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# Academic Communication Equity- British Columbia

## Visualizing the Interpreting System in British Columbia

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Challenges, Insights, and  
Recommendations for Next Steps

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## Working Definitions

- **Complex System:** While there is no universal definition of a complex system, in this report I will utilize the following definition: A complex system is “a dynamic and constantly emerging set of processes and objects that not only interact with each other, but come to be defined by those interactions” (Cohn et al., 2013, p.42). That is, it is a system in which the parts are changed and influenced over time by their interactions with each other.
- **Interpreter Service Hours:** In this report, I use the term interpreter service hours to refer to the combined total amount of work-time all interpreters are able to provide in any given location (including virtual) and setting.
- **System:** A system is an interconnected set of parts and processes that are organized in some way, often in order to achieve something or with an overarching goal. Examples of systems include: transit systems, non-profit organizations, and specific ecosystems. Adapted from Wright and Meadows’ “Thinking in Systems: A Primer” (2009).
- **System Mapping:** A collection of approaches and tools that attempt to visually capture the components, interrelationships, and processes involved in a real-world system (Barbrook-Johnson & Penn, 2022; Wright & Meadows, 2009).
- **Rich Picture Drawings:** A Rich Picture is a drawing that shows a situation or system that one has experienced that includes the behaviors, people, interconnections, pressures, and values on and within a system (Cristancho & Helmich, 2019).

## Introduction

In British Columbia, there appears to be an increasing shortage of sign language interpreter service hours, with many stakeholders feeling the effects of this shortage. As a main way that the BC, federal, and local governments attempt to support the inclusion of Deaf, Hard of Hearing, and DeafBlind (DHHDB) people, this shortage is and has the potential to exacerbate social, fiscal, educational, and health inequities experienced by this community. Previous attempts to address the shortage of sign language interpreter service hours have taken a sectoral approach to the issue; however, this report takes a whole system approach.

It is important to recognize that the interpreter shortage varies considerably by service domain (ex. Medical or post-secondary) and geography, and thus it is felt differently by different stakeholders. In settings where interpreters require additional or specialized skill and training, for example in healthcare, there are often considerably fewer available interpreter service hours. Similarly, in areas outside of the Lower Mainland there are considerably fewer available interpreter service hours, and, in some regions, no in-person service hours at all. This makes the issue not just about the number and availability of interpreters, but about where these interpreters are located and the skills they are able to acquire and maintain. As a result, the quantity, quality, and location of interpreters emerged as central concerns in this project. Thus, this project became guided, early on, by the problem of: **providing the right interpreter(s), at the right location, at the right time, with the right support(s).**

Utilizing a systems and complexity theory approach to the shortage of sign language interpreting service hours, this report attempts to visually explore the interpreting system using three maps of the interpreting system in BC and the insights that were gained in making these maps. As such, the maps provided in this report focus on the interconnections between parts and how they interact as a system, rather than focusing on detailed analysis of any one individual part. Ultimately, these maps are a starting place for important conversations and collaboration to help move us toward providing the right interpreter(s), at the right location, at the right time, with the right support(s) in BC.

## Metaphorical Summary of Insights Gained

Through this project, I have started to think about the sign language interpreting system in BC in different ways. This shift in understanding that underpins a number of the insights summarized below, can be best summarized metaphorically. Non-traditional forms of representation, particularly arts, can help us to think and understand in new ways (Leavy, 2017; Tracy & Redden, 2015). Below I provide a metaphor as a summary of the key insights in this report, in the hopes it helps you to think anew about the shortage of sign language interpreter service hours.





(Photo taken and provided royalty-free by Steve Adams on Unsplash)

The interpreting system in BC is much like a unique community garden built in sections overtime, with the plants representing interpreters. The garden grows a variety of fruit and vegetables, which are used by a wide range of local people (representing those who want, need, and use interpreting services). The people who manage and grow this garden are largely not the people who use the fruit and vegetables that are grown by this garden.

Like any living thing, the garden changes every year. Each year, there are some new plants that are planted to grow more vegetables and fruit. And each year, the composition of the garden changes: some plants don't grow back and some plants produce fewer fruit or vegetables (providing less interpreting service hours).

As the garden changes, so too does the community who uses the fruit and vegetables that are grown by the garden. Most years the community grows. Over time, the need for specific vegetables or fruits changes. For example, some years they need more pears. The problem is that pear trees take 4 to 6 years to start producing fruit, and there is a disconnect between those who fund and manage the garden and those who use the garden's fruit and vegetables.

Because this community garden was created in parts over time, without a master plan, those who fund and manage it do so in a haphazard way. Those managing the garden haven't been able to track the usage of the whole garden, instead focusing only on their own plots; however, many in the community eat produce from many different plots.

Making matters worse, funding for seeds to grow new plants and trees has remained the same, despite the need for the produce made by the garden increasing significantly. So, the number of seeds that are planted each year is disconnected from community needs. Moreover, because no one is watching out for the garden as a whole, those seedlings are not cultivated or given the support they need to grow. The seedlings are forced to grow and adapt to the plot of the garden they have ended up in, resulting in a significant number being unable to grow.

Finally, the climate and nutrients in the soil are changing. Some plants and trees, often the most well established, have been able to push through and survive. But other plants and trees are more impacted by these changes due to their location in the garden or the types of produce they make, and they don't grow back the following year. Yet, those plants and trees that are not growing back might be those that grow the specific types of produce needed by the community.

Yet, despite all these challenges, if we work together, we can cultivate and grow this community garden. We can diversify what we grow. We can create innovative ways to sustainably increase our yield of produce in the short term and long term. We can share information about the plots we manage. We can engage the community that uses the produce in the community garden in decision making, allowing them to inform what we plant and how we cultivate the plants. We can achieve all of this, but in order to do so, we need to modify the ways we design, manage, and take care of our community garden.

## About this Report

This report is one of a package of two reports<sup>1</sup> funded by Academic Communication Equity-British Columbia (ACE-BC). In this report I attempt to visually summarize, at a high-level, the interpreting system in BC as it currently exists in the summer of 2023. In doing so, I took the position that the interpreting system in BC represents a complex system. As a complex system, any attempt to conceptualize the interpreting system in BC is always a partial or incomplete representation (Barbrook-Johnson & Penn, 2022; Newell, 2001), as such systems have too many components to be fully represented mentally or visually in their entirety. This makes who I am and the processes used to conduct this design project vital, as how a person conceptualizes a complex system is always influenced by the positions they hold within that system (Newell, 2001). I provide this information below, in the hopes that it helps readers to better understand, utilize, and improve upon the system maps I created.

## Context of This Project

### *What motivated this project?*

This project was developed in response to the ongoing shortage of available sign language interpreting hours in the province of BC. There was, and is, a growing sense among central actors within this system of an insufficient amount of sign language interpreter service hours to meet current needs. Additionally, with improving legislation and awareness, there is a sense that the demand for interpreting service hours is increasing in the province of BC and will continue to increase for the foreseeable future, likely making the shortage worse. This design project builds on the work of the Westcoast Association of Visual Language Interpreters' Community And Systems Engagement (CASE) committee's multi-stakeholder work examining current issues in interpreting in the province of BC, including the report from McLaughlin and Russell (2023).

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<sup>1</sup> The other report is: Sign Language Interpreting Services: An International Environmental Scan by Jennifer Kennedy, MSci.

Previous work by ACE-BC has attempted to specifically examine post-secondary sign language interpreter shortages in BC. Through this work, ACE-BC identified that a significant number of the factors influencing post-secondary interpreter shortages lay outside of the post-secondary specific setting. This led to the recognition that many of the problems with the post-secondary interpreting system are actually larger system issues and need to be addressed as such. This report is an attempt to start a conversation that moves us toward a collaborative systems approach so that we can truly reduce the shortage of sign language interpreters in BC, and together, move toward a system that gives us more of what we want and value, and less of what we don't want.

### ***What is systems mapping?***

Simply put, systems mapping is a collection of approaches and tools that attempt to capture and visually represent the components, interrelationships, and processes involved in real-world systems (Barbrook-Johnson & Penn, 2022; Wright & Meadows, 2009). In this project, this includes the processes, organizations, people, values, and interrelationships that influence the provision of sign language interpreting services in BC. In other words, systems maps help people to step back from the day to day, and individual parts, to consider systems as a whole (Barbrook-Johnson & Penn, 2022; FSG Consulting, n.d.). What can be learned by studying the parts of a system in isolation is not the same as what can be learned by studying a system holistically (Gies, 2017; Greenhalgh & Papoutsis, 2018). While never perfect, a system map is a snapshot of the system as it currently exists, with the goals of supporting new insights, helping guide action, and enabling new collaborations (Barbrook-Johnson & Penn, 2022; Canadian Centre on Substance Abuse, 2014).

### ***Why did I use a systems approach to this project?***

The system-wide approach used in this design project was motivated by the recognition that sign language interpreters are a limited resource and the hope that coordinated action may help to remedy this stubborn issue. While previous actions to reduce the interpreter shortage within the post-secondary setting may have improved the shortage for a short time, in the long run the issue has always re-emerged. Moreover, considering that there is only a limited number of interpreters available, improvements in the post-secondary setting are likely to have unexpected and negative impacts on other service domains (eg. increasing the service hours in post-secondary may drastically reduce the hours available in healthcare settings). By taking a systems approach to the shortage and quality problem in BC, we hope to encourage coordinated and long-term change that benefits all stakeholders.

### ***Who I am, and Why that Matters Deeply***

As I am the lens through which this project and the systems maps were envisioned, I feel it is important to provide some details on who I am. Taken together, the identities and experiences I outline below inform the ways I come to understand and view the interpreting system in BC. Any system can be represented in multiple ways, with each decision having the potential to greatly impact the design of a systems map. This is particularly true in the sign language interpreting system in BC, as little factual data exists, and the system itself is spread widely and loosely connected.



Professionally, I am a hearing Registered Sign Language Interpreter with 13 years of practice experience and 20 years of involvement with the DHHDB community in Vancouver and Victoria. My practice has included: DeafBlind, medical, general community, and post-secondary interpreting. Throughout this, I have been honored to be supported by so many members of the DHHDB and interpreting community within and outside of BC. So much of my knowledge and insights are based on what I have learned from working, discussing, and sharing spaces with you all. I have a Bachelor and Master of Arts in Interdisciplinary Studies, and have had the opportunity to study qualitative research methodology, interpreting theory, public health, disability studies, interdisciplinary studies, complexity theory, and systems theory.

Personally, I am a disabled person, a queer and gender-queer person, and a white settler. I was raised in a low-income household and I am a first-generation university student. All of these elements have shaped how I move through the interpreting system and life in general and, in turn, how I have conceptualized, designed, and produced the system maps in this report.

I have worked hard throughout this project to become aware of, thoughtfully navigate, and refine my perspectives, but, ultimately, these maps are woven within my lived experience. Though I included a great deal of the insights gained through my conversations with participants, I could only produce one version of each map. As a result, these maps should be understood as an imperfect starting place, shaped for better or worse by who I am. While not perfect, I hope this report and the maps it contains bring you some level of practical wisdom (phronesis) and learning as this process has for me.

### **Summary of this Project:**

In order to complete this project, I (Bryan Hemingway) took the following steps:

1. I built on my previous knowledge of systems and complexity theory by reading several chapters and research articles related to systems mapping best practices.
2. I identified three kinds of maps that I believed would help to facilitate discussion and could be used as reflection tools.
3. Recognizing my singular perspective within the interpreting system, I conducted 3 initial data gathering interviews with participants who occupy different positions in the interpreting system in BC. Participants were asked to prepare a rich picture drawing of the interpreting system in advance of our interview, a representation that allows them to choose the parts they include and create their own structure (Cristancho & Helmich, 2019). This allowed them to guide our discussion based on their own experience, rather than my assumptions about what was important.
4. The information gathered in step 3 was used to draft the initial Iceberg and Actor maps.
5. The first drafts of the Iceberg and Actor maps were then the focus of six individual online recorded interviews, with each participant providing feedback on both of the maps. Of the 6 participants, 3 were newly recruited and 3 were those recruited in step 3.
6. After reviewing all of the gathered information and reviewing my research notes, the information gathered in steps 3 and 4 were used to refine the Actor and Iceberg system maps.

7. Finally, using all of the insights gathered, I created the first draft of the structural system, and wrote this report.

### ***Who I Interviewed for this project and how I recruited them:***

Interview	Participants Involved
Rich Picture Interviews	<ul style="list-style-type: none"> <li>• 1 Registered Sign Language Interpreter</li> <li>• 1 Deaf person</li> <li>• 1 Agency representative</li> </ul>
Actor and Iceberg Map Feedback Interviews	<ul style="list-style-type: none"> <li>• 2 Registered Sign Language Interpreters</li> <li>• 2 Deaf people</li> <li>• 2 Agency representatives</li> </ul>

Due to the size of the community, individual demographics would risk the potential of deductive disclosure of their identities. Thus, the demographics of the participants are provided for the overall group of six. Key highlights of who participated in this project include:

- Some LGBTQ2SIA+ people
- Interpreters with under 10 years of experience and over 10 years of experience
- Those from Metro-Vancouver composed the majority of the sample, however people living on Vancouver Island were also included
- Both Deaf people recruited had a great deal of professional and system level experience
- All participants were over the age of 30

I recruited the participants via email from my professional networks, with the goal of talking to people I had not talked to about the interpreting system regularly. Each participant was offered a \$75 honorarium for each individual online interview in recognition of their time and knowledge.

Ultimately, this project was not designed to gather all perspectives within the interpreter, agency/employer, and DHHDB communities in BC. That said, there are notable gaps that should be addressed in future iterations of these maps, including but not limited to: people located outside of Metro Vancouver, People Of Color, and participants under the age of 30.

## **Systems Maps**

This section contains the systems maps that I developed throughout this project. They are first provided in totality, then in discrete sections (where possible). Where needed, I provide additional clarifications, rationale, and context on the following page after each subsection.

Please note that both the Actor and Iceberg map are included in a text-only format at the end of this report, as Appendix 1 and Appendix 2. Sadly, due to the visual nature of the system structure map, a text only format is not available at the time of writing this report.

## External Factors Influencing Each Map

The following contextual elements are believed to deeply impact the interpreting system, but were not possible to include in the Actor, Iceberg, or Systems Structure maps

- **Inclusion Laws:** Recent changes in the legal landscape, including provincial and federal inclusion legislation, has increased the demand for interpreting services. While a positive development for access and inclusion, these policy changes have not included measures to increase the number of interpreters entering the field, or decrease the number of interpreters leaving it.
- **Awareness of Interpreting:** The increased visibility of ASL-English interpretation on emergency broadcasts appears to be increasing awareness of this service, which in turn drives requests for interpreters in new places. However, this increase in awareness has not been linked to efforts to improve supply.

## Actor Map

In this map, I attempted to capture all of the major organizations currently involved in the interpreting system in BC and group them by their overall function. Finally, I attempted to capture the general educational pathways of students to specialized interpreters, as well as the barriers they may face as they move through these educational pathways.

Through this map, I was attempting to visually explore the question: Who in BC has significant influence on the provision of the right interpreter(s), at the right time, in the right location, with the right support(s)?

### Legend for the Actor Map:

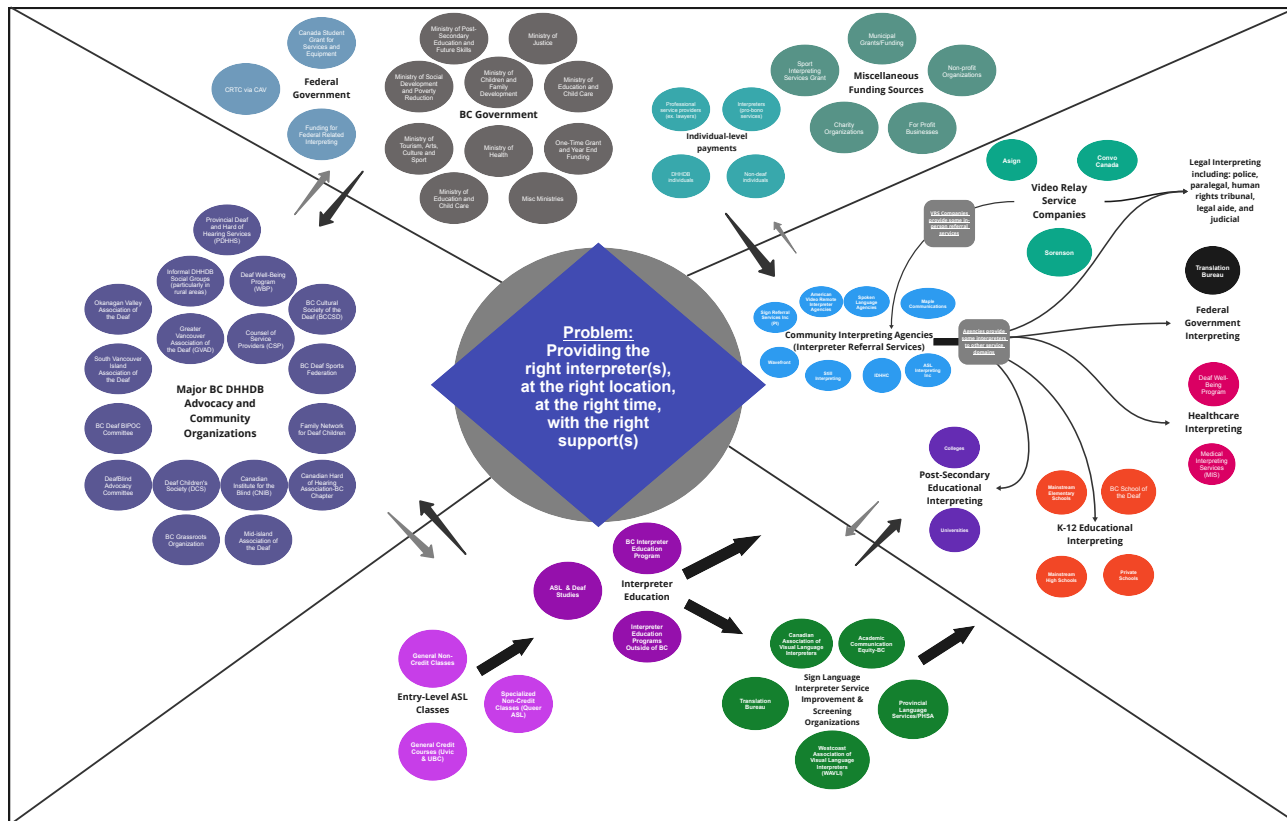
- **Arrows** indicate general influence between actors within the sector.
- **Black arrows** indicate a strong influence of one sector on another. For example, how funders provide funding deeply impacts major organizations that provide and coordinate interpreting services.
- **Gray arrows** indicate a weak influence of one sector on another. These often relate to informal relationships, reporting, or other less structurally powerful mechanisms of influence.

### Actor Map: Clarifications

- One of the limitations of the map design is that it cannot show influence between sectors that are not located beside each other on the map. There is most certainly influence between actors in all sectors, but the two dimensional nature of the medium limited the ability to represent this.
- This map does not show relative power between actors within a sector. In other words one listed actor may have considerably more power and influence over the interpreting system compared to another listed beside it.
- Some of the actors listed are not formal organizations or even groups who communicate, but individuals whose behaviour asserts some level of influence over the system over time. For example, individual-level payments from professional service providers (eg. lawyers) are perceived to have some level of influence over the interpreting system as a whole in BC.

# Key Actors in the BC Interpreting System: Organized by Role

## Funding Sources



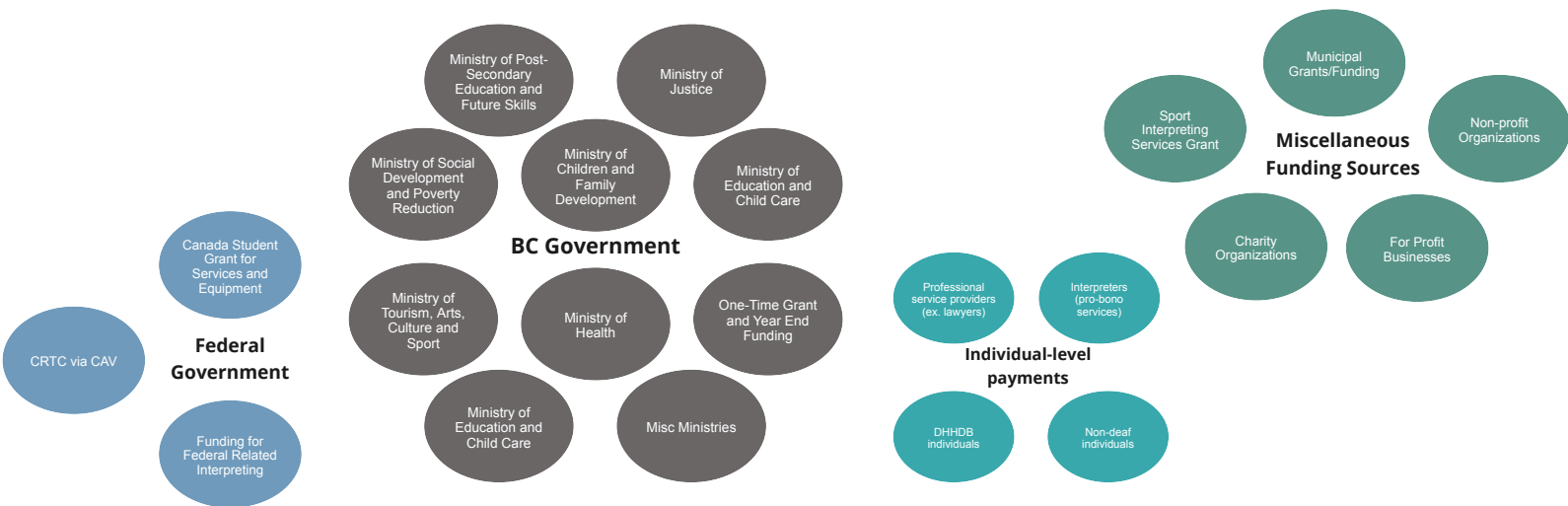
## Interpreter Training & Quality Improvement

**Major Organizations**  
that  
**Provide & Coordinate**  
**Interpreting Service**

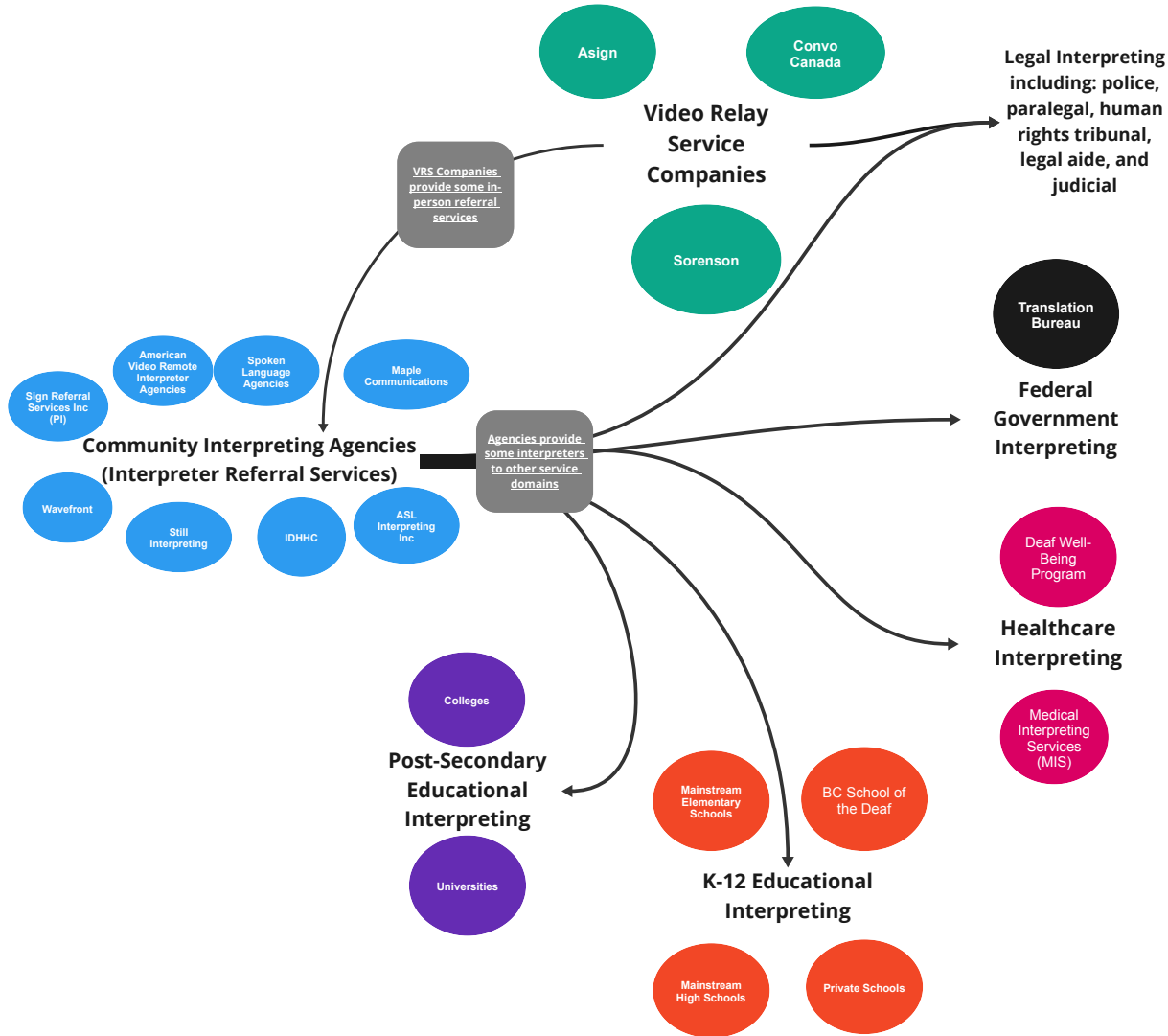
**Community**  
**Organizations**



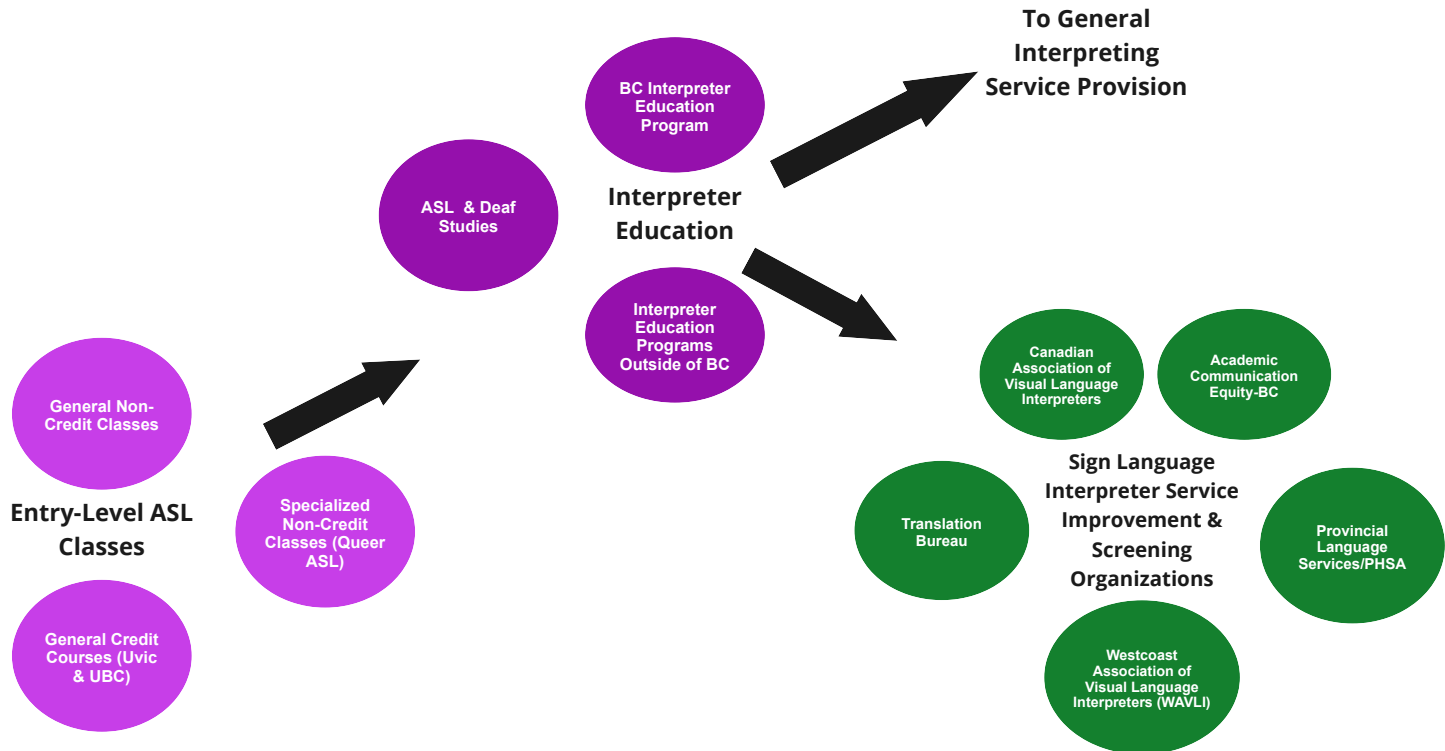
# Funding Sources



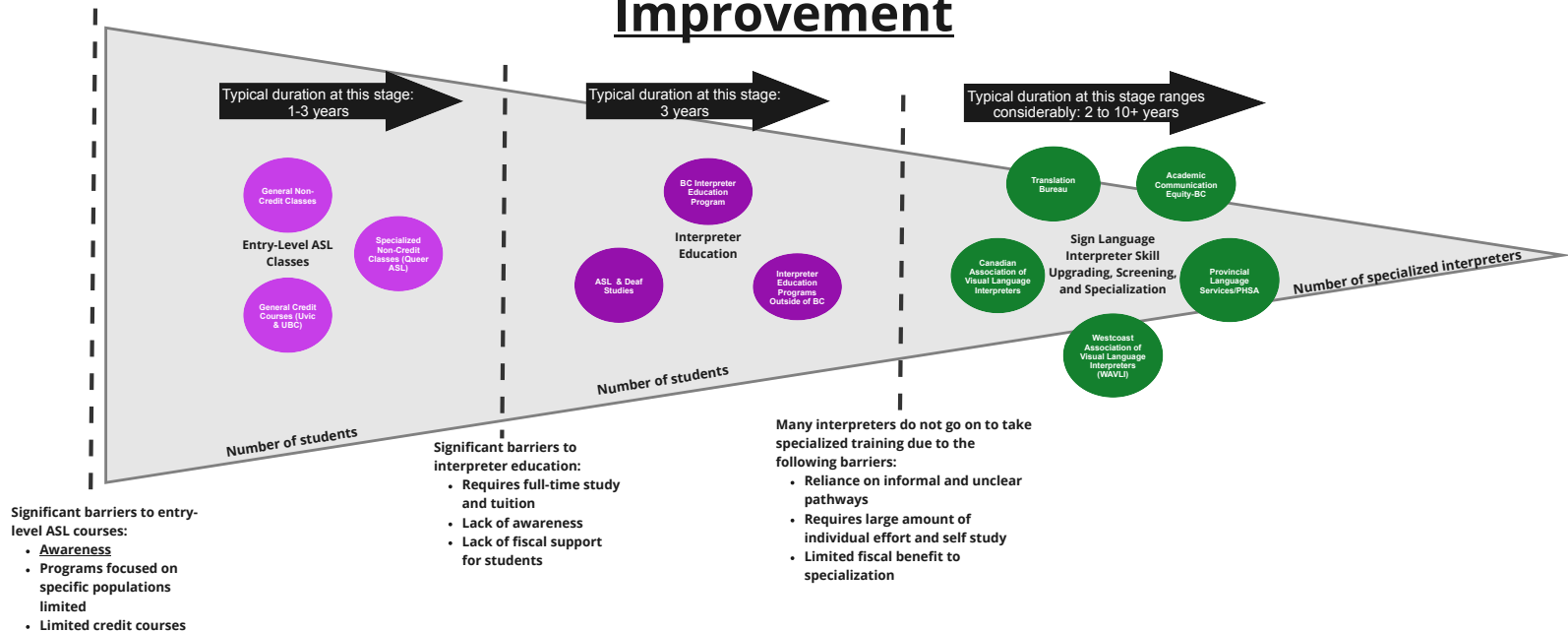
## Major Organizations that Provide & Coordinate Interpreting Service



# Interpreter Training & Quality Improvement

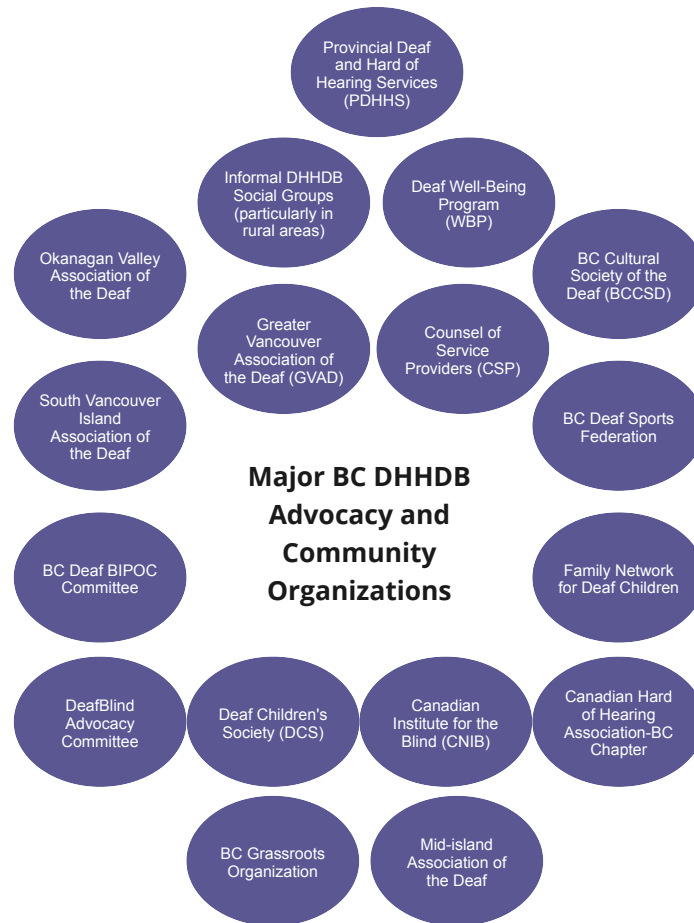


# Pathways of Interpreter Training & Quality Improvement





# Community Organizations



## Iceberg Map

This type of map attempts to get to the root of a problem, starting with what we observe in our daily life and drilling down into the patterns, structures, and mental models that lie below the surface (*Iceberg Model*, 2023). It assumes that, much like an iceberg, what we are able to observe in our day to day interactions are shaped by a great deal of factors that are less visible (Durmonski, 2021). The deeper you go, the greater the influence over the problem or our everyday life as a whole (Durmonski, 2021; *Iceberg Model*, 2023). Thus, Iceberg maps attempt to provide a high-level overview of a problem, highlighting the elements that may be less visible in daily life.

In designing this map, I was attempting to visually explore the question: What forces are creating barriers to providing the right interpreter, at the right time, in the right location, with the right support(s)?

### **Legend for Iceberg Map:**

- Notes of the same color are meant to imply a similarity or interrelatedness between those issues. The exception to this are white notes, which do not represent any relationship between notes.
- The numbering is not meant to rank or order the problems within a level, they were only added to help make clear which of the notes I am referring to in the clarifications below.

# Iceberg System Model of the Interpreting System in BC

**Problem statement:** Providing the right interpreter(s), at the right location, at the right time, with the right support(s)

Least influential

## Events Level: What are we noticing happening right now?

There is an insufficient amount of interpreter service hours	DHIDBC people face significant barriers to obtaining interpreting services in a number of vital areas (ie. funeral and community events)	The shortage of in-person interpreter service hours is much more severe in some geographic areas (ie. Northern BC)	Significant graduation to competency gap in interpreters
	There is an insufficient number of interpreters with specialized skills	Shortage of interpreter service hours varies across domains (eg. Healthcare etc.)	

At this level, we are forced to react to events after they happen

Everything below here is hard to notice in daily life

## Patterns or Trends Level: What trends exist between events over time?

Lack of data collection and analysis to understand the effectiveness of and meaningful information on processes	The cost of interpreting services is increasing, without commensurate funding and/or government support, resulting in reduced accessibility to services	Lack of information and information communication technology (ICT) for interpreting services, resulting in reduced accessibility to services	Interpreter education capacity has increased significantly, but the number of graduates is decreasing, while demand for interpreters increases	Increasing cost of living, training, and certification for interpreters, making many areas of interpreting less financially viable (ie. freelance)	Reduced informal mentorship opportunities for interpreters
Many actors operating in significant areas of energy in education, to general public, due to a lack of awareness	Due to shortage, many interpreters feel they have to be interpreting during off-hours (leading to burnout and turnover)	Changing demographic and linguistic profile of DHIDBC communities	Technology is increasing the demand for interpreters, while also providing new avenues for training and support	Insufficient, outdated and uncoordinated professional development pathways for interpreters	Lack of funding for advanced training and recognition of need

At this level, we are able to anticipate and plan for trends

## Underlying Structural Level: What physical, social, relational, or policy structures are contributing to the problem?

Issues of scale, small number of DHIDBC and interpreters	Significant gaps in funding, often associated with increasing services in vital areas (ie. health care, education, justice, etc.) without commensurate funding for interpreting and communication services	Increased interpreter demand, often associated with increasing services in vital areas (ie. health care, education, justice, etc.) without commensurate funding for interpreting and communication services	Limited funding and systems for the evaluation of interpreting work and the improvement of interpreting services	DHIDBC people have limited structural power to influence the interpreting system and funding	Funding availability is often changing based on where interpretation is provided, and the degree of need within the community
Limited educational resources about interpreting to the public, media, community, and opportunities for education, training, and assessment	Advocacy for interpreting services and services is often not a high priority for government and community, leading to limited or unstable funding	Interpreting systems often designed to provide local efficiency, due to limited or unstable funding	A combination of more traditional professional pathways (ie. education and work-based learning) and new pathways (ie. online learning, etc.) are not supported for training	Lack of information and communication technology (ICT) for interpreting services, resulting in reduced accessibility to services	Progressive to where there is a need for services, limited interpretation to business etc.

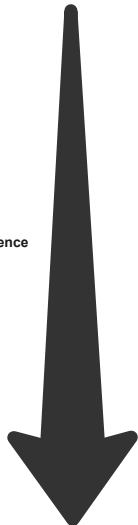
Changes at this level can influence patterns of events and create new patterns

## Mental Models Level: What beliefs, attitudes, values, or expectations do people hold that support the current system structure? (these can be implicit or explicit)

It's say no to interpreting work today, I will be offered less work in the future (least or far more)	Interpreting is simple and straightforward, if an interpreter is present there is access	The only way to be a good interpreter is to be perfect	There will never be enough funding to provide sufficient service	Interpreters shouldn't focus on or discuss money or income
All DHIDBC people mutually know and understand the interpreting process and interpreting system	The best interpreters can do any and all types of appointments	To be a good interpreter I have to be invisible	Only certain people have what it takes to work as an interpreter (quirk or swim)	There has never been enough interpreters and that is just the way will always be

Changes at this level, can transform the system as a whole

Most influential



# Iceberg System Model of the Interpreting System in BC

**Problem statement: Providing the  
right interpreter(s), at the right location, at the right time,  
with the right support(s)**

## **Events Level: What are we noticing happening right now?**

**1.** There is an insufficient amount of interpreter service hours

**2.** DHHDB people face significant barriers to obtaining interpreting services in a number of vital areas (ex. funerals and community events)

**3.** The shortage of in-person interpreter service hours is much more severe in some geographic areas (ex. Northern BC)

**4.** Significant graduation to competency gap in interpreters

**5.** There is an insufficient number of interpreters with specialized skills

**6.** Shortage of interpreter service hours varies across domain areas (healthcare etc.)

At this level, we are forced to react to events after they happen

**Everything below here is hard to notice in daily life**

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***Events Level: Clarifications and Context***

- **2.** This highlights the number of vital areas of society and everyday life that receive no or inconsistent funding for interpreting service. Some of the more notable gaps are for community events, life events, and work related elements (outside of WorkBC programs). The DHHDB people interviewed described how these inconsistencies and gaps in funding deeply impacted them and other members of their community.

## Patterns or Trends Level: What trends exist between events over time?

**1.** Lack of data collection and evaluation creates challenges to the identification of and meaningful intervention on problems

**2.** The cost of interpreting services is increasing, without increases in funding, excluding some people and organizations from access to interpreting services

**3.** Lack of proactive and collaborative communication between various actors in the interpreting system, resulting in silos and reduced optimization

**4.** Interpreter education capacity has remained the same (or decreased), while demand for interpreters increases

**5.** Increasing cost of living impacting interpreters, making many areas of interpreting less fiscally viable (ex. freelance)

**6.** Reduced informal mentorship opportunities for interpreters

**7.** Many actors spending a significant time and energy on education to general public, due to a lack of awareness

**8.** Due to shortage, many interpreters feel guilty saying no to interpreting appointments (leading to overwork and burnout)

**9.** Changing demographics and linguistic profile of DHHDB communities

**10.** Technology is accelerating the rate of change in our profession and the education of interpreters, impacting how and where we work

**11.** Insufficient, unclear, and underfunded continuing professional development pathways for interpreters

**12.** Lack of funding for education and employment of DIs, despite growing recognition of need

At this level, we are able to anticipate and plan for trends

***Patterns or Trends Level: Clarifications and Context***

- **3.** The term actors here refers to individual funders, interpreter service organizations, DHHDB representative organizations, and interpreters. By 'reduced optimization,' I refer to missed opportunities to better use interpreters' time. For example, both interpreter participants mentioned that in a typical work day, they might work in several geographic regions, meaning that a significant portion of their work day is spent on unpaid travel time.
- **6.** Several participants perceived a lack of available informal mentorship opportunities for recent graduates. Most participants suggested that this was largely due to the increasing cost of living, but it was unclear if this was the only reason.
- **7.** All participants reported needing to do a significant amount of advocacy and education with the general public. It is interesting to note that there was no clear indication that this education and advocacy is coordinated between or within actor groups, only that interpreters do so independently and without clear understanding of the work interpreter service organizations do (and vice versa). Moreover, one Deaf participant pointed out that they have to do this advocacy and education with limited data and resources, thereby increasing the time and effort needed.
- **10.** All participants spoke to the ways that Video Remote Interpreting (VRI), Video Relay Interpreting (VRS), and other technologies are shifting the ways that interpreting work is provided. In some cases, they were concerned that this might push out older interpreters, but in others situations they felt it might be an asset. At the least, technology is changing the landscape of interpreting, and at present is doing so in uncontrolled, uncoordinated, and largely unexamined ways.
- **11.** There was a reported sense that many interpreters are unaware of screenings and educational pathways, relying on information sharing from colleagues. Moreover pursuing these educational pathways often rely on happenstance, self motivation, and use of unpaid free time. Additionally, interpreters indicated that the benefit of committing significant unpaid time to pursue these educational pathways was not always clear.

## Underlying Structural Level: What physical, social, relational, or policy structures are contributing to the problem?

**1.** Issues of scale, small number of DHHDB and interpreters

**2.** Significant gaps in funding often create barriers to interpreting services in vital areas of life (ex. limited funding for employment related interpreting and community events)

**3.** Organizations that hire or contract interpreters operate independently, hiring interpreters on different time scales, with different sources and scales of funding creating significant competition for interpreters

**4.** Limited funding and systems for the evaluation of interpreting work and the improvement of interpreting services

**5.** DHHDB people have minimal structural power to influence the interpreting system and funding

**6.** Funding availability is often a driving factor of where interpreters are provided, not the opinion or needs of the DHHDB community

**7.** Limited educational resources about interpreting for the public, DHHDB community, and interpreters; decreasing opportunities for advocacy, learning, and awareness

**8.** Advocacy for interpreting service and service improvement is often left to individual organizations and people (and is often unfunded), limiting its success

**9.** Interpreting systems often designed to prioritize fiscal efficiency, due to limited or unstable funding

**10.** In the absence of more structured professional development, the reputation and social network of an interpreter has considerable impact on their opportunities for mentorship

**11.** Lack of formal mentorship or support for early career interpreters and those wanting to move between service domains (ex. from post-secondary to healthcare), limiting interpreter mobility and skill development

**12.** Interpreters live where they can get sufficient work, not in relation to where there is need for service (ex. limited interpreters in northern bc)

Changes at this level can influence patterns of events and create new patterns



***Underlying Structural Level: Clarifications and Context***

- **1.** The size of the interpreting profession and the DHHDB community in BC creates unique challenges to awareness, education, and advocacy campaigns.
- **3.** Interpreters are a limited resource accessed by a wide range of organizations. Some of these have significant and stable funding, while others do not. Interrelatedly, some organizations can hire interpreters months in advance or for 10 months out of the year. Without ongoing collaboration between these organizations, this can create significant tensions and competition between organizations that hire and coordinate interpreters.
- **9.** An example of how interpreting systems prioritize fiscal efficiency is that, in many parts of the interpreting system, there is no clear plan or resource for when an interpreter is unable to provide service due to illness or an emergency. This can lead to interpreters working despite being sick or having a serious life emergency, or feeling very guilty for asking to take time off. In turn, this seems likely to increase burnout of interpreters over the long term.

## **Mental Models Level: What beliefs, attitudes, values, or expectations do people hold that support the current system structure? (these can be implicit or explicit)**

**1.** Audist and ableist assumptions and beliefs (ex. decisions being made for rather than with/by DHHDB communities)

**2.** If I say no to interpreting work today, I will be offered less work in the future (feast or famine)

**3.** Interpreting is simple and straightforward, if an interpreter is present there is access

**4.** The only way to be a good interpreter is to be perfect

**5.** There will never be enough funding to provide sufficient service

**6.** Interpreters shouldn't focus on or discuss money or income

**7.** All DHHDB people innately know and understand the interpreting process and interpreting system

**8.** The best interpreters can do any and all types of appointments

**9.** To be a good interpreter I have to be invisible

**10.** Only certain people have what it takes to work as an interpreter (sink or swim)

**11.** There has never been enough interpreters and that is just the way will always be

**Changes at this level, can transform the system as a whole**

***Mental Models Level: Clarifications and Context***

- **1.** I do not mean to imply that audism or ableism are the same, but rather that they both seem to be impacting the design of the interpreting system in BC.
- **2.** This seems to be a case of 'success to the successful.' Within the interpreting system, there is an assumption that those who are the most visible and say yes to most appointments are most likely to be offered more work in the future. Additionally, there is a perception that those who say no more often receive less work offers in the future. As a result, there is a significant pressure to say yes to as much as possible, encouraging overwork (and potentially acceptance of work outside of an interpreter's comfort level).
- **3.** A feature of this mental model is the perception that if an interpreter is present there is access. However, that is not always true, and the reality is far more complex.
- **7.** Examples of this mental model include the assumption that all DHHDB people know how to request an interpreter in various systems. Another example is the lack of education or orientation provided to DHHDB people about what they can expect of interpreters within any given setting (given that interpreters often function differently between settings). Ultimately, this assumption serves to marginalize DHHDB people within the interpreting system and decrease their ability to advocate for themselves.

## System Structure Map of Interpreting in BC

This map attempts to imagine how the various actors, features, and elements influence each other. Due to a lack of data, it does so at a high level of abstraction, providing a rough sketch of how the interpreting system in BC may function at present. Ultimately in designing this map, I was attempting to visually explore the questions:

- How do we currently attempt to provide the right interpreters, at the right time, in the right location, with the right supports?
  - How might our current system be creating unintended side-effects or barriers to achieving this?

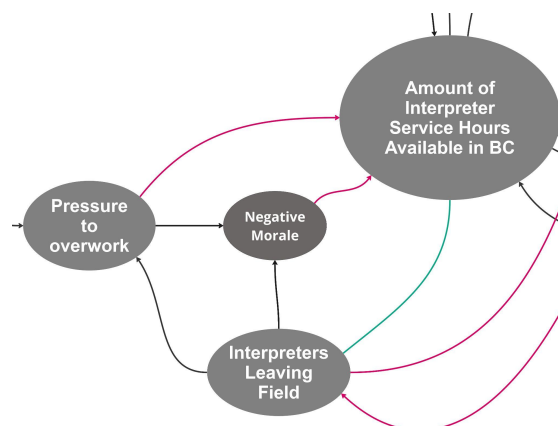
At this point, the system structure map is constructed at a very abstract level; a future project aims to bring participants from all sectors of the interpreting systems together to recreate and refine this map.

### How to Read the BC Interpreting System Structures Map

In this map, I used arrows to represent the influence between elements within the interpreting system in BC. The color and direction of the arrows indicate a specific type of Influence:

- **Black arrows:** indicate a positive<sup>2</sup> influence, as one element increases, the other element (the one being pointed to) also increases.
- **Red arrows:** indicate a negative<sup>3</sup> influence: as one element increases, the other element decreases
- **Green Arrows:** indicate an unclear relationship.

To further clarify, let's apply this to the following small section of the Income-Quality-Availability Sub-System in this map:



- As the number of interpreters leaving the field increases, so does negative morale (indicated by the black arrow).

<sup>2</sup> Positive in this case, does not imply a 'good' or 'desirable' influence, but rather just the type of influence. Thus, the relationship between elements may be positive, but be undesirable or produce something unwanted.

<sup>3</sup> Similarly, negative in this case is a descriptor of the relationship and does not imply that the relationship is 'bad' or 'undesirable.'

- As negative morale increases, the amount of interpreter service hours available in BC decreases (indicated by the red arrow).
- As the amount of interpreters leaving the field increases, so too does the pressure to overwork (indicated by the black arrow connecting them). As the pressure to overwork increases, so too does negative morale (black arrow). Over the long term, as pressure to overwork increases, the amount of interpreter service hours decreases (red arrow).
- Finally, it is assumed that there is some link between the amount of interpreter service hours available in BC and the interpreters leaving the field. However, it is unclear if it is positive or negative<sup>4</sup>, thus it is labeled with a green arrow.

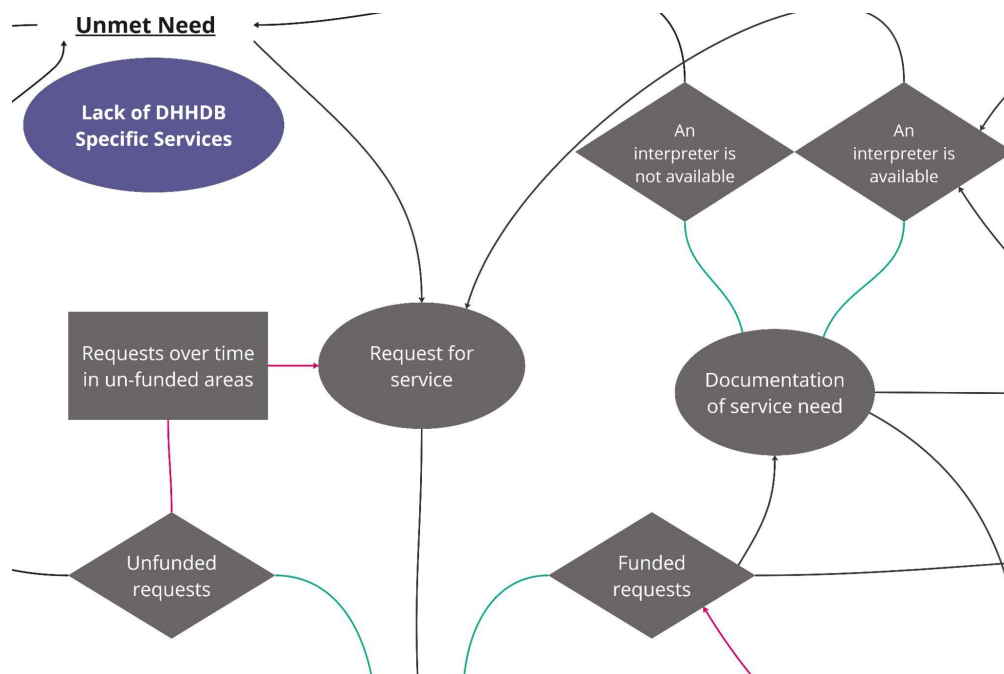
The second component that makes up this map are the elements themselves. The elements are the processes, values, structures, resources, and actors that make up the overall interpreting system in BC. In this map I represent elements in the interpreting system using:

- **Ovals:** represent a node that is perceived to be important in the interpreting system in BC (often actors, processes, or resources)
- **Underlined text:** represent a meta-node. That is, a node that is made up of a significant number of other elements, with at least a few visualized around them.
- **Rectangles:** provide information about the perceived nature of the influence/relationship. That is, where it was possible and I felt the relationship might be unclear, I added rectangles to clarify the relationship or the type influence being displayed.
- **Diamonds:** represent dichotomous events, i.e., when one thing happens then the other does not. These events may have very different influences and, over time, exert a significant impact on the shape of the interpreting system overall.

To further clarify, let's apply this to the following small section of the Need-Employment-Funding Sub-System in this map:

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<sup>4</sup> In this specific case, it is likely unclear due to the level of abstraction. A more detailed map that breaks down the ways interpreters are leaving the field and the concept of available service hours likely could better define this relationship.



- **Documentation of service need:** is an oval and represents a node (actor, process, or abstract/physical resource that is perceived to be important to the interpreting system)
- **Requests over time in unfunded areas:** is a rectangle and represents clarifying information about the perceived influence/interrelationship
- **Funded/Unfunded requests:** these are dichotomous events and have different influences, so they are represented by diamonds. Same with the interpreter is available/not available
- **Unmet need:** is underlined text and therefore represents a meta-node, it is made up of several other nodes (including lack of DHHDB specific services).

With this in mind, on the following page, I present the full map. When exploring this map, it is recommended that you focus on specific subsystems and follow one arrow at a time. Additionally, it is important to consider both what is and is not linked to each other, and how that influences how the system functions over time.





***System Structure Map Clarifications and Highlights:***

- **Unmet need for interpreters:** At a high level, the unmet need for interpreters results from a lack of DHHDB specific services. One important way to decrease the demand for sign language interpreter service hours is to support the increase of DHHDB specific services, especially those that are culturally and linguistically tailored to the community.
- **Funding linked to what gets documented, not actual need:** Due to the ways that overall documentation processes happen, I believe our perception of the need for interpreters is likely to be substantially skewed from reality. Moreover, this perception becomes further skewed due to the distance between the funders and the DHHDB community. It is important to find ways to identify and make visible this unmet need to more stakeholders, particularly funders.
- **Lack of feedback between interpreter per hour rate and funders:** in order to manage cost of living increases, interpreter rates have increased notably. However, there is no direct feedback loop between interpreter rates and funder. As a result, funding may be insufficiently responsive to increases in the cost of providing interpreting services, thereby impacting some organizations ability to provide and access interpreting services. This impact is likely to be felt more by those with limited funding.
- **Lack of feedback between perceived need or actual need for interpreters and funding for education sub-system:** At present, there is a lack of clear feedback system between the need for interpreters and funding of the educational subsystem. As a result, the current demand for interpreters does not appear to affect the funding of student recruitment efforts, instructor training, scholarship, or increased capacity in any part of the interpreter subsystem. This is a considerable and serious oversight.

## Insights, Limitations and Recommendations

### Insights Gained Throughout this Mapping Process

Through this mapping project, I gained more insights than I expected. These came from the rich discussion with participants, the challenge of trying to visually represent the BC sign language interpreting system, and having the opportunity to step back and think through the interpreting system(s) in new ways. Some of these insights I was not able to capture in the system maps, therefore I outline them below.

- **The interpreting system is opaque, complex, and hard to navigate.** A theme I noticed throughout the interviews, and in my own analysis, was the complexity of the interpreting system at present. As DHHDB people move across systems, there are new requirements and processes to obtain interpreter services. Moreover, it is often unclear where there is and is not available funding for interpreter services, even within the same service domain. Finally, when there is funding available, it is hard to know which organization holds it and what the requirements are to access that funding. The lack of publicly available information to support navigation, combined with the complexity of the interpreting system, likely creates significant barriers to obtaining interpreters for DHHDB people and the general public.
- **The current system seems to largely operate on a for rather than with service model, excluding DHHDB people from influencing and designing the systems that affect them.** There is a distinct lack of ongoing, consistent, and meaningful involvement of DHHDB people within most (if not) all aspects of the interpreting system in BC. Though there are some notable exceptions, overall, there is a distinct lack of clear consultation and engagement with DHHDB people around funding allocation, service provision, and measures and priorities of service quality. Though informal social connections may have been sufficient in the past, there seems to be a growing need to shift towards more robust data collection and engagement mechanisms. Moreover, there needs to be a shift toward meaningfully including DHHDB people in decision-making positions within all parts and levels of this system.
- **Video Remote Interpreting (VRI) is rapidly changing our field.** All people I interviewed mentioned that VRI use is increasing, shifting and changing a great deal within the interpreting system in BC. Like any new tool, how VRI affects a system is related to how it is being used. At present, it is unclear what information is being used and who is being consulted in decisions around the use of VRI. Without a general and accepted framework for the use of VRI, individual actors seem to be creating their own practices and processes, resulting in significant variation. Moreover, it is unclear what skillsets interpreters may need in order to best navigate working in a virtual environment.
- **There is a lack of data collection around under/unfunded areas of interpreting systems, resulting in the further obscuring of these areas of need.** There is a lack of publicly-available information on interpreting requests. Rather, data is often retained

by individual organizations and institutions. As a result, the data collected is likely to vary significantly and we are unable to see the full picture of the interpreting shortage or the impacts it is having on various communities. Moreover, there appears to be a lack of publicly available systems for reporting the need for interpreting services in areas that have limited, inconsistent, or no funding (for example community events or funerals). The lack of clear data collection frameworks and public reporting is likely obscuring significant unmet need.

- **Interpreter graduates are left to ‘sink or swim,’ which likely significantly reduces the average career length of interpreters.** At present, there is very little to no formal support systems for recent graduates of interpreter training programs. As one interpreter participant described it, students are “released into the wild” and we hope they survive. Those that do receive support, do so through informal social networks (which rely on happenstance, level of extroversion, the number of experienced interpreters in their local community, and experienced interpreters’ capacity for unpaid mentorship). This approach not only impacts the quality of service provision, but was also perceived to reduce the career length for many interpreters. Though no data exists about why interpreters are leaving the field, it was perceived that many interpreters burn out early in their career due to lack of support. While increasing the inflow of interpreters is likely to increase available interpreter service hours, increasing the retention of early career interpreters is also key, as this will decrease the outflow of interpreters. Even if we only add 2-3 years to the average interpreter’s career, this would result in a significant increase in the overall available service hours.

### Limitation of these Systems Maps

Like any attempt to capture the complexity of life, systems mapping has limitations. As models of the world, they are purposeful simplifications of some aspects of reality (Barbrook-Johnson & Penn, 2022). As Box and Draper (1987) describe, “all models are wrong, but some are useful.” So, while the maps provided here are not true descriptions of reality, and no doubt wrong in some ways, they were purposefully designed to be useful. Below, I outline some of the limitations of the maps contained within this report, organized into limitations of this project specifically and system maps more generally.

### Limitations of the Project Process

- **Data collection skewed toward community interpreting, due to my pre-established professional network and experience.** Plainly put, I (Bryan Hemingway) have largely practiced within general community settings, specifically, freelance, medical, and post-secondary. Though attempts were made to collect information from those outside of general community interpreting, most participants were most experienced with general community interpreting. Drawing on my own experience further anchored the maps in a general community and freelance interpreting perspective. In the generation of future iterations of these maps, it will be important to include a more diverse range of experiences.

- **Due to the project's scope, budget, and timelines, there was a limited number of participants.** This project only drew on the perspectives of seven people: six participants and the one project lead. Considering the size and complexity of the interpreting system, more participants and perspectives are needed. This should be considered when planning future mapping projects, balancing them with available funding, capacity, and other pragmatic considerations.
- **All maps are built, in part, from the perspectives of six people, but they were analyzed by one person.** As such, these maps are composites that reflect one person's understanding of the discussions with six people, not how each of these six people would design their own maps (Barbrook-Johnson & Penn, 2022). They should be understood as my interpretations of my own and other people's experience, perspective, and information.
- **Participants provided information and feedback, but did not engage in designing the maps created.** This project was designed as a pilot project, and thus had a narrow scope. As a result, participants were not asked to engage in the design of the maps contained in this report, only to provide feedback on them.

### *Limitations of the System Maps*

- **System maps are snapshots of this moment, not predictions of the future.** System maps are wonderful thinking tools and can help us navigate an increasingly interconnected and complex world. However, they can only capture what is happening right now and cannot be used to predict the future, as relationships and elements within and outside of the system maps shift (Barbrook-Johnson & Penn, 2022).
- **System maps are always incomplete.** The world is too complex and dynamic to capture in a system map (Barbrook-Johnson & Penn, 2022). So, any mapping work is always, necessarily, incomplete or only part of a much more complex story. As such, we need to always be highly critical of whose story is being told in any one map. This is why mapping needs to be an ongoing process and include more people.
- **To be most useful, system maps need to be living documents, revisited and revised regularly.** In a complex system, dynamic, surprising, and unexpected change is the norm, not the exception (Byrne, 2014; Greenhalgh & Papoutsis, 2018; Newell, 2011). Without revision, these ongoing changes will make any system map less and less accurate (Barbrook-Johnson & Penn, 2022). Therefore, the maps contained in this report need to be considered living documents and regularly updated. Without doing so, as time passes, we are more and more likely to be heading in the wrong directions.
- **System maps are starting places, not the ending.** System maps can help us to think anew about systems, but they do not actually do anything to modify those systems in themselves (Mohr, 2019). Without meaningful conversation and action, they do not resolve any real-world issues. Therefore, they should be seen as the starting of an important conversation and of collective work, not as an end-point. Like any map, they may help guide our journey but they do not replace the journey itself.

## Recommendations

Based on the design work, conversations, and insights I have gained through this project, I have proposed some potential next steps. As Mohr (2019) highlights, without action on what we learn, system maps do not move us anywhere. The recommendations below try to point toward potential ways to move from learning to action. Whatever next steps you choose to take, overall, this project has indicated a clear need for multi-stakeholder and multi-sectoral collaboration to improve the interpreting system in BC.

- **Diverse group(s) of stakeholders should refine these maps.** These maps were designed as a first draft and require the participation of more people to be improved. Ideally, whomever refines the maps should represent as many stakeholder groups as possible. We all see part of the system, and therefore we all have some but not all of the pieces to the puzzle.
- **We need more details on what we mean by the ‘shortage of interpreters.’** Though there seems to be agreement on a shortage of interpreting service hours, there is a distinct lack of data on where these shortages are happening, in what domain areas, and during what time frames. As Cristancho et al. (2017) highlights, often in complex systems, problem definition is a critical component of success. At present, it is unknown how much of the felt shortage can be attributed to an insufficient number of interpreters, inefficient use of interpreter time, interpreters not working full-time levels for some preventable reason, and/or because demand for service has increased. Without a better sense of the nature of the shortage, any attempts to increase service hours are less likely to be successful.
- **The DHHDB community needs to be given more input and control over all parts of the interpreting system, from funding priorities to service provision.** As one Deaf professional put it, our current system is designed around “doing for, rather than with (DHHDB people).” At present, there is an over-reliance on informal, social, and other informal types of feedback mechanisms. This needs to change and a wide range of DHHDB people must have input on all parts of the interpreting system (as a system that impacts them significantly). It is therefore recommended that all organizations, including funders, embrace the idea of the ‘right to design’ promoted by Rimington and Cea’s 2022 book *Beloved Economies*, and ensure that the people affected by a decision and system are given the power to shape and influence that decision and system at multiple points.
- **Information on how to navigate the interpreting provision system needs to be developed and publicly shared.** At present, the interpreting system in BC is complex to navigate, particularly for the general public. Without publicly available information or resources to navigate the interpreting system, these complexities create significant barriers to obtaining interpreting services (even when funding exists).
- **Increasing the availability of language and culturally concordant services for DHHDB people in BC.** One way to decrease the shortage of interpreting service hours is to decrease the demand for the service. By supporting and creating initiatives for

DHHDB people to develop the skills, systems, and positions to provide services in their own language and culture, we can decrease the need for interpreters. Moreover, language concordant service provision is likely to have a wide number of benefits over services requiring interpreters<sup>5</sup>, creating a win-win situation.

- **Data collection, evaluation, and reporting needs to be improved across the interpreting system.** At present, there is a distinct lack of data collection and sharing in our interpreting system. As a result, when making decisions, we are all left to guess at the root of issues and the most effective route forward. Data collection, evaluation, and sharing should be an expected responsibility of all organizations in the interpreting system and funded as such. This funded data collection work should collect information on: gaps in funding interpreter services; when interpreters were unavailable; needed qualities/skills in interpreters; and gaps in current interpreter provision policy and practice. Providing funding for data collection and sharing is likely to not only help us to better address the current shortage, but also help us move toward better service provision in the long term.
- **Educational resources on interpreting should be developed for all stakeholders and the general public.** At present, individuals within the interpreting system independently spend significant amounts of time educating people on how to navigate interpreting. Moreover, as several participants identified, a lot of people within the interpreting system have not had the opportunity to learn depthfully about interpreting. Therefore, it is recommended that funds be acquired for the development of educational resources, and perhaps classes, to help educate the general public and improve the knowledge of all stakeholders on interpreting services. Doing so is likely to decrease, but not eliminate, the (often unfunded) time spent on education efforts and increase the ability of all stakeholders to advocate for their needs.

## Conclusion

Providing the right sign language interpreter(s), at the right location, at the right time, with the right support(s) in British Columbia is a considerable but important challenge. As presented in this report, there are a great deal of parts, interconnections, factors, and stakeholders that both influence and create the interpreting system in our province. By taking a systems approach to the sign language interpreter shortage, it is hoped that long lasting and coordinated improvement might be achieved. These maps are a first draft in need of collaborative revision, but it is hoped they can serve as a starting place for conversation, and ultimately, coordinated action.

While the interpreting system in BC is big and complex, it is ultimately a largely social system. As a social system, how we act, think, communicate, and participate in it matters. So, while no one of us have the ability to control the system, together, we have significant influence over the shape(s) and function of the system (Barbrook-Johnson & Penn, 2022). We all have

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<sup>5</sup> Those interested in this concept are encouraged to read De Meulder and Hualand's 2019 paper titled "Sign language interpreting services: A quick fix for inclusion?"

one piece of a much larger puzzle, and what we can build together is not the same as what we can build alone (Johnson et al., 2002). If we are able to shift our thinking and participation, together we can improve the interpreting system considerably. Toward this end, this report is one part of a two report package<sup>6</sup>. The other report explores international examples and other models of interpreting provision with the goal of helping us think anew about the system in BC. In totality, it is hoped that these reports can help inspire new conversations, perspectives, and action, thereby improving the interpreting system in BC.

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<sup>6</sup> The other report is: Sign Language Interpreting Services: An International Environmental Scan by Jennifer Kennedy, MSci.



## References

- Barbrook-Johnson, P., & Penn, A. S. (2022). *Systems Mapping: How to build and use causal models of systems*. Springer International Publishing.  
<https://doi.org/10.1007/978-3-031-01919-7>
- Box, G. E. P., & Draper, N. R. (1987). *Empirical model-building and response surfaces*. Wiley. <https://go.exlibris.link/HqqjrPvD>
- Byrne, D. S. (2014). *Complexity theory and the social sciences: The state of the art*. Routledge.
- Canadian Centre on Substance Abuse. (2014). *Systems Approach Workbook: System Mapping Tools*.  
<https://www.ccsa.ca/systems-approach-workbook-system-mapping-tools>
- Cohn, S., Clinch, M., Bunn, C., & Stronge, P. (2013). Entangled complexity: Why complex interventions are just not complicated enough. *Journal of Health Services Research & Policy*, 18(1), 40–43. <https://doi.org/10.1258/jhsrp.2012.012036>
- Cristancho, S., & Helmich, E. (2019). Rich pictures: A companion method for qualitative research in medical education. *Medical Education*, 53(9), 916–924.  
<https://doi.org/10.1111/medu.13890>
- Cristancho, S., Lingard, L., & Regehr, G. (2017). From problem solving to problem definition: Scrutinizing the complex nature of clinical practice. *Perspectives on Medical Education*, 6(1), 54–57. <https://doi.org/10.1007/s40037-016-0314-0>
- De Meulder, M., & Haualand, H. (2019). Sign language interpreting services: A quick fix for inclusion? *Translation and Interpreting Studies, Journal Article*.  
<https://doi.org/10.1075/tis.18008.dem>

Durmonski, I. (2021, August 23). How The Iceberg Model of Systems Thinking Can Help You Solve Problems? *Durmonski.Com*.

<https://durmonski.com/self-improvement/iceberg-model-systems-thinking/>

FSG Consulting. (n.d.). *Systems Thinking Toolkit: Putting Systems Thinking Intro Practice in Your Organization*.

Gies, E. (2017). The Meaning of Lichen. *Scientific American*, 27(3s), 52–59.

Greenhalgh, T., & Papoutsi, C. (2018). Studying complexity in health services research: Desperately seeking an overdue paradigm shift. *BMC Medicine*, 16(1), 95.

<https://doi.org/10.1186/s12916-018-1089-4>

*Iceberg Model*. (2023). Ecochallenge.Org. <https://ecochallenge.org/iceberg-model/>

Johnson, A., Papi-Thornton, D., & Stauch, J. (2002). *Student Guide to Mapping a System*. University of Oxford.

[https://www.mtroyal.ca/nonprofit/InstituteForCommunityProsperity/pdfs/ssdata\\_icp\\_mts\\_2020.pdf](https://www.mtroyal.ca/nonprofit/InstituteForCommunityProsperity/pdfs/ssdata_icp_mts_2020.pdf)

Leavy, P. (2017). Introduction to Arts-Based Research. In P. Leavy (Ed.), *Handbook of Arts-Based Research* (pp. 3–21). Guilford Publications.

<http://ebookcentral.proquest.com/lib/ubc/detail.action?docID=4979052>

McLaughlin, J., & Russell, D. (2023). *WAVLI Research Project* [Research]. Westcoast Association of Visual Language Interpreters.

Mohr, R. (2019, September 10). *Making systems more approachable*. Medium.

<https://blog.kumu.io/making-systems-more-approachable-37896c5cd482>

Newell, W. (2001). A Theory of Interdisciplinary Studies. *Issues in Integrative Studies*, 1(19), 1–25.

Newell, W. (2011). The Road from Interdisciplinary Studies to Complexity. *World Futures*, 67(4–5), 330–342. WorldCat.org.

Rimington, J., & Cea, J. (2022). *Beloved Economies: Transforming How We Work* (1st ed.).

Page Two Books, Inc. <https://www.belovedeconomies.org>

Tracy, S. J., & Redden, S. M. (2015). Markers, Metaphors, and Meaning: Drawings as a

Visual and Creative Qualitative Research Methodology in Organizations. In K. Elsbach

& R. Kramer (Eds.), *Handbook of Qualitative Organizational Research* (1st ed.).

Routledge.

Wright, D., & Meadows, D. H. (2009). *Thinking in Systems: A Primer*. Taylor & Francis

Group. <http://ebookcentral.proquest.com/lib/uvic/detail.action?docID=430143>

# Appendix One: Text-Only Version of Actor Map

## Problem Statement:

Providing the right interpreter(s), at the right location, at the right time, with the right support(s)

## Sector One: Funding Sources

### Federal Government

- CRTC via CAV
- Funding for Federal Related Interpreting
- Canada Student Grant for Services and Equipment

### BC Government

- Ministry of Post-Secondary Education and Future Skills
- Ministry of Justice
- Ministry of Children and Family Development
- Ministry of Social Development and Poverty Reduction
- Ministry of Education and Child Care
- Ministry of Tourism, Arts, Culture and Sport
- Ministry of Health
- Ministry of Education and Child Care
- Misc Ministries
- One-Time Grant and Year End Funding

### Miscellaneous Funding Sources

- Municipal Grants/Funding
- Sport Interpreting Services Grant
- Non-profit Organizations
- Charity Organizations
- For Profit Businesses

### Individual-level payments

- Professional service providers (ex. lawyers)
- Interpreters (pro-bono services)
- DHHDB individuals

- Non-deaf individuals

## **Sector Two: Major Organizations that Provide & Coordinate Interpreting Service**

### **Video Relay Service Companies**

- Asign
- Convo Canada
- Sorenson

### **Legal Interpreting including: police, paralegal, human rights tribunal, legal aide, and judicial**

- No specific organization focuses on legal interpreting, rather a mixture of VRS and community interpreting organizations provide service as needed

### **Federal Government Interpreting**

- Translation Bureau

### **Community Interpreting Agencies (Interpreter Referral Services)**

- American Video Remote Interpreter Agencies
- Spoken Language Agencies
- Maple Communications
- Sign Referral Services Inc (PI)
- Wavefront
- ASL Interpreting Inc
- IDHHC
- Still Interpreting

### **Post-Secondary Educational Interpreting**

- Colleges
- Universities

### **Healthcare Interpreting**

- Deaf Well-Being Program
- Medical Interpreting Services (MIS)

### **K-12 Educational Interpreting**

- BC School of the Deaf
- Mainstream Elementary Schools
- Private Schools
- Mainstream High Schools

## **Sector Three: Interpreter Training & Quality Improvement**

### **Entry-Level ASL Classes**

- General Non-Credit Classes
- Specialized Non-Credit Classes (Queer ASL)
- General Credit Courses (Uvic & UBC)

### **Interpreter Education**

- BC Interpreter Education Program
- ASL & Deaf Studies
- Interpreter Education Programs Outside of BC

### **Sign Language Interpreter Service Improvement & Screening Organizations**

- Canadian Association of Visual Language Interpreters
- Academic Communication Equity-BC
- Translation Bureau
- Provincial Language Services/PHSA
- Westcoast Association of Visual Language Interpreters (WAVLI)

## **Sector Three: Pathways of Interpreter Training & Quality Improvement Sub-Section**

At each stage, there are decreasing numbers of people (due to barriers described).

### **Entry Level ASL Classes**

- Typical duration at this stage: 1-3 years
- Significant barriers to entry-level ASL courses:
  - Awareness
  - Limited programs focused on specific populations
  - Limited credit courses

### **Interpreter Education**

- Typical duration at this stage: 3 years
- Significant barriers to interpreter education:
  - Requires full-time study and tuition
  - Lack of awareness
  - Lack of fiscal support for students

### **Sign Language Interpreter Skill Upgrading, Screening, and Specialization**

- Typical duration at this stage ranges considerably: 2-10+ years
- Many interpreters do not go on to take specialized training due to the following barriers:

## Appendix One: Text-Only Version of Actor Map

- Reliance on informal and unclear pathways
- Requires large amount of individual effort, motivation, and self study
- Limited fiscal benefit to specialization

## **Sector Four: Major BC Deaf, Hard of Hearing, and DeafBlind Advocacy and Community Organizations**

### **Community Organizations:**

- Provincial Deaf and Hard of Hearing Services (PDHHS)
- Informal DHHDB Social Groups (particularly in rural areas)
- Deaf Well-Being Program (WBP)
- Okanagan Valley Association of the Deaf
- BC Cultural Society of the Deaf (BCCSD)
- Greater Vancouver Association of the Deaf (GVAD)
- Counsel of Service Providers (CSP)
- South Vancouver Island Association of the Deaf
- BC Deaf Sports Federation
- BC Deaf BIPOC Committee
- Family Network for Deaf Children
- DeafBlind Advocacy Committee
- Deaf Children's Society (DCS)
- Canadian Institute for the Blind (CNIB)
- Canadian Hard of Hearing Association-BC Chapter
- BC Grassroots Organization
- Mid-island Association of the Deaf



# Appendix Two: Text-Only Version of Iceberg Map

## **Problem Statement:**

Providing the right interpreter(s), at the right location, at the right time, with the right support(s)

## **Events Level: What are we noticing happening right now?**

Note: Working at this level, we are forced to react to events after they happen

1. There is an insufficient amount of interpreter service hours
2. DHHDB people face significant barriers to obtaining interpreting services in a number of vital areas (ex. funerals and community events)
3. The shortage of in-person interpreter service hours is much more severe in some geographic areas (ex. Northern BC)
4. Significant graduation to competency gap in interpreters
5. There is an insufficient number of interpreters with specialized skills
6. Shortage of interpreter service hours varies across domain areas (healthcare etc.)

## **Patterns or Trends Level: What trends exist between events over time?**

Note: Working at this level, we are able to anticipate and plan for trends

1. Lack of data collection and evaluation creates challenges to the identification of and meaningful intervention on problems
2. The cost of interpreting services is increasing, without increases in funding, excluding some people and organizations from access to interpreting services
3. Lack of proactive and collaborative communication between various actors in the interpreting system, resulting in silos and reduced optimization
4. Interpreter education capacity has remained the same (or decreased), while demand for interpreters increases
5. Increasing cost of living impacting interpreters, making many areas of interpreting less fiscally viable (ex. freelance)
6. Reduced informal mentorship opportunities for interpreters
7. Many actors spending a significant time and energy on education to general public, due to a lack of awareness

## Appendix Two: Text-Only Version of Iceberg Map

8. Due to shortage, many interpreters feel guilty saying no to interpreting appointments (leading to overwork and burnout)
9. Changing demographics and linguistic profile of DHHDB communities
10. Technology is accelerating the rate of change in our profession and the education of interpreters, impacting how and where we work
11. Insufficient, unclear, and underfunded continuing professional development pathways for interpreters
12. Lack of funding for education and employment of DIs, despite growing recognition of need

### **Underlying Structural Level: What physical, social, relational, or policy structures are contributing to the problem?**

Note: Changes at this level can influence patterns of events and create new patterns

1. Issues of scale, small number of DHHDB and interpreters
2. Significant gaps in funding often create barriers to interpreting services in vital areas of life (ex. limited funding for employment related interpreting and community events)
3. Organizations that hire or contract interpreters operate independently, hiring interpreters on different time scales, with different sources and scales of funding creating significant competition for interpreters
4. Limited funding and systems for the evaluation of interpreting work and the improvement of interpreting services
5. DHHDB people have minimal structural power to influence the interpreting system and funding
6. Funding availability is often a driving factor of where interpreters are provided, not the opinion or needs of the DHHDB community
7. Limited educational resources about interpreting for the public, DHHDB community, and interpreters; decreasing opportunities for advocacy, learning, and awareness
8. Advocacy for interpreting service and service improvement is often left to individual organizations and people (and is often unfunded), limiting its success
9. Interpreting systems often designed to prioritize fiscal efficiency, due to limited or unstable funding
10. In the absence of more structured professional development, the reputation and social network of an interpreter has considerable impact on their opportunities for mentorship
11. Lack of formal mentorship or support for early career interpreters and those wanting to move between service domains (ex. from post-secondary to healthcare), limiting interpreter mobility and skill development

## **Mental Models Level: What beliefs, attitudes, values, or expectations do people hold that support the current system structure?**

Note mental models can be implicit or explicit. Also, Changes at this level, can transform the system as a whole.

1. Audist and ableist assumptions and beliefs (ex. decisions being made for rather than with/by DHHDB communities)
2. If I say no to interpreting work today, I will be offered less work in the future (feast or famine)
3. Interpreting is simple and straightforward, if an interpreter is present there is access
4. The only way to be a good interpreter is to be perfect
5. There will never be enough funding to provide sufficient service
6. Interpreters shouldn't focus on or discuss money or income
7. All DHHDB people innately know and understand the interpreting process and interpreting system
8. The best interpreters can do any and all types of appointments
9. To be a good interpreter I have to be invisible
10. Only certain people have what it takes to work as an interpreter (sink or swim)
11. There has never been enough interpreters and that is just the way will always be



# Academic Communication Equity-British Columbia

## Visualizing the Interpreting System in British Columbia

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Challenges, Insights, and  
Recommendations for Next Steps