

**Developing Effective and Culturally Appropriate
Speech-Language Services for First Nations Children
Living On-Reserve**

**by
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Abstract

Research conducted by the First Nations Information Governance Centre and Aboriginal Child Survey have found speech and language delays to be the most common developmental challenge facing First Nations children. Despite the prevalence of these challenges, many First Nations children in B.C. are unable to receive adequate speech and language services due to barriers such as geographic location, service coordination, and the lack of culturally appropriate services. This capstone employs a literature, jurisdictional scan, and expert interviews investigate these barriers and to propose three policy options to address them. The proposed options are then evaluated using a multi-criteria analysis. Through this analysis, this capstone makes a series of short and long-term recommendations to promote language development and improve the ability of First Nations children in B.C. to access culturally appropriate speech-language services.

Keywords: Speech-Language Pathology; British Columbia; First Nations; Policy Analysis

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Table of Contents

Approval.....	ii
Ethics Statement.....	iii
Abstract.....	iv
Acknowledgements.....	v
Table of Contents.....	vi
List of Tables.....	viii
List of Figures.....	viii
List of Acronyms.....	ix
Glossary.....	x
Executive Summary.....	xi
Chapter 1. Introduction.....	1
Chapter 2. Background.....	3
2.1. First Nations Children in B.C.....	3
2.1.1. First Nations Perspectives on Health and Child Development.....	3
2.1.2. Social Determinants of Health.....	4
2.1.3. Jurisdictional Issues.....	4
2.2. Speech-Language Pathology.....	5
2.2.1. Speech-Language Pathology in B.C.....	5
2.2.2. Speech-Language Service Provision for First Nations.....	7
2.2.3. Telehealth in Speech-Language Service Delivery.....	9
Chapter 3. Methodology.....	11
3.1. OCAP.....	11
3.2. Jurisdictional Scan.....	12
3.3. Expert Interviews.....	12
3.4. Limitations.....	13
Chapter 4. Results.....	15
4.1. Jurisdictional Scan.....	15
Australia.....	15
United States.....	16
New Zealand.....	17
4.2. Interviews.....	18
4.2.1. Factors Influencing Service Delivery and Language Development.....	18
Jurisdiction.....	19
Intergenerational Trauma from Colonization.....	19
Dialects.....	20
4.2.2. Developing Community Capacity.....	21
First Nations SLP Training.....	22
First Nations SLPA Training.....	22
First Nations ECE Training and Support.....	24

4.2.3. Relationships	24
4.2.4. Service Delivery.....	26
SLP Preparation.....	26
Telehealth	27
Group Interventions.....	28
The Role of Assessments	29
Chapter 5. Policy Options.....	31
5.1. Increase funding for telehealth services.....	32
5.2. Increase funding for the training of First Nations SLPAs	32
5.3. Increased investment for early childhood educator training and retention.....	33
Chapter 6. Evaluative Criteria.....	34
6.1. Overview	34
6.2. Criteria.....	34
Equity: Availability of Services	34
Equity: Cultural Appropriateness of Services	34
Community Development.....	35
Cost.....	35
Stakeholder Acceptance: First Nations	35
Stakeholder Acceptance: Service Providers	35
Chapter 7. Policy Analysis.....	36
7.1. Option 1: Increase funding for telehealth services	36
7.2. Option 2: Increase funding for the training of First Nations SLPAs.....	38
7.3. Option 3: Increase investment in early childhood education programs.....	39
Chapter 8. Recommendations.....	41
8.1. Recommended Policy Options.....	41
8.2. Long Term Recommendations.....	42
8.2.1. Create an Aboriginal speech-language professional body	42
8.2.2. Increase funding for the training of First Nations SLPs	43
8.2.3. The development of community specific assessment tools	44
Chapter 9. Conclusion	45
References.....	47
Appendix A. Criteria and Measures	56
Appendix B. Complete Policy Analysis Matrix.....	57
Appendix C. Interview Questions.....	62

List of Tables

Table 7.1	Policy Analysis Summary of Results	36
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List of Figures

Figure 2.1	SLPs per 100,000 People by Province, 2016	6
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List of Acronyms

ACS	Aboriginal Children’s Survey
AI/AN	American Indian and Alaska Native
ASHA	American Speech-Language-Hearing Association
BCACCS	BC Aboriginal Child Care Society
BCASLPA	BC Association of Speech/Language Pathologists and Audiologists
CASLPA	Canadian Association of Speech-Language Pathologists and Audiologists (now Speech-Language & Audiology Cinda)
CDA	Communication Disorder Assistant
CSHHPBC	College of Speech and Hearing Professionals of BC
ECE	Early Childhood Educator
FNHA	First Nations Health Authority
FNTEP	First Nations Telehealth Expansion Project
IAHA	Indigenous Allied Health Australia
ICT	Information Communication Technology
MCFD	Ministry of Child and Family Development
NZSTA	New Zealand Speech-Language Therapists Association
SAC	Speech-Language & Audiology Canada (formerly known as the Canadian Association of Speech-Language Pathologists)
SFU	Simon Fraser University
SLP	Speech-Language Pathologist
SLPA	Speech-Language Pathology Assistant
SPA	Speech Pathology Australia
UBC	University of British Columbia

Glossary

Speech-Language Pathologist	The professionals who screen, assess, identify and treat, speech, language, voice, fluency, swallowing and feeding problems
Speech-Language Pathology Assistant	Paraprofessionals who work under the supervision of a qualified speech-language pathologist to support the treatment of clients
Early Childhood Educator	Educators who work with young children and their families to support healthy child development

Executive Summary

Policy Problem

Speech and language difficulties are the most prevalent developmental challenges facing First Nations children living on reserve (FNIGC, 2012). These deficits in speech-language ability are alarming because of their potential long-term negative impacts on educational attainment, cognitive ability, and quality of life. Research has demonstrated that early childhood interventions can reduce the impacts of speech-language deficits and produce long term benefits in the form of reduced special education use, higher earnings, and reduced interactions with the criminal justice system. Despite the importance of speech-language skills to outcomes in adulthood, First Nations children in B.C. are faced with barriers that challenge their optimal speech-language development.

The policy problem addressed in this study is that too many First Nations children living on-reserve in B.C. do not have adequate access to culturally appropriate speech-language services. This capstone examines the barriers that impact language development and access to services for First Nations children in B.C., surveys alternative forms of service delivery that may reduce these barriers, and makes a series of policy recommendations to improve First Nations children's access to culturally appropriate services.

Methodology

To investigate this policy problem, this capstone makes use of three qualitative methods: a literature review, a jurisdictional scan, and semi-structured interviews. The literature review was used to explore the context of speech-language service delivery in both B.C. and the rest of Canada, while the jurisdictional scan was used to identify the approaches used in similar international jurisdictions to deliver speech-language services to their Indigenous peoples. Together, these methods provided insight into the current issues regarding speech-language service delivery to Indigenous populations and information on alternative forms of service delivery that might be applied in the context of B.C. The information gathered through these methods was then used to inform a series of semi-structured interviews with experts in the fields of Aboriginal health, Aboriginal education, and speech-language pathology. Interview participants

provided additional insights into the barriers to delivering speech-language services to First Nations children in B.C. and assessed the viability of policy options identified in the literature and in international jurisdictions.

Results

The literature revealed that the speech-language development of First Nations children is challenged by a variety of factors, including geography, trauma and colonialism, the imposition of Western perspectives on health, and jurisdictional issues. The literature also revealed that there is a national and international shortage of qualified speech-language pathologists, who are the main providers of speech-language services, and that speech-language paraprofessionals appear to be underutilized in B.C. Additionally, it was revealed that the ability of First Nations children to access speech-language services is further complicated by the use of tools and techniques that are culturally inappropriate and may be biased against First Nations children. A scan of international jurisdictions revealed that Australia, the United States and New Zealand also struggle with providing access to culturally appropriate services for their Indigenous populations, though all three of these jurisdictions have made strong efforts to promote Indigenous interests in their professional organizations.

The interview data also revealed four major themes. First, respondents identified barriers to service delivery and language development that were consistent with the literature, but also provided additional insights into how these barriers appeared in the context of B.C. Interview participants also argued for the need for greater representation of First Nations in the speech-language workforce at all levels of the profession. The third theme identified was the importance of relationship building for effective service delivery and how relationships can be established. Finally, respondents discussed the improvements that might be made to service delivery and the viability of alternative models of service delivery.

Policy Analysis

Based on the literature review, jurisdictional scan, and expert interviews, three policy options were chosen for analysis. These were an increase in funding for telehealth services, an increase in funding for the training of First Nations speech-language pathology assistants, and increased investment for early childhood education programs.

These options were then evaluated against a set of criteria chosen to highlight the strengths and weaknesses of the each of the options. These criteria evaluate how options impacted the availability of services, the cultural appropriateness of services, community development, cost, First Nations acceptance and service provider acceptance.

Recommendations

Based on the findings from the policy analysis, my primary recommendation is that greater investment be made into the training and support of early childhood educators. This option was recommended because early childhood programs can act as a preventative measure against language delays and early childhood programs are already well established across the province. Given the strong performance of the increased funding for the training of First Nations SLPAs in my analysis, I also recommend that option be considered as well. The use of SLPAs in B.C. has been limited, but the literature and interview participants suggest that they may provide speech-language services in a cost-effective manner and may act as cultural brokers to ensure the delivery of culturally appropriate services. In addition to recommendations from the policy analysis, I also provide three long-term recommendations that can improve access and cultural appropriateness in the future. These long-term recommendations include increasing funding for training First Nations SLPs, the development of an Aboriginal speech-language professional body, and the development of community specific assessment tools.

Conclusion

I conclude by emphasizing the important role speech-language development can play in reducing the education and employment gaps between First Nations and non-First Nations peoples. I also highlight how this capstone has contributed to the body of research regarding speech-language service delivery to First Nations and provide recommendations for the direction of future research in this area.

Chapter 1. Introduction

Studies have shown that speech and language difficulties¹ are the most prevalent developmental challenges facing First Nations children. For example, in the 2008/10 First Nations Regional Health Survey, 4.7% of children living on-reserves were reported to have speech or language difficulties. Of those children who were reported as having speech or language difficulties, more than 40% were not treated for their conditions (FNIGC, 2012). A high rate of speech-language difficulties was also reported off-reserves in the 2006 Aboriginal Children's Survey, which found that 12% of survey participants between ages 2 and 5 living off-reserve reported speech-language difficulties (Findlay and Kohen, 2013). The presence of deficits in speech and language ability for First Nations children is alarming because of the potential negative impact on academic performance, wellbeing, and quality of life (SAC, 2012). Weak language skills prior to entering school have been associated with behaviour and attention problems, poorer school readiness, poorer cognitive performance, and lower levels of literacy and educational attainment (Findlay and Kohen, 2013; Markham et al., 2011).

Though speech-language delays can have a large negative impact, it has been demonstrated that early childhood interventions can help to reduce these negative impacts (Ulrich et al., 2014; Galagher and Chiat, 2009; Justice et al., 2009). Additionally, addressing language delays can have long-term benefits through reductions in the rate of special education use, higher levels of educational attainment, higher future earnings, and fewer interactions with the criminal justice system (Heckman, 2006; Temple and Reynolds, 2007; Barnett and Masse, 2007). The importance of addressing speech-language difficulties is amplified by large proportion of First Nations in the early childhood years, which are the most critical for language development (SAC, 2012). In the 2016 census, 9.5% of First Nations were between the ages of 0 to 4, compared to only 5.3% of non-Aboriginal Canadians (Statistics Canada, 2017).

¹ Speech and language difficulties encompass a variety of delays and disorders which pose communication challenges for a child. Delays mean that a child is undergoing typical language development but at a slower rate than other children of a similar age, while disorders refer to atypical language development. (SHBC, n.d.)

The combination of the high rate of speech-language difficulties and the effectiveness of interventions make the provision of speech-language services to First Nations children an issue of critical importance. Despite the importance of speech-language services to the healthy development of First Nations children, their ability to access culturally appropriate services is challenged by a series of barriers.² This capstone is a qualitative study that utilizes expert interviews and literature to examine these barriers and explore options for overcoming them. This capstone also analyzes the potential of options to improve the access and appropriateness of services in the context of B.C. and concludes with recommendations regarding policies to facilitate better language outcomes for First Nations children.

² Cultural safety, cultural competency, cultural appropriateness, cultural sensitivity and cultural relevance are all concepts used when describing interactions between Indigenous and non-Indigenous peoples. In some instance these concepts are used interchangeably, while in others very specific definitions are prescribed to them. In B.C., the First Nations Health Authority describes cultural safety as “an outcome based on respectful engagement that recognizes and strives to address power imbalances inherent in the healthcare system. It results in an environment free of racism and discrimination, where people feel safe when receiving health care” (FNHA, n.d.). While the ultimate goal is for a culturally safe interaction to occur, policy cannot guarantee this type of interaction will take place. Therefore, the term culturally appropriate will be used, as the goal of policies to provide “care that is appropriate to [First Nations] wellness beliefs, goals and needs.”

Chapter 2. Background

2.1. First Nations³ Children in B.C.

First Nations children in B.C. face unique circumstances that affect the development of their speech-language skills. The following section will provide a brief overview of some of the unique needs and challenges facing this population.

2.1.1. First Nations Perspectives on Health and Child Development

First Nations views on health and child development are important considerations when discussing the delivery of speech-language services. Many First Nations embrace a holistic approach to health, which includes physical, mental, spiritual and emotional components, as well as land, community, family, and more (FNHA, n.d.a; Castleden et al., 2016). An important component of this holistic view is the use of a strength-based approach to health. Early intervention practices are grounded in a Western model of health, which use “diagnostic categories that focus on problems and deficits” (Gerlach, 2007, 16-17). In the context of speech-language services, this may include diagnosing a child as having a delay or disorder in a child’s ability to communicate. This approach not only stands in contrast to the views of health held by many Indigenous communities, but may also perpetuate the colonial practice labelling and stigmatizing Indigenous peoples (Gerlach, 2007).

First Nations may also hold different beliefs about child development patterns, childcare practices, desirable behaviours, and the role of family in child rearing (Bird, 2011). Research suggests that the inclusion of community members can have a positive impact on child development and that their social knowledge allows them to better understand language socialization, the development of children in the context of their

³ First Nations are one of the three groups who constitute the Aboriginal peoples of Canada, along with the Métis and Inuit, under Section 35 of the Canadian Constitution. While the focus of this capstone is on First Nations, it is often the case that the literature and statistics discussed will refer to the broader category of Aboriginal peoples. Beginning in 2015, the Government of Canada began to use the term Indigenous instead of Aboriginal, which is a term most frequently used in international contexts. Therefore, this capstone will predominantly use the term First Nations, but will also make use of the terms Aboriginal and Indigenous where appropriate in order to reflect the terminology used in any literature or data that is being referenced.

community, and offer service providers insights into community needs (Ball and Lewis, 2011).

2.1.2. Social Determinants of Health

The social determinants of health place First Nations children at an elevated risk for language delays. Factors including high levels of child poverty, sub-standard housing, and living in single parent families create conditions which can challenge optimal child development (Ball and Lewis, 2014). The remoteness of many First Nations communities in BC also affects the health and development of First Nations children. Most health facilities are in urban areas, creating access issues for First Nations children in need of services. Further challenges to the development of speech-language skills for First Nations children stem from the ongoing effects of colonialism. Throughout Canadian history, policy has been used to assimilate Aboriginal peoples and eliminate their language and culture. The most prominent example of this is the residential school system, where many children were subject to physical, emotional, and sexual abuse. This abuse, along with efforts to eradicate Aboriginal language and culture, has led to language loss, a loss of parenting skills, and a loss of confidence in capacity to engage with young children (Ball, 2008). Though the last residential school closed in 1996, intergenerational trauma will continue to have lasting impacts for decades. Government sponsored abuse also occurred in the health care system through Indian hospitals, where Aboriginal peoples were subject to harm, separation from family and community, and forced assimilation (Meijer Drees, 2013). As the work of speech-language professionals is often conducted in settings where First Nations have experienced discrimination, including hospitals, public health units, and schools, the trauma and distrust that have resulted from these legacies poses a significant barrier to service delivery.

2.1.3. Jurisdictional Issues

Service delivery to First Nations children is further complicated by jurisdictional divides. While the provision of health services in Canada is primarily a provincial responsibility, the responsibility for First Nations falls under federal jurisdiction. These jurisdictional divides result in a fragmented system in which First Nations receive services through a confusing patchwork of programs and policies (Lavoie, 2013). In the

case of speech-language services, the divisions have created a situation where more than half of Aboriginal children do not have access to programs in which their speech-language development can be monitored because they are ineligible for provincial funding and their communities are unable to afford speech-language services (Ball, 2009; Bird 2011).

Jurisdictional barriers were to be eliminated using Jordan's Principle, which was created to ensure that First Nations children could access services "without experiencing any service denials, delays or disruptions related to their First Nations status" (FNCFCSC, n.d.). Since Jordan's Principle was adopted in 2007, the federal government has been criticized for using a narrow interpretation and implementation of the principle (O'Brien et al., 2015). As a consequence of this, the Canadian Human Rights Tribunal (CHRT) issued three sets of non-compliance orders to the Government of Canada, with the most recent being in May 2017. Key concepts outlined in the 2017 ruling included that Jordan's Principle should apply to all First Nations, that there should be no gaps in government services, including speech therapy, and that "when a government service is available to all other children, the government department of first contact will pay for the service to a First Nations child" without engaging in reviews or administrative procedures (CHRT, 2017).

2.2. Speech-Language Pathology

2.2.1. Speech-Language Pathology in B.C.

The identification, assessment, treatment, education and prevention of speech, language and communication disorders is handled primarily by speech-language pathologists (SLPs) (SAC, 2016).⁴ SLPs are responsible for diagnosing disorders, and the planning and implementation of treatment plans. Referrals to an SLP are typically made by healthcare workers, teachers, family members, or anyone else involved the care of the affected individual. There is both a national and international shortage of trained SLPs, creating a high demand for their services (Eriks-Brophy et al. 2008). This shortage is due in part to the high educational requirements and limited availability of

⁴ Speech-language pathologists are sometimes referred to as speech-language therapists (SLTs) in other jurisdictions

training programs to join the profession. Accredited SLP master’s programs are only offered at twelve Canadian universities, five of which are French language focused, across five provinces (SAC, n.d.a.). In terms of the number of SLPs per 100,000 people, B.C. falls slightly below the Canadian average (CIHI, 2017).

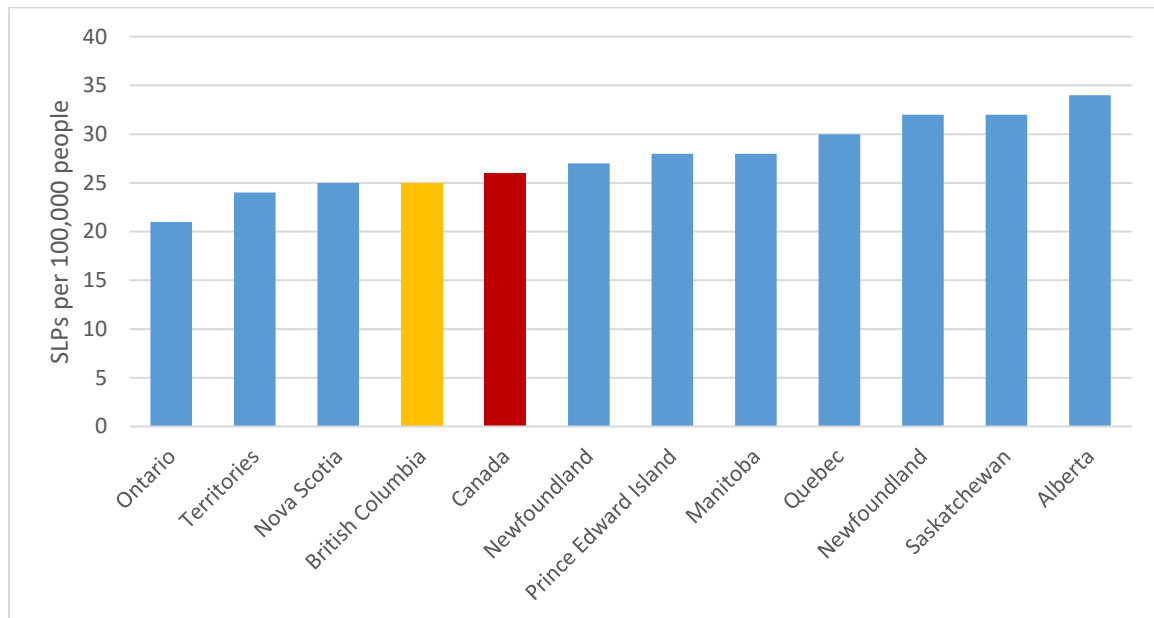


Figure 2.1 SLPs per 100,000 People by Province, 2016

Source: CIHI, 2017

This shortage of services is even more pronounced in remote communities. In 2011, more than half of B.C.’s SLPs and audiologists resided in the Vancouver area, while the remainder were concentrated in eight census metropolitan areas (CMA) and census agglomeration areas (CA). Of the 24 CMAs and CAs in BC, 16 reported no SLPs during 2011 National Household Survey (Statistics Canada, 2013).

In B.C., there is a growing recognition of the importance of SLP services. In 2017, the Legislative Assembly of B.C. conducted public consultations regarding the provincial government’s budget proposals for 2018. During this consultation, the respondents highlighted a need to increase funding for SLP services for children to increase access and realize the cost savings in the health and education systems through early intervention (Select Standing Committee on Finance and Government Services, 2017). In response to this, the report recommended increased funding for SLP services for children and increased access through a focus on recruitment and retention challenges.

Paraprofessionals, called speech-language pathology assistants (SLPAs), exist within the field of speech-language pathology.⁵ The scope of practice for SLPAs is broad and can include activities such as assisting in assessment, implementing treatment plans, assisting with program development, and assisting with family or community education if they are supervised by an SLP (SAC, 2016). It is difficult to know the extent to which SLPAs are used in BC due to the unregulated nature of the profession, but the lack of training programs in the province suggests the number of trained SLPAs is relatively small. SAC lists only 9 assistant level programs across Canada, with only one program offered in B.C. (SAC, n.d.b.).

Research regarding the use of SLPAs is limited, but what is available suggests that they can be effective in improving speech production for children (Lubinski & Hudson, 2013; Ostergren and Aguilar, 2015). The need for trained paraprofessionals has been recognized at an international level as well. In the WHO World Report on Disability, it was argued that mid-level training programs “can compensate for difficulties in recruiting higher level professionals in developed countries” and that “training community-based workers can address geographical access and respond to workforce shortages and geographical dispersion” (WHO, 2011). This concept was reiterated in the WHO Global Disability Action Plan 2014-2021, which proposed that member states “produce national standards in training for different types and levels of rehabilitation and habilitation personnel that can enable career development and continuing education across levels” (WHO, 2015).

2.2.2. Speech-Language Service Provision for First Nations

The unique needs and circumstances facing First Nations children in B.C. impact their access to speech-language services. One factor affecting service delivery for First Nations is the underrepresentation of First Nations in the speech-language profession. Only a handful of First Nations SLPs exist in Canada, and this lack of representation can lead to “cultural conflict and cultural bias in assessment and intervention” for Aboriginal peoples in need of services (Eriks-Brophy et al., 2008, 593). A lack of knowledge

⁵ Titles given to paraprofessionals in the speech-language field can include speech-language pathology assistant or aide (SLPA), speech-language therapy assistant (SLTA), communication disorders assistant (CDA), and communication health assistant (CHA). For this capstone, the term SLPA will be used to refer to all paraprofessionals working the speech-language field.

regarding the services offered by SLPs also poses a challenge to service delivery. A 2006 study of First Nations parents and Elders' goals for language development found that while participants acknowledged that SLP services may assist in language development, few had knowledge of the work done by SLPs or how to access SLP services (Ball and Lewis, 2011).

