases, participants received the same PowerPoint presentation on inclusive education for students with ESNs and UDL. As well, the same person facilitated both facilitated planning meetings, and the two cases had the same desired outcome (i.e., designing learning activities and materials for a grade-level, curricular unit for a general education classroom, that were accessible to a student with ESNs). Furthermore, the same mediating tools (i.e., facilitated planning meeting, principles of UDL) were used to facilitate the outcome of the planning session. Fifth, in both cases, participants' knowledge of UDL ranged from being very limited to fairly extensive. Furthermore, using UDL as an instructional planning tool to design a curricular unit that was accessible to a student with ESNs was a new approach for all participants in the study. Finally, an inter-professional collaborative approach to planning curricular learning activities that were accessible to a student with ESNs was a new experience for participants in both cases.

5.2.2 Differences Between Cases.

Indeed, several similarities existed between cases. However, it is just as important to highlight key differences between cases. First, although both cases were centered around an elementary-aged student, the first case study site was located in a middle school, while the second case study site was located in an elementary school. Although both students met inclusion criteria (i.e., Kindergarten-grade 7), it is likely that there is at least a slightly different culture, as well as different expectations (for both students and staff), in an elementary school compared to a middle school.

Second, although both students had ESNs, including a moderate to profound intellectual disability (ID) and physical disability, Maya also had a hearing impairment and a visual impairment. The British Columbia Ministry of Education (2016) has 'special needs' categories to

"assist school districts in identifying the needs of students and providing appropriate education programs for them" (p. 40). Under this categorization system, Maya was designated as "physically dependent – multiple needs," thus meeting criteria for level 1 low incidence funding (British Columbia Ministry of Education, 2016). Florence, on the other hand, was categorized under the label "physical disability or chronic health impairment," thus meeting criteria for level 2 low incidence funding, which correlated to less funding than level 1. In other words, Maya's needs were perceived to be more complex than Florence's needs. As well, although both cases had a similar number of participants (i.e., Case 1: Maya had five participants; Case 2: Florence had four participants), Maya had several different organizations and professionals contributing to her education program, while there were significantly fewer professionals involved in Florence's education program.

Grade level and disability level have been identified as being influential with respect to the perceptions of educators on inclusive education (Carter & Hughes, 2006). Therefore, the difference in the grade and level of disability of the students with ESNs likely contributed to differences in how participants engaged in IPP, as the desired outcome of the collaborative process was a curricular unit that was accessible to a student with ESNs. For instance, participants in Case 1 appeared to question whether it was possible to design a curricular unit that was accessible to Maya throughout the facilitated planning session. On the other hand, participants in Case 2 quickly established that as they designed activities and materials for the science unit, they would consider what would be accessible to Florence, but also "good for everyone." The difference in how quickly participants in Case 2 appeared to engage in work directed toward an outcome of designing an accessible curricular unit compared to participants in Case 1 is not surprising, as it is generally believed that including disabled students in general

education is more complex in higher grades, the perception being that as students age, the focus on learning becomes more subject-oriented and the complexity of learning content increases (Avramidis & Norwich, 2002). Furthermore, there is a perception among educators that the more complex a student's needs are, the more difficult it will be to include them in the classroom; this is especially true if the student's ESNs include an ID and a sensory impairment, as Maya's did (Avramidis & Norwich, 2002).

Third, despite the fact that both cases represented the same disciplines across participants (i.e., CT, LST, EA, SLP), there are differences, but also some similarities, between the participants associated with each discipline across cases. For instance, the LSTs in Case 1 were fairly new to their roles (i.e., LST A had three years of experience as an LST and had been an LST at the case study site for 1.5 years; LST B had only two months of experience as an LST). On the other hand, the LST in Case 2 had 10 years of experience as an LST, and had been an LST at the case study site for the past five years. Both SLPs had similar levels of experience (e.g., the SLP from Case 1 had 10 years of experience as an SLP; the SLP from Case 2 had four or five years of experience as an SLP) and had been working at their respective case study sites for the past two years. As well, both SLPs practiced under a Multi-Tiered System of Supports (MTSS) service delivery model. However, the SLP from Case 1 held the role of district AAC-SLP, meaning she had a specialized SLP role that was directed to addressing augmentative and alternative communication (AAC) for all students in the district who had complex communication needs. Under the MTSS model of speech-language pathology service delivery that was employed in the district, the SLP from Case 1 was more likely to provide support at tier three (individualized supports) compared to tier one (classroom wide support; Sailor et al., 2018). Thus, the SLPs from each case fulfilled their roles as SLPs in different ways. When

comparing the level of professional experience of the EAs, the EA from Case 1 had six years of experience and had worked with Maya for the past two years, while the EA from Case 2 had only two years of experience as an EA and had just started working with Florence that year. Therefore, the EA from Case 1 likely had a stronger preconceived conception of what Maya's education program should look like compared to the Case 2 EA's preconceived conception of Florence's education program. Finally, in terms of the CT, both CTs had been in their current role for similar lengths of time (i.e., CT from Case 1 had been working as a CT at the case study school for 15 years; CT from Case 2 had been working as a CT at the case study school for 24 years), and both CTs described their role with respect to Maya or Florence's education program as "implementing the IEP in the classroom."

It should also be noted that some of the participants in Case 1 may have had a different understanding of what the study entailed, compared to participants in Case 2. Specifically, the CT and the EA from Case 1 were not initially aware that participating in the study required a change in how they typically practiced (i.e., they would be using principles of UDL to design learning activities and materials in order to facilitate Maya's participation in a grade-level, curricular unit), despite having read and signed the research study consent forms. Although all of the participants agreed to continue to take part in the study once expectations were clarified, it is possible that they may not have initially consented to the study had they fully understood the desired outcome of the facilitated planning meeting. On the other hand, I spoke with the CT from Case 2 over the phone prior to data collection to review the purpose of the facilitated planning session, so she likely entered into the process with a stronger sense of what participating in the study entailed, compared to the CT from Case 1.

In summary, the aforementioned differences between participants from each case suggest that: a) the LSTs from Case 1 had significantly less experience in their roles as LSTs, compared to the LST from Case 2; b) the role of the SLP from Case 1 focused more on tier 3 supports, whereas the role of the SLP from Case 2 was more conducive to providing classroom-wide, universal supports (tier 1); c) the EA from Case 1 had more experience as an EA and had worked with the student with ESNs for a longer period of time compared to the EA in Case 2; and d) the CT from Case 1 was not fully aware of the expectations of her participation in the research study, compared to the CT from Case 2.

5.3 Key Patterns Across Cases

In the context of the present study, the definition of IPP is framed by CHAT, which theorizes that IPP occurs as participants identify and address contradictions that arise between components of the activity system through collaborative interactions that result in transformative learning (Villeneuve, 2011). Findings indicated that several key contradictions that arose in the activity system in Case 1: Maya also arose in the activity system in Case 2: Florence, including: a) the unfamiliarity of the task of designing a curricular unit that was accessible to a student with ESNs, indicating a contradiction between the object and the subjects, b) a lack of experience in using principles of UDL to collaboratively design an accessible curricular unit, representing a contradiction between the object and tools, c) the tendency for classroom teachers to work independently, indicating a contradiction between the rules and the object, and d) a perceived lack of time to engage in meaningful collaboration, indicating a contradictions in the activity system that were evident across cases.

Figure 13

Key Contradictions in the Activity System Evident Across Cases (adapted from Engeström, 2000)



Rules and Object:

Tendency for classroom teachers to work independently

Rules and Community: Perceived lack of time to engage in

meaningful collaboration

Interestingly, all contradictions that were common across cases involve tension between either: a) the object and another component of the activity system; or b) the rules and another component of the activity system. Therefore, with respect to these two cases, it can be said that when multi-disciplinary education professionals worked toward the shared goal of collaboratively designing learning materials and activities for a grade-level science unit that was accessible to a student with ESNs, they experienced tensions that were related to the curricular unit (i.e., object) and to how they typically fulfilled their roles and responsibilities (i.e., rules).

5.3.1 Contradictions with the Object

Given that a lack of access to grade-level curriculum is the very problem the present study addresses, it is not surprising that contradictions involving the object arose in the activity systems in both cases. Furthermore, designing learning activities and materials for the curricular unit that were accessible to a student with ESNs was both a new concept and a new practice for most participants. The first contradiction highlighted in both datasets was that prior to data collection, the education program for the student with ESNs did not include participation in grade-level curricular activities. Thus, the goal or outcome of the activity system was beyond what some participants had previously considered to be one of the purposes of an education program for students with ESNs. This finding is consistent with current literature that suggests a common perception of 'access to curriculum' for students with ESNs means access to adapted or *modified* curriculum, not to the general education curriculum that is taught to their peers (Petersen, 2016). Indeed, how students with the most significant disabilities might have access to general education through grade-level learning materials, activities, and instruction continues to be an area of inclusive education that is not well understood (Ryndak et al., 2008). This finding indicates a contradiction between the subjects and the object, as participants had to shift their perception of inclusive education for students with ESNs to include participation in grade-level curricular activities in order to engage in the task of designing learning activities and materials for a science unit that were accessible to a student with ESNs.

The second contradiction common across cases was a lack of experience among participants with respect to using UDL principles to design curricular units that were accessible to a student with ESNs. This finding indicates a contradiction between the object (i.e., science unit) and the tools (i.e., UDL). This contradiction was somewhat surprising, as UDL has become

increasingly prevalent as an evidence-based approach to promoting inclusive education and equitable access to general curriculum for diverse learners (Smith et al., 2019). I chose to use UDL principles as a guiding tool to support participants in the design of a curricular unit that was accessible to a student with ESNs because of its apparent popularity, as well as evidence that indicates multi-disciplinary school professionals, including SLPs, have incorporated UDL principles into their professional practice. (Kennedy et al., 2018). As well, evidence indicates that UDL has the potential to facilitate academic inclusion for students with ESNs (e.g., Dymond et al., 2006). Yet, using UDL as an inclusive planning approach was new to most participants, and they consequently had to make changes to how they typically designed the education program for the students with ESNs. Furthermore, the CTs had to engage in a different approach to fulfilling a key professional responsibility: designing learning materials and activities. This finding reflects a key issue in the implementation of UDL: although teacher education programs typically provide a general overview of the principles of UDL, there are often few opportunities for teacher candidates to apply UDL in practice (Smith et al., 2019). A similar trend has been observed with respect to professional development opportunities for teachers who are already working in the field (Smith et al., 2019).

5.3.1.1 Addressing Contradictions with the Object. In both cases, as participants worked collaboratively to design a curricular unit that was accessible to a student with ESNs, they shared their professional expertise and experience. In doing so, participants engaged in *co-configuration* or the co-designing of materials and activities (Martin, 2008). Co-configuration was especially evident between the SLPs and the CTs in both cases. Co-configuration was likely only possible with the contribution of the CTs, as they had knowledge about the curricular unit, including potential learning activities and materials. As well, the SLPs had disciplinary knowledge of

speech development and communication, including AAC, which both Maya and Florence utilized. Thus, it is not surprising that in both cases, the CTs and the SLPs collectively used their knowledge and expertise to contribute to the design of activities and materials that would facilitate participation in curricular units in general education classrooms. However, in Case 2, the EA engaged in co-configuration (e.g., contributed to the brainstorming session of activities for the curricular lesson), yet the EA in Case 1 did not. Thus, perhaps it is not merely the disciplinary role that the member holds that contributes to co-configuration. It is possible that self-efficacy played a role in whether members engaged in the type of collaborative work that leads to co-configuration, as self-efficacy is an influential factor in determining whether an educator implements innovative teaching practices (De Smul et al., 2019; Shaukat & Iqbal, 2012).

As participants contributed their individual knowledge and experience to work toward the shared goal, they demonstrated *expansive learning*, which could produce an expanded, collective expertise (Martin, 2008). Participants across both cases engaged in expansive learning, particularly with respect to enhancing their understanding of the student with ESNs. This finding is consistent with literature indicating that classroom teachers are likely to develop a better understanding of their students' specialized learning needs when engaging in collaborative work with district resource staff (Wehrmann et al., 2006). However, findings from the present study suggest that it is not only the CTs who developed a better understanding of the student with specialized learning needs, but all members involved in the collaborative process.

Participants also demonstrated expansive learning with respect to their knowledge of using principles of UDL to design an accessible curricular unit, resulting in a better understanding of how UDL can be used as an inclusive planning approach among participants,

especially the CTs. This finding aligns with current literature that suggests multi-disciplinary collaboration has the potential to facilitate the implementation of evidence-based practices, such as UDL, to facilitate access to grade-level curricular activities in general education classrooms for students with ESNs (Ryndak et al., 2021). In the context of this multiple-case study, UDL provided a 'common language' that facilitated communication between different disciplines as they worked toward the shared goal of a single, accessible curricular unit, rather than several modified activities. Providing multi-disciplinary professionals with both the common language of UDL and on-going opportunities to apply UDL in practice, in conjunction with fostering IPP, may have the potential to facilitate inclusive education for all students, including those with ESNs (Dulaney et al., 2013). Specifically, a collaborative approach to instructional planning that is guided by principles of UDL may help to bridge the gap between individualized education programs and grade-level, curricular content that continues to be a significant barrier to full school inclusion for students with ESNs (Kurth et al., 2021). For example, both CTs noted that using UDL as an approach to planning an accessible curricular unit fostered a new sense of responsibility with respect to including students with ESNs in their classrooms. This finding echoes results from Lowrey et al. (2017), who found that when general education teachers used UDL to guide the design of curricular units for students with moderate to severe IDs, CTs became more intentional in ensuring that activities were accessible to all students, including those with ESNs.

Martin (2008) noted that expansive learning is different from other, perhaps more traditional, forms of learning that focus on the transfer of knowledge from an 'expert' to the 'learners.' Instead, members rely on the unique expertise and experience of each other to engage in a shared problem-solving process (Martin, 2008). Through expansive learning, all of the

subjects of the activity system are learners who learn from each other, with different subjects taking the lead (i.e., 'most knowledgeable or experienced') in the activity at different points of the collaborative process (Engeström, 2001). Findings from the present study suggest that expansive learning likely contributed to facilitating a change in participants' perspectives on inclusive education for students with ESNs. For example, all participants in Case 2 noted a shift in their perspective of inclusive education for Florence; instead of focusing only on social inclusion, participants also came to consider opportunities for participation in grade-level learning activities. Not only were activities designed to be accessible to Florence, but the CT and the EA also shifted their expectations of Florence in the classroom. The CT in Case 1 also noted that she experienced a shift in her perspective of Maya as a student in her classroom, although the shift was arguably more subtle than the shifts in perspectives that were noted in Case 2.

5.3.2 Contradictions with the Rules

According to CHAT, *rules* refer to the regulations that provide guidance on how subjects act within the activity system. In the present study, rules included how participants fulfilled their disciplinary roles and how they applied provincial and school district policies on inclusive education for students with ESNs to their professional practice. Although the British Columbia Ministry of Education (2016) recommends a collaborative team approach to developing education programs for students categorized as being "physically dependent – multiple needs" (such as Maya) and having "physical disabilities and/or chronic health impairments" (such as Florence), participants shared that multi-disciplinary collaboration rarely occurred in their professional practice. This finding suggests contradictions within the 'rules' component of the activity system, as how professional roles were intended to be fulfilled (i.e., official guidelines for practice from the Ministry of Education) did not fully align with how participants actually

fulfilled their roles, with respect to working collaboratively to provide an education program for students with ESNs.

The third contradiction that was consistent between cases was the fact that the two classroom teachers typically worked independently of other disciplines, especially with respect to planning learning activities and designing materials for curricular units. Thus, this pattern represents a contradiction between the rules and the object (i.e., the science unit). The finding that the CTs were not used to working collaboratively is consistent with results from a study indicating that in an inclusive education setting that included students with ESNs, LSTs felt more prepared to collaborate with their colleagues, as compared with CTs (Zagona et al., 2017). Thus, it is not surprising that collaborative work, especially the collaborative design of a curricular unit, was unfamiliar to both of the CTs in the present study. Therefore, the CTs in the present study likely had to re-conceptualize how they fulfilled their professional roles as classroom teachers in order to engage in a new, collaborative approach to designing a curricular unit. In other words, the CTs had to shift their approach to engaging in a critical aspect of their professional role (i.e., designing learning activities and materials that aligned with the B.C. curriculum) from working individually to working collaboratively with colleagues.

The fourth contradiction that was common across cases, was that participants perceived a lack of designated time during their work days to engage in collaborative practices with colleagues from other disciplines. In other words, the larger social context the activity exists in (i.e., the *community*) was not perceived to be conducive to collaborative planning. Thus, this finding indicates a contradiction between the rules and the community. A lack of time has been well-documented in the literature as one of the biggest barriers to inter-professional collaborative practice (e.g., Pfieffer et al., 2019; Villeneuve, 2009). Knowing this, a key element of the

research design of the present study addressed this barrier by providing a designated time for collaborative planning between multi-disciplinary education professionals (i.e., the facilitated planning meeting). However, participants were not accustomed to working collaboratively in this way, reflecting previous literature that suggests IPP is an unfamiliar practice approach for many education professionals (e.g., Pfeiffer et al., 2019). Engeström (2008) differentiated 'teamwork' from collaboration, and defined teamwork as a group of professionals from different disciplines performing their individual roles and responsibilities as they worked around a student. It is possible that participants in the present study were more likely to fulfill their professional roles by engaging in multi-disciplinary 'teamwork' as opposed to 'collaborative work,' and collaborative planning was a new approach to planning for participants. Therefore, participants needed to re-conceptualize their own roles in order to achieve the desired outcome of a collaboratively designed, accessible curricular unit.

5.3.2.1 Addressing Contradictions with the Rules. To address contradictions with the rules of the activity system, participants adapted their roles in response to engaging in IPP during the facilitated collaborative planning process. For instance, as participants in both Case 1 and Case 2 shared their individual perspectives, they formed new understandings about the roles and responsibilities of other members and considered their individual roles in relation to other members. Through this process, participants engaged in *boundary crossing*, which occurs as members cross boundaries created by historic work practices and the professional culture of each discipline (Martin, 2008). Furthermore, boundaries between disciplines started to become blurred, as participants in both cases began to step out of their own disciplinary roles as they contributed to the design of an accessible, curricular unit. This practice requires *role release*, where "members give up or 'release' intervention strategies from their disciplines" and requires

"sharing expertise, valuing perspectives of other disciplines, and trust, as members must "let go" of disciplinary roles, where appropriate (King et al., 2009, p. 213). Role release can be one of the most challenging practices in inter-professional work, and is typically easier for professionals with more experience and/or training in IPP to embrace (King et al., 2009).

Although there was evidence of most participants re-conceptualizing how they fulfilled their professional roles after taking part in the facilitated planning session, this process was particularly notable for the CT in Case 2. Of all the participants, the CTs were the most likely to fulfill their professional roles independently of their colleagues, and, as noted earlier, taking part in the facilitated planning session required them to adopt a new way of engaging in a key aspect of their professional practice, by collaboratively designing curricular learning activities and materials. As the participants in Case 2 engaged in IPP to design an accessible science unit, the CT engaged in a practice called *knotworking*, as she seemingly took on a leadership role, gathering different ideas and strategies from her colleagues and weaving them together to create a cohesive and accessible unit plan (Martin, 2008). This was an interesting dynamic, as it is typically the LST who takes on a leadership role with respect to the education programs of disabled students, especially those with ESNs (Shurr et al., 2022).

Participants across cases expressed a desire to develop stronger professional relationships with other members and noted that listening to different perspectives led to prioritizing opportunities for collaborative work, particularly between: a) the CT and the EA; and b) the CT and the SLP. Participants identified building trust with each other as an important aspect of IPP, as trust was viewed essential to facilitate change, which is consistent with research that suggests collaboration is enriched in an environment that provides "cognitive and emotional support for the risk-taking cycles of experimentation and trial-and-error process that is essential for learning"

(Hobbs & Coiro, 2016, p. 623). Previous literature indicates that strategies to support school participation of disabled students that are designed collaboratively by CTs and specialists are more likely to be implemented in the classroom by the CT, compared to strategies developed independently by the specialist (e.g., Sayers, 2008). It is possible that the likelihood of the CTs implementing collaboratively developed strategies may be, in part, influenced by the development of trust.

It is interesting to consider the difference in how the EAs in each case conceptualized their professional roles and responsibilities. Prior to taking part in the facilitated planning meeting, neither of the EAs had considered that students with ESNs should or could take part in grade-level curricular learning activities. However, it is interesting to note that after contributing to the facilitated planning meeting, the EA from Case 1 held the viewpoint that engaging with grade-level academic content was not possible for Maya, while the EA from Case 2 began to consider opportunities for Florence to participate in other curricular lessons. It is possible that the culture at the school in Case 1 may not have led the EA to viewing facilitating participation of students with ESNs in curricular activities as part of her professional role. This finding aligns with current literature that implies that in general, expectations of learning for disabled students, especially students with developmental disabilities, are significantly lower than expecations of their peers (Giangreco, 2021). It is possible that the EA from Case 1 was not able to resolve a contradiction between her understanding of her professional role and the desired outcome, resulting in retaining her original viewpoint regarding Maya's inability to engage with gradelevel curriculum.

Notably, a review of research on patterns of teacher expectations and school performance of students with IDs indicated that teachers expected students with IDs to perform lower than

their peers without disablities, and their subsequent actions contributed to that result (McGrew et al., 2004). The resistance of the EA in Case 1 to consider desigining learning materials and activites that were accessible to Maya may have been due to her perception that Maya would not be capable of particiption in a grade-level science unit, demonstrating the *Pygmalion effect* (Rosenthal & Jacobson, 1968) highlighed by McGrew et al. (2004). It is also possible that this misperception stems from a lack of adequate training to prepare EAs to support disabled students to engage with grade-level curricular content. This finding is consistent with previous research directed toward preparedness of EAs to fulfill their role in inclusive education (e.g., Giangreco et al., 2010).

5.4 Contributions and Implications

The present study makes theoretical and methodological contributions, and demonstrates implications for practice in inclusive education.

5.4.1 Theoretical Contributions

Results of the present study build on current theory of IPP in inclusive education, framed by CHAT, by comparing original theoretical propositions from previous research to empiricalbased patterns in the findings. The following theoretical propositions were supported by findings from the present study that existed across both cases, and thus remain as they were originally stated:

- 1. Members will share values and goals.
- 2. Members will share the task and responsibility of identifying and implementing goals.
- 3. Members will experience transformative, inter-professional learning, including:
 - (a) engaging in co-configuration;
 - (b) demonstrating expansive learning;

(c) engaging in boundary crossing; and

(d) a key member of the group engaging in knotworking practices.

4. Members will learn from and about the roles and responsibilities of all team members.

5. Members will demonstrate mutual trust and open communication.

However, some of the original propositions were revised, as they were informed by new empirical patterns in the present study. Revised propositions include:

- 6. IPP will result in:
 - (a) district resource staff developing a good understanding of the education system and the impact their role has on the role of others; and
 - (b) members developing a better understanding of their students' specialized learning needs, across different contexts.

As well, findings from the present study contributed to a new proposition. As participant perspectives on the value of collaboration increased as they engaged in IPP, they adapted how they fulfilled their roles to create more opportunities for collaboration. Therefore, the newly developed proposition states:

7. Members will adapt how they fulfill their role as a result of engaging in IPP.

Using CHAT to investigate how participants engaged in IPP supported an examination of contextual factors that influenced the collaborative process, such as the way participants viewed their roles, how workloads and responsibilities were typically divided, and the values and beliefs of both individual participants and the larger community (e.g., school, school district, field of inclusive education). These contextual factors provided insight into the contradictions that arose as participants worked toward the shared outcome of a collaboratively designed curricular unit that was accessible to a student with ESNs. Overall, the present study supports the use of CHAT

as a suitable theoretical framework for examining IPP in an inclusive education context, contributing to an area of research that is frequently cited as essential in promoting academic inclusion of students with ESNs (e.g., Morningstar et al., 2016).

5.4.2 Methodological Contributions

Findings from the present study contribute to methodological approaches in research in inclusive education. First, case study work facilitated a close examination of IPP, resulting in a detailed narrative description and holistic understanding of the complex processes that characterize inter-professional work (Stake, 1995; Tracy, 2010). Additionally, a multiple-case study design allowed for literal replication of parallel cases, increasing the strength of the study's analytic conclusions (Yin, 2018). Second, taking an approach of critical realism allowed me to bring my perspective and experience as a school-based occupational therapist (OT) and graduate student in Special Education to shape the interpretation of the data, resulting in a unique perspective on IPP. Third, by using an integrated approach to data analysis (Lo, 2016), I was able to explore all possible patterns that existed within the data (i.e., induction), while using prior theory to make sense of the data through the use of theoretical propositions (abductive reasoning). Finally, comparing findings from the data to theoretical propositions contributed to the external validity of the study by allowing me to situate results within existing theory on IPP. Specifically, as this research is framed by CHAT, findings contribute to a better understanding of the social, historical, and cultural contexts that influence IPP as multi-disciplinary school professionals engage in IPP when they use principles of UDL to collaboratively design a curricular unit that is accessible to a student with ESNs.

My decision to use CHAT as a theoretical framework to study IPP provided a lens that focused on collaborative practice, rather than multi-disciplinary teamwork or cooperative work.

Although cooperative work requires members to contribute their individual expertise to solve a shared problem, cooperation differs from collaboration in that the interactions do not necessarily result in a re-conceptualization of roles or responsibilities (Engeström, 2008). I used the secondgeneration Activity Theory model (Engeström, 2000, 2014) to examine how multi-disciplinary education professionals engaged in IPP, as I considered the group of professionals to be a single activity system. However, a complex organization like a school, may be more accurately viewed as a network of smaller activity systems that interact with each other than as a single activity system. Thus, Engeström (2001) developed a third-generation Activity Theory model (see Figure 14), which contains identical elements to its previous iteration, but brings a different viewpoint and perspective to the collaborative process (Martin, 2008). This is conceptualized in Figure 14, as the objects of each system (*object 1*) bring a particular perspective to the interaction between systems (*object 2*), creating a new, shared object (*object 3*). In other words, the third-generation Activity Theory model may have provided an opportunity to consider each participant as their own activity system, interacting with a network of activity systems (i.e., other participants), which might have provided the opportunity for a closer examination of the transformative learning of each individual participant.

Figure 14

Third-Generation Activity Model: Two Interacting Activity Systems (adapted from Engeström,

2001)



5.4.3 Practical Implications

Results of the present study have practical implications that are consistent with current research in inclusive education, with respect to facilitating IPP among education professionals, roles and responsibilities in inclusive education, and perspectives of the inclusion of students with ESNs in grade-level curricular learning activities.

5.4.3.1 Facilitating IPP in Education. Considerable evidence in the literature indicates that IPP is critical in providing access to the general education curriculum for students with ESNs (e.g., Olson et al., 2016). Yet, findings from the present study suggest that designing a grade-level curricular unit collaboratively was a new approach to planning, particularly for the CTs. As mentioned previously, this finding should not come as a surprise as it has been well-documented in the literature that collaboration rarely occurs in practice (e.g., Bose & Hinojosa, 2008; Brandel & Loeb, 2011; Kennedy & Stewart, 2012). Furthermore, university training programs for

professionals who work in inclusive education (e.g., CTs, LSTs, SLPs) rarely include training on IPP (Weiss et al., 2020). Thus, post-secondary training programs, including teacher education programs and education assistant programs, should consider including training on IPP.

Findings may also have implications for models of professional development in inclusive education. Previous research indicates that traditional, 'top-down approaches' of professional development are not effective at bringing innovative, evidence-based practices into classrooms, and opportunities for professionals currently working in inclusive education to engage in shared problem-solving processes may provide a solution to this problem (Schnellert & Butler, 2021). For instance, as participants in the present study engaged in IPP, they developed a deeper collective understanding of including a student with ESNs in a grade-level curricular unit, aligning with results from similar research. For example, Schnellert and Butler (2021) found that taking part in a facilitated process of collaborative inquiry in a professional learning network fostered the co-construction of knowledge and practice development among education professionals. Therefore, this research adds to literature that supports socially constructed forms of professional development, and implies that schools and school districts may want to consider providing designated time for facilitated IPP as a means of professional development.

5.4.3.2 Promoting a Shift in Perspective of Abilities of Students with ESNs. As

participants shared their perspectives, experiences, and expertise to contribute to the design of an accessible curricular unit, they experienced a shift in their thinking and practice. For example, both CTs spoke about experiencing a shift in how they perceived their professional role, with respect to the students with ESNs who were enrolled in their classrooms. As well, participants, especially participants in Case 2, began to see students with ESNs as capable of participating in grade-level curricular activities with peers. This finding aligns with previous research. For

example, Krishnan (2021) found that when classroom teachers observed students with ESNs engaging in curricular content, their perceptions of the students shifted to seeing them as competent learners. Therefore, it is possible that IPP has the potential to shift the perspectives of education professionals so that they see students like Maya and Florence as valuable, contributing learners.

The CT's perception of disabled students is critical in inclusive education, as teachers who believe that the education of students with disabilities is their responsibility are more likely to address barriers to learning for those students than teachers who consider the education of disabled students to be the responsibility of another educator, such as an LST (Jordan et al., 2009). Furthermore, the CT can be considered the 'gatekeeper' to inclusion, as individualized supports (e.g., AAC device) and elements of differentiated instruction (e.g., options to take part in different ways, open-ended tasks) facilitate participation of students with ESNs only when they are designed and applied by the classroom teacher to do so (Skinner et al., 2022). Thus, IPP may have the potential to support the implementation of inclusive practices (e.g., UDL) and anti-deficit instructional strategies, such as designing for total accessibility and presuming students to be competent learners (Krishnan, 2021). Considering the widespread issue of ableism in education, greatly perpetuated by contextual factors, such as special education policies and practices (Parekh, 2022), this is an important finding from a disability justice perspective.

5.4.3.3 Clarification of Rules and Responsibilities in Inclusive Education. Findings shed light on the need for clarification with respect to roles and responsibilities of education professionals, particularly with respect to CTs and EAs. However, Giangreco (2021) suggested that instead of focusing on clarifying individual roles of EAs and teachers, we should consider how different disciplines fulfill their roles within a SBT. For instance, Giangreco implied that to

advance academic inclusion of students who receive support from EAs, EAs must be trained to "support and supplement (not supplant) the work of teachers and special educators" and to facilitate opportunities for CTs to provide instruction to student with disabilities (p. 288). Indeed, training EAs to support the implementation of evidenced-based strategies that facilitate cognitive learning of students with ESNs (e.g., system of least prompts) *by teachers* in general education classrooms, may facilitate academic inclusion for this population of students (Hudson et al., 2021).

5.5 Limitations

The present study has some limitations that need to be acknowledged. First, as consent from the school administration was required for participants to take part in the study, the school principal served as a gatekeeper function to access participants. Second, participants in the study included CTs, LSTs, EAs, and SLPs. I had hoped to include other district resource specialists, such as OTs and physical therapists (PTs). However, the collaborative relationship between multi-disciplinary school professionals can be particularly challenging, due to the complexity of a service system involving Health and Education ministries (Villeneuve, 2009). For example, in B.C., the Ministry of Education, the Ministries of Health Services and Healthy Living and Sport, and the Ministry of Children and Family Development all provide funding for many of the services provided by district resource staff (British Columbia Ministry of Education et al., 2013). Therefore, some of the professionals (e.g., OTs, PTs) providing these services may be employed by local health regions, not school districts. Thus, including OTs and PTs as participants would likely lead to more insight into the complexity of IPP in inclusive education. As well, I did not include school administrators, the parent or guardians of the students with ESNs, or the students themselves in the study. I made this decision, as I was interested in examining inter-professional

collaborative partnerships. However, the perspectives of administrators, the parents or guardians, and/or the students would have provided social and historical contextual information (e.g., school culture; relationship between EA and student; goals of the family) that, from a CHAT perspective, may have been relevant to the study's findings.

Second, there are some limitations with how CHAT was applied to the research design. For example, as previously noted, I used the second-generation Activity Theory model (Engeström, 2000, 2014) to examine the overall group collaborative practices. An embedded case study design that utilizes the third-generation Activity Theory model (Engeström, 2001) would allow for an examination of the transformative learning of each individual participant. That being said, utilizing the third-generation Activity Theory model would produce significantly more data, such that data management and analysis for an individual researcher might prove overly challenging. Furthermore, activity systems are understood to be dynamic structures that typically move through "relatively long cycles of qualitative transformations" as contradictions are resolved and new ones emerge (Engeström, 2001, p. 137; Martin, 2008). Thus, CHAT can be applied as a methodology for examining human activity, for example, by using Developmental Work Research (DWR), a methodology developed by Engeström (2001). However, in the present study, CHAT is utilized as a static, theoretical framework; that is, I applied CHAT as a lens to study IPP. My goal was to examine how multi-disciplinary education professionals engaged in IPP in a specific, natural context (i.e., during a facilitated planning session when the goal was to design learning activities and materials for a grade-level curricular unit that would be accessible to a student with ESNs). Therefore, case study methodology was a better fit than an interventionist methodology, such as DWR, and CHAT provided a structure that bounded my case and guided data collection and analysis.

Finally, the present study was limited by time. As noted, Activity Theory focuses on the process of transformation through an iterative cycle of addressing contradictions (Martin, 2008). Thus, a study that followed the same groups of participants as they continued to work collaboratively to design curricular units that were accessible to Maya and Florence might have provided greater insight into IPP. Nevertheless, the limitations do not preclude the contributions that the findings from the present study make to theory and practice.

5.6 Recommendations for Future Research

The present study adds to a growing body of research aimed at examining IPP in inclusive education of students with ESNs. Future research that includes IPP of other disciplines, such as OTs and PTs, would deepen our understanding of IPP between multi-disciplinary school professionals and could potentially inform the roles that district resource professionals play on SBTs to promote academic inclusion of students with ESNs. Furthermore, as previously noted, research that utilizes the third-generation Activity Theory model to examine IPP of multiple members of an SBT would allow for a closer examination of the transformative learning of each individual participant and may have the potential to inform our understanding of how designated opportunities for facilitated IPP might contribute to models of professional development in inclusive education. As well, research that examines the effect of IPP on teacher knowledge and implementation of inclusive practices, such as UDL, could potentially make valuable contributions to the field of inclusive education. Finally, despite evidence suggesting that collaboration is an essential factor in promoting participation in general education curriculum for students with ESNs (Olson et al., 2016), very few publications specifically report student outcomes of IPP. Thus, this is another area where future research is warranted.

5.7 Conclusion

The present research study provided insight into how multi-disciplinary education professionals engage in IPP. Findings indicate that in the two cases in the study, IPP contributed to transformative learning that has the potential to promote inclusive education for students with ESNs. Most notably, as CTs engaged in IPP, they experienced a change in perspective with respect to their role and responsibility in the education program of a student with ESNs. Furthermore, district resource staff (e.g., LSTs, SLPs) re-conceptualized their roles on the SBT, as they recognized the impact their actions might have on their colleagues, particularly on CTs. Finally, as participants recognized the value of IPP, they reimagined how they could fulfill their roles in a way that would foster IPP, particularly between the CT and the EA.

References

- Agran, M., Jackson, L., Kurth, J. A., Ryndak, D., Burnette, K., Jameson, M., Zagona, A., Fitzpatrick, H., & Wehmeyer, M. (2020). Why aren't students with severe disabilities being placed in general education classrooms: Examining the relations among classroom placement, learner outcomes, and other factors. *Research and Practice for Persons with Severe Disabilities*, 45(1), 4-13. https://www.doi.org/10.1177/1540796919878134
- Agran, M., Wehmeyer, M., Cavin, M., & Palmer, S. (2010). Promoting active engagement in the general education classroom and access to the general education curriculum for students with cognitive disabilities. *Education and Training in Autism and Developmental Disabilities*, 45(2), 163-174. https://www.jstor.org/stable/23879804
- American Psychiatric Association (2021). *What is intellectual disability?* <u>https://www.psychiatry.org/patients-families/intellectual-disability/what-is-intellectual-disability</u>
- American Psychological Association. (2020). *Publication manual of the American Psychological Association: The official guide to APA style (7th ed.).* American Psychological Association.
- Archibald, L. M. (2017). SLP-educator classroom collaboration: A review to inform reasonbased practice. *Autism & Developmental Language Impairments*, 2, 1-17. https://doi.org/10.1177/2396941516680369

Atkinson, J. (2002). *Four steps to analyse data from a case study method*. Association for Information Systems AIS Electronic Library (AISeL). http://aisel.aisnet.org/acis2002/38

Avramidis E. & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: A review of the literature. *European Journal of Special Needs Education*, *17*(2), 129-147.

https://doi.org/10.1080/08856250210129056

Bal, A., Waitoller, F. R., Mawene, D., & Gorham, A. (2021). Culture, context, and disability: A systematic literature review of cultural-historical activity theory-based studies on the teaching and learning of students with disabilities. *The Review of education/pedagogy/cultural Studies, 43*(4), 293-337.

https://doi.org/10.1080/10714413.2020.1829312

- BC Teachers Federation and Canadian Union of Public Employees BC. (2009). *Roles and Responsibilities of Teachers and Teacher Assistants/Education Assistants.* <u>https://3523.cupe.ca/files/2014/07/Roles-and-Responsibilities.pdf</u>
- Barnes, K. J., & Turner, K. D. (2001). Team collaborative practices between teachers and occupational therapists. *American Journal of Occupational Therapy*, 55, 83–89. <u>https://doi.org/10.5014/ajot.55.1.83</u>
- Baxter, P. & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544-559. <u>https://nsuworks.nova.edu/tqr/vol13/iss4/2</u>
- Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, 26(13), 1802-1811. <u>https://doi.org/10.1177/1049732316654870</u>
- Bose, P., & Hinojosa, J. (2008). Reported experiences from occupational therapists interacting with teachers in inclusive early childhood classrooms. *American Journal of Occupational Therapy*, 62(3), 289-297. <u>https://doi.org/10.5014/ajot.62.3.289</u>
- Bota, S. K. (2023). *Championing inclusive education in Canada : Voices of educators, advocates, and researchers* (Publication No. 9657) [Master's thesis, The University of

Western Ontario]. Electronic Thesis and Dissertation Repository.

https://ir.lib.uwo.ca/etd/9657

Bowman, J. A., McDonnell, J., Ryan, J., Coleman, O. F., Conradi, L. A., & Eichelberger, C. (2020). Effects of general education teacher-delivered embedded instruction to teach students with intellectual disability to solve word problems. *Education and Training in Autism and Developmental Disabilities*, 55(3), 318-331.

https://eric.ed.gov/?id=EJ1264095

- Brandel, J., & Loweb, D. F. (2011). Program intensity and service delivery models in the schools: SLP survey results. *Language, Speech, and Hearing Services in Schools, 42*(4), 461-490. <u>https://www.doi.org/10.1044/0161-1461(2011/10-0019</u>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <u>https://doi.org/10.1191/1478088706qp063oa</u>

Braun, V., & Clarke, V. (2022). Thematic analysis: A practical guide. Sage Publications.

British Columbia Ministry of Education. (n.d.-a). Curriculum Orientation Guide.

https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/supports/curriculum_bro chure.pdf

British Columbia Ministry of Education. (n.d.-b). *Inclusive Education Resources*. <u>https://www2.gov.bc.ca/gov/content/education-training/k-12/teach/resources-for-teachers/inclusive-education</u>

British Columbia Ministry of Education. (2016). Special education services: A manual of policies, procedures and guidelines. B.C. Ministry of Education.
 http://www.B.C.ed.gov.B.C..ca/specialed/special_ed_policy_manual.pdf

British Columbia Ministry of Education, Ministry of Children and Family Development,

Ministry of Health, Ministry of Justice (2013). *Inter-ministerial protocols for the provision of support services to schools*.

https://www2.gov.B.C..ca/assets/gov/education/kindergarten-to-grade-12/teach/teachingtools/inclusive/provision-of-support-services-to-schools.pdf

Browder, D. M., Mims, P. J., Spooner, F., Ahlgrim-Delzell, L., & Lee, A. (2008). Teaching elementary students with multiple disabilities to participate in shared stories. *Research & Practice for Persons with Severe Disabilities*, 33(1-2), 3–12.

https://doi.org/10.2511/rpsd.33.1-2.3

- Browder, D. M., Root, J. R., Wood, L., & Allison, C. (2017). Effects of a story-mapping procedure using the iPad on the comprehension of narrative texts by students with Autism Spectrum Disorder. *Focus on Autism and Other Developmental Disabilities*, 32(4), 243–255. https://doi.org/10.1177/1088357615611387
- Bundy, A. C. (1995). Assessment and intervention in school-based practice: Answering questions and minimizing discrepancies. *Physical & Occupational Therapy in Pediatrics*, 15(2), 69-88. <u>https://doi.org/10.1080/J006v15n02_05</u>
- Calculator, S. N. (2009) Augmentative and alternative communication (AAC) and inclusive education for students with the most severe disabilities. *International Journal of Inclusive Education*, 13(1), 93-113. <u>https://doi.org/10.1080/13603110701284656</u>
- Campbell, W. N., Missiuna, C. A., Rivard, L. M., & Pollock, N. A. (2012). "Support for everyone": Experiences of occupational therapists delivering a new model of schoolbased service. *Canadian Journal of Occupational Therapy*, 79(1), 51–60. https://doi.org/10.2182/cjot.2012.79.1.7

- Carter, E. W., & Hughes, C. (2006). Including high school students with severe disabilities in general education classes: Perspectives of general and special educators, paraprofessionals, and administrators. *Research and Practice for Persons with Severe Disabilities*, *31*(2), 174-185. https://doi.org/10.1177/154079690603100209
- Causton, J. & Tracy-Bronson, C.P. (2014). *The occupational therapist's handbook for inclusive school practices.* Paul Brookes Publishing Co., Inc.
- CAST. (2018a). The UDL guidelines version 2.2. http://udlguidelines.cast.org/
- CAST. (2018b). Provide multiple means of Engagement. http://udlguidelines.cast.org/engagement
- CAST. (2018c). Provide multiple means of Representation. http://udlguidelines.cast.org/representation
- CAST. (2018d). Provide multiple means of Action & Expression. http://udlguidelines.cast.org/action-expression
- Courey, S. J., Tappe, P., Siker, J., & LePage, P. (2013). Improved lesson planning with universal design for learning (UDL). *Teacher Education and Special Education*, 36(1), 7-27. https://doi.org/10.1177/0888406412446178
- Coyne, P., Pisha, B., Dalton, B., Zeph, L. A., & Smith, N. C. (2012). Literacy by design: A universal design for learning approach for students with significant intellectual disabilities. *Remedial and Special Education*, 33(3), 162–172. https://doi.org/10.1177/0741932510381651
- De Smul, M., Heirweg, S., Devos, G., & Van Keer, H. (2019). School and teacher determinants underlying teachers' implementation of self-regulated learning in primary education. *Research Papers in Education*, 34(6), 701-724.
https://doi.org/10.1080/02671522.2018.1536888

- Downing, J. E., Spencer, S., & Cavallaro, C. (2004). The development of an inclusive charter elementary school: Lessons learned. *Research and Practice for Persons with Severe Disabilities*, 29(1), 11-24. <u>https://www.doi.org/10.2511/rpsd.29.1.11</u>
- Dracup, M., Austin, J. E., & King, T. J. (2020). Applying cultural-historical activity theory to understand the development of inclusive curriculum practices in higher education. *International Journal of Inclusive Education*, 24(8), 882-900.

https://doi.org/10.1080/13603116.2018.1492638

- Dulaney, S. K., Hallam, P. R., & Wall, G. (2013). Superintendent perceptions of multi-tiered systems of support (MTSS): Obstacles and opportunities for school system reform. AASA Journal of Scholarship & Practice, 10(2), 30–45.
- Dymond, S. K., Renzaglia, A., Rosenstein, A., Chun, E. J., Banks, R. A., Niswander, V., & Gilson, C. L. (2006). Using a participatory action research approach to create a universally designed inclusive high school science course: A case study. *Research & Practice for Persons with Severe Disabilities, 31*(4), 293-308.

https://doi.org/10.1177/154079690603100403

Edwards, A., & Daniels, H. (2004). Using sociocultural and activity theory in educational research [Editorial]. *Educational Review*, *56*(2), 107–111.

https://doi.org/10.1080/0031910410001693191

Egan, M. & Restall, G. (2022). Canadian model of occupational participation (CanMOP). In M. Egan & G. Restall (Eds.), *Promoting occupational participation: Collaborative relationship-focused occupational therapy*. (pp. 73-95). Canadian Association of Occupational Therapists

- Engeström, Y. (2000). Activity theory as a framework for analyzing and redesigning work. *Ergonomics*, *43*(7), 960–974. <u>https://doi.org/10.1080/001401300409143</u>
- Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work, 14*(1), 133-156. https://doi.org/10.1080/13639080020028747
- Engeström, Y. (2008). Teamwork between adversaries: Coordination, cooperation, and communication in a court trial. In Y. Engeström (Ed.), *From teams to knots: Activitytheoretical studies of collaboration and learning at work* (pp. 48-63). Cambridge University Press. <u>https://doi.org/10.1017/CBO9780511619847.005</u>
- Engeström, Y. (2014). Learning by expanding: An activity-theoretical approach to developmental research (2nd ed.). Cambridge University Press. https://doi.org/10.1017/CBO9781139814744
- Fairbairn, M., & Davidson, I. (1993). Teachers' perceptions of the role and effectiveness of occupational therapists in schools. *Canadian Journal of Occupational Therapy*, 60(4), 185-191. <u>https://doi.org/10.1177/000841749306000404</u>
- Fisher, D., & Frey, N. (2001). Access to the core curriculum: Critical ingredients for student success. *Remedial and Special Education*, 22(3), 148-157.

https://doi.org/10.1177/074193250102200303

- Fletcher, A. J. (2017). Applying critical realism in qualitative research: Methodology meets method. *International Journal of Social Research Methodology*, 20(2), 181-194. <u>https://www.doi.org/10.1080/13645579.2016.1144401</u>
- Foreman, P., Arthur-Kelly, M., Pascoe, S., & King, B. S. (2004). Evaluating the educational experiences of students with profound and multiple disabilities in inclusive and

segregated classroom settings: An Australian perspective. *Research and Practice for Persons with Severe Disabilities*, 29(3), 183-193.

https://www.doi.org/10.2511/rpsd.29.3.183

- Fuchs, D., Fuchs, L. S., & Stecker, P. M. (2010). The "blurring" of special education in a new continuum of general education placements and services. *Exceptional Children*, 76(3), 301–323. <u>https://doi.org/10.1177/001440291007600304</u>
- Gallagher, A. L., Tancredi, H., & Graham, L. J. (2018). Advancing the human rights of children with communication needs in school. *International Journal of Speech-Language Pathology*, 20(1), 128-132. <u>https://doi.org/10.1080/17549507.2018.1'95478</u>
- Giangreco, M. F. (2021). Maslow's hammer: Teacher assistant research and inclusive practices at a crossroads. *European Journal of Special Needs Education*, 36(2), 278-293. https://doi.org/10.1080/08856257.2021.1901377
- Giangreco, M., Hurley, S., & Suter, J. (2009). Special education personnel utilization and general class placement of students with disabilities: Ranges and ratios. *Intellectual and Developmental Disabilities*, 47(1), 53-56. <u>https://doi.org/10.1352/2009.47:53-56</u>
- Giangreco, M. F., Suter, J. C., & Doyle, M. B. (2010). Paraprofessionals in inclusive schools: A review of recent research. *Journal of Educational and Psychological Consultation*, 20(1), 41-57. <u>https://doi.org/10.1080/10474410903535356</u>
- Government of Canada (2023, November 21). Section 15 Equality rights. <u>https://www.justice.gc.ca/eng/csj-sjc/rfc-dlc/ccrf-</u>

ccdl/check/art15.html#:~:text=15.,or%20mental%20or%20physical%20disability.

Hadley, P. A., Simmerman, A., Long, M., & Luna, M. (2000). Facilitating language development for inner-city children: Experimental evaluation of a collaborative, classroom-based intervention. *Language, Speech, and Hearing Services in Schools, 31*(3), 280–295. https://doi.org/10.1044/0161-1461.3103.280

Health Professions Networks Nursing & Midwifery. (2010). Framework for action on

interprofessional_education and collaborative practice. Department of Human Resources for Health, World Health Organization.

http://apps.who.int/iris/handle/10665/70185?search-

result=true&query=Framework+for+action+on+interprofessional+education+and+collab orative+practice.&scope=&rpp=10&sort_by=score&order=desc

- Hermanowicz, J. C. (2002). The great interview: 25 strategies for studying people in bed. *Qualitative Sociology*, 25(4), 479-499. https://doi.org/10.1023/A:1021062932081
- Hobbs, R., & Coiro, J. (2016). Everyone learns from everyone: Collaborative and interdisciplinary professional development in digital literacy. *Journal of Adolescent & Adult Literacy*, 59(6), 623–629. <u>https://doi.org/10.1002/jaal.502</u>
- Hudson, M.E., Wood, L., Root, J., & McConomy, A. (2021). Access to the general education curriculum. In J. McLeskey, F. Spooner, B. Algozzine, & N.L. Waldron (Eds.), *Handbook of effective inclusive elementary schools: Research and practice* (2nd ed., pp. 269-285). Routledge. <u>https://doi.org/10.4324/9781003043874</u>
- Hughes, C., Cosgriff, J. C., Agran, M., & Washington, B. H. (2013). Student self-determination: A preliminary investigation of the role of participation in inclusive settings. *Education and Training in Autism and Developmental Disabilities*, 48(1), 3-17.
 <u>https://www.proquest.com/docview/1503664471?accountid=14656&pq-</u>

origsite=summon

- Hung, D., Tan, S., & Koh, T. (2006). From traditional to constructivist epistemologies: A proposed theoretical framework based on activity theory for learning communities. *Journal of Interactive Learning Research*, 17(1), 37. <u>https://www-learntechliborg.eu1.proxy.openathens.net/primary/p/6020/</u>
- Illeris, K. (2014). Transformative learning and identity. *Journal of Transformative Education*, *12*(2), 148-163. <u>https://doi.org/10.1177/1541344614548423</u>
- Jordan, A., Schwartz, E., & McGhie-Richmond, D. (2009). Preparing teachers for inclusive classrooms. *Teaching and Teacher Education: An International Journal of Research and Studies*, 25(4), 535–542. <u>https://doi.org/10.1016/j.tate.2009.02.010</u>
- Katz, J., Porath, M., Bendu, C., & Epp, B. (2012). Diverse voices: Middle years students' insights into life in inclusive classrooms. *Exceptionality Education International*, 22, 2-16. <u>http://ir.lib.uwo.ca/eei/vol22/iss1/2</u>
- Kennedy, J., Missiuna, C., Pollock, N., Wu, S., Yost, J., & Campbell, W. (2018). A scoping review to explore how universal design for learning is described and implemented by rehabilitation health professionals in school settings. *Child: Care, Health and Development*, 44(5), 670–688. <u>https://doi.org/10.1111/cch.12576</u>
- Kennedy, S., & Stewart, H. (2012). Collaboration with teachers: A survey of South Australian occupational therapists' perceptions and experiences. *Australian Occupational Therapy Journal*, 59(2), 147–155. <u>https://doi.org/10.1111/j.1440-1630.2012.00999.x</u>
- King, G., Strachan, D., Tucker, M., Duwyn, B., Desserud, S., & Shillington, M. (2009). The application of a transdisciplinary model for early intervention services. *Infants and Young Children*, 22(3), 211-223. <u>https://doi.org/10.1097/IYC.0b013e3181abe1c3</u>

- Knight, V. F., Wood, L., McKissick, B. R., & Kuntz, E. M. (2020). Teaching science content and practices to students with intellectual disability and autism. *Remedial and Special Education*, 41(6), 327-340. <u>https://doi.org/10.1177/0741932519843998</u>
- Krishnan, S. (2021). The role of multiliteracies in changing learning spaces and promoting selfadvocacy for students with complex support needs. *Research and Practice for Persons with Severe Disabilities*, 46(2), 108-124. <u>https://doi.org/10.1177/15407969211010307</u>
- Köpfer, A., & Óskarsdóttir, E. (2019). Analysing support in inclusive education systems A comparison of inclusive school development in Iceland and Canada since the 1980s focusing on policy and in-school support. *International Journal of Inclusive Education*, 23(7-8), 876-890. https://doi.org/10.1080/13603116.2019.1624844
- Kurth, J. A., Lockman-Turner, E., Burke, K., & Ruppar, A. L. (2021). Curricular philosophies reflected in individualized education program goals for students with complex support needs. *Intellectual and Developmental Disabilities*, 59(4), 283–294.
 https://doi.org/10.1352/1934-9556-59.4.283
- Kurth, J. A., Lyon, K. J., & Shogren, K. A. (2015). Supporting students with severe disabilities in inclusive schools: A descriptive account from schools implementing inclusive practices. *Research and Practice for Persons with Severe Disabilities*, 40(4), 261–274. https://doi.org/10.1177/1540796915594160
- Kurth, J., & Mastergeorge, A. M. (2010). Individual education plan goals and services for adolescents with autism: Impact of age and educational setting. *The Journal of Special Education*, 44(3), 146-160. <u>https://doi.org/10.1177/0022466908329825</u>
- Kurth, J. A., Morningstar, M., & Kozleski, E. (2014). The persistence of highly restrictive special education placements for students with low-incidence disabilities. *Research and*

Practice for Persons with Severe Disabilities, 39(3), 227-239.

https://doi.org/10.1177/1540796914555580

- Kurth, J. A., Ruppar, A. L., Toews, S. G., McCabe, K. M., McQueston, J. A., & Johnston, R. (2019). Considerations in Placement Decisions for Students With Extensive Support Needs: An Analysis of LRE Statements. *Research and Practice for Persons with Severe Disabilities*, 44(1), 3-19. <u>https://doi.org/10.1177/1540796918825479</u>
- Leadbetter, J. (2004). The role of mediating artefacts in the work of educational psychologists during consultative conversations in schools. *Educational Review*, *56*(2), 133–145. <u>https://doi.org/10.1080/0031910410001693227</u>
- Lo, C.O. (2016). Literature integration: An illustration of theoretical sensitivity in grounded theory studies. *The Humanistic Psychologist*, 44(2), 177-189. <u>http://dx.doi.org/10.1037/hum0000029</u>
- Lowrey, K. A., Hollingshead, A., Howery, K., & Bishop, J. B. (2017). More than one way: Stories of UDL and inclusive classrooms. *Research and Practice for Persons with Severe Disabilities*, 42(4), 225–242. <u>https://doi.org/10.1177/1540796917711668</u>
- Martin, D. (2008). A new paradigm to inform inter-professional learning for integrating speech and language provision into secondary schools: A socio-cultural activity theory approach. *Child Language Teaching and Therapy*, *24*(2), 173–192.

https://doi.org/10.1177/0265659008090293

McGrew, K. S., Evans, J., National Center on Educational Outcomes, Council of Chief State School Officers, & National Association of State Directors of Special Education (2004). *Expectations for students with cognitive disabilities: Is the cup half empty or half full?* *can the cup flow over? Synthesis report 55*. National Center on Educational Outcomes. https://files.eric.ed.gov/fulltext/ED518644.pdf

- Meyer, A., Rose, D. H., & Gordon, D. (2014). Universal design for learning: Theory and practice. CAST Professional Publishing. <u>http://www.cast.org/our-</u> work/publications/2014/universal-design-learning-theory-practice-udlmeyer.html#.Xp9nLshKg2y
- Meyer, L. H. (2001). The impact of inclusion on children's lives: Multiple outcomes, and friendship in particular. *International Journal of Disability, Development, and Education,* 48(1), 9-31. <u>https://doi.org/10.1080/10349120120036288</u>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book* (2nd ed.). Sage Publications.
- Missiuna, C., Pollock, N., Campbell, W. N., Bennett, S., Hecimovich, C., Gaines, R., DeCola, C., Cairney, J., Russell, D., & Molinaro, E. (2012). Use of the Medical Research Council Framework to develop a complex intervention in pediatric occupational therapy: Assessing feasibility. *Research in Developmental Disabilities*, *33*(5), 1443–1452. https://doi.org/10.1016/j.ridd.2012.03.018
- Missiuna, C. A., Pollock, N. A., Levac, D. E., Campbell, W. N., Whalen, S. D. S., Bennett, S. M., Hecimovich, C. A., Gaines, B. R., Cairney, J., & Russell, D. J. (2012). Partnering for change: An innovative school-based occupational therapy service delivery model for children with Developmental Coordination Disorder. *Canadian Journal of Occupational Therapy*, *79*(1), 41–50. <u>https://doi.org/10.2182/cjot.2012.79.1.6</u>

- Mitchell, M. P., Ehren, B. J., & Towson, J. A. (2020). Collaboration in schools: Let's define it.
 Perspectives of the ASHA Special Interest Groups, 5(3), 732–751.
 https://doi.org/10.1044/2020_persp-19-00125
- Moore, S. (2022). Transforming inclusive education for students with intellectual disabilities in secondary academic classrooms: A case study [Doctoral dissertation, University of British Columbia]. <u>https://open.library.ubc.ca/collections/ubctheses/24/items/1.0422961</u>
- Morningstar, M. E., Allcock, H. C., White, J. M., Taub, D., Kurth, J. A., Gonsier-Gerdin, J.,
 Ryndak, D. L., Sauer, J., & Jorgensen, C. M. (2016). Inclusive Education National
 Research Advocacy Agenda: A call to action. *Research and Practice for Persons with Severe Disabilities*, 41(3), 209-215. https://doi.org/10.1177/1540796916650975
- Morningstar, M. E., Shogren, K. A., Lee, H., & Born, K. (2015). Observations and preliminary lessons on supporting participation in inclusive classrooms. *Research and Practice for Persons with Severe Disabilities*, 40(3), 192-210.

https://doi.org/10.1177/1540796915594158

- National Center on Disability and Journalism (2021). *Disability Language Style Guide (Revised)*. https://ncdj.org/style-guide/
- O'Brien, J., Pearpoint, J., & Kahn, L. (2015). *The PATH & MAPS handbook: Person-centered ways to build community.* (2nd ed.). Inclusion Press.
- Ok, M. W., Rao, K., Bryant, B. R., & McDougall, D. (2017). Universal design for learning in pre-K to grade 12 classrooms: A systematic review of research. *Exceptionality*, 25(2), 116–138. <u>https://doi.org/10.1080/09362835.2016.1196450</u>

- Olson, A., Leko, M. M., & Roberts, C. A. (2016). Providing students with severe disabilities access to the general education curriculum. *Research and Practice for Persons with Severe Disabilities*, *41*(3), 143-157. <u>https://doi.org/10.1177/1540796916651975</u>
- Parekh, G. (2022). Ableism in education: Rethinking school practices and policies. W.W. Norton & Company, Inc.
- Petersen, A. (2016). Perspectives of special education teachers on general education curriculum access: Preliminary results. *Research and Practice for Persons with Severe Disabilities*, 41(1), 19-35. <u>https://doi.org/10.1177/1540796915604835</u>
- Pfeiffer, D. L., Pavelko, S. L., Hahs-Vaughn, D. L., & Dudding, C. C. (2019). A national survey of speech-language pathologists' engagement in interprofessional collaborative practice in schools: Identifying predictive factors and barriers to implementation. *Language, Speech, and Hearing Services in Schools, 50*(4), 639-635.

https://www/doi.org/10.1044/2019_LSHSS-18-0100

- Phelan, S. K., & Kinsella, E. A. (2013). Picture this...safety, dignity, and voice ethical research with children: Practical considerations for the reflexive researcher. *Qualitative Inquiry*, 19, 81-90. https://doi.org/10.1177/1077800412462987
- Plummer-D'Amato, P. (2008). Focus group methodology Part 1: Considerations for design. International Journal of Therapy and Rehabilitation, 15(2), 69–73. https://doi.org/10.12968/ijtr.2008.15.2.28189
- Rafferty, Y., Piscitelli, V., & Boettcher, C. (2003). The impact of inclusion on language development and social competence among preschoolers with disabilities. *Exceptional Children*, 69(4), 467-479. <u>https://doi.org/10.1177/001440290306900405</u>

- Rao, K., Smith, S. J., & Lowrey. A. K. (2017). UDL and intellectual disability: What do we know and where do we go? *Intellectual and Developmental Disabilities*, (55)1, 37-47. <u>https://doi.org/10.1352/1934-9556-55.1.37</u>
- Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. Holt, Rinehart and Winston.
- Ryndak, D. L., Lehr, D., Harayama, N., & Foster, M.H. (2021). Collaborative teaming for effective inclusive education for students with severe disabilities. In J. McLeskey, F. Spooner, B. Algozzine, & N.L. Waldron (Eds.), *Handbook of effective inclusive elementary schools: Research and practice* (2nd ed., pp. 269-285). Routledge. https://doi.org/10.4324/9781003043874
- Ryndak, D. L., Moore, M. A., Orlando, A., & Delano, M. (2008). Access to the general curriculum: The mandate and role of context in research-based practice for students with extensive support needs. *Research and Practice for Persons with Severe Disabilities*, 34(1), 199-213. <u>https://doi.org/10.2511/rpsd.33.4.199</u>
- Sailor, W., McCart, A. B., & Choi, J. H. (2018). Reconceptualizing inclusive education through multi-tiered system of support. *Inclusion (Washington, D.C.)*, 6(1), 3-18. <u>https://doi.org/10.1352/2326-6988-6.1.3</u>
- Sayers, B. R. (2008). Collaboration in school settings: A critical appraisal of the topic. *Journal of Occupational Therapy, Schools, & Early Intervention, 1*(2), 170-179. <u>https://doi.org/10.1080/19411240802384318</u>
- Schnellert, L., & Butler, D. L. (2021). Exploring the potential of collaborative teaching nested within professional learning networks. [Collaborative teaching within PLNs] *Journal of*

Professional Capital and Community, 6(2), 99-116. <u>https://doi.org/10.1108/JPCC-06-</u> 2020-0037

- Schraeder, T. (2017). *A guide to school services in speech-language pathology* (3rd ed.). Plural Publishing, Inc.
- Shakespeare, T. (2016). The social model of disability. In L. J. Davis (Ed.), *The disability studies reader* (5th ed., pp. 195-203). Routledge.
- Shaukat, S., & Iqbal, H. M. (2012). Teacher self-efficacy as a function of student engagement, instructional strategies and classroom management. *Pakistan Journal of Social and Clinical Psychology*, 9(3), 82.
- Shurr, J., Bouck, E. C., & McCollow, M. (2022). Examining teacher and teacher educator perspectives of teacher leadership in extensive support needs. *Teacher Education and Special Education*, 45(2), 160-179. <u>https://doi.org/10.1177/08884064211001455</u>
- Skinner, S. Y. (2021). Fostering participation in academic occupations: Considerations for school-based therapists. *Occupational Therapy Now*. <u>https://www.mydigitalpublication.com/publication/?m=61587&i=727426&view=articleB</u> <u>rowser&article_id=4150780&ver=html5</u>
- Skinner, S.Y., Katz, J., & Knight, V.F. (2022). Meaningful participation in a general education classroom for a student with significant disabilities: Bridging the fields of occupational therapy and inclusive education. *International Journal of Inclusive Education*. Advance online publication. <u>https://doi.org/10.1080/13603116.2022.2137589</u>
- Smith, S. J., & Lowrey, K. A. (2017a). Applying the universal design for learning framework for individuals with intellectual disability: The future must be now. *Intellectual and Developmental Disabilities*, 55(1), 48–51. <u>https://doi.org/10.1352/1934-9556-55.1.48</u>

- Smith, S. J., & Lowrey, K. A. (2017b). Making the UDL framework universal: Implications for individuals with intellectual disability. *Intellectual and Developmental Disabilities*, 55(1), 2–3. <u>https://doi.org/10.1352/1934-9556-55.1.2</u>
- Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology*, 11(1), 101-121. <u>https://doi.org/10.1080/1750984X.2017.1317357</u>
- Smith, B. R., Spooner, F., Jimenez, B. A., & Browder, D. M. (2013). Using an early science curriculum to teach science vocabulary and concepts to students with severe developmental disabilities. *Education & Treatment of Children, 36*(1), 1-31. https://doi.org/10.1353/etc.2013.0002
- Smith, S. J., Rao, K., Lowrey, K. A., Gardner, J. E., Moore, E., Coy, K., Marino, M., & Wojcik,
 B. (2019). Recommendations for a national research agenda in UDL: Outcomes from the
 UDL-IRN preconference on research. *Journal of Disability Policy Studies*, *30*(3), 174–185. <u>https://doi.org/10.1177/1044207319826219</u>
- Sokal, L. (2012). What are schools looking for in new, inclusive teachers? *McGill Journal of Education*, 47(3), 403-420. <u>https://mje.mcgill.ca/article/download/8904/6835</u>
- Sokal, L., & Katz, J. (2015). Oh, Canada: Bridges and barriers to inclusion in Canadian schools. *Support for Learning*, *30*(1), 42-54. <u>https://doi.org/10.1111/1467-9604.12078</u>
- Sparkes, A. C., & Smith, B. (2014). Traditions in qualitative research. In A. C. Sparkes & B. Smith (Eds.), *Qualitative research methods in sport, exercise and health: From process* to product (pp. 33-59). Routledge. <u>https://doi.org/10.4324/9780203852187</u>

- Spencer, K. C., Turkett, A., Vaughan, R., & Koenig, S. (2006). School-based practice patterns: A survey of occupational therapists in Colorado. *American Journal of Occupational Therapy*, 60, 81-91. <u>https://doi.org/10.5014/ajot.60.1.81</u>
- Spooner, F., Dymond, S. K., Smith, A., & Kennedy, C. H. (2006). What we know and need to know about accessing the general curriculum for students with significant cognitive disabilities. *Research and Practice for Persons with Severe Disabilities*, 31(4), 277-283. <u>https://doi.org/10.1177/154079690603100401</u>

Stake, R. E. (1995). The art of case study research. Sage Publications.

- Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The sage handbook of qualitative research* (3rd ed., pp. 443-466). Sage Publications.
- Starling, J., Munro, N., Togher, L., & Arciuli, J. (2012). Training secondary school teachers in instructional language modification techniques to support adolescents with language impairment: A randomized control trial. *Language, Speech, and Hearing Services in Schools, 43*(4), 474–495. <u>https://doi.org/10.1044/0161-1461(2012/11-0066)</u>
- Staskowski, M., & Rivera, E. A. (2005). Speech–language pathologists' involvement in responsiveness to intervention activities. *Topics in Language Disorders*, 25(2), 132–147. <u>https://doi.org/10.1097/00011363-200504000-00006</u>
- Stutchbury, K. (2022) Critical realism: An explanatory framework for small-scale qualitative studies or an 'unhelpful edifice'? *International Journal of Research & Method in Education*, 45(2), 113-128. <u>https://doi.org/10.1080/1743727X.2021.1966623</u>
- Taub, D. A., McCord, J. A., & Ryndak, D. L. (2017). Opportunities to learn for students with extensive support needs: A context of research-supported practices for all in general education classes. *The Journal of Special Education*, 51(3), 127-137.

https://doi.org/10.1177/0022466917696263

TASH (2023). About TASH. https://tash.org/about/

Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In C. Willig and W.
Stainton-Rogers (Eds.) *The SAGE handbook of qualitative research in psychology* (2nd ed., pp. 17-37). SAGE Publications, Limited.

Thurlow, M. L. (2000). Standards-based reform and students with disabilities: Reflections on a decade of change. *Focus on Exceptional Children*, 33(3), 1-16. https://doi.org/10.17161/foec.v33i3.6922

Timmons, V. & Wagner, M. (2008). Inclusive education knowledge exchange initiative: An analysis of Statistics Canada participation and activity limitation survey: Final report.
 Canadian Council on Learning.

http://en.copian.ca/library/research/ccl/inclusive_edu_know/inclusive_edu_know.pdf

- Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative Inquiry*, 16, 837-851. <u>https://doi.org/10.1177/1077800410383121</u>
- Tracy-Bronson, C. P., Causton, J. N., & MacLeod, K. M. (2019). Everybody has the right to be here: Perspectives of related service therapists. *International Journal of Whole Schooling*, 15(1), 132-174. <u>https://eric.ed.gov/?id=EJ1205546</u>
- Turnbull, A. P., Wehmeyer, M. L., & Turnbull, H. R., III. (2007). Exceptional lives: Special education in today's schools (5th ed.). Pearson/Merrill/Prentice Hall.

Villeneuve, M. (2009). A critical examination of school-based occupational therapy collaborative consultation. *Canadian Journal of Occupational Therapy*, 76(1), 206-218. <u>https://doi.org/10.1177/000841740907600s05</u>

- Villeneuve, M. (2011). Learning together: Applying socio-cultural activity theory to collaborative consultation in school-based occupational therapy (NR78468) [Doctoral dissertation, Queen's University]. ProQuest Dissertations Publishing.
- Villeneuve, M., & Hutchinson, N. L. (2012). Enabling outcomes for students with developmental disabilities through collaborative consultation. *Qualitative Report*, 17(49), 1-29.
- Villeneuve, M. A., & Shulha, L. M. (2012). Learning together for effective collaboration in school-based occupational therapy practice. *Canadian Journal of Occupational Therapy*, 79(5), 293–302. <u>https://doi.org/10.2182/cjot.2012.79.5.5</u>
- Vygotsky, L. (1981). Instrumental method in psychology. In J. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 134-143). M.E. Sharpe, Inc.
- Wehrmann, S., Chiu, T., Reid, D., & Sinclair, G. (2006). Evaluation of occupational therapy school-based consultation service for students with fine motor difficulties. *Canadian Journal of Occupational Therapy*, 73(4), 225-235. <u>https://doi.org/10.2182/cjot.05.0016</u>
- Weiss, D., Cook, B. & Eren, R. (2020). Transdisciplinary approach practicum for speechlanguage pathology and special education graduate students. *J Autism Dev Disord 50*, 3661–3678 (2020). <u>https://doi.org/10.1007/s10803-020-04413-7</u>
- Williams, J., Davis, P., & Black, L. (2007). Sociocultural and cultural–historical activity theory perspectives on subjectivities and learning in schools and other educational contexts.
 International Journal of Educational Research, 46(1), 1-7.
 https://doi.org/10.1016/j.ijer.2007.07.001
- Williamson, P., Hoppey, D., McLeskey, J., Bergmann, E., & Moore, H. (2020). Trends in LRE placement rates over the past 25 years. *The Journal of Special Education*, 53(4), 236-244. https://doi.org/10.1177/0022466919855052

- Wilson, A. L., & Harris, S. R. (2018). Collaborative occupational therapy: Teachers' impressions of the partnering for change (P4C) model. *Physical & Occupational Therapy in Pediatrics*, 38(2), 130-142. <u>https://doi.org/10.1080/01942638.2017.1297988</u>
- Wu, X. (2010). Universal design for learning: A collaborative framework for designing inclusive curriculum. *i.e.: inquiry in education*, 1(2), 1-13.

http://digitalcommons.nl.edu/ie/vol1/iss2/6

- Yamagata-Lynch, L. C. (2010). Activity systems analysis methods: Understanding complex learning environments. Springer. <u>https://doi.org/10.1007/978-1-4419-6321-5</u>
- Yin, R. K. (2014). Case study research: Design and methods (5th ed.). Sage Publications.
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage Publications.
- Zagona, A. L., Kurth, J. A., & MacFarland, S. Z. C. (2017). Teachers' views of their preparation for inclusive education and collaboration. *Teacher Education and Special Education*, 40(3), 163-178. <u>https://doi.org/10.1177/0888406417692969</u>

Appendix A: Introductory Letters and Consent Forms

Recruitment Letter for District Administrators

Introductory Letter and Consent: Principal

Introductory Letter and Consent: Professional Members of School Team

Introductory Letter and Consent: Guardian

Letter of Assent: Student



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Education Department of Educational & Counselling Psychology, and Special Education

Recruitment Letter for District Administrators

Inter-Professional Collaborative Practice and Universal Design for Learning: Promoting Academic Inclusion of Students with Intellectual Disabilities

Who is conducting the study?

Principal Investigator:

Dr. Jennifer Katz, Associate Professor, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

Co-Investigator:

Sarah Skinner, M.A., PhD Candidate, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

This study will form part of a PhD thesis for Sarah Skinner. We have received funding by the Social Sciences and Humanities Research Council (SSHRC) to support our research.

Why are we conducting this study?

The BC Ministry of Education states all students in BC have the right to a quality education, and inclusive education promotes equitable access to learning for all students. Research has shown that there are many benefits for both students with disabilities and their peers when students with disabilities attend inclusive, general education classrooms.

Although most students with intellectual disabilities (ID) are socially included in general education classrooms, many of these students are not participating in activities related to grade-level curricular content. These students are often supported by multi-disciplinary teams who ideally work collaboratively to provide support to the student's education program. However, research suggests collaboration between multiple members of a school team can be difficult to achieve in practice. As well, evidence suggests Universal Design for Learning (UDL) leads to an increase in academic participation of students with ID, but there is a need to explore how individualized student supports can be integrated into the UDL framework. As district resource staff (e.g., occupational therapists, speech-language pathologists) play a role in the development and implementation of individualized student supports, an inter-professional collaborative approach to applying UDL may promote academic inclusion of students with ID.

To support academic inclusion, we want to learn how multi-disciplinary education professionals engage in collaborative work when they take part in a facilitated meeting that uses the UDL

guidelines (<u>http://udlguidelines.cast.org/</u>) to design and implement individualized student supports to promote academic participation of a student with ID in a curricular unit in a general education classroom. We also are interested in examining factors that facilitate and create barriers to collaborative practices. Finally, we want to learn how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID. Findings from this study can help develop theory of collaboration of multi-disciplinary members on school teams to promote inclusive education for students with ID. Findings may also provide a format for the practical implementation of UDL to promote academic inclusion of students with ID in general education classrooms and identify strategies that promote collaboration on school teams.

What does the research involve?

To study how multi-disciplinary professionals who support students with ID engage in collaborative practices, we will be conducting a multiple-case study of two cases. In each case, we will collect data from participants who are professional members of the school-based team that supports a student with IDs and attends a general education classroom. In the fall, each group of participants will participate in a half-day session that includes a workshop on the CAST model of UDL and a facilitated planning meeting where team members will use the UDL guidelines to design individualized supports that promote academic participation of the student with ID in a curricular unit. The session will be facilitated by Jennifer Katz, an Associate Professor in the Department of Educational & Counselling Psychology & Special Education at the University of British Columbia. The curricular unit will be selected by the classroom teacher and must be taught over at least an eight week period. If the classroom teacher has designed a shorter unit, two consecutive curricular units will be included in the study. The study will not extend beyond one school term.

The session will be video recorded so that the research team can watch the video and collect data on collaborative practices that occur during the session. Data collection will also include two focus groups with the school team – the first will occur within one week of the planning session, the second will occur at the end of the curricular unit. As well, an individual interview with each participant will take place some time in the duration of curricular unit, either by phone or in person. Focus groups will be video recorded and interviews will be audio recorded. The student's Individual Education Plan (IEP), documents created during the planning meeting, and collaboration notes between participants relating to the implementation of the individualized supports will be reviewed.

Participant Recruitment

This study will revolve around two students who attend different elementary schools and meet the following criteria:

Inclusion Criteria:

Students who are eligible for this study:

- are enrolled in and attend an elementary school
- have a diagnosis of a moderate to profound intellectual disability
- have a level 1 or level 2 low incidence special education designation of "physically dependent – multiple needs", "moderate to profound intellectual disability", or "Autism Spectrum Disorder"
- spends the majority of their day in general education classrooms

• receives support from at least one other discipline (e.g., occupational therapy, speechlanguage pathology, physiotherapy)

Exclusion Criteria:

Students who are ineligible for this study:

- do not have a diagnosis of a moderate to profound disability
- do not have a level 1 or level 2 low incidence special education designation of "physically dependent – multiple needs," "moderate to profound intellectual disability," or "Autism Spectrum Disorder"
- do not spend the majority of their day in general education classrooms with same-age peers (i.e., spend most of their day in a segregated or specialized program) who received occupational therapy services from the co-investigator, Sarah Skinner, as part of the Provincial Inclusion Outreach Program (PIOP)

To help us select a classroom for this study, we are asking you to identify the principals who have students in their schools who meet the inclusion and exclusion criteria and forward an introductory letter describing the study, our contact information, and a consent form to these principals. Please ask the principals who are interested in participating in the study to contact us directly (via email) with questions and to return a signed consent form (via email). **Please do this within one week of receiving this letter.**

We will then contact the school principals who have provided consent and ask them to forward an introductory letter, our contact information, and consent form to all potential participants. We sincerely thank all those who are interested in the study, but not all those who express interest will be invited to participate. We will be selecting the first two groups of participants to return consent forms to be participants in this study.

Are there any risks? Benefits??

There are no risks to the student or members of the school team in participating in the research. Their responses will be kept confidential and all identifying information (including participant names, school name, city) will be given pseudonyms or will remain confidential. Participants will not be paid to take part in the study. By participating in this study, they may learn more about UDL and collaboration of school teams, and they may be able to use this information to support academic inclusion of students with intellectual disabilities. The knowledge gained from this study will also further develop theories on collaborative practices of school teams and the implementation of UDL, and may support the development of strategies educators can use to promote inclusive education of this group of students.

Completion and Results

All responses to the interviews will be confidential. The schools will not have access to individual participant responses. We will video record the planning meeting and focus groups and audio record interviews; transcripts of all recordings will only include information provided by study participants and will be labelled with codenames. We encourage participants not to discuss the content of the focus group to people outside the group; however, we can't control what participants do with the information discussed. Video and audio recordings will only be viewed by the research team for data analysis purposes and will be deleted after five years after results of the study have been published, as

per the guidelines of UBC's Behavioural Research Ethics Board. We will use codes instead of names on all of the notes we take during observations and will redact identifying information on any documents we receive. All copies of hard data will be stored in a locked filing cabinet in a locked research lab at UBC. All electronic files will be encrypted and stored on a password protected computer and backed up on UBC's OneDrive cloud services for faculty, undergraduate, and graduate research, which is FIPPA compliant.

At any point in the study, if the researcher becomes aware that there has been abuse and/or neglect of a child (or that there is a risk of such occurring in the future) please be advised that the researcher must, by law, report this information to the appropriate authorities.

Results of the study overall will be shared with the families of the students participating in the study, all participants, and the school district. That is, we will tell you how participants engaged in collaborative practices to promote academic inclusion of students with intellectual disabilities. We will also tell you how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID, and report the factors that facilitated and factors that created barriers to engaging in collaborative practices. We may also publish results or present them at conferences, so other teachers can learn how UDL can be implemented with multi-disciplinary professionals to promote academic inclusion of students with ID and how multi-disciplinary members of school teams engage in collaborative practices when they use UDL. If you would like to receive a summary of the findings, please be sure to provide an email on the form below.

SSHRC is committed to maximizing opportunities to enhance learning by ensuring research data collected with public funds is accessible in the public domain. This means that raw data, including the transcripts of interviews and focus groups, fieldnotes collected during direct observations, and documents collected for review will have all identifying information removed (including names of people, schools, and cities) and be uploaded to a data repository within two years after the completion of the study. SSHRC also requires Open Access to publications arising from Agency-supported research, within 12 months of the publication. This means that research publications (e.g., articles) must be accessed online, free of charge by any user, with no technical obstacles (such as mandatory registration or login to specific platforms). We will publish our final, peer-reviewed manuscripts in journals that offer open access on their websites and/or deposit a copy of the final, peer-reviewed manuscript into an accessible online repository immediately upon publication.

Contact Information

If you have any questions or concerns, please feel free to contact Sarah Skinner at the email or phone number listed at the top of the page.

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail <u>RSIL@ors.ubc.ca</u> or call toll free 1-877-822-8598.

Thank you.



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Education Department of Educational & Counselling Psychology, and Special Education

Introductory Letter and Consent: Principal

Inter-Professional Collaborative Practice and Universal Design for Learning: Promoting Academic Inclusion of Students with Intellectual Disabilities

Who is conducting the study?

Principal Investigator:

Dr. Jennifer Katz, Associate Professor, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

Co-Investigator:

Sarah Skinner, M.A., PhD Candidate, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

This study will form part of a PhD thesis for Sarah Skinner. We have received funding by the Social Sciences and Humanities Research Council (SSHRC) to support our research.

Why are we conducting this study?

The BC Ministry of Education states all students in BC have the right to a quality education, and inclusive education promotes equitable access to learning for all students. Research has shown that there are many benefits for both students with disabilities and their peers when students with disabilities attend inclusive, general education classrooms.

Although most students with intellectual disabilities (ID) are socially included in general education classrooms, many of these students are not participating in activities related to grade-level curricular content. These students are often supported by multi-disciplinary teams who ideally work collaboratively to provide support to the student's education program. However, research suggests collaboration between multiple members of a school team can be difficult to achieve in practice. As well, evidence suggests Universal Design for Learning (UDL) leads to an increase in academic participation of students with ID, but there is a need to explore how individualized student supports can be integrated into the UDL framework. As district resource staff (e.g., occupational therapists, speech-language pathologists) play a role in the development and implementation of individualized student supports academic inclusion of students with ID.

To support academic inclusion, we want to learn how multi-disciplinary education professionals engage in collaborative work when they take part in a facilitated meeting that uses the UDL guidelines (<u>http://udlguidelines.cast.org/</u>) to design and implement individualized student supports to promote academic participation of a student with ID in a curricular unit in a general education

classroom. We also are interested in examining factors that facilitate and create barriers to collaborative practices. Finally, we want to learn how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID. Findings from this study can help develop theory of collaboration of multi-disciplinary members on school teams to promote inclusive education for students with ID. Findings may also provide a format for the practical implementation of UDL to promote academic inclusion of students with ID in general education classrooms and identify strategies that promote collaboration on school teams.

What is the study about?

To study how multi-disciplinary professionals who support students with ID engage in collaborative practices, we will be conducting a multiple-case study of two cases. In each case, we will collect data from participants who are professional members of the school-based team that supports a student with IDs and attends a general education classroom. In the fall, each group of participants will participate in a half-day session that includes a workshop on the CAST model of UDL and a facilitated planning meeting where team members will use the UDL guidelines to design individualized supports that promote academic participation of the student with ID in a curricular unit. The session will be facilitated by Jennifer Katz, an Associate Professor in the Department of Educational & Counselling Psychology & Special Education at the University of British Columbia. The curricular unit will be selected by the classroom teacher and must be taught over at least an eight week period. If the classroom teacher has designed a shorter unit, two consecutive curricular units will be included in the study. The study will not extend beyond one school term.

The session will be video recorded so that the research team can watch the video and collect data on collaborative practices that occur during the session. Data collection will also include two focus groups with the school team – the first will occur within one week of the planning session, the second will occur at the end of the curricular unit. As well, an individual interview with each participant will take place some time in the duration of curricular unit, either by phone or in person. Focus groups will be video recorded and interviews will be audio recorded. The student's Individual Education Plan (IEP), documents created during the planning meeting, and collaboration notes between participants relating to the implementation of the individualized supports will be reviewed.

Who can participate in the study?

We are looking for two elementary students from different schools who:

- have a diagnosis of a moderate to profound intellectual disability
- have a level 1 or level 2 low incidence special education designation of "physically dependent – multiple needs", "moderate to profound intellectual disability", or "Autism Spectrum Disorder"
- spends the majority of their day in general education classrooms
- receives support from at least one other discipline (e.g., occupational therapy, speechlanguage pathology, physiotherapy)

We will be asking the professional members of each students' school team to participate in the study – all professional members of the school team will be invited, but participants must include at least three professional members; one of the participants must be the classroom teacher and one of the participants must be a district resource staff member from a different discipline (e.g., occupational

therapist, speech-language pathologist, physical therapist), as we are interested in inter-professional collaboration of a multi-disciplinary team.

What does the research involve?

If there is a student in your school who meets criteria for the study and you think the professional members of their school team would be interested in participating, we will ask you to:

- 1. Sign this consent form.
- 2. <u>Return the consent form within one week of receiving this letter to Sarah Skinner at</u> [redacted]

After receiving your consent to conduct the study in your school, we will ask you to forward an introductory letter, our contact information, and consent form to the classroom teacher and other professional members of the student's school team to invite them to participate in the study. After receiving consent from the classroom teacher and two other members of the student's team (at least one of them being from a different discipline, such as occupational therapy or speech-language pathology), we will ask the classroom teacher to forward an introductory letter, our contact information, and consent form to the guardian of the student with ID and an assent form for the student. Please ask the members of the school team who are interested in participating in the study to contact us directly (via email) with questions and to return a signed consent form (via email) within one week of receiving the letter and consent forms.

We sincerely thank everyone who is interested in the study, but not all those who express interest will be invited to participate. We will be selecting the first two groups of participants to return consent forms to be participants in this study. If your school has been selected as a site for the study:

- 1. We will ask you to provide a location for a half-day session (3 hour) in the fall (facilitated by Dr. Jennifer Katz), which will include a workshop on UDL and curricular planning meeting and provide time for all participants to attend the workshop.
- 2. We will ask you to provide participants time to participate in two focus groups throughout the school year. Each focus group will take 60-90 minutes. We will ask you to provide a location for these meetings to occur.
- 3. We will ask you to provide participants time to participate in one individual interview that will take 30-45 minutes. Interviews will be conducted over the phone or in person; for in-person interviews, we will ask you to provide a location to hold them.
- 4. We will ask for copies of the student's IEP, documents created at the planning meeting, and collaboration notes between participants related to the design and implementation of individualized supports to promote academic participation in the curricular unit.

Are there any risks? Benefits?

There are no risks to the student or members of the school team in participating in the research. Their responses will be kept confidential and all identifying information (including participant names, school name, city) will be given pseudonyms or will remain confidential. Participants will not be paid to take part in the study. By participating in this study, they may learn more about UDL and collaboration of school teams, and they may be able to use this information to support academic inclusion of students with intellectual disabilities. The knowledge gained from this study will also further develop theories on collaborative practices of school teams and the implementation of UDL,

and may support the development of strategies educators can use to promote inclusive education of this group of students.

What will we do with the data and results?

All responses to the interviews will be confidential. The schools will not have access to individual participant responses. We will video record the planning meeting and focus groups and audio record interviews; transcripts of all recordings will only include information provided by study participants and will be labelled with codenames. We encourage participants not to discuss the content of the focus group to people outside the group; however, we can't control what participants do with the information discussed. Video and audio recordings will only be viewed by the research team for data analysis purposes and will be deleted after five years after results of the study have been published, as per the guidelines of UBC's Behavioural Research Ethics Board. We will use codes instead of names on all of the notes we take during observations and will redact identifying information on any documents we receive. All copies of hard data will be stored in a locked filing cabinet in a locked research lab at UBC. All electronic files will be encrypted and stored on a password protected computer and backed up on UBC's OneDrive cloud services for faculty, undergraduate, and graduate research, which is FIPPA compliant.

At any point in the study, if the researcher becomes aware that there has been abuse and/or neglect of a child (or that there is a risk of such occurring in the future) please be advised that the researcher must, by law, report this information to the appropriate authorities.

Results of the study overall will be shared with the families of the students participating in the study, all participants, and the school district. That is, we will tell you how participants engaged in collaborative practices to promote academic inclusion of students with intellectual disabilities. We will also tell you how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID, and report the factors that facilitated and factors that created barriers to engaging in collaborative practices. We may also publish results or present them at conferences, so other teachers can learn how UDL can be implemented with multi-disciplinary professionals to promote academic inclusion of students with ID and how multi-disciplinary members of school teams engage in collaborative practices when they use UDL. If you would like to receive a summary of the findings, please be sure to provide an email on the form below.

SSHRC is committed to maximizing opportunities to enhance learning by ensuring research data collected with public funds is accessible in the public domain. This means that raw data, including the transcripts of interviews and focus groups, fieldnotes collected during direct observations, and documents collected for review will have all identifying information removed (including names of people, schools, and cities) and be uploaded to a data repository within two years after the completion of the study. SSHRC also requires Open Access to publications arising from Agency-supported research, within 12 months of the publication. This means that research publications (e.g., articles) must be accessed online, free of charge by any user, with no technical obstacles (such as mandatory registration or login to specific platforms). We will publish our final, peer-reviewed manuscripts in journals that offer open access on their websites and/or deposit a copy of the final, peer-reviewed manuscript into an accessible online repository immediately upon publication.

Contact Information

If you have any questions or concerns, please feel free to contact Sarah Skinner at the email or phone number listed at the top of the page.

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail <u>RSIL@ors.ubc.ca</u> or call toll free 1-877-822-8598.

Your participation in the study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason. Of course, each participant will also be given the choice as to whether they wish to participate.

Your signature on the attached page indicates that you have received a copy of this consent form for your records and agree to have your school participate. Consent will be sought from the guardian of the student with intellectual disabilities and professional members of the school team, including the classroom teacher. As well, we will ask for student assent. Please tear off and return the last page. You may keep the rest of this letter for your records.

PLEASE TEAR OFF AND <u>RETURN WITHIN ONE WEEK OF RECEIPT</u>

If you agree to participate in the study, please check the following box:

I consent to my participation in the study	
Name	Role (e.g., principal)
Signature	Date
(Optional) I would like a copy of the results. Please email them to me at:	

This consent form can be returned **within one week** to Sarah Skinner by email at [redacted] or by mail to:

Sarah Skinner Department of Educational & Counselling Psychology, and Special Education The University of British Columbia – Point Grey Campus Neville Scarfe Building <u>2125 Main Mall</u>, Vancouver, BC V6T 1Z4 | Canada



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Education Department of Educational & Counselling Psychology, and Special Education

Introductory Letter and Consent: Professional Members of School Team

Inter-Professional Collaborative Practice and Universal Design for Learning: Promoting Academic Inclusion of Students with Intellectual Disabilities

Who is conducting the study?

Principal Investigator:

Dr. Jennifer Katz, Associate Professor, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

Co-Investigator:

Sarah Skinner, M.A., PhD Candidate, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

This study will form part of a PhD thesis for Sarah Skinner. We have received funding by the Social Sciences and Humanities Research Council (SSHRC) to support our research.

Why are we conducting this study?

The BC Ministry of Education states all students in BC have the right to a quality education, and inclusive education promotes equitable access to learning for all students. Research has shown that there are many benefits for both students with disabilities and their peers when students with disabilities attend inclusive, general education classrooms.

Although most students with intellectual disabilities (ID) are socially included in general education classrooms, many of these students are not participating in activities related to grade-level curricular content. These students are often supported by multi-disciplinary teams who ideally work collaboratively to provide support to the student's education program. However, research suggests collaboration between multiple members of a school team can be difficult to achieve in practice. As well, evidence suggests Universal Design for Learning (UDL) leads to an increase in academic participation of students with ID, but there is a need to explore how individualized student supports can be integrated into the UDL framework. As district resource staff (e.g., occupational therapists, speech-language pathologists) play a role in the development and implementation of individualized student supports academic inclusion of students with ID.

To support academic inclusion, we want to learn how multi-disciplinary education professionals engage in collaborative work when they take part in a facilitated meeting that uses the UDL guidelines (<u>http://udlguidelines.cast.org/</u>) to design and implement individualized student supports to promote academic participation of a student with ID in a curricular unit in a general education

classroom. We also are interested in examining factors that facilitate and create barriers to collaborative practices. Finally, we want to learn how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID. Findings from this study can help develop theory of collaboration of multi-disciplinary members on school teams to promote inclusive education for students with ID. Findings may also provide a format for the practical implementation of UDL to promote academic inclusion of students with ID in general education classrooms and identify strategies that promote collaboration on school teams.

What is the study about?

To study how multi-disciplinary professionals who support students with ID engage in collaborative practices, we will be conducting a multiple-case study of two cases. In each case, we will collect data from participants who are professional members of the school-based team that supports a student with IDs and attends a general education classroom. In the fall, each group of participants will participate in a half-day session that includes a workshop on the CAST model of UDL and a facilitated planning meeting where team members will use the UDL guidelines to design individualized supports that promote academic participation of the student with ID in a curricular unit. The session will be facilitated by Jennifer Katz, an Associate Professor in the Department of Educational & Counselling Psychology & Special Education at the University of British Columbia. The curricular unit will be selected by the classroom teacher and must be taught over at least an eight week period. If the classroom teacher has designed a shorter unit, two consecutive curricular units will be included in the study. The study will not extend beyond one school term.

The session will be video recorded so that the research team can watch the video and collect data on collaborative practices that occur during the session. Data collection will also include two focus groups with the school team – the first will occur within one week of the planning session, the second will occur at the end of the curricular unit. As well, an individual interview with each participant will take place some time in the duration of curricular unit, either by phone or in person. Focus groups will be video recorded and interviews will be audio recorded. The student's Individual Education Plan (IEP), documents created during the planning meeting, and collaboration notes between participants relating to the implementation of the individualized supports will be reviewed.

Who can participate in the study?

We are looking for two elementary students from different schools who:

- have a moderate to profound intellectual disability (i.e., level 1 or level 2 low incidence special education designation of "physically dependent multiple needs", "moderate to profound intellectual disability", or "Autism Spectrum Disorder")
- spends the majority of their day in general education classrooms
- receives support from at least one other discipline (e.g., occupational therapy, speechlanguage pathology, physiotherapy)

We will be asking the professional members of each students' school team to participate in the study – all professional members of the school team will be invited, but participants must include at least three professional members; one of the participants must be the classroom teacher and one of the participants must be a district resource staff member from a different discipline (e.g., occupational therapist, speech-language pathologist, physical therapist), as we are interested in inter-professional collaboration of a multi-disciplinary team.

What does the research involve?

If you agree to participate, we will ask you to:

- 3. Sign this consent form.
- 4. <u>Return the consent form within one week of receiving this letter to Sarah Skinner at</u> [redacted]

We sincerely thank everyone who is interested in the study, but not all those who express interest will be invited to participate. We will be selecting the first two groups of participants to return consent forms to be participants in this study. If your school has been selected as a site for the study:

- 1. We will ask you to attend a half-day session in the fall (facilitated by Dr. Jennifer Katz), which will include a workshop on UDL and a planning meeting to support a student with ID to participate in a curricular unit(s) in their classroom.
- If you are the classroom teacher, we will ask you to bring a brief outline of the unit you would like to use for the focus of the study. If the unit you selected will be less than eight weeks long, bring a brief outline of two consecutive units in the same subject you would like to use for the focus of the study. The outline should include a list of the Core Competencies, Big Ideas, and Curricular Competencies you will be addressing, and a <u>brief</u> description of the learning activities you have planned.
- 3. We will ask you to participate in two focus groups throughout course of the study. One focus group will occur within one week of the planning session and one at the end of the curricular unit. Each focus group will include all participants and will take 60-90 minutes. Focus groups will occur at a time that is mutually agreed on by all participants.
- 4. We will ask you to participate in one individual interview at the end of the curricular unit that will take 30-45 minutes. Individual interviews can be done in person or over the phone.
- 5. We will ask for copies of the student with ID's IEP, documents created at the planning session, and collaboration notes between you and participants that are related to the curricular unit(s). We will provide you with a template for collaboration notes.

Are there any risks? Benefits?

There are no risks to the student or members of the school team in participating in the research. Their responses will be kept confidential and all identifying information (including participant names, school name, city) will be given pseudonyms or will remain confidential. Participants will not be paid to take part in the study. By participating in this study, they may learn more about UDL and collaboration of school teams, and they may be able to use this information to support academic inclusion of students with intellectual disabilities. The knowledge gained from this study will also further develop theories on collaborative practices of school teams and the implementation of UDL, and may support the development of strategies educators can use to promote inclusive education of this group of students.

What will we do with the data and results?

All responses to the interviews will be confidential. The schools will not have access to individual participant responses. We will video record the planning meeting and focus groups and audio record interviews; transcripts of all recordings will only include information provided by study participants

and will be labelled with codenames. We encourage participants not to discuss the content of the focus group to people outside the group; however, we can't control what participants do with the information discussed. Video and audio recordings will only be viewed by the research team for data analysis purposes and will be deleted after five years after results of the study have been published, as per the guidelines of UBC's Behavioural Research Ethics Board. We will use codes instead of names on all of the notes we take during observations and will redact identifying information on any documents we receive. All copies of hard data will be stored in a locked filing cabinet in a locked research lab at UBC. All electronic files will be encrypted and stored on a password protected computer and backed up on UBC's OneDrive cloud services for faculty, undergraduate, and graduate research, which is FIPPA compliant.

At any point in the study, if the researcher becomes aware that there has been abuse and/or neglect of a child (or that there is a risk of such occurring in the future) please be advised that the researcher must, by law, report this information to the appropriate authorities.

Results of the study overall will be shared with the families of the students participating in the study, all participants, and the school district. That is, we will tell you how participants engaged in collaborative practices to promote academic inclusion of students with intellectual disabilities. We will also tell you how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID, and report the factors that facilitated and factors that created barriers to engaging in collaborative practices. We may also publish results or present them at conferences, so other teachers can learn how UDL can be implemented with multi-disciplinary professionals to promote academic inclusion of students with ID and how multi-disciplinary members of school teams engage in collaborative practices when they use UDL. If you would like to receive a summary of the findings, please be sure to provide an email on the form below.

SSHRC is committed to maximizing opportunities to enhance learning by ensuring research data collected with public funds is accessible in the public domain. This means that raw data, including the transcripts of interviews and focus groups, fieldnotes collected during direct observations, and documents collected for review will have all identifying information removed (including names of people, schools, and cities) and be uploaded to a data repository within two years after the completion of the study. SSHRC also requires Open Access to publications arising from Agency-supported research, within 12 months of the publication. This means that research publications (e.g., articles) must be accessed online, free of charge by any user, with no technical obstacles (such as mandatory registration or login to specific platforms). We will publish our final, peer-reviewed manuscripts in journals that offer open access on their websites and/or deposit a copy of the final, peer-reviewed manuscript into an accessible online repository immediately upon publication.

Contact Information

If you have any questions or concerns, please feel free to contact Sarah Skinner at the email or phone number listed at the top of the page.

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail <u>RSIL@ors.ubc.ca</u> or call toll free 1-877-822-8598.

Your participation in the study is entirely up to you. You have the right to refuse to participate in this study. If you decide to take part, you may choose to pull out of the study at any time without giving a reason.

Your signature on the attached page indicates that you have received a copy of this consent form for your records and agree to participate. Please tear off and return the last page. You may keep the rest of this letter for your records.

PLEASE TEAR OFF AND <u>RETURN WITHIN ONE WEEK OF RECEIPT</u>

If you agree to participate in the study, please check the following box:

I consent to my participation in the study

Name

Role (e.g., classroom teacher, OT, SLP)

Signature

Date

(Optional) I would like a copy of the results. Please email them to me at:

This consent form can be returned **within one week** to Sarah Skinner by email at [redacted] or by mail to:

Sarah Skinner Department of Educational & Counselling Psychology, and Special Education The University of British Columbia – Point Grey Campus Neville Scarfe Building <u>2125 Main Mall</u>, Vancouver, BC V6T 1Z4 | Canada



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Education Department of Educational & Counselling Psychology, and Special Education

Introductory Letter and Consent: Guardian

Inter-Professional Collaborative Practice and Universal Design for Learning: Promoting Academic Inclusion of Students with Intellectual Disabilities

Who is conducting the study?

Principal Investigator:

Dr. Jennifer Katz, Associate Professor, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

Co-Investigator:

Sarah Skinner, M.A., PhD Candidate, Educational & Counselling Psychology & Special Education Email: [redacted] Phone: [redacted]

This study will form part of a PhD thesis for Sarah Skinner. We have received funding by the Social Sciences and Humanities Research Council (SSHRC) to support our research.

Why are we conducting this study?

All students in BC have the right to a good education, and inclusive classrooms allow all students, including students with intellectual disabilities (ID), to learn together in one classroom. Research has shown that there are many benefits for both students with disabilities and their peers when students with disabilities attend inclusive, general education classrooms.

Although most students with intellectual disabilities are socially included in general education classrooms, many of these students are not participating in activities related to grade-level curricular content with their peers. Often, these students have school teams that include different professionals, such as speech-language pathologists and occupational therapists, who work collaboratively together to design and use strategies that support these students to participate in their classrooms. However, research suggests collaboration between multiple members from different disciplines can be difficult to achieve in schools. Using a framework called Universal Design for Learning (UDL) to guide school teams during a planning meeting has the potential to foster collaborative practices.

We want to learn how multi-disciplinary school professionals work collaboratively together when they use the UDL guidelines (<u>http://udlguidelines.cast.org/</u>) during a planning meeting to design and implement supports for a student with ID to participate in a curricular unit with their peers. We also are interested in examining factors that facilitate collaborative practices, as well as barriers to collaboration. Finally, we want to learn how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID. Findings from this study can help develop theory of collaboration of multi-disciplinary school teams to promote inclusive education for students with intellectual disabilities. Findings may also provide a format for the practical implementation of UDL during planning meetings and identify strategies that promote collaboration on school teams.

What is the study about?

To study how multi-disciplinary education professionals work collaboratively when they use UDL to promote academic inclusion of a student with ID, we will be conducting a multiple-case study of two cases. In each case, we will collect data from participants who are professional members of the school team that supports a student with IDs and attends a general education classroom.

Your child is being invited to participate in this study because they are a student with an intellectual disability attending a general education classroom. If you consent to your child's participation, we will be asking the professional members of their school team (e.g., classroom teacher, resource teacher, speech-language pathologist) to participate in the study. All professional members of the school team will be invited, but participants must include at least three professional members of the team; one of the participants must be the classroom teacher and one of the participants must be a district resource staff member from a different discipline (e.g., occupational therapist, speech-language pathologist, physical therapist), as we are interested in inter-professional collaboration of a multi-disciplinary team.

We sincerely thank everyone who is interested in the study, but not all those who express interest will be invited to participate. We will be selecting the first two groups of participants to return consent forms to be participants in this study. If your child's school has been selected as a site for the study:

In the fall term, participants will take part in a half-day session that includes a workshop on UDL and a planning meeting where team members will use the UDL guidelines to design supports that promote academic participation for your child in one or two curricular unit(s) in their classroom. The session will be facilitated by Jennifer Katz, an Associate Professor in the Department of Educational & Counselling Psychology & Special Education at the University of British Columbia. The curricular unit(s) will be selected by the classroom teacher. The study will take place for at least eight weeks, but no more than one school term.

The session will be video recorded so that the research team can watch the video and collect data on collaborative practices that occur during the session. Data collection will also include two focus groups with participants – the first will occur within one week of the session, the second will occur at the end of the curricular unit. As well, an individual interview with each participant will take place during the teaching of the curricular unit, either by phone or in person. Focus groups will be video recorded and interviews will be audio recorded. We would like to review your child's Individual Education Plan (IEP), documents created during the planning meeting, and collaborative notes between participants that relate to the curricular unit. Please note that the focus of the study is on partnerships between professionals; therefore, you or your child will **not** participate in the workshop, focus groups, or individual interview.

If you agree to have your child participate in this study, we will ask you to:

- 1. Sign this consent form.
- 2. Indicate on the consent form if you consent to us reviewing a copy of your child's IEP.
- 3. <u>Return the consent form within one week of receiving this letter to Sarah Skinner at</u> [redacted]
Are there any risks? Benefits?

We are confident there no risks to your child's participation in this study. Responses of all participants will be kept confidential and all identifying information (including participant names, school name, city) will be given pseudonyms or will remain confidential. Participants will not be paid to take part in the study. Participants in this study may learn more about UDL and collaboration of multi-disciplinary education professionals, and they may be able to use this information to support inclusive education for your child and other students with disabilities. The knowledge gained from this study will also further develop theories on collaborative practices and the implementation of UDL and may support the development of strategies educators can use to promote inclusive education of this group of students.

What will we do with the data and results?

All responses to the interviews will be confidential. The schools will not have access to individual participant responses. We will video record the planning meeting and focus groups and audio record interviews; transcripts of all recordings will only include information provided by study participants and will be labelled with codenames. We encourage participants not to discuss the content of the focus group to people outside the group; however, we can't control what participants do with the information discussed. Video and audio recordings will only be viewed by the research team for data analysis purposes and will be deleted after five years after results of the study have been published, as per the guidelines of UBC's Behavioural Research Ethics Board. We will use codes instead of names on all of the notes we take during observations and will redact identifying information on any documents we receive. All copies of hard data will be stored in a locked filing cabinet in a locked research lab at UBC. All electronic files will be encrypted and stored on a password protected computer and backed up on UBC's OneDrive cloud services for faculty, undergraduate, and graduate research, which is FIPPA compliant.

At any point in the study, if the researcher becomes aware that there has been abuse and/or neglect of a child (or that there is a risk of such occurring in the future) please be advised that the researcher must, by law, report this information to the appropriate authorities.

Results of the study overall will be shared with the families of the students participating in the study, all participants, and the school district. That is, we will tell you how participants engaged in collaborative practices to promote academic inclusion of students with intellectual disabilities. We will also tell you how multi-disciplinary education professionals use knowledge of UDL to remove barriers to learning for a student with ID, and report the factors that facilitated and factors that created barriers to engaging in collaborative practices. We may also publish results or present results at conferences, so other teachers can learn how UDL can be implemented with multi-disciplinary professionals to promote academic inclusion of students with ID and how multi-disciplinary members of school teams engage in collaborative practices when they use UDL. If you would like to receive a summary of the findings, please be sure to provide an email on the form below.

SSHRC is committed to maximizing opportunities to enhance learning by ensuring research data collected with public funds is accessible in the public domain. This means that raw data, including the transcripts of interviews and focus groups, fieldnotes collected during direct observations, and documents collected for review will have all identifying information removed (including names of people, schools, and cities) and be uploaded to a data repository within two

years after the completion of the study. SSHRC also requires Open Access to publications arising from Agency-supported research, within 12 months of the publication. This means that research publications (e.g., articles) must be accessed online, free of charge by any user, with no technical obstacles (such as mandatory registration or login to specific platforms). We will publish our final, peer-reviewed manuscripts in journals that offer open access on their websites and/or deposit a copy of the final, peer-reviewed manuscript into an accessible online repository immediately upon publication.

Contact Information

If you have any questions or concerns, please feel free to contact Sarah Skinner at the email or phone number listed at the top of the page.

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail <u>RSIL@ors.ubc.ca</u> or call toll free 1-877-822-8598.

Your child's participation in the study is entirely up to you. You have the right to refuse your child's participation in this study. If you decide to take part, you may choose to pull your child out of the study at any time without giving a reason. We will also ask your child to sign an assent form; if they are not able to sign or make a mark on the form, we will ask them to verbally indicate if they are willing to participate in the study, in the presence of another adult. We will ask that adult to sign the form, indicating they have witnessed your child providing assent. We will use your child's preferred method of communication and modify the assent form so that your child will understand the study, before we ask them to provide assent.

Your signature on the attached page indicates that you have received a copy of this consent form for your records and agree to have your child participate. You may keep the rest of this letter for your records.

PLEASE TEAR OFF AND <u>RETURN WITHIN ONE WEEK OF RECEIPT</u>

If you agree to your child's participation in the study, please check the following box:

I consent to my participation in the study	
If you agree to giving us a copy of your chil	d's IEP, please check the following box:
I consent to providing a copy Sarah Skinner	of my child's Individual Education Plan (IEP) to
Child's Name (please print)	Guardian's Name (please print)
Guardian's Signature	Date
(Optional) I would like a copy of the result	s. Please email them to me at:
This consent form can be returned within o mail to:	ne week to Sarah Skinner by email at [redacted] or by
Sarah Skinner Department of Educational & Counselling F	Psychology, and Special Education

The University of British Columbia – Point Grey Campus

Neville Scarfe Building

2125 Main Mall, Vancouver, BC

V6T 1Z4 | Canada



THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Education Department of Educational & Counselling Psychology, and Special Education

Letter of Assent: Student

Inter-Professional Collaborative Practice and Universal Design for Learning: Promoting Academic Inclusion of Students with Intellectual Disabilities

Invitation

You are being invited to be part of a research study. We are studying how people who work in schools, like teachers and therapists, help a student with a disability to be included in classroom activities. We can learn a lot from you and your teachers and other members of your school team.

Joining the study is your choice. No one will make you be part of the study. Even if you agree now to be part of the study, you can change your mind later. No one will mind if you don't want to do it.

Why are we doing this study?

We want to learn about how a school team can work together to make it easier for students with disabilities to participate in the classroom. We hope the information we learn from our study can be used to help teachers make it easier for other students with disabilities to participate in inclusive classrooms.

What will you do if you participate?

During a meeting at the beginning of the school year, we will help people from your school team – some of your teachers and therapists – plan a unit that you will study in your classroom, with your classmates. We will video record this meeting and interview the people planning the unit. We will also look at your Individual Education Plan (IEP) and notes your team writes.

Who is doing this study?

Sarah Skinner, a graduate student at UBC, and Dr. Jennifer Katz, a professor at UBC. Sarah can answer any questions you have about the study. You can call her at [redacted] or email her at [redacted].

Are there any risks to participating?

No. You are going to continue to do regular classroom activities. Anything that we read or see and anything that anyone on your team tells us will be kept private.

Are there any benefits?

We hope so! We hope we can learn how people who work on school teams can make it easy for you to be included in your classroom. We hope this will help your team make it easy for you to

be included. We also hope that this study can help other students with disabilities to participate in their classrooms.

Who will know I am in the study?

Your parents, principal, teachers, school therapists, and the researchers will know you are in the study.

When do I have to decide?

You can take this form home and talk to your parents about the study. If you decide to join, you can sign this form, and your parents can sign their form, and then return them to your teacher. You have one week from the time you got this letter to return it.

If you sign this form, we will know you agree to participate. It is your choice if you will participate in this study, and if you choose not to participate do not sign this form. If you decide to take part, you may choose to stop participating at any time without giving a reason by telling your teacher or your family or the researchers.

If you wish to participate in the study, please return the signed form to Sarah Skinner **within one** week.

PLEASE TEAR OFF AND <u>RETURN WITHIN ONE WEEK OF RECEIPT</u>

If you agree to participate in the study, please check the following box:

I consent to my participation in the study	
I consent to pr Skinner	oviding a copy of my Individual Education Plan (IEP) to Sarah
My Name (please print):	
My Signature:	
Date:	

This consent form can be returned **within one week** to Sarah Skinner by email at [redacted] or by mail to:

Sarah Skinner Department of Educational & Counselling Psychology, and Special Education The University of British Columbia – Point Grey Campus Neville Scarfe Building <u>2125 Main Mall</u>, Vancouver, BC V6T 1Z4 | Canada

Appendix B: Background Information Questionnaire

Inter-Professional Collaborative Practice and Universal Design for Learning: Promoting Academic Inclusion of Students with Intellectual Disabilities

Background Information Questionnaire for Participants

Name:	
Role (e.g., classroom teacher, occupational therapist):	
Number of Years in Current Role:	
Number of Years on this School Team:	

How does this school-based team engage in collaborative practices? What are examples of how you collaborate?

Describe your role on the school-based team.

From your perspective, what are the roles of the other members of the school-based team?

How is work divided on this school-based team?

How are student goals set and worked on with this school-based team?

Describe your experience with collaboration on school-based teams.

Describe your experience with Universal Design for Learning?

Appendix C: Running Record for Direct Observations

Type of	Observation (circle):	Planning Meeting	Focus Group	Other
School:				
Observer	's Name:			
Date of C	Observation:			
Start Tim	ne of Observation:			
End Tim	e of Observation:			
Total Ob	servation Time:			
Purpose	of Observation:			
_				
G				
Setting/Contextual Factors:				
Time	De	scription of Events	No	otes

Appendix D: Guiding Questions for Focus Groups

First Focus Group: Guiding questions address objectives #1 (reflective) and #3 (transformative)

Objective #1:	Guiding Questions:
To enhance the theoretical understanding of IPP among multi-disciplinary school professionals when they participated in a facilitated meeting with the goal of designing a grade-level, curricular unit that was accessible to a student with ESNs.	 How did your team work together to design supports to include (student's name) in the curricular unit? How did you solve-problems or address barriers that came up during the process of designing supports for (student's name)? How did you negotiate solutions? How did you decide who would do what? What are some of the factors that influence your work together? Can you give me examples of how these factors influenced your work? What elements of the planning meeting supported your team to work toward the goal of designing supports to include (student's name) in the curricular unit? (e.g., what worked well during the planning meeting?) What didn't work well? Is there anything you would abange?
Objective #3:	Guiding Questions:
To develop practical strategies that support mutli-discplinary school professionals to use priniciples of UDL to collaboratively design accessible materials and learning activities that promote participation of students with ESNs in grade-level curriculum.	 Tell me about your experience using the UDL guidelines to design supports that remove barriers for (student's name) to participate in the curricular unit. Can you give me some examples of how you used the guidelines? What was useful about using the UDL guidelines during the planning meeting? What wasn't useful? What did you learn about using UDL to promote (student's name)'s participation in a curricular unit?

Objective #2:	Guiding Questions:
To develop strategies to facilitate IPP among mutli-disciplnary school professionals who provide service delivery to students with ESNs in inclusive, general education classrooms and consider changes to models of practice for practioners working on multi-discplinary school-based teams (SBT).	 Based on your participation in this project, what are some of the potential opportunities or changes for how multi- disciplinary school-based teams provide support to students with intellectual disaiblities?
Objective #3:	Guiding Questions:
To develop practical strategies that support mutli-discplinary school professionals to use priniciples of UDL to collaboratively design accessible materials and learning activities that promote participation of students with ESNs in grade-level curriculum.	 Tell me about your experience in using supports designed in the planning meeting to remove barriers for (student's name) to participate in the curricular unit. Can you give me some examples of how supports were implemented in the classroom? Did you make any changes to the supports since the facilitated planning meeting? If so, what were the changes? How did UDL assist you in making changes? Since the last focus group, have you learned anything about using UDL to promote (student's name)'s participation in a curricular unit? Were there any surprises or challenges that came up as (student's name) participated in the curricular unit? How did you address them? Based on your participation in this project, what are some of the potential opportunities for using UDL to provide supports for students with intellectual disabilities to participate in curricular units? Is there anything else that might promote inclusive education for students with intellectual disabilities?

Second Focus Groups: Guiding questions address objectives #2 & 3 (transformative)

Appendix E: Guiding Questions for Semi-Structured Interviews

Guiding questions address objectives #1 (reflective) and #2 & 3 (transformative)

Objective #1:	Guiding Questions:
To enhance the theoretical understanding of IPP among multi-disciplinary school professionals when they participated in a facilitated meeting with the goal of designing a grade-level, curricular unit that was accessible to a student with ESNs.	 From your perspective, how did the team work together to design supports to include (student's name) in the curricular unit? Did you notice any differences in how you typically work together? How did your expertise/experience contribute to the goal of promoting (student's name)'s participation in the curricular unit? Are there any factors that influence how you work with other participants to promote (student's name) academic inclusion in (his/her) classroom? Can you give me an example of how these factors influenced your work? Has your role or participation on the team changed from how you typically practice? If yes, how? Did you learn anything from participating in the facilitated planning meeting? What did you learn? (prompt: What did you learn about the student? The curriculum? The other participants?)
Objective #2:	Guiding Questions:
To develop strategies to facilitate IPP among mutli-disciplnary school professionals who provide service delivery to students with ESNs in inclusive, general education classrooms and consider changes to models of practice for practioners working on multi-discplinary school-based teams (SBT).	 Based on your participation in this project, what are some of the potential opportunities or changes for how multi-disciplinary school-based teams provide support to students with intellectual disaiblities? Will you make any changes to how you work with members of the school-based team, after participating in this project? If yes, what changes?

Objective #3:	Guiding Questions:
To develop practical strategies that support mutli-discplinary school professionals to use priniciples of UDL to collaboratively design accessible materials and learning activities that promote participation of students with ESNs in grade-level curriculum.	 What was your experience using the UDL guidelines to remove barriers for (student's name) to participate in the curricular unit. Did the UDL guidelines assist you in your role as a (discipline; e.g., teacher, occupational therapist) to remove barriers to (student's name)'s participation in the curricular unit? If yes, how? If no, what did? Were there any challenges to using the UDL guidelines? Are you likely to use UDL when considering how to implement individualized student supports for students with intellectual disabilities in their classrooms? If yes, how? If no, why not?

Appendix F: Protocol for Facilitated Planning Meetings

Part 1

The training sessions were delivered as a presentation in the form of a PowerPoint presentation and a facilitated discussion on inclusive education and the Center for Applied Special Technology (CAST) Universal Design for Learning (UDL) framework and lasted approximately 45-60 minutes. The presentation was based on information and learning activities from Meyer et al. (2014):

- 1. I defined inclusive education and academic participation (i.e., participation in grade-level curricular activities, opportunities for interactive learning with peers, and activities that presented a cognitive challenge) in context of this study.
- I presented a quick review of research regarding UDL and academic participation of students with extensive support needs (ESNs).
- 3. I provided a brief introduction of UDL, including:
 - a. definition of UDL (including example of closed captioning)
 - b. three learning networks (affective, recognition, strategic)
 - c. three guiding principles of CAST's model of UDL (multiple means of engagement, multiple means of representation, multiple means of expression)
- 4. I Introduced CAST's UDL guidelines and checkpoints by:
 - a. listing 9 guidelines
 - explaining how guidelines are organized (vertically, according to three principles; horizontally, as building blocks: access, build, internalize)
 - c. using website <u>http://udlguidelines.cast.org/</u> to introduce the checkpoints under each guidelines

- 5. I outlined the steps to using CAST's model of UDL, including:
 - a. goals:
 - i. linked to BC curriculum
 - ii. separate means from the ends
 - iii. consider all three learning networks
 - iv. challenging
 - b. methods
 - c. materials
 - d. assessment (optional for purposes of the research study)

Part 2

The second part of the session was a facilitated planning meeting, and took up the remainder of the half-day sessions (2-2.5 hours). My advisor facilitated both of the facilitated planning meetings, using a format similar to the format used during person-centered planning meetings, such as Planning Alternative Tomorrows with Hope (PATH; O'Brien et al., 2015). In a PATH planning meeting, the facilitator does not have formal authority and facilitator power is" power-with", meaning the facilitator does not act as though they "know best" (O'Brien et al., 2015, p. 25). Therefore, the facilitator puts their ideas about what should come out of the planning process aside and guides, not directs, the team to work toward the goal of the meeting. Furthermore, the facilitator helps to keep the planning process moving forward and ensures all participants have the opportunity to contribute.

At the beginning of the meeting, the facilitator: clarified the purpose of the meeting, presented an overview of the meeting, established ground rules with participants (O'Brien et al., 2015). Throughout the planning process, the facilitator helped to keep the attention and focus on the goal of the meeting and asked open-ended questions to keep the conversation moving forward (e.g., what would participation for the student with ESNs look like in this curricular unit?; what are the barriers to participation?; what do we need to do to allow the student with ESNs to participate more fully?). The following is an outline of the facilitated meetings:

- Review classroom goals: the classroom teacher shared an outline of the curricular unit, including the class goals (based on Big Ideas and Curricular Competencies) the unit would address and a brief description of learning activities.
- Discuss student goals: participants developed individual learning goals for Maya or Florence that were related to the classroom goals.
- Develop methods and materials: participants identified potential barriers to Maya or Florence's learning and used principles of UDL to design curricular learning activities and materials or universal supports that would eliminate barriers.
- Discuss assessment plan: the team determined how they would assess Maya or Florences' progress on their individual learning goals (not required for research study, but useful in practice).

Collectively, parts one and two of the facilitated planning meeting did not exceed three hours.

Appendix G: Agenda for Facilitated Planning Meetings

Inter-Professional Collaborative Practice and Universal Design for Learning: Promoting Academic Inclusion of Students with Extensive Support Needs

Presentation and Facilitated Planning Meeting Agenda

Date: Time:

Part 1 (45-60 minutes) – Presentation on Inclusive Education and the Center for Applied Special Technology (CAST) Model of Universal Design for Learning (UDL)

- 1. Discussion of inclusive education and academic participation
- 2. Background and development of CAST's model of UDL
- 3. Introduction to CAST's model of UDL: Guiding principles
- 4. Introduction to CAST's UDL guidelines and checkpoints http://udlguidelines.cast.org/
- 5. Summary

Part 2 (2-2.25 hours) – Facilitated Planning Meeting

- 1. Purpose and overview of the meeting
- 2. Review classroom goals:
 - The classroom teacher will share an outline of the curricular unit, including:
 - Core Competencies
 - o Big Ideas
 - Curricular Competencies
 - Brief description of learning activities.
- 3. Develop academic student goals for curricular unit
- 4. Develop methods and materials (i.e., individualized supports and strategies) to reduce barriers to learning using UDL guidelines and checkpoints
- 5. Plan to assess student progress on their goals
- 6. Review Plan

Thank you!

Appendix H: Case 1: Key Ideas from Reflexive Memos

- macro and chrono contexts (and individual contexts of microsystem) influence collaborative practices (ecological model)
- concept of 'time' and 'resources' both are valued and there seems to be a lot of both available, but the sense is that there is not (misperception)
- not everyone has the same vision of inclusion
- not everyone has the same priority/agreement on goals Maya is working toward
- not everyone fully grasped concept of UDL
- presuming competence
- UDL and collaboration were both valued, but hard to explain why and how
- how to make universal supports accessible to all students (including Maya)
- planning is easier than implementing
- how people fulfill their roles/role confusion
- learning from each other
- learning about each other
- started out with great excitement...then the motivation dropped
- resistance due to lack of confidence
- whose responsibility is Maya's educational program?
- self-efficacy
- perception that students with ID are hard to include
- professionalism (evolving practices)
- role of facilitator
- not having a great understanding of Maya made it hard to plan for her
- 'stay in your lane' but interested in what's going on in other lanes

Appendix I: Case 1: Member Check

Theme #1: Academic inclusion: Wondering if it can be done

The goal of the facilitated planning session was for participants to design learning activities in a Science Unit that were accessible to Maya, using UDL. We found that although participants supported the goal of inclusion, they had different perceptions about academic inclusion:

- **Differing perspectives on an inclusive education program**: Some participants felt it was important to include Maya in the classroom learning activities, "doing the same things that some of the other kids are doing, there is huge value in that." Other participants prioritized social goals for Maya to, "interact and makes some friends, bring some kids into her circle, play games, go for a walk."
- **Differing perspectives on Maya's abilities**: "That could be a challenge, I guess, in working together, realizing, okay, well, here we have an idea of what we want to try. One person might be like, 'No, I don't think she can do that.""
- Ableism in education: Within our society, there is an underlying belief that students with intellectual disabilities are not in school to learn "Students like this one, they're just going to go play and listen to music, and it's not really on their radar to be developing their skills and how important that is."

Please add any comments and consider the following statement: It seems people believe in inclusion but have different ideas of what an inclusive education program looks like. Do you agree?

Participants addressed different perceptions about academic inclusion by:

- **Creating a safe space:** Participants shared the importance of listening and trusting each other, and noted the space felt safe enough for them to be vulnerable "the openness of the team and almost, like, vulnerability, given that none of us have really done something like this before...we're going to do our best and, you know, we're all in this together. There was a kind of collaborative openness."
- Sharing and listening to different beliefs: Participants were willing to share and listen to their different perspectives "Everyone's opinion of success (is) so different. That was an eye opener for me...(another participant) stated what success looked like to her and that was so different than what I thought success was."
- Sharing professional expertise: Participants shared their own areas of expertise to contribute to the problem-solving process, strengthening the unit plan "having everyone's perspective in that meeting was so helpful, to hear each team member's bit in helping plan that, I think makes it a stronger unit plan because you actually have input from an EA, the classroom teacher, an SLP, LST.

• **Presuming competence**: "I don't want to make any assumptions as to what Maya is and isn't capable of until we actually try things and then troubleshoot and problem solve if things aren't going well."

Please add any comments and consider the following statement: It seems as though people were willing to listen to and learn from different perceptions about academic inclusion. Do you agree?

Theme #2: Academic inclusion: Wondering if I can do it

We found that participants' perceptions of their capacity to was a barrier to working toward the goal of using UDL to promote academic inclusion for Maya.

- Not enough training to include a student with ID in curricular activities or to use UDL: "So, teachers, maybe they do learn about UDL, but maybe they need more training. Like the new teachers coming up, right? Maybe they need more training in it? I don't know. But there has to be more...it's not just about the bodies but it's also about knowing the kind of supports to provide."
- **UDL is good in theory, but not practice**: "I see the benefits, the purpose of trying to incorporate the other kids and use the UDL model. But you know, at the same time, it's time consuming."
- A fear of failure: Concern that if the activities didn't go as planned it would be perceived as a failure at their job (by themselves and others) "And I am still worried about fear of failure because of her, I know her limitations. And I want this to be successful. But I don't know how successful it is going to be given how well I know Maya and, you know, can this work?"
- **Spread thin:** Participants expressed feeling spread thin in the scope of their professional roles and the size of their caseloads or classroom "There's so much that needs to be done to get each little piece of something that it leaves so little time...the thing that I hate is that I'm barely ever in the classroom, but I am in this job to be in the classroom and do the kind of inclusion stuff that we did."
- Lack of clarity in roles: There were discrepancies between how participants described their roles and how the Ministry of Education describes their roles (as per the Special Education Policy Manual).
- **Personal life:** People have busy lives outside of work, and limited time/capacity to try something new "we are just trying to keep our heads above water".

Please add any comments and consider the following statement: It seems as though self-efficacy (including training) and time/capacity may be a barrier to academic inclusion. Do you agree?

Participants addressed a lack of self-efficacy (training) and/or time/capacity by:

- Sharing the load: Participants discussed the importance of being on a team and sharing the workload, the success, and the failures "I also feel that you guys are totally willing to help, right? Like, the resources and co-teaching and stuff like that."
- **Keeping supports minimal:** Participants stressed the importance of designing accessible learning activities and supports that were realistic and easy to implement "We also have low-tech systems where you can program it to have two buttons, with the two pictures. It's very easy to program and then she can push whichever one she thinks it is going to be the guess, the hypothesis."

• Using UDL – Participants stated the UDL framework helped to keep the facilitated planning meeting focused and provided some guidance as they tried something new – "Our learning support teacher was great with coming back to (UDL) and making sure that we were on topic with the things that we were talking about." However, participants also noted that the plan they designed was less of a UDL unit and more of an individual plan to include Maya, so it was very frustrating when she was absent.

Please add any comments and consider the following statement: Through the collaborative process, it seemed as though people started to address barriers related to lack of time/capacity/self-efficacy. Do you agree?

Theme #3: Working in silos and valuing collaboration

We found that even though collaboration was highly valued among participants, the current education system makes it more likely for people to work in silos, which creates barriers to collaboration.

- Inclusion requires collaboration with the classroom teacher, but time to collaborate is not built into the schedule: "It's nice because everybody is getting updated, the classroom teacher is getting to know Maya, which is probably an opportunity she never would have gotten. Yes, she is in her class, but we don't really get to sit down and teach her about Maya. This is rare and it's quite nice."
- Having so many professionals involved in Maya's education program makes it hard to engage in meaningful collaboration: "I think it would have been helpful to have other members of the team there and in some ways when it's too many people then it starts to be difficult to actually get anything done."

Please add any comments and consider the following statement: It seems as though people value collaboration, but collaboration rarely occurs in practice. Do you agree?

Participants addressed barriers related to working in silos by:

- **Being creative with time**: Participants brainstormed ways they could find meaningful opportunities to collaborate If you scheduled 15 minutes once a month and you may have 4 of those in your class, for example. Then you knew on so and so time we are going to check in for 15 minutes about that student. You probably wouldn't even have four, but I don't know how many kids you would have. But I did do that with an EA and it worked, it was great."
- **Prioritizing collaboration:** Participants expressed the importance of making collaboration happen "My first go-to is not to think about including you guys, which is my bad as a (classroom) teacher. Obviously, you know, you collaborate with us too. It's wonderful you were like, 'Oh, let's co-teach.' And I was like, 'That's great.' So, it makes me...even this has made me open my eyes to try to incorporate you guys more into what we are doing."
- Integrating multiple perspectives: Participants integrated recommendations from specialists into the curricular activities they were designing "Well, and I mean, also tying in some of her IEP goals, she could be engaged in that way. Like, there was one about using the spinner (from Inclusion Outreach) to choose peers for...whatever. So, she could (use the spinner) to help to make part of the groups or choose what order kids go up in for presentations."

• **Blurring professional boundaries**: By sharing expertise participants not only learned from each other, but started to think about their roles differently – "For me, when I come, you know, with the communication system and all that, I can talk about ideas of how we can incorporate it into the classroom and throughout the day."

Please add any comments and consider the following statement: It seems as though people were coming up with solutions that could help remove barriers to collaboration. Do you agree?

Please add any additional comments here:

Appendix J: Case 2: Key Ideas from Reflexive Memos

- collaborative process was positive because everyone came with a spirit of willingness and mutual respect; everyone equally valued
- learning from and about each other changed practices (especially for CT and EA)
- designed for Florence but "benefits all the kids"
- time is a barrier but also opportunity for creativity
- time to listen to each other with a focused goal contributed working things out through discussion
- role of the facilitator was just right (or could have been less)
- UDL presentation was critical in setting the stage for what they would be doing (e.g., what does academic inclusion look like; using the principal of UDL --> supports for one benefit all)
- planning process in the facilitated planning meeting was led by the CT
- focus on self-regulation
- participants seemed to hold their own roles
- push-in vs pull-out models of service delivery (SLP uses MTSS)
- collaboration means becoming more humble
- EA talked about becoming more confident
- willingness of participants to include Florence
- "Space to listen and learn from each other"
- UDL was simple

Appendix K: Case 2: Member Check

Theme #1: Building collaborative partnerships

We found participants experience challenges to building collaborative partnerships in the current education system.

- **Multi-disciplinary professionals in education often work in silos:** It is not typical for classroom teachers to collaboratively plan a unit with colleagues from different disciplines or discuss the unit plan with the EA "It took an adjustment for me because, yeah, I don't think I've ever collaborated like that on a unit before...But it was weird because usually it was like, you're the one. You need to figure out what you're going to teach, how you're going to teach it, how you're going to assess it, what to do when if things don't go how you want."
- Working in silos is not the most effective practice: The classroom teacher might not have the time or skills to implement specific strategies that specialists recommend and specialists might not fully understand what the student needs to do in order to participate in the classroom "I will often make recommendations, but without knowing the curricular topic or the content that's going to be taught, it's hard to get specific, right?"
- Lack of designated time for collaboration: "We knew there was a certain amount of time and we could take our time and we could kind of brainstorm. There wasn't a sense of pressure, I guess, for me. Like, it was a luxury to have that time, you know, if only it could happen all the time when we wanted it."
- **Discomfort in trying something new (i.e., collaborative planning):** Participants expressed that they weren't used to planning collaboratively and there was some discomfort in trying something new "At the beginning it was a little weird for me because usually I have control over everything. And I don't really, like, not for many, many years, I don't really get other people's opinion besides seeing something that you like and thinking, 'oh, I might try and put that in.' So it took a bit of adjustment."

Please add any comments and consider the following statement: It seems like collaborative work doesn't happen very often in practice. Do you agree?

Participants addressed challenges in building collaborative partnerships by:

- **Building trust:** Participants talked about coming into the process open and willing to listen to each other and noted that going through the process helped to build trust "If we have that trusting relationship, then I feel like there's more of a chance that they'll be able or feel willing to take that on board or trust my opinion, and vice versa"
- Seeing other perspectives: The collaborative process left participants with a better understanding of their colleagues' roles and experiences "So, I guess almost humbling ourselves and kind of being, 'I don't necessarily know it all' or 'I know my expertise but everybody else has their own expertise', so I feel like that's where this was really successful because it gave us that platform to listen."

- Making time to collaborate: Participants talked about being creative with the time they have in order to collaborate "It makes me want to try to get creative with scheduling with whole class groups or grade groups. To be able to...like, I am wondering if, within our school, if we got creative, if we do have the man power to spell each other off so that all of the grade two teachers could meet and design these stellar units."
- Changing models of practice: Participants (e.g., LST and SLP) shared their experience with push-in supports and multi-tiered systems of support as an example of collaborative partnerships "And also, I think we're intentionally making a move toward, rather than that medical pullout model, we're working collaboratively and really working on how does this tie into the classroom and to that learning experience."

Please add any comments and consider the following statement: It seems as though collaborative partnerships are being built. Do you agree?

Theme #2: Making inclusive teaching easy and efficient

We found that there are barriers to inclusive teaching in the current education system. For example:

- The classroom is so diverse: There are many students with many needs in a classroom and it is difficult to plan for them all "I think there are definitely a lot of good strategies that we can incorporate. But then I think some of them are just difficult to...like, with the whole class, because everyone's needs are so varied."
- Adapting activities for multiple students is not realistic "And I was like, wow, that's really eye-opening that you know, this is just one topic. So, (the classroom teacher) is kind of having to plan that out for all of the different kids and then adapt."
- **Constant juggling:** Participants expressed feeling like they were juggling large caseloads, supporting 'unofficial' caseloads, and supporting each other and the students "So what I used to do is like, take on any name that was thrown at me and just run around and like, 'OK, I can do six sessions and I'll work with you in term one and then I've got to pause you because I'm going to pick up another student and then I just...you're not really effective."

Please add any comments and consider the following statement: It seems as though there are barriers to inclusive teaching in our current education system. Do you agree?

Participants addressed barriers in inclusive education by:

- Valuing a culture of inclusion in the classroom: Participants discussed how to foster a culture of inclusion in the classroom "You know, people will ask a lot like, 'what do other kids say about this kid who, you know, is nonverbal? Or they are running around the room?'...what most other children say, and like, they are the most accepting people on the planet, they don't do that. They're just, like, 'oh wow, he really needs to move, right?' They absolutely accept anything that comes in front of them. And being able to foster that moving forwards, yeah."
- Sharing the workload: Participants each took on different roles and responsibilities in the planning of the science unit "It felt like everyone was helping (in the implementation), it's not like, here's all the ideas, good luck!"
- **Keeping it simple:** Participants stressed the importance of designing supports that are easy to implement "And sometimes, like, it's the simple ideas that are the ones that are the best. And sometimes you think, why couldn't I have thought of that on my own? But sometimes you don't."
- Using UDL for inclusion: For the most part, participants thought the UDL framework was a useful tool for designing an inclusive science unit, noting it helped them shift from planning for individual students to thinking about the whole class "I guess it's the UDL part where I feel like if I include Florence and I meet her needs, I meet every student's needs. I think I remember hearing that, but now I understand it more, now that I was actually part of creating

something like that. And so now when I do my other units, I'm thinking about, 'OK, if I meet these kid's needs, I'm meeting the whole range of needs.' So yeah. I see it a little bit differently now. And I feel happy about that."

Please add any comments and consider the following statement: It seems as though collaboration helped people address some of the barriers that exist in inclusive education. Do you agree?

Theme #3: Engaging in transformative learning

We found that at the beginning of the study, participants had varying understandings and experiences of UDL and teaching/including students with ID. As well, participants had different perspectives of Florence and how to include her in the classroom. We found that throughout the duration of the study, participants experienced transformative learning, including new learning, new ways of thinking, and new ways to practice. For example:

- Shifting views on what inclusive education for Florence looks like: Participants shared that their perspective on Florence and her education shifted "Yeah. I would say with Florence, I typically, really before this meeting I wasn't really that much thinking about how I can include her in what the class is learning so much."
- Learning about UDL: Participants came into the study with varying experience/knowledge of UDL "I don't know enough about UDL, really. I mean, this is just the first of really integrating it or using it or learning about it."

Participants experienced transformative learning by:

- Working toward a shared goal: Participants stated collaboration made it easier to work toward a common goal of academic inclusion "And like I said, not being a teacher, I think sometimes I might be, you know, missing that connection piece to well, how does this matter in the classroom?...So it kind of helps to tie it together, I guess."
- **Making changes to practice** "I think we should do this more. Why don't we make more lesson plans together, like during LIFT time? We can you know...I think maybe this will be a good step, like a good focus point for us to be able to engage and put our heads together and come up with some good ideas for social studies and science lessons."
- **Blurring professional roles** Participants learned from each other and occasionally stepped outside of their 'traditional' disciplinary roles to contribute to the planning of the science unit. For example, the EA came up with activities for all students that support curricular goals; the classroom teacher spoke about how the AAC device facilitated inclusion in curricular activities, and the SLP talked about the curriculum.
- **Co-constructing new knowledge** –Sharing perspectives helped deepen everyone's understanding about Florence and her learning strengths and needs "It was really nice and informative to get the perspective of those staff members on the child and then also information about what's going on for that child in the classroom. And throughout the school day, because I'm not there. I'm not in that room. So that was helpful.

Please add any comments and consider the following statement: It seems as though participants experienced new learning that may lead to new ways of practice. Do you agree?

Please add any additional comments here: