
CAPER-BC Needs Assessment and Cost Benefit Analysis

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Prepared by the Social Planning and
Research Council of British Columbia

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Executive Summary

The Centre for Accessible Post-secondary Education Resources British Columbia (CAPER-BC) is a publicly funded organization that provides print disabled post-secondary students with the accessible course materials they need to succeed. CAPER-BC serves clients who cannot use conventional print resources due to visual impairments (including blindness), learning disabilities, physical limitations, neurological impairments, and multiple disabilities.

This study was initiated as part of CAPER-BC's efforts to assess the quality of provided services and to identify potential unfulfilled needs across different groups of stakeholders and costs associated with new directions and initiatives.

Research undertaken by Social Planning and Research Council of British Columbia (SPARC BC) was designed to achieve the following goals:

1. develop a Needs Assessment for the services provided by CAPER-BC;
2. create a Cost Benefit Analysis of service enhancement options for CAPER-BC.

The data for the study was gathered through several channels:

1. Background and literature review

Preliminary background research included a review of administrative documents provided by CAPER-BC such as annual reports from previous years, financial statements, and other descriptive statistical information related to the nature of services and patterns of use. In addition, academic and grey literature was reviewed to inform key aspects related to the provision of materials in alternate formats.

2. Phone interviews with stakeholders from four different groups:

Key stakeholders were asked to evaluate the quality of services provided by CAPER-BC as well as provide any suggestions for improving the quality of services. Interview data informed the majority of the findings of the study and all findings were aligned with CAPER-BC priorities and key operational areas as outlined in the CAPER-BC funding mandate. Stakeholder interviews consisted of:

- 7 interviews with organizations involved in similar work;
- 4 interviews with collaborating or partner organizations;
- 8 interviews with CAPER-BC staff;
- 12 interviews with accessibility/disability services staff at mandated post-secondary institutions.

Interview questions for each stakeholder group can be found in the Appendix section at the end of this report.

3. Online surveys of students with disabilities

Students with disabilities were surveyed using an online platform. Reaching out to students electronically proved to be a successful strategy of recruitment and engagement. A total of 110 students from post-secondary institutions across the province filled out the online survey.



CAPER-BC Needs Assessment

SUMMARY OF STAKEHOLDERS' INTERVIEWS

STAKEHOLDER GROUPS:

- Organizations involved in similar work
- Collaborating or partner organizations
- CAPER-BC staff
- Accessibility/Disability services staff
- Students

KEY THEMES

TECHNICAL SUPPORT



There is an overall agreement among the stakeholders that technical support is an important component of providing materials in alternate formats.

PUBLISHING INDUSTRY ADVOCACY



Most of the stakeholders recognize the importance of ongoing efforts to make the publishing industry more aware about accessibility needs of students with disabilities.

QUALITY OF PDF DOCUMENTS



A majority of stakeholders, especially students with disabilities, agree that a continuous quality improvement of the produced PDF documents is an important part of CAPER-BC's mandate.

ADVOCACY IN K-12 AND POST-SECONDARY SETTINGS



Most of the respondents agreed that it is imperative to ensure that students transitioning from K-12 to post-secondary settings can still access the services they need. Post-secondary system of disability accommodations can be confusing and stigmatizing. It was suggested that CAPER-BC can take up a more active role in helping students communicate their needs.



CAPER-BC Needs Assessment

SUMMARY OF STAKEHOLDERS' INTERVIEWS

"OUR JOB IS TO TAKE AS MUCH OF THIS STRESS AWAY. AND MAKE THEIR LEARNING EQUITABLE AND PROVIDE SERVICES SO THAT THEY CAN LEARN WITHOUT HAVING TO WORRY HOW THEY ARE GOING TO GET THEIR TEXTBOOK."

CAPER-BC STAFF MEMBER

COLLABORATION WITH PARTNER ORGANIZATIONS



There is an agreement among the respondents that consistent and close collaboration with other partner organizations on a range of accessibility projects strengthens CAPER-BC's quality of services.

PRODUCTION OF AUDIO AND TACTILE IMAGES



Individuals with visual impairments who rely on Braille and tactile images in K-12 environment experience challenges transitioning into post-secondary settings. Production of audio and tactile images can mitigate the transition stage.

COMMUNICATION



Most of the respondents agree that communication among faculty, students, CAPER-BC staff and accessibility services staff is essential to ensuring the quality of services.

ABOUT CAPER-BC

CAPER-BC is a publicly funded organization that provides print disabled BC post-secondary students with the accessible course material they need to succeed.

[HTTPS://CAPERBC.CA/](https://caperbc.ca/)

CAPER-BC Needs Assessment

SUMMARY OF STUDENTS' RESPONSES

110 respondents

Camosun College - 13

BCIT - 11

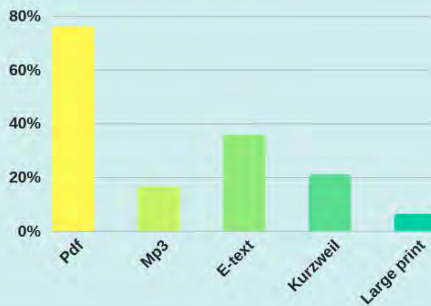
University of the Fraser Valley - 11

Vancouver Island University - 11

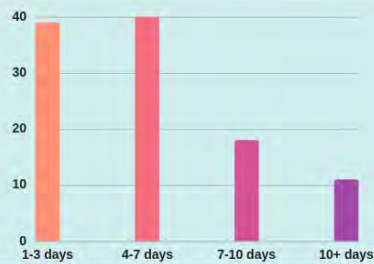
Douglas College - 10

North Island College - 9

MOST COMMON FIELDS OF STUDY:



WAIT TIMES:



TECHNOLOGY USED:



QUALITY OF SERVICES:

- 82.4% rated the quality of CAPER-BC services as Good and Very Good
- CAPER-BC is efficient, easy to work with, and the staff are friendly and accommodating.
- Great resource
- Overall it's good service, responses are quick and to the point.

KEY THEMES:

cost

I wish they had more textbooks already converted to pdf so that I didn't have to send any textbooks in. It's hard because of the size of some of my textbooks to have them coiled. It is also hard for me to send them away and be without a textbook for that period. I struggle with sending my textbooks off because after they are coiled, they can't be resold and education is expensive already and then not getting money back on textbooks is hard for students.

advocacy

I think the CAPER-BC staff were very respectful, helpful, and professional. The problem is the books and publishers. I hope to see CAPER-BC representatives at the upcoming Advocacy Week telling MLAs how important it is to mandate accessibility as a textbook adoption criterion and to invest in creation of accessible open education resources.

document navigation

The menu within the pdf that reads the text is a bit frustrating because you keep having to open sub-menus to adjust the read back settings.

It was relatively easy for me, but not particularly useful, because the text in PDF from OCR were prone to errors, misreads, irrelevant interjections, and other distractions.

WHAT WOULD IMPROVE THE QUALITY OF SERVICES?

More information/ awareness about services available

Technical assistance/ step-by-step guidance

Online request system/direct service model

Improved quality of existing formats

Phone app, better access on tablets, non-downloadable format

Background Information

Administrative data overview

College and Institute Library Services (CILS) was established in 1984 to assist colleges and institutes in British Columbia to acquire learning resources for students with print impairments in formats suitable for their use. The organization was renamed to Centre for Accessible Post-Secondary Educational Resources British Columbia (CAPER-BC) in 2014, to better reflect its mandate.

CAPER-BC serves clients who identify as print impaired; those who cannot effectively access conventional hard-copy print materials because of a visual, physical, perceptual, developmental, cognitive, or learning disability.

A total of 20 institutions currently work with CAPER-BC to ensure that their students with print disabilities have access to textbooks and other study materials.

- British Columbia Institute of Technology
- Camosun College
- Capilano University
- College of New Caledonia
- College of the Rockies
- Douglas College
- Emily Carr University of Art + Design
- Justice Institute of British Columbia
- Kwantlen Polytechnic University
- Langara College
- Nicola Valley Institute of Technology
- North Island College
- Northern Lights College
- Northwest Community College
- Okanagan College
- Selkirk College
- Thompson Rivers University
- University of the Fraser Valley
- Vancouver Community College
- Vancouver Island University

Formats produced

The most common format produced by CAPER-BC is PDF, followed by e-text and MP3.

PDF	687	75.7%
E-text	176	19.4%
MP3 (digital audio)	35	3.9%
Large Print	8	0.9%
Kurzweil	1	0.1%
Total	907	100.0%

Table 1: Formats produced by CAPER-BC to fulfill student request, 2017/18

Types of disabilities among CAPER-BC users

In the past decade, the number of students with learning disabilities who rely on CAPER-BC services has grown by more than 3 times, the number of students with physical disabilities by almost 7 times, and the number of students with a visual impairment by 1.6 times.

Number of productions and requests

The number of requests from post-secondary institutions has been growing steadily throughout CAPER-BC's history. Between 2008 and 2018, the number of requests has increased more than 300% (from 1,157 to 4,764). Despite the challenges of significant increases in demand year over year, CAPER-BC has maintained consistent high quality of productions and decreases in wait times by building an extensive centralized collection and capitalizing on technological advances. This approach allows CAPER-BC to accommodate an increasing number of clients by utilizing production efficiencies.

Summary of Current Service Model Cost-Benefit Analysis

Costs

- CAPER-BC is funded by the Ministry of Advanced Education, Skills and Training (AEST) with an annual budget of \$516,000 (Fiscal Year 2017/18).
- Despite a growing demand for services, there has not been an increase in CAPER-BC's base funding in over a decade.
- CAPER-BC has relied on increasing efficiencies and utilizing technological advances to continue to offer excellent service to an increasing number of students.
- Additional one-time Ministry funding (ranging from \$25,000 to \$125,000) was made available over several of the last few years. These extra funds contributed significantly to improved staffing, technological upgrades, and professional development initiatives to offer enhanced options for students, but do not allow for long-term, ongoing improvements that would require an increase to base funds.
- Langara College provides a home space as well as HR Resources to CAPER-BC. Due to the static nature of CAPER-BC's stable funding, Langara College has increasingly been called upon to provide support for CAPER-BC activities.

Benefits:

- CAPER-BC provides services that are instrumental for students with disabilities in post-secondary education settings.
- A total of 20 institutions are working with CAPER-BC to ensure that their students with print disabilities have access to textbooks and other academic materials.
- CAPER-BC increased the efficiency of its services by building an extensive centralized collection and capitalizing on the ability to borrow materials from partner libraries and organizations. During 2017/18, CAPER-BC fulfilled 58% of all requests from existing collections.

- Two of the six strategic priorities as outlined in CAPER-BC's mandate from AEST are related to building partnerships and collaboration with post-secondary institutions and organizations that do similar work provincially and nationally. There are a number of strategies used to build these partnerships, including:
 - conducting site visits;
 - developing and delivering training workshops;
 - conducting orientations for new accessibility services staff at mandated institutions;
 - reciprocal borrowing agreements with other alternate format providers.
- CAPER-BC has built a network of partnerships with numerous organizations, including:
 - Canadian DAISY Consortium;
 - Canadian Association of Educational Resource Centres for Alternate Format Materials (CAER);
 - Council of Post-Secondary Library Directors in BC (CPSLD);
 - Provincial Communication Access Service (PCAS);
 - Provincial Resource Centre for the Visually Impaired (PRCVI);
 - UBC Access and Diversity;
 - Assistive Technology BC (AT-BC);
 - Council of Senior Student Affairs Leaders in BC (CSSAL).
- CAPER-BC has also been involved in multiple advocacy efforts around accessibility and inclusion. For example, CAPER-BC has advocated for and collaborated on an Open Textbook accessibility project with BCcampus. In addition, other presentations around universal design as it relates to accessibility of educational materials have been delivered. The following is a select list of conferences that CAPER-BC has recently participated in:
 - BC Library Association Conference 2015 & 2019 – Presented sessions on accessibility topics;
 - Alternate Formats 101 – 2015;
 - Disability Resource Network of BC – 2016;
 - Can I actually use it? Testing open textbooks for accessibility – 2015;
 - 15th Annual Symposium on Teaching and Learning: Universal Design for all learners – 2016;
 - BCANDS Gathering 2019 – participated as a vendor.

Literature Review

The Canadian Library Association Working Group to define a National network for equitable library service (2005) reported that only around 5% of English language publications worldwide are ever made accessible for those with print-related disabilities¹. Consequently, students with print impairments do not have access to the wide range of resources available to their classmates.

In addition to the challenge presented by this reduced access to resources, many students with print-related disabilities do not always have accessible materials on the first day of class. Some reasons for delayed access to material include faculty not providing necessary information for students to make timely requests, students not making timely requests, publishers not providing timely access to alternative media, or the length of time necessary to produce complex materials in the alternate format requested.

Timely delivery of and access to materials in alternate formats has been shown to positively impact students' reading abilities and academic outcomes, the effective use of different technologies and alternate media over time, the effectiveness of different types of service delivery models, and the psychological benefits of alternate formats, such as attitudes towards school.²

There are several models of providing materials in alternate formats:

- 1) requesting an electronic copy of the textbook directly from publishing companies with a caveat that a majority of documents in electronic formats are not accessible and would require further modifications to make them accessible;
- 2) ordering an accessible copy from organizations like CAPER-BC who can either produce an accessible copy from a hard copy or request it from partnering organizations or resources like AccessText network or Bookshare;
- 3) in-house production using scanners and print conversion software (e.g., Fine Reader, OmniPage, Kurzweil).

Three major components that need to be taken into consideration when deciding which of these models to use to provide materials in alternate formats are the timeliness of delivery, accuracy of translation, and appropriateness of the format based on an individual's disability.

The review of existing literature on the provision of alternate formats shows that there is an increasing focus on the role of multiple stakeholders (including faculty) in the process of providing accessible education materials, as well as the economic barriers to accessing materials in alternate formats, and the ability of technology to help meet the educational needs of students with disabilities. This review is not comprehensive, but touches on a selection of the higher level aspects related to provision of educational materials in alternate formats.

¹ Opening the Books: A Strategy for National Network for Equitable Library Service for Canadians with Print Disabilities. (2005). Retrieved from http://cla.ca/wp-content/uploads/NNELS_FINAL_EN.PDF.

² Dallas, B. K., & Upton, T. D. (2011). Maximizing access to postsecondary educational print materials for students with print-related disabilities. *Journal of Applied Rehabilitation Counseling*, 42(1), 35.

Faculty and Universal Design of Instruction

Faculty play an important role in ensuring that students receive materials in alternate formats. There is increasing pressure in higher education environments for positive changes in student retention, learning, and outcomes, in addition to improvements in accountability and incorporation of evidence-based practices. Universal Design of Instruction (UDI) has been proposed as a viable answer to create a positive change for students with disabilities in higher education. This inclusive instructional approach could benefit diverse learners, including the 60% of students with disabilities who never disclose their disability while attending college.³ Many students feel conflicted about using disability support services on campus because they do not know how to be a self-advocate or what to advocate for. Students often acknowledge they do not understand if they are eligible for services and what kind of services they would obtain, presenting further challenges for the system of disability accommodations.⁴

UDI has the potential to lower costs by lessening the need for individual academic accommodations. For example, posting course notes online and choosing reading materials (e.g., textbooks) that are readily available in audio format decreases the need for hiring a human note taker and converting print reading materials to audio respectively. Technology is becoming more prevalent and easier to use, allowing faculty to deploy instructional techniques that are accessible for all students.

Textbook cost

Unfortunately, there is a dearth of reliable and publicly available data on student textbook spending in Canada. According to one survey of 1,350 university students across the country, the median undergraduate student spent \$385 during the fall 2012 semester on required course materials (Usher, 2015). Although two-thirds of these respondents indicated that they had bought all of their required textbooks, the proportion of students doing so dropped significantly as the cost of their textbooks rose. For example, whereas 82% of students whose textbooks totalled less than \$200 bought all of their textbooks, only 48% of those whose textbooks totalled more than \$800 did so. Another survey, this one of 1,530 post-secondary students in Ontario, found that the median student spent between \$301-\$400 during the Spring 2009 semester on required course materials, with 47% of the sample agreeing somewhat or strongly with the statement “Buying the latest editions of