Assessment bias impacts the delivery of speech-language services to First Nations children and can occur in several ways. For example, examiner bias occurs when the SLP projects her own "cultural holdings, assumptions, attitudes, and values onto individuals of other cultures, assuming that these individuals share their world view" (Eriks-Brophy et al, 2008, 593). Bias may come in the form of intimidation, which can result in parents providing answers they perceive to be correct rather than actual answers when questioned by health care professionals, such as SLPs (Peltier, 2010). Unfamiliarity with First Nations English dialects, which are community-specific nonstandard dialects of English, also creates the potential for bias. The favouring of Standard English pronunciation in the education system places users of Aboriginal English dialects at risk of stigmatization and being misidentified as having delayed or deficient language skills (Peltier, 2010; Blundon, 2016). First Nations children whose first language is a First Nations language are also placed at a disadvantage because of the lack of First Nations SLPs and diversity of First Nations languages makes assessment in their first language nearly impossible (Bird, 2011). Finally, bias can occur in test items and procedures, which are typically based on majority culture perspectives and may not reflect the culture or language of the individual being assessed (Eriks-Brophy, 2008). Assessment tools in First Nations languages are unavailable and research has demonstrated that the direct translation of English tests is problematic (Peltier, 2010). The creation of assessment tools in First Nations languages would also be a monumental task due to the presence of 34 unique First Nations languages in B.C., many of which have several different dialects (FPCC, 2014).

These unique needs of First Nations children have led SLPs to recognize the need for a different approach when working with this population. For example, a 2011 survey of 70 SLPs from across Canada with a minimum of two years of experience working with Aboriginal children, 79% expressed that "an altogether different approach" to serving that population was needed (Ball and Lewis, 2011). Alternative approaches include a shift from clinical intervention to a community-based approach, a shift in

identity from expert to collaborator, basing assessment on community-specific norms and goals, and focusing on interventions that facilitate development through family or community programs.

Discussions of service delivery improvements often include proposals to improve the knowledge and skills of service providers through cultural safety training. This training can make service providers more aware of the needs of Aboriginal children and how their own biases impact assessments. Some work has been done to include culturally safe practices within the SLP profession, including a mandatory course on service delivery to Aboriginal peoples at the University of British Columbia's (UBC) School of Audiology and Speech Sciences, and the provision of resources to support interventions that are culturally safe and effective for Aboriginal communities (Bernhardt et al., 2011; Gerlach, 2007). At a professional level, the College of Speech and Hearing Health Professionals of BC (CSHHPBC) signed the Declaration of Commitment to Cultural Safety and Humility in March 2017 (FNHA, 2017). This declaration commits signatories to reporting annually on how they are meeting their commitment to cultural safety, and "formally encouraging all health professionals to complete cultural safety training" (FNHA, 2017).

2.2.3. Telehealth in Speech-Language Service Delivery

First Nations children living in remote communities in B.C. receive services either through an outreach model, where SLPs provide services through infrequent visits, or by travelling long distances for care in clinics (Gerlach et al., 2008; CASLPA, 2010). In some communities, health professionals have used telehealth to overcome the geographic barriers to service delivery (Eriks-Brophy et al. 2008; Gibson et al., 2011; Hunt and Smith, 2016) Telehealth utilizes technology such as videoconferencing to deliver services remotely through methods including real time service and the recording of audio and visual images for later examination (SAC, 2006). For remote First Nations communities, telehealth may potentially reduce wait times, increase the frequency of contact, improve cost effectiveness, and reduce the costs of travel, accommodation and work disruptions for families and service providers (Eriks-Brophy et al, 2008). While there is a strong potential for telehealth to improve the accessibility of speech-language services, significant concerns about the technology remain. These concerns include the notion of telehealth as a second-rate service and the potential for the amplification of

assessment bias (Eriks-Brophy et al, 2008). Poor levels of internet connectivity in some communities also pose a challenge, as the speed of internet required for telehealth is relatively high (FNHA 2010; FNTC, 2015).

Chapter 3. Methodology

This is a qualitative study that consists of three different methods of data collection: a literature review, a jurisdictional scan, and semi-structured interviews. The literature review was used to explore the context of speech-language service delivery in both B.C. and the rest of Canada, while the jurisdictional scan was used to identify the approaches used in similar international jurisdictions to deliver speech-language services to their Indigenous peoples. The expert interviews were then used to further explore the themes identified in the literature review and jurisdictional scan. A qualitative methodology was chosen because it allowed for a deep exploration of the complex factors that impact language development and service delivery for First Nations children, and provided flexibility to pursue issues which emerged once the research process had begun. The use of these three methods in combination was also critical, as it allowed for interview participants to evaluate the potential of programs and policies identified in other jurisdictions and in pilot projects. To conduct this research, I applied for and received ethics approval from the SFU Office of Research Ethics.

3.1. OCAP⁶

OCAP (Ownership, Control, Access, and Possession) is a set of First Nations principles that guide how First Nations data should be collected, protected, used or shared, and the de facto standard for conducting research with First Nations (FNIGC, 2017). To help ensure that my research was guided by this set of standards, I completed the “Fundamentals of OCAP” online course through the FNIGC. It should be noted that my completion of this course does not mean this research project is OCAP-certified, and that each First Nation community or region may interpret these principles differently. Despite these limitations, the principles of OCAP have served as an important reminder of the First Nations perspectives on research. The goal of this project is to respectfully gather information to inform speech-language service delivery options for First Nations, and to share the results of this study with First Nations communities and organizations for their benefit.

⁶ OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC). Further information can be found at www.FNIGC.ca/OCAP

3.2. Jurisdictional Scan

A jurisdictional scan was undertaken to explore and document how other jurisdictions have approached speech-language service delivery for Indigenous populations. The international jurisdictions studied include Australia, New Zealand and the United States, as research has been done on speech-language service delivery for their Indigenous populations. It should be noted that there is a great deal of diversity among the First Nations population in BC, as well as the Indigenous populations of the other jurisdictions examined. Policies used in one jurisdiction may not necessarily be applicable in another due to the unique cultures and experiences of each population. With this in mind, these Indigenous populations share common experiences that can assist in policymaking in B.C., including the burden of colonialism, persistent discrimination, and challenge of promoting cultures and perspectives that are distinct from those of the dominant society in which they live (UN, 2013).

3.3. Expert Interviews

Semi-structured interviews were conducted with sixteen experts in the fields of Aboriginal health, Aboriginal education, and speech-language pathology. Interview candidates included twelve SLPs with knowledge of service delivery issues for First Nations, three experts on early childhood development, and one dean of an Aboriginal postsecondary institution. Within the group of twelve SLPs, three were university educators, two had experience in an administrative role, and two had experience delivering speech-language development training to First Nations Early Childhood Educators (ECEs). Five of the interviewees identified as being of Aboriginal descent. These interviews ranged from twenty-nine to seventy-two minutes in length. The purpose of these interviews was to help identify barriers to delivering speech-language services to First Nations children, and to determine the suitability of policy options found in the literature.

A semi-structured interview technique was chosen for several reasons. First, it allowed the gathering of information in a systematic manner, while also allowing for the exploration of new issues and ideas presented in the interviews. The exploration of new issues and ideas was especially important given the lack of information regarding the challenges of delivering services in a B.C. context. The use of semi-structured interviews

also allowed for probing and clarification questions to be used. Finally, the open-ended questions allowed for interview participants with diverse areas of expertise to contribute opinions and information to the same set of questions.

The recruitment of interview candidates was accomplished through publicly available information and snowball sampling. Participants were contacted via email and provided with a consent form and interview questions. All interviews were conducted by phone, and verbal confirmation of consent was audio recorded. Interviews were digitally recorded and later transcribed by the researcher. The transcribed interviews were then analyzed and organized thematically for further analysis. Participants were given the opportunity to clarify quotes before they were published in this study and had the option of being identified by name or remaining anonymous. All interviewers spoke on their own behalf and their statements do not reflect the views of organizations they might be associated with. Given the small number of experts in this field, all information that could identify a participant or community were removed from the transcripts. To protect the privacy of participants, all quotes directly taken from the interviews have had any identifying information removed. Some quotes were edited for grammar and clarity.

3.4. Limitations

The first and foremost limitation in this study is my own background as a non-Aboriginal person, which limits my ability to incorporate Aboriginal knowledge and views in this study. To address this limitation, I have collaborated with the BC Aboriginal Child Care Society (BCACCS), which promotes spiritually enriching, culturally relevant, high quality early childhood development services through community outreach, education, research and advocacy. Their role in this project has been to assist in the refinement of the research question, dissemination of the research findings, and the provision of a letter of support for this study. The underrepresentation of Aboriginal peoples in the literature reviewed and interviews conducted for this project is another limitation. The interview participants and authors of the articles referenced in this paper are mostly non-Aboriginal, and therefore the views of the challenges to speech-language service delivery are largely non-Aboriginal. A third limitation is the reliance of this paper on research regarding the broad category of Indigenous peoples. First Nations of BC are incredibly diverse, and the research presented in this paper does not reflect the view of

every First Nations individual and community. Therefore, the findings of this study may not necessarily be applicable to every First Nations individual or community.

Chapter 4. Results

4.1. Jurisdictional Scan

Australia

Australia's Indigenous population is composed of Aboriginal peoples and Torres Strait Islanders. Similar to First Nations, Indigenous Australians are highly diverse, hold a holistic view of health, have been subject to colonialism, and face challenges that negatively impact health, education, and employment outcomes (IAHA, n.d.a, Webb and Williams, 2017; AIATSIS, 2015). Indigenous Australians also face similar barriers when accessing services, including geographic isolation, a lack of community-based services, culturally inappropriate practices, and a lack of Indigenous SLPs (Pearce and Williams, 2013; Webb and Williams, 2017).

While similar disparities between service delivery for Indigenous and non-Indigenous people exist in Australia, there are policies in Australia which may benefit service delivery in B.C. For example, the Australian Government provides funding for Indigenous Allied Health Australia (IAHA), which is a national organization that supports Indigenous peoples working as allied health professionals, promotes allied health careers to Indigenous Australians, provides advice to government, and connects with Indigenous communities to ensure organizational objects are meeting their needs (IAHA, 2017). Indigenous Australian allied health professionals are eligible to become full IAHA members, while non-Indigenous allied health professionals, health assistants, Indigenous Australian people working or studying on other health fields may join as associate members (IAHA, n.d.b.).

To address remote service access issues, which disproportionately affect Indigenous Australians, Australia has made use of telehealth services to increase access to remote populations (National Rural Health Alliance, 2011). Medicare coverage for telehealth is included for recipients in eligible areas, recipients of an aged care facility, or patients of an Aboriginal Medical Service (Australian Government Department of Human Services, 2017). Research regarding the use of telehealth for Indigenous Australians has found several advantages to its use, including social and emotional

wellbeing benefits from receiving in-community care, the inclusion of family during care, increased specialist access, reduced travel, improved screening rates and increased health literacy (Caffery et al., 2017). Despite the potential for improved care access through telehealth, there remains some concerns over its use. For example, a study examining the attitudes toward the use of telehealth for speech-language service delivery found a mismatch between the beliefs among SLPs that rural residents would hold negative views toward telehealth, and the willingness of rural residents to make use of these services (Dunkley et al., 2010). While the study did not expressly state whether recipients identified as Indigenous, it nevertheless highlighted the importance of considering provider and recipient attitudes.

United States

The Indigenous population of the United States consists of American Indian and Alaska Native (AI/AN) peoples. Within the broad category of AI/AN are 600 federally recognized tribes and Alaska Native groups, and over 400 non-federally recognized tribes, each of which has its own distinct culture and language (Faircloth, 2015). The AI/AN population also shares demographic similarities to Canada's Indigenous peoples, including a relatively young population, high levels of poverty in Indigenous communities, poorer economic conditions, and a lack of data regarding early childhood development (Faircloth, 2015). The AI/AN population of the U.S. also shares the experience of colonialism with Canadian First Nations populations.

Indigenous peoples in the U.S. have greater representation within the SLP profession than in Canada. In the U.S., the governing body for speech-language pathologists is the American Speech-Language-Hearing Association (ASHA). The organization is responsible for credentialing programs, professional development and the publication of research. ASHA also has several resources dedicated to the provisions of services to culturally and linguistically diverse issues. The first is the Office of Multicultural Affairs, which "addresses cultural and linguistic diversity issues related to professionals and persons with communications disorders and differences" (ASHA, n.d. a). This is accomplished in part through the funding of projects on multicultural activities, which have included research regarding AI/AN population in the past (ASHA, n.d. b). ASHA also includes a Special Interest Groups (SIGs) program to promote specific interests among members, address narrow subtopics, and assist in policy formation.

SIGs that cover issues relevant to Indigenous peoples include SIG 14, Cultural and Linguistic Diversity and SIG 18, Telepractice (ASHA, n.d.c). Past research regarding AI/AN population published through the SIGs has included studies on assessment considerations for AI/AN children who are dual language learners, the need for culturally responsive instruction in Native American communities, and the creation of a culturally responsive speech-language program in a Native American community (Vining et al., 2017; Gillispie, 2016; Ross, 2016).

Closely related to, but independent of ASHA, are Multicultural Constituency Groups (MCCGs), which focus on the issues and perspectives of specific populations. One of the MCCGs is the Native American Caucus, which includes ANI/AN professionals and students, and professionals who work extensively with AI/AN populations (ASHA, n.d. d). Topics that have been addressed by the caucus include the recruitment of AI/AN SLPs, enhancing service to AI/AN peoples, and encouraging AI/AN leadership in the profession. The caucus also supports research efforts, promotes public awareness and understanding of Native American culture, and acts as a resource for information.

New Zealand

The Māori are the Indigenous people of New Zealand. Similar to First Nations, the Māori face challenges that include the use of languages and customs that are not dominant in mainstream society and the negative impacts of colonialism and discrimination on health and socioeconomic outcomes. SLPs working with Māori also face similar challenges to Canadian SLPs working with First Nations. These challenges include a lack of professional guidelines for implementing Māori rights into clinical practice, a lack of culturally appropriate assessments and therapy materials, and the under representation of Indigenous peoples in the field of speech-language pathology (Brewer and Andrews, 2016).

Cultural safety was developed in New Zealand and plays an important role in the delivery of speech-language services to Maori (Guerra and Kurtz, 2017). The work of health and disability service providers, including SLPs, in New Zealand is influenced by the *He Korowai Oranga* and the New Zealand Disability Strategy, which are guiding documents that acknowledge the importance of Māori perspectives and the provision of

culturally safe services (New Zealand Office of Disability Issues, 2016; New Zealand Ministry of Health, 2017). While the direct impact of these documents is unclear, research suggests that SLPs in New Zealand have a desire to provide services in a culturally safe and appropriate manner to Māori (Brewer et al., 2015). Service delivery in New Zealand has also been shaped by the Treaty of Waitangi, which is an “integral part of SLT practice in Aotearoa [New Zealand] and SLT training programs are required to teach students to apply it clinically” (Brewer and Andrews, 2016).

New Zealand’s national professional body, the New Zealand Speech-language Therapists’ Association (NZSTA), promotes Maori interests. In 2015, the *He Kete Whanaungatanga* group was founded within NZSTA to support the organization’s Maori and Cultural Development Portfolio and to act as a resource for NZSTA’s members and executive council. The goal of this group is to ensure “the NZSTA is a culturally safe organisation that upholds the Treaty of Waitangi” (Brewer, 2015). *He Kete Whanaungatanga* meets approximately every six weeks via videoconferencing, as well as in person at NZSTA events. Though it is not specific to Maori issues, the NZSTA also includes a Cultural & Linguistic Diversity Special Interest Group which is “designed for the spreading of information and the discussion of issues, concerns and interests about cultural and linguistic diversity in communication disorders” (NZSTA, n.d.).

4.2. Interviews

The interviews covered a wide range of topics regarding the factors which influence First Nations children’s speech-language development, the ability for children to access service providers, the components of effective service delivery, and potential options to improve the current system. The following is a summary of key themes derived from the interviews.

4.2.1. Factors Influencing Service Delivery and Language Development

Many of the barriers identified in the interviews were consistent with what was found in the literature. This was especially true for the impacts of geographical remoteness and the incompatibility of Western models of health with First Nations

perspectives. The following is a list of barriers for which interview participants provided insights which expanded on the findings of the literature substantially.

Jurisdiction

Respondents noted that jurisdictional barriers stemmed primarily from two jurisdictional divides: whether a child lived on or off-reserve and whether a child was of school age or younger. These were identified as important because they determined whether services were provided through a public health unit or a school, and the funding sources that were available. Even within school service delivery, respondents noted that the different types of school a First Nations child might attend created further complexity. When asked who coordinates access to funding and services, one respondent stated:

It really would vary from place to place, I don't really know. I think that is also a barrier, no one really knows who's in charge of what or who to contact. There isn't always a point person. I just do my thing and I really don't know who is paying for what, or where the money comes from, or how it's distributed. It's so different because some First Nation schools are independent schools and some are not, and some First Nations children on reserve go to public schools and some go to First Nations schools. It's so complex.

Respondents noted that these jurisdictional divides resulted in confusion for families needing services, the need to piece together program funding from multiple sources, difficulty maintaining continuity of care, and programs with overlapping jurisdiction. Some respondents noted that the on/off-reserve divide was especially problematic because many First Nations families regularly transition between these jurisdictions. While discussing this barrier, one respondent argued:

Our families are transient so they move based on many things like education, or living in inadequate housing and they keep trying to find better places to live or find work. I'd say jurisdictional barriers are one of the biggest issues right now and Jordan's principle isn't necessarily being implemented province wide.

Intergenerational Trauma from Colonization

Respondents also elaborated on how intergenerational trauma impacted speech-language development for children and the ability for service providers to work with First Nations families. Many participants expressed that the loss in parenting confidence that stemmed from colonialism resulted in reduced early language exposure, which is critical

to language development. When discussing the impact of trauma, one participant noted that

Because of intergenerational trauma and residential schools, it's not part of the culture anymore for parents to talk to their children, so a lot of what I was doing was trying to encourage parents to read stories, tell stories, and talk to their kids throughout daily activities.

Some respondents noted that the high rate of foster care placements created trauma which was detrimental to children's language development. Interview participants noted that the fear of children being taken into foster care resulted in families feeling threatened by a non-Indigenous person entering their community and attempting to alter parenting practices. Many respondents spoke of a common belief among First Nations families that the identification of a language delay or disorder was a sign of poor parenting and could lead to a child's placement in foster care. The fears among parents were described by a respondent who stated that

We need a lot more understanding around what colonialism has done to families. Very few of the families I worked with appreciated my reports. Some families would actually say "write me a note that says you gave me a report and I'll shred it because I don't want it." Many families are so scared of having their kids identified, because they themselves were labelled.

Respondents also noted that the numerous issues already facing First Nations communities acted as barriers to service delivery. For example, one participant stated:

Many First Nations parents are reluctant to have their children identified as having special needs on all kinds of different dimensions. Many communities are already aware of mental health needs, trauma, and suicide risk, and that's already very troubling to many First Nations parents in rural and remote communities. To additionally say "Well not only that but your youngest children are having early learning needs, early sensory problems, and early speech-language delays and disorders," I think it creates too much negativity. Many parents want to see that early childhood is a time of joy and celebrating the gift of childhood, and would prefer to see things that support the development of their children without labelling them and without pulling them out for specialized services.

Dialects

Many participants spoke about the need to consider Aboriginal English dialects when working with First Nations children. One respondent noted that the importance of

acknowledging dialectical differences in not only speech, but in other aspects of communication as well. With respect to this, the respondent stated:

In the classroom setting you see a lot of praise for verbal responses to questions, a lot of asking and answering, and a fast-paced interaction between the teacher and the learners. I was wondering why a lot of the Aboriginal kids never even take a turn. It's almost like they're silent. And then observing in the community and my own family, I figured out it's because listening is the number one thing that's valued and not verbal responses. It's a dialect and discourse difference that's culturally and linguistically based. I was starting to kind of solve this puzzle and realizing that the dialect difference is way beyond speech.

While some respondents noted that a greater awareness of Aboriginal English dialects had led to a reduction in the misidentification of First Nations children as having a language delay, others expressed concern about the ability of the speech-language profession to respond to changes to the status quo. For example, one respondent stated that:

People are very comfortable doing speech language pathology the way it's always been done. You can feel very powerful when you're a speech pathologist in a school and you can tell someone we have a waiting list of 200 children. You feel important, like the work that you do matters, and it feeds into that whole way of being. Then if you really started to unpack that waiting list and you realized that three quarters of that waiting list are Aboriginal children who probably don't even have a language impairment or delay, it's probably dialect or linguistic cultural difference that can be addressed in the classroom, then how do you feel? It's kind of threatening to people to re-evaluate what they're doing.

4.2.2. Developing Community Capacity

Participants also spoke about the importance of capacity building to facilitate greater community involvement. Respondents identified a lack of awareness about the speech-language field and the emphasis on a Western health model as barriers to greater First Nations participation in service delivery. With respect to these barriers, one participant stated that:

We see a lot of social work programs and people are becoming social workers. I think part of it has to do with the fact that we're responding to the residential school legacy for ourselves and realizing we need to figure out our identity. We need to do some healing and reclaiming things that were absent or taken from our life, and social work provides that. I think a lot of times Indigenous people in social work programs are working on

themselves and their families, and that's why we end up having so many Indigenous social workers. Now if you want to talk about speech-language pathology, well what's that about? What's the draw? I made it work for myself because I talk about honouring the child's voice, honouring the relationship and interpersonal communication, because from a cultural perspective it's meaningful. That's the kind of messaging that would have to come out of the profession to hook Indigenous practitioners.

Most respondents spoke to three areas of need for training First Nations service providers, though there was no consensus around which area should be prioritized. Some respondents expressed that there should be greater efforts made to train First Nations as SLPs to ensure representation at the highest level of the profession, while others argued that the most effective way increase First Nations representation was through the training of community members as SLPAs. Some interview participants argued that supporting childhood language development would be best accomplished through additional training for ECEs.

First Nations SLP Training

Regarding the lack of First Nations SLPs, respondents identified the high academic requirements and inaccessibility of programs as major barriers. With respect to the challenge of accessing courses, one respondent stated that:

There need to be more online opportunities for learning, and northern and remote universities need to have a broader course base. Even UBC Okanagan doesn't allow you to do all the program prerequisites, so you have to come to UVIC, SFU or UBC. That's not possible for a lot of people, whether they're Aboriginal students or non-Aboriginal students.

Some respondents also noted that the long period required to become an SLP meant that students often settled in the area where they did their training and did not return to their communities. With respect to this, one respondent stated that:

There is a lot of commitment among people to help their community and to live within their community so there are people who will return, but I know speech pathology students who come into a program intending to go back to their community, and once they get trained they move on somewhere else, and the community doesn't benefit from that training.

First Nations SLPA Training

Participants in favour of a SLPA focused approach to capacity building identified the lower education requirements, shorter timeframe, and additional specialization of

SLPA training over typical ECE training as advantages of this approach. Some respondents also expressed that the cultural knowledge of community trained SLPAs would help to ensure services were delivered in a culturally appropriate manner. For example, one respondent expressed that SLPA training could:

Provide the opportunity for people who are already doing this work in communities to gain more skills and to understand what their role could be as a cultural broker between the largely non-Aboriginal SLPs who might come into the community, and the EAs who often live in and are members of the community.

Barriers to training additional SLPAs identified by participants included a lack of training programs, the requirement to leave a community for training, and the willingness of SLPs to embrace the use of paraprofessionals. For example, one respondent stated that:

I think that a lot of times in our field, speech language pathology, there's this belief that only people with a particular degree can do things, and I don't think that's necessarily the case. There's a lot of paraprofessional people that can be trained to do a lot of very good work, and we need to be more proactive in transferring work to paraprofessionals.

Some participants also expressed concerns that focusing on SLPA programs could lead to a situation where the highest level of the profession continued to be dominated by non-Aboriginal peoples, while First Nations remained in assistant level positions. With respect to this concern, one respondent argued that:

Community members could do assistant programs and that's a good thing too, but in the long run that's not what you want. You want people to come in who can do the job so they don't feel like they're somehow less. I don't feel that's a great thing to have the privileged class go in and be the SLP, and then the community people get to be the assistants and do the day-to-day hard work.

Several participants spoke positively of a First Nations SLPA program offered through the Nicola Valley Institute of Technology (NVIT), an Aboriginal postsecondary institute in BC. One respondent with knowledge of the program explained it was initially created in 2008 and was offered only once due to a lack of funding, but was undergoing curriculum revisions and would resume in July 2018.

First Nations ECE Training and Support

The idea of providing additional support and training to ECEs on speech-language development was also discussed by interview participants. Several participants noted that much of their work already involved providing on the job training to ECE staff. Some participants expressed that an investment in ECE training was needed before further investment into specialized SLPA training. With respect to the need for more ECEs, one participant stated that:

There needs to be a building up of that cadre, and then within that specialized training on supporting speech-language development, identifying children with outstanding needs, being able to work with possibly large groups of children who are having delays and disorders.

The advantages of training ECEs highlighted by respondents included a reduced cost compared to SLP or SLPA training, and a sustained community presence to promote language development and supplement infrequent service from SLPs. For example, one respondent argued that given the high cost of training SLPs and SLPAs:

The most promising approach is to ensure that ECEs that are going to be working with Aboriginal children, especially those in rural and remote communities, get extra training, extra understanding of the prevalence of speech language and hearing difficulties, and extra training on ways they could work with every child in their program to promote speech-language development and identify early hearing loss.

The barriers to increased ECE training and support were also discussed by participants. One of the most significant barriers identified was the high rate of staff turnover that resulted from low wages. With respect to the need for staff retention, one respondent stated that:

Everybody's prepared to pay the trainer, pay their airfare, pay their hotel, pay for everybody to come, rent the place at the hotel, but there's that missing piece that everybody should realize is absolutely necessary, or you've just actually wasted all this money.

4.2.3. Relationships

Relationship building was a major theme present throughout the interviews. Respondents expressed that building a trusting relationship was critical because families

were often apprehensive about working with non-Indigenous service providers from outside of the community. With respect to this, one respondent stated:

What stands out to me in terms of the barriers to delivery is relationships. Typically, service is being provided by non-Indigenous providers and there isn't a relationship of trust that's established. There's a skepticism or potentially, mistrust of somebody coming in and giving all this information and leaving, and there isn't a real true engagement.

The necessity of relationship building for service providers to gain understanding of children, families, and communities was another idea discussed by several participants. One respondent discussed how creating a relationship with families and communities can allow a service provider to understand what a child is bringing to the classroom and to make the activities more relevant to the child. To reinforce her point, the respondent provided the following example:

For instance, an 8-year-old boy, I knew that his father worked with heavy equipment in the community, so I connected with the dad about that and found out that his little guy could name every kind of equipment. All I had to do was bring up a website or publication, and he named the parts and he could compare and talk about these different gigantic mighty machines. Of course, the speech and language tests would never even go there, but he was like at a genius level of language ability.

Interview participants emphasized that relationship building was best achieved through being visible and spending time in communities, including time that did not involve service delivery. Participants provided numerous examples of what this might look like, including the following:

You have to establish trust and that means becoming involved in their whole community. It can mean attending events and just spending time. Sometimes I'd be in the daycare where I was just helping the staff to prepare lunches or helping kids go outside or those kinds of things, so working alongside them. It looked very different than a service I might provide at a different center but I knew it was important.

Despite its importance, respondents identified significant challenges to building relationships. Some participants identified inadequate time in communities as a barrier. This was especially the case for remote communities, where travel and demanding schedules left service providers with little discretionary time. Some respondents also noted that it was difficult for service providers to change their attitude toward how time should be spent. For example, one respondents stated:

It's so important to be authentic and present in the moment, and not worried about the next appointment. I think we're just so on point and everything's scheduled. A Eurocentric world view and an Aboriginal world view are on opposite ends of the spectrum.

4.2.4. Service Delivery

Given the ineffectiveness of the traditional model of speech-language service delivery, in which children received individualized therapy in a clinical setting, interview participants also discussed how service delivery might be improved.

SLP Preparation

Respondents discussed the current policies and programs in place to prepare service providers to address the unique needs of First Nations children. Most respondents had experience with the Aboriginal service delivery course in UBC's SLP program, and praised it for instructing SLPs on the importance of cultural safety and the impacts of colonization and trauma. Participants were also asked about the availability of similar courses at other educational institutions and confirmed that the course was unique to UBC, though one respondent noted that the institution she worked at offered a non-mandatory course that included linguistic diversity more broadly. Respondents provided explanations for the lack of similar courses in other institutions, including uncertainty around how to build the necessary partnerships with First Nations, the non-consideration of linguistic diversity in the SAC program accreditation process., and a lack of policies to facilitate the adoption of a similar course. With respect to this, one respondent stated that:

The reason it hasn't caught on is there's no policy that says it should happen. That policy could easily be linked to the Truth and Reconciliation Calls to Action and the United Nations Declaration on the Rights of Indigenous Peoples, because from a social justice perspective we should be allowed to be who we are, and not be marginalized or tested and shown to be in deficit.

Participants also spoke about the need for ongoing access to education for SLPs working with First Nations. Some respondents discussed the online cultural safety courses offered to service providers through the PHSA. One respondent noted that while the course was helpful, it would have been more beneficial if the course was targeted to SLPs as opposed to all health professionals so that SLPs could consider issues specific

to their practice. Several participants spoke about greater efforts being made by BCASLPA to support service provision to First Nations and noted that the 2017 BCASLPA conference offered workshops and presentations on topics relevant to First Nations service delivery.

Telehealth

The views of interview participants towards telehealth were consistent with what was found in the literature. Most interview participants recognized the potential of telehealth to improve service delivery in some contexts but also voiced concerns regarding its use. The potential benefits highlighted by respondents included accessing children who were unavailable during fly-in visits, time savings for families who might otherwise need to travel for services, supplementing infrequent in-person visits, and a small record of success in pilot projects. One respondent provided the following example of where telehealth would be beneficial:

There's a couple of kids I missed because they weren't in the preschool the day I was there. If there were a way to record the kids and go through some of the pictures with them, I could analyze it and send a report. I don't need to be there to do it.

Some of the common concerns regarding telehealth usage included children receiving services in a less welcoming environment, the need for a strong relationship prior to telehealth use, and limitations on the types of services that could be provided. For example, some respondents noted that conducting standardized assessments would be extremely challenging over telehealth. With respect to telehealth, one respondent stated:

I have some concerns around telehealth when it is not also building capacity in the individuals working around the child. For example, making sure we are providing information and opportunity to engage in activities and use strategies that support the development of skills rather than just facilitating a 'session' with in an individual child. We are starting to do more video coaching with the work that I do, but that only has ever been successful after I have a solid relationship with the person on the other end

Privacy concerns when working remotely with clients was another issue raised by many participants. Participants noted that many of the electronic communication platforms First Nations relied on, such as Skype and Facebook Messenger, were not secure enough for working with children. Some respondents also highlighted

inconsistencies between the privacy rules of different departments and organizations responsible for delivering services. With respect to this, one respondent explained:

The platforms that people are most familiar with, Skype and Facetime, might be those that we are barred from using because they're not secure enough. There are secure platforms but they haven't had that same grip and I think that's because that kind of technology hasn't bled into people's lives, whereas something like Facetime or Facebook Messenger is part of the communities. I contact people over Facebook when I want to get in touch with them, and I couldn't have done that if I was working for a health authority.

Group Interventions

The use of a group-based approach to delivery, as opposed to an individualized clinical approach, was discussed by the respondents. Many stated that a group approach was more effective for First Nations because it allowed service providers to utilize a preventative approach beneficial to all children and to work with children who exhibited speech difficulties without singling them out for individualized therapy. Respondents also noted that the group-based approach to service delivery was more aligned with strength-based approach to health favoured by most First Nations. When discussing how she adopted a group based approach, one participant stated:

I went in with a medical model of this kid needs me and this kid doesn't, and then I moved towards the fact that all these children are extremely at risk in terms of not doing well in school, of being in foster families, and high risk of being in the prison system. So, the whole idea was that every kid in there needs my services, and acting as an enriched partner working with the kids, and demonstrating to others, doing some very gentle coaching for parents. It was more like a prevention model, but with the ability that those certain kids I was worried about I could spend individual time, write goals, and train the ECD staff to follow through.

The shift to a group-based approach was shared by another participant as well, who stated:

I've learned that it's better to provide a more population-based, preventative type of program than to try and provide an assessment, diagnostic, therapeutic approach. That's a very medical model and not an approach that is comfortable for some First Nations people. It doesn't fit with how they think and view their children. Their children are seen as gifts from the Creator, and coming in as the experts to identify what is wrong is a very foreign concept to them. I don't think we should be approaching First Nations families as the experts who are going to tell them what to do. I think they've probably had enough of that from their years of colonization.

Another advantage of utilizing a group focused approach was that it allowed service providers flexibility if a child was unavailable to be seen. To demonstrate how this might work, one respondent provided the following example:

I went in last week and it turned out for some reason not a single kid that we wanted to work with was there. If I put my mainstream hat on I would have said “Oh my god! This is such a disaster. I can’t do it.” On the other hand, we were there, we talked to the staff who were there, we did a lot of discussion, we did some fitness work with the kids, we talked a lot about how to use language within it, and we came away feeling it wasn’t a waste of time.

The Role of Assessments

Respondents highlighted problems with standardized assessment tools that were consistent with the literature, but were divided on how service providers should approach assessments for First Nations children. Some argued that standardized assessments remained useful in certain contexts, while others argued that they should be mostly abandoned when working with First Nations. Participants who argued against the use of standardized assessments in any context suggested that dynamic or informal assessments were more appropriate for First Nations children. In dynamic assessments, language ability is measured to develop a benchmark and then progress is compared to the initial benchmark. With respect to the advantages of dynamic assessments, one participant shared the following example:

We knew that our kids were going to come up low on any standardized test so we didn’t want them to do that. Instead we measured where they were and got a benchmark of what was normal for them, and then we based the assessments on their own progress and compared their progress to themselves. That was where you could see the success and it was a very strength-based approach. We searched for Indigenous assessments, but I think what it came down to was measuring the child against themselves was the best way to approach assessments.

Interview participants also discussed informal assessments, which typically include the observation of children in their everyday interactions and interviews with people who know the child well, such as parents and teachers. While discussing this approach, one respondent stated:

You can observe a child in play, how they interact with friends, write down their utterances, and ask them questions to figure out whether they’ve got

a receptive language delay, an expressive language delay, whether their vocabulary seems age level.

Those who believed standardized assessments had a place in First Nations service delivery recognized that the tools were problematic but still provided important information for SLPs. With respect to the issues of standardized assessments, one respondent stated:

We have limited strategies that allow us to address that concern. There are some strategies that have been developed, for example dynamic assessment processes, but dynamic assessment is meant to identify whether a person has a normal, for example, language learning process. It doesn't necessarily tell you what you need to teach and what the sequence of behavior should be that you need to teach, and that sort of information only comes out of an understanding of how speech and language develops within a particular community.

Some respondents suggested that how the tools were applied was a greater issue than the tools themselves. With respect to the use of standardized assessments, one respondent stated:

If I look at assessments as a help in determining where I can better support the student who seems to be struggling with language in the classroom, then I see that as less fraught with the sort of the difficulties that might be present if I believed that I were identifying a student as delayed or disordered. Many assessment tests seem more of a test of knowledge rather than language skills.

The idea of creating new culturally appropriate tools was also discussed with respondents. Consistent with the literature, respondents noted that the development of new tools would be challenging given the linguistic and cultural diversity of First Nations in BC. Given the difficulty of creating new tools, some participants suggested that adaptations of existing tools would be more appropriate. With respect to creating new culturally appropriate tools, one respondent stated:

When it comes to Aboriginal children, as a First Nations person, at this moment I don't believe we need to develop an Aboriginal assessment tool. The reason I say that is we all know that development happens cumulatively over time and sequentially wherever you live. Parenting structures differ, some develop a little sooner than others, but it's all sequential and cumulative. I've been asked that question a lot and I think any of the tools we use can be Indigenized without losing the standardization for it.

Chapter 5. Policy Options

Based on the literature review, jurisdictional scan, and themes identified in the interviews, I have proposed three policy options to increase the access and cultural appropriateness of services to First Nations children in BC. The options are increasing funding for telehealth services, increasing the funding for the training of First Nations SLPAs, and increasing funding to early childhood education programs. These options are not mutually exclusive and could be in combination with each other but given fiscal constraints the implementation of all three simultaneously is unlikely.

Additional cultural safety training was also identified as a potential option based on findings in the jurisdictional scan and interviews; however, it was not considered for this analysis for two reasons. First, cultural safety training focuses entirely on training SLPs and neither improves the ability for children to access services nor does it build community capacity. Cultural safety training was also not considered due to the CSHHPBC's recent signing of the Declaration of Commitment to Cultural Safety and Humility and the emphasis on First Nations focused content at the 2017 BCASLPA conference. When the training provided through UBC's Aboriginal service delivery course is also considered, it appears that most SLPs will have access to some form of cultural safety training during their career. Therefore, the best options to increase the appropriateness of services going forward involve policies which facilitate in-community service delivery and improve the ability of First Nations to act as cultural brokers for outside professionals.

All three of the chosen options would still require that SLPs be flown into communities; however, the increased supplementary services provided through the options may reduce the workload of SLPs during visits. A reduction in the per visit workload could provide SLPs with additional time to spend on activities that are not directly related to the provision of individualized services, including relationship building, preventative group-based interventions, and encouraging parent participation in activities which support language development at home. Additionally, the options which focus on training community members may reduce jurisdictional barriers by allowing the community to play a more active role in service delivery regardless of the organization responsible for service provision.

There are also three options that are not being considered in this policy analysis due to the length of time it would take for them to have an effect. They are the creation of new community-specific assessment tools, funding to train First Nations as SLPs, and the creation of an Aboriginal speech-language professional body. Nevertheless, these are important options to facilitate the delivery of culturally appropriate care and will be discussed in the long-term recommendations portion of the paper.

5.1. Increase funding for telehealth services

The literature and jurisdictional scan indicated that telehealth is becoming increasingly popular as an option to provide health services to rural and remote communities in a cost-effective manner. This is true of B.C. as well, where the use of telehealth to deliver services to remote First Nations communities has increased in recent years. For example, the FNHA undertook the First Nations Telehealth Expansion Project (FNETP) between 2013 and 2015, which brought telehealth to 18 remote communities (FNHA, 2015a). While the use of telehealth specifically for speech-language pathology for B.C. First Nations has been limited, it has been used successfully with Indigenous populations in other jurisdictions. This option would see the use of telehealth technology to connect SLPs with First Nations children in need of services, as well as an expansion of the telehealth infrastructure to remote communities. In this option, telehealth would not supplant in-person visits with SLPs, but would be used to supplement the infrequent visits made by SLPs.

5.2. Increase funding for the training of First Nations SLPAs

As noted in the literature and interviews, Aboriginal peoples are vastly under-represented in the speech-language workforce. Despite representing 4.9% of the Canadian population, only a handful of SLPs from across Canada identify as Aboriginal. This option would seek to increase the representation of First Nations in the speech-language workforce through an increased investment in training First Nations as SLPAs. This would allow for increased involvement of First Nations community members in the delivery of services, which was a theme present throughout the research process. While training more First Nations as SLPs should be a long-term objective, the lower academic

requirements and shorter duration of paraprofessional programs would allow for the representation of First Nations in the speech-language workforce much more quickly. Under this option, funding would be provided to ensure the redeveloped NVIT First Nations Speech-Language Assistant Program were offered consistently.

5.3. Increased investment for early childhood educator training and retention

This option would see an increase in funding to early childhood education programs to address issues of staff training and retention. Early childhood education programs were identified in the literature as an effective tool to address language delays during the critical period of language development and to reduce the need for services from an SLP later. Several interview participants also stated that ECEs could play an important role in supporting childhood language development, but identified barriers that prevented ECEs from doing so. These barriers included a lack of training for ECE staff and issues regarding staff retention. The lack of training is especially problematic for early childhood centres located outside of the Coast Fraser MCFD region, where between 24%-28% of ECE staff have no certification and only 10%-22% of centres have no uncertified staff (BCACCS, 2012). The need to change from an individualized clinical approach to a preventative group-based approach to service delivery was a common theme throughout the interviews, and the use of early childhood education programs to deliver services would align with this model.

Chapter 6. Evaluative Criteria

6.1. Overview

The following section outlines the analytical framework used to evaluate different policy options for improving speech-language service delivery to First Nations living on-reserve. Six criteria have been selected to analyze the different policy options: availability of services, cultural appropriateness of services, community development, cost, First Nations acceptance, and service provider acceptance.

6.2. Criteria

Equity: Availability of Services

This criterion considers the ability of policy options to increase the availability of services in terms of both quantity and type of service provided. The consideration of both of these factors is important because service providers with less training are limited in the types of services they can provide. As noted in the literature and interviews, First Nations children face substantial geographic and jurisdictional barriers to accessing services which facilitate healthy language development. The goal of any policy option should be to reduce these barriers, and to work toward improving the access of First Nations children. To evaluate the availability of services, I measured the ability of each policy option to reduce each of the barriers listed above.

Equity: Cultural Appropriateness of Services

Policy options should not only increase access to services, but also encourage service delivery in a manner which is culturally appropriate for First Nations children. Both interview participants and the literature have identified that the tools and techniques used by SLPs as problematic when working with First Nations. To evaluate the cultural appropriateness, I measured the ability of each option to account for the cultural and linguistic norms of a community and to fit within a strength-based approach to service delivery.

Community Development

The most effective way to ensure First Nations children have access to culturally appropriate services is to involve community members in service provisions. Developing community capacity to deliver services will allow communities to exercise greater control over their children's development and wellbeing. To evaluate community development, I measured the degree to which each option built the capacity of communities to deliver services.

Cost

This criterion seeks to estimate the cost of each of the policy options. These costs include the costs of establishing and operating each of the policies. Costs estimations are based on costs of similar programs and policies.

Stakeholder Acceptance: First Nations

Canada has a long history of imposing policies on First Nations, many of which have been culturally inappropriate and harmful. This has resulted in a strained relationship between Canada and First Nations. Therefore, First Nations acceptance is a key consideration in the analysis of policy options. This criterion estimated the likelihood that First Nations would accept the various options based on literature and interview data.

Stakeholder Acceptance: Service Providers

Altering how services are provided to First Nations children may potentially generate opposition from service providers. Some interview participants expressed concern about the willingness of SLPs to alter their practices to meet the needs of First Nations. SLPs, especially those with limited experience, may also be uncomfortable using alternative forms of service provision. To measure stakeholder acceptance, I have estimated the degree of acceptance based on the literature and interview responses relevant to each option.

Chapter 7. Policy Analysis

In this section I have applied the criteria and measures to the policy options and ranked each option. The following section covers the strengths and weaknesses of each of the proposed options to determine which option should be recommended. An overview of the scoring is shown in Table 7.1. For the complete policy analysis table, refer to Appendix B.

Table 7.1 Policy Analysis Summary of Results

Objective	Telehealth	SLPA Training	ECE Funding
Equity: Availability of Services	2	3	2
Equity: Cultural Appropriateness	2	3	3
Community Development	1	3	2
Cost	2	2	3
Stakeholder Acceptance: First Nations	2	2	3
Stakeholder Acceptance: Service Providers	2	2	3
Total	11	15	16

Note: Table 7.1 summarizes the results of the policy analysis. For each criterion, a value was assigned for the three options based on a relative scale ranging from one to three. A value of one indicates an option performed well under a criterion, while a value of three indicates the option performed poorly.

7.1. Option 1: Increase funding for telehealth services

Funding for increased telehealth usage performed moderately with respect to the availability of services. This option would allow children who were unavailable during fly-in visits to receive services, enable SLPs to provide some services in the event of a visit cancellation, and supplemental services would enable children to be seen more regularly. Despite these improvements, the current reach of the telehealth network remains a concern. Telehealth services are available to 150 First Nations communities, with 39 of those communities being served by the FNHA telehealth network (COACH, 2015). This means that at least one-quarter of communities would be unable to benefit from this option without further telehealth network expansion, which would be challenging due to poor internet connectivity in many communities and the high cost of telehealth infrastructure (INAC, 2013; Avizia, n.d.).

A mix of potential benefits and concerns regarding the cultural appropriateness of telehealth services means that this option performs moderately on this criterion. Research on telehealth use for speech-language services for First Nations

acknowledges that examiner bias may affect assessments, though a study comparing the assessment scores of an in-person and a remotely connected SLP suggests that videoconferencing can be accomplished in a way that minimizes bias (Eriks-Brophy et al., 2008). Interview participants expressed that telehealth had the potential to be used in a culturally appropriate manner, but doing so would require that relationships be built prior to its use, that community members receive video coaching, and that the broader issues of Western epistemologies in the field be addressed. In terms of community development, this option performs poorly because it mostly improves the access to outside service providers and focuses the least on improving the ability of communities to deliver services on their own. Cost is also a significant concern with this option because it focuses on increased access to SLPs, who represent the highest and most expensive level of the profession. Increased services would be supplemental as opposed to replacement, so telehealth session costs would be added to current service costs. There is no set cost for SLP services; however, example fees provided by professional organizations range from \$166/hr to \$196/hr and \$98-139/hr per person for group work (BCASLPA, 2007; OSLA, 2017).

With respect to First Nations acceptance, this option performs moderately. In recent years, the FNHA has invested in telehealth for a variety of health services, which suggests some level of acceptance for the technology among First Nations communities. In the case of telehealth for speech-language services specifically, small scale pilot projects have shown a willingness of First Nations to use this service (Eriks-Brophy et al., 2008; FNHA, 2015b). Despite the growing acceptance of telehealth, many families are already hesitant to receive services in-person and telehealth does nothing to address this on its own. Additionally, interview participants highlighted that the communication platforms First Nations were most familiar with could not be used due to privacy concerns. As for service provider acceptance, the interviews and literature suggest that service providers have mixed opinions on telehealth. Some interview participants saw telehealth as potentially beneficial, but many expressed concerns about the ability to meet the unique needs of First Nations through telehealth. Some respondents noted outright that they would feel uncomfortable using the technology. This was especially true for inexperienced SLPs. Given the mixed opinions around telehealth, this option performed moderately.

7.2. Option 2: Increase funding for the training of First Nations SLPAs

Increasing the funding for the training of First Nations SLPAs performed well with respect to increasing the availability of services. The increased use of SLPAs would provide children with access to supervised services between visits from an SLP. The actions a SLPA could take would depend on the supervising SLP, but SAC guidelines state that supervised services can include implementing treatment plans, documenting client performance, relaying treatment processes to clients, and assisting SLPs in most activities (SAC, 2016). Supervision can be either direct or indirect. Indirect supervision means the SLP is not in view and provides support which may not be immediate, including review of taped sessions, supervisory conferences by phone, email or webcam, and documentation review (SAC, 2016). Research has also demonstrated the efficacy of SLPAs when delivering services that do not require the specialized skills of an SLP (Boyle et al., 2007) This broad scope of practice and ability to be indirectly supervised means that SLPAs could play a large and effective role in service delivery.

This option would also greatly improve the cultural appropriateness of services in a community. This is because community-based SLPAs would be aware of the culturally and linguistically distinct ways of communicating, and serve as cultural brokers between the SLPs and the community. Community-based SLPAs would also have an increased awareness of the socialization practices of a First Nation community, and the development of children in the context of their community. This would allow them to provide SLPs with insight into community needs and expectations, and reduce the impact of assessment bias.

This option would greatly improve the ability of a community to deliver services on its own. While SLPAs cannot entirely replace SLP services, their scope of practice is broad given that there is professional supervision. SLPA educational requirements are lower and the program timeframes are shorter, which would make this level of training relatively accessible compared to a full-fledged SLP program. SLPAs provide more limited services than SLPs but may be more cost-effective, especially when working with children in groups (Dickinson et al. 2009). There are no guidelines regarding SLPA costs in B.C., but costs may be comparable to the wages paid for senior ECEs working for AHSOR or special education assistants in B.C., which range from \$16 to \$25.93/hr

(BCACCS, 2012; 2014). The expansion of the First Nations SLPA workforce would be best accomplished through the NVIT SLPA training program. No data was available regarding that program's cost, but in 2014 INAC provided \$130,823 in funding to NVIT to develop a Health Care Assistant program (INAC, 2015).

With respect to the acceptance of both groups of stakeholders, this option performed moderately. Many First Nations would be more likely to feel comfortable receiving services from a community member who is familiar with the local culture and language. The cultural broker potential of community-based SLPAs would also lead to increased comfort for families working with SLPs. Despite these benefits, two clear challenges remain. The first is a lack of interest and awareness of the speech-language field, which may create recruitment challenges. The second challenge is the skewed power dynamic that would result from paraprofessional level being dominated by First Nations and the SLP level continuing to include primarily non-Indigenous practitioners. The lack of recognized SLPA training programs in B.C. suggests that SLPAs have not been wholly embraced by SLPs in the province. Interview respondents were supportive of the use of SLPAs, but some expressed concern about the willingness of the SLPs to allow work to be handled by paraprofessionals. This option performed moderately regarding acceptance of service providers.

7.3. Option 3: Increase investment in early childhood education programs

Increased investment in early childhood education programs would improve the ability of children to receive language development support as a preventative measure against language delays, but the ability to receive interventions would continue to rely heavily on infrequent visits from outside SLPs. The number of communities with an ECE program is unknown; however, there are 121 AHSOR programs, 75 FNICCI centers, and 21 AIDP programs on-reserve in B.C. (BCACCS, 2014; AIDP, 2016). Given the wide reach but limited services available in this option, it performs moderately with respect to increasing access. With respect to the cultural appropriateness of services, this option performs well for several reasons. The first is that a focus on early childhood programs aligns well with the ideas of using a strength-based group approach and focusing on preventative strategies that were advocated in the interviews. This option also performs well because language development could be facilitated through the programs that are

run by community-based staff who would be familiar with local language and culture. Finally, this option benefits from the availability of culturally appropriate language development resources already available. The best example of this is the Moe the Mouse program, which is delivered through BCACCS.

With respect to community development, this option performs moderately because it would improve community-based support for language development, but would not allow communities to provide more specialized services available from a community-based SLPA. Increasing early childhood education investment would also be the most cost effective of the three options because of the focus on ECEs, who are the most limited in terms of the services they can provide but also the least costly. The wages of ECEs depend on their level of certification and the region of the province they work in. ECEs with a basic certification earn wages ranging from \$15.52-\$18.19/hr on average, while uncertified ECEs earn \$11.86-\$15.5/hr (BCACCS, 2012). Given the ECE retention issues raised in the literature and interviews, the higher end of these ranges would be necessary. Several ECE training programs are already in existence across the province, some of which provide an Aboriginal perspective, so new programs would not need to be established (Government of B.C., n.d.).

This option also performed well regarding the acceptance of both groups of stakeholders. Given the widespread use of early childhood education programs in B.C., it is likely that most First Nations communities would support an increased investment in ECE training and support. Community-based ECE staff would also be familiar with local culture and language. This option is also likely to be supported by current service providers because it does not upset the status quo. Interview participants expressed that they already spend a substantial portion of their time working with ECEs and providing on-site training. Greater investment into the ECE workforce would make the ability of SLPs to work with ECEs easier. .

Chapter 8. Recommendations

This chapter includes three sets of recommendations. The first set of recommendations is based on the policy analysis and focus on the improvement of the accessibility and appropriateness of speech-language services for First Nations children in the short term. The second set of recommendations address actions which should be considered for the improvement of service delivery over the long-term.

8.1. Recommended Policy Options

Based on my analysis, my primary recommendation is that greater investment be made into the training and support of early childhood education programs. While ECEs lack the specialized training of SLPs and SLPAs, they play a critical role in early language development and their work can act as a preventative measure against language delays. Early childhood programs are already well established in B.C., as are the resources to support language development within those programs. A greater investment in training to ensure that all ECE staff are certified and addressing wage-related retention issues can make sure First Nations children are getting the most out of these programs.

Given the strong performance of the increased funding for the training of First Nations SLPAs in my analysis, I would also recommend that option be considered as well. The use of SLPAs in B.C. has been limited, but interview participants who had experience working with the small number of First Nations who completed the NVIT SLPA training program spoke positively of the role they played. Investing in the NVIT program to ensure that it is available regularly would help to build the First Nations SLPA workforce and the ability of communities to play a greater role in ensuring the healthy and safe development of their children. Additionally, this option would help to generate a greater awareness of and interest in the speech-language profession, which is vital to increasing the number of First Nations SLPs. Finally, further investigation into a laddering program to allow First Nations who train as SLPAs to work toward their master's in speech-language pathology should also be undertaken.

At this point in time, an increased focus on telehealth service delivery is not being recommended. While there is a potential for telehealth to improve access to services, there is also potential that no improvements are made to the appropriateness of services. Additionally, expanding the telehealth network to cover more communities would be extremely expensive. It should be noted that this does not mean telehealth should not be used at all, as it may be effective in circumstances where there is access to a telehealth network and both the provider and client are willing to use the service. The effectiveness of telehealth in these circumstances may be further increased by through SLPA and ECE training, which would provide SLPs working remotely with a community-based professional to facilitate telehealth services. That being said, there are too many caveats affecting its use to recommend that it be the focus of policy to improve service delivery to First Nations children across B.C.

8.2. Long Term Recommendations

The following is a list of recommendations that may help to improve the accessibility and appropriateness of services to First Nations children in the long-term.

8.2.1. Create an Aboriginal speech-language professional body

In Australia, New Zealand, and the U.S., Indigenous peoples have representation at the professional level through either special interest groups within the national professional body, or through associated organizations. Consideration should be given to the creation of a similar body in Canada to promote Aboriginal interests, recruit Aboriginal peoples into the profession, guide research, and serve as an advisory body to mainstream professional organizations. An organized forum for Aboriginal interests could be especially beneficial given the jurisdictional barriers and fractured landscape of service delivery identified by interview participants.

While there has not been a great deal of research regarding the impact of special interest groups within professional organizations, it has been argued that these groups provide networking, research and professional development opportunities (Jacob et al., 2013). The potential for an Aboriginal speech-language professional body was also discussed with interview participants. Many expressed that an organized forum could be beneficial, but also highlighted concerns regarding funding, the need for sustained

interest from members, and limited number of potential members. Some respondents noted that similar discussions and efforts around organizing had been made previously but were unsuccessful. Other respondents expressed concerns about the limitations of such an organization. For example, one participant stated that:

It's great to have an interest group, but we're talking about practitioners delivering services in B.C., where Aboriginal people are represented throughout the province. This shouldn't be an interest group, it should be of interest to everyone.

Given the small size of SAC relative ASHA and the complexity of creating a broader rehabilitation organization similar to the IAHA, the NZSTA's *He Kete Wahanaungatanga* may serve as the best model in a Canadian context. In 2010 a CASLPA/SAC research committee published an extensive report on Speech, Language and Hearing Services for Aboriginal peoples in Canada (CASLPA, 2010).⁷ This research committee and its findings may serve as the foundation for the creation of a professional group focused on Aboriginal interests. With respect to the analysis criteria, the research produced by an Aboriginal speech-language professional body would lead to improvements in the appropriateness of services and recruitment efforts help to the capacity of communities to deliver services.

8.2.2. Increase funding for the training of First Nations SLPs

Until the underrepresentation of First Nations SLPs is addressed, First Nations will always face an increased risk of being exposed to services that are culturally inappropriate. Additionally, the recruitment of First Nations is critical to ensuring the incorporation of First Nations knowledge and perspectives into future research, which may help to address the gap between the Western epistemologies that dominate the field of speech-language pathology and Indigenous ways of knowing (Peltier, 2017). While increasing the number of First Nations SLPs would be the best option to increase the availability and appropriateness of services, the impact of these efforts would not be seen for many years. SLP training is a long process, as it includes the completion of bachelor's and master's degrees, and the cost of training would be substantially higher than the options considered in the analysis. First Nations who seek to enter the field at

⁷ The study and report was published prior to the name change from CASLPA to SAC

this level also face barriers including high academic requirements, the accessibility of program prerequisite courses, and the number and location of master's programs. These barriers may be reduced through increasing online education opportunities and offering more prerequisite classes at universities outside of southwestern B.C.; however, these actions would take significant time and financial resources. Additionally, interview participants cited a lack of interest in the field that would make recruitment challenging. Given the difficulty of addressing these barriers, this option should be viewed as a vital but long-term recommendation.

8.2.3. The development of community specific assessment tools

An important step to reducing instances of assessment bias is to gather information regarding the linguistic and cultural norms of communities in B.C., and then using this information to develop tools and techniques that are appropriate for First Nation communities. Despite the importance of this, the time required to develop tools which account for First Nations' methods of communicating in a collaborative and respectful manner would be significant (Blundon, 2016) The development of community specific tools is especially challenging in the context of B.C., which is home to approximately one-third of First Nations in Canada, 34 languages, and 61 language dialects (INAC, 2014; FPCC, 2014).⁸ Given the high cost, minimal impact on service availability, and time consuming nature of developing tools for so many communities, as well as the ability for service providers to either adapt standardized tools or use dynamic assessments, the development of community specific tools should be a long-term goal.

⁸ 198 refers to the number of Indian Act bands recognized by the government of Canada, but the number of First Nations communities in B.C. is disputed. For example, the BC Assembly of First Nations recognizes 203 First Nations

Chapter 9. Conclusion

Through this research, I have explored the factors which challenge the development of First Nations children's speech-language skills and their ability to access supports that facilitate their development. The factors identified in the literature as impacting language development included the mismatch between the Western model of health used in speech-language pathology and the holistic view held by many First Nations, the social determinants which challenge language development, and problematic jurisdictional divides. Service delivery barriers were identified as a shortage of SLPs, the lack of paraprofessional training and utilization, and the limited training and resources available to professionals working with First Nations children. In addition to research in the context of B.C. and Canada, the policies and research conducted in international jurisdictions was also examined. This revealed that although Australia, New Zealand and the United States struggle with many of the same language development and service delivery challenges as B.C., all three jurisdictions have made stronger efforts to ensure Indigenous representation at a professional level.

The interview data also revealed four major themes. First, respondents identified barriers to service delivery and language development that were consistent with the literature, but also provided additional insights into how these barriers appeared in the context of B.C. Interview participants also argued for the need for greater representation of First Nations in the speech-language workforce at all levels of the profession. The third theme identified was the importance of relationship building for effective service delivery and how relationships can be established. Finally, respondents discussed the improvements that might be made to service delivery and the viability of alternative models of service delivery.

Based on the ideas and themes presented in the research, I have recommended that greater investment be made into the training and support of early childhood education programs, which play a critical role in facilitating language development and may act as a preventative measure against the development of language difficulties. Additionally, I recommend increased funding for the training of First Nations SLPAs to build First Nations representation in the workforce and to allow communities to play a greater role in service delivery. While the initial intention of this capstone was to examine

ways to increase access to SLP services, the themes presented in the research emphasized the importance of SLPAs and ECEs in service delivery. Therefore, this capstone has used a broad definition of speech-language services that considers the work done not only by SLPs, but SLPAs and ECEs as well. Finally, this capstone makes three long-term recommendations to improve the accessibility and appropriateness of services in B.C. These include the creation of an Aboriginal speech-language professional body, a greater investment in the training of First Nations SLPs, and the development of community specific assessment tools. This research will be shared through SFU's Summit research repository and provided to BCACCS so that they can share the findings with interested individuals, communities, and organizations.

In addition to its core findings, this study has identified several areas where additional research should be conducted. First, given the lack of research demonstrating the direct impact of cultural safety training on client outcomes, the recent cultural safety commitments should be studied to examine their efficacy. Second, the impact of the CHRT's non-compliance order regarding Jordan's Principle should be examined to ensure its effectiveness in reducing jurisdictional barriers. Finally, additional research should be conducted regarding the impact of privacy legislation on the ability of First Nations to access service providers remotely so that communication between these parties can be made easier and safer.

In 2015, the Truth and Reconciliation Commission called upon the federal government to "develop with Aboriginal groups a joint strategy to eliminate educational and employment gaps between Aboriginal and non-Aboriginal Canadians" (TRC, 2015). One way this gap may be closed is by ensuring First Nations children can access services which support the development of speech-language skills. This research provides recommendations for how this important work should be accomplished, and contributes to the existing literature regarding speech-language services and child development by examining how alternative models of service delivery can overcome the barriers to language development and access in B.C.

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Appendix A. Criteria and Measures

Table A1 Criteria and Measures Matrix

Objective	Criteria	Measure
Equity: Availability of Services	Does the option increase the availability of services to First Nations children living on-reserve in B.C.?	The extent to which each option increases access to speech-language services.
Equity: Cultural Appropriateness	Does this option encourage services to be delivered in a culturally appropriate manner?	The ability of each option to account for the cultural and linguistic norms of a community and to fit within a strength-based approach to service delivery.
Community Development	Does this option improve the capacity of communities to deliver services?	The extent to which this option facilitates the involvement of communities in service delivery.
Cost	What are the additional costs which result from this policy option?	Estimated option cost based on similar programs and policies.
Stakeholder Acceptance: First Nations	How likely are First Nations to support this policy option?	The estimated degree of acceptance based on the literature and interview responses relevant to each option.
Stakeholder Acceptance: Service Providers	How likely are service providers to support this option?	The estimated degree of acceptance based on the literature and interview responses relevant to each option.

Appendix B. Complete Policy Analysis Matrix

The following table includes a full policy analysis of each of the options identified in Chapter 6. For each criterion, a value was assigned for the three options based on a relative scale ranging from one to three. A value of one indicates an option performed well under a criterion, while a value of three indicates the option performed poorly.

Table B1 Complete Policy Analysis Matrix

Objective	Telehealth	SLPA Training	ECE Funding
Equity: Availability of Services	<p>This option improves the ability of children living in communities with telehealth access to receive services. This would allow children who were unavailable during fly-in visits to receive services, and supplemental services would improve infrequent services.</p> <p>Despite this improvement, the current reach of the telehealth network remains a concern. Telehealth services are available to 150 of the 198 First Nations communities, with of those 39 communities being served by the FNHA telehealth network (COACH, 2015). This means that at least one-quarter of communities in B.C. would be unable to benefit from this option. Further telehealth expansion would be challenging due to internet connectivity in many communities and the high cost of expansion (Avizia, n.d.). Only 84 communities have access to Industrial/Institutional Capable Broadband required for telehealth services (INAC, 2013).</p>	<p>The increased use of SLPAs would provide children with access to supervised services between visits from an SLP. The actions a SLPA could take would depend on the supervising SLP, but SAC guidelines state that supervised services can include implementing treatment plans, documenting client performance, relaying to treatment processes to clients, and assisting SLPs in most activities (SAC, 2016). The supervision provided by an SLP can be either direct or indirect. Indirect supervision means the SLP is not in view and may provide support which may not be immediate, including review of taped sessions, supervisory conferences by phone, email or webcam, and documentation review (SAC, 2016). This broad scope of practice and ability to be indirectly supervised means that SLPAs could play a large role in service delivery.</p> <p>Interview participants also noted that SLPAs could</p>	<p>This option would improve the ability of children to receive language development support as a preventative measure against language delays, but the ability to receive interventions would continue to rely heavily on infrequent visits from outside SLPs.</p> <p>The number of communities with an ECE program is unknown; however, there are 121 AHSOR programs, 75 FNICCI centers, and 21 AIDP programs on-reserve in B.C. (BCACCS, 2014; AIDP, 2016).</p> <p>Given the wide reach but limited services available in this option, it performs moderately.</p> <p style="text-align: center;">2</p>

	<p>While an increase in supplemental visits would improve the access of children, connectivity and telehealth access concerns mean this option performs only moderately.</p> <p style="text-align: center;">2</p>	<p>play strong role in service delivery and would be better able to follow SLP recommendations. This option performs strongly on this criterion.</p> <p style="text-align: center;">3</p>	
Equity: Cultural Appropriateness	<p>A mix of potential benefits and concerns regarding the cultural appropriateness of telehealth services means that this option performs moderately on this criterion. Research on telehealth use for speech-language services for First Nations acknowledges that examiner bias may affect assessments, though a study comparing the assessment scores of an in-person and a remotely connected SLP suggests that videoconferencing can be accomplished in a way that minimizes bias (Eriks-Brophy et al., 2008).</p> <p>Interview participants expressed that telehealth had the potential to be used in a culturally appropriate manner, but doing so would require that relationships be built prior to its use, that members within the community receive video coaching, and that the broader issues of Western epistemologies in the field be addressed</p> <p style="text-align: center;">2</p>	<p>This option would greatly improve the culturally appropriateness of services in a community. This is because community-based SLPAs would be aware of the culturally and linguistically distinct ways of communicating, and serve as cultural brokers between the SLPs and the community.</p> <p>Community-based SLPAs would also have an increased awareness of the socialization practices of a First Nation community, and the development of children in the context of their community. This would allow them to provide SLPs with insight into community needs and expectations, and reduce their impact of assessment bias.</p> <p style="text-align: center;">3</p>	<p>This option performs well for several reasons. The first is that a focus on early childhood programs aligns well with the ideas of using a strength-based group approach and focusing on delay prevention that was advocated in the interviews. This option also performs well because language development could be facilitated through the programs that many First Nations already access and feel comfortable with. Finally, this option benefits from the availability of culturally appropriate language development resources already available. The best example of this is the Moe the Mouse program, which is delivered through BCACCS.</p> <p style="text-align: center;">3</p>
Community Development	<p>This option performs poorly because it mostly improves the access to outside service providers and focuses the least on improving the ability of</p>	<p>This option would greatly improve the ability of a community to deliver services on its own. While SLPAs cannot entirely replace SLP services, their</p>	<p>This option performs moderately because it would improve community-based support for language development, but would</p>

	<p>communities to deliver services on their own.</p> <p style="text-align: center;">1</p>	<p>scope of practice is broad given that there is professional supervision.</p> <p>SLPA educational requirements are lower and the program timeframes are shorter, which would make this level of training relatively accessible compared to a full-fledged SLP program.</p> <p style="text-align: center;">3</p>	<p>not allow communities to provide more specialized services available from a community-based SLPA.</p> <p style="text-align: center;">2</p>
Cost	<p>This option would provide increased access to SLPs, who represent the highest and most expensive level of the profession. Increased services would be supplemental as opposed to replacement, so telehealth session costs would be added to current service costs.</p> <p>There is no set cost for SLP services. Example fees calculated by BCASLA for private services range from \$166/hr to \$186/hr (BCASLPA, 2007). OSLA recommends between \$196/hr, or \$98-139/hr, per person for group work.</p>	<p>This option would focus on increased access to SLPAs. SLPAs provide more limited services than SLPs but may be more cost-effective, especially when working with children in groups (Dickinson et al. 2009).. There are no guidelines regarding SLPA fees in B.C. OSLA recommends CDA fees of \$134/hr; however, the cost an SLPA employed by the community would likely be substantially lower than the fees charged to individuals receiving private services. Senior ECEs working for AHSOR in BC \$16-\$25/hr, while wages for special education teaching assistants in BC ranged from \$18.92-\$25.93/hr (BCACCS, 2012; 2014).</p> <p>The expansion of the First Nations SLPA workforce would be best accomplished through the NVIT SLPA training program. No data was available regarding that program's cost, but in 2014 INAC provided \$130,823 in funding to NVIT to develop a Health Care Assistant</p>	<p>This option would focus on ECEs, who are the most limited in terms of the services they can provide but also the least costly. The wages of ECEs depend on their level of certification and the region of the province they work in. ECEs with a basic certification earn wages ranging from \$15.52-\$18.19/hr on average, while uncertified ECEs earn \$11.86-\$15.5/hr (BCACCS, 2012). Given the ECE retention issues raised in the literature and interviews, the higher end of these ranges would be necessary.</p> <p>Several ECE training programs are already in existence across the province, some of which provide an Aboriginal perspective, so new programs would not need to be established (MCFD, n.d.).</p> <p style="text-align: center;">3</p>

		<p>program (INAC, 2015). It does not specify whether this funding covered the course development cost in its entirety.</p> <p style="text-align: center;">2</p>	
Stakeholder Acceptance: First Nations	<p>In recent years, the FNHA has invested in telehealth for a variety of health services, which suggests some level of acceptance for the technology among First Nations communities. In the case of telehealth for speech-language services specifically, small scale pilot projects have shown a willingness of First Nations to use this service (Eriks-Brophy et al., 2008; FNHA, 2015).</p> <p>Despite the growing acceptance of telehealth, many families are already hesitant to receive services in-person and telehealth does nothing to address this on its own. Additionally, interview participants highlighted that the communication platforms First Nations were most familiar with were unable to be used due to privacy concerns.</p> <p style="text-align: center;">2</p>	<p>Many First Nations would be far more likely to feel comfortable receiving services from a community member who is familiar with the local culture and language. The cultural broker potential of community-based SLPAs would also lead to increased comfort for families working with SLPs.</p> <p>Despite these benefits, two clear challenges remain. The first is a lack of interest and awareness of the speech-language field, which may create recruitment challenges. The second challenge is the skewed power dynamic that would result from paraprofessional level being dominated by First Nations and the SLP level continuing to include primarily non-Indigenous practitioners.</p> <p style="text-align: center;">2</p>	<p>Given the widespread use of early childhood education programs in B.C., it is likely that most First Nations communities would support an increased investment in ECE training and support. Community-based ECE staff would also be familiar with local culture and language. This option performs strongly.</p> <p style="text-align: center;">3</p>
Stakeholder Acceptance: Service Providers	<p>The interviews and literature suggest that service providers have mixed opinions on telehealth.</p> <p>Some interview participants saw telehealth as potentially beneficial, but many expressed concerns about the ability to meet the unique needs of First</p>	<p>The lack of training recognized SLPA training programs in B.C. suggests that SLPAs have not been wholly embraced by SLPs in the province.</p> <p>Interview respondents were supportive of the use of SLPAs, but some expressed concern about the willingness of the SLPs</p>	<p>This option is likely to be supported by current services providers because it does not upset the status quo. Interview participants expressed that they already spend a substantial portion of their time working with ECEs and providing on-site training. Greater</p>

	<p>Nations through telehealth. Some respondents noted outright that they would not feel comfortable using the technology. This was especially true for inexperienced SLPs. This option performs moderately regarding acceptance of service providers.</p> <p style="text-align: center;">2</p>	<p>to allow work to be handled by paraprofessionals. This option performs moderately regarding acceptance of service providers.</p> <p style="text-align: center;">2</p>	<p>investment into the ECE workforce would make the ability of SLPs to work with ECEs easier. Therefore, this option performs well on this criterion.</p> <p style="text-align: center;">3</p>
Total	11	15	16

Appendix C. Interview Questions

The following questions were utilized in the each of the semi-structured interviews of this study.

1. Can you tell me about your experience promoting the development of speech-language skills?
2. What do you see as the most significant barriers to the delivery of speech-language services for First Nations children living on reserve?
3. What are some of the advantages and disadvantages to the current form of speech-language service delivery for First Nations communities?
4. What are some of the advantages and disadvantages of delivering services remotely through a telehealth approach?
5. How might policy be used to facilitate the inclusion of First Nations community members in the delivery of speech-language services?
6. How can First Nations peoples and communities be made more aware of the services offered by speech-language pathologists?
7. Are you aware of any other methods of speech-language service delivery that would be appropriate for children in First Nation communities?
8. There are currently very few Indigenous speech-language pathologists working in Canada. What can be done to address this problem?
9. Many speech-language pathologists have expressed that their current education and training have left them unprepared to work with First Nations effectively. How might this be addressed?
10. Relationship-building service providers and First Nations is often cited as critical to effective service-delivery. What can be done to facilitate this?
11. Speech-language assessment tools are often developed from a Western perspective and may not be culturally appropriate for First Nations. How can

policy encourage the development of culturally appropriate tools, or encourage speech-language pathologists to adopt existing tools to better suit First Nations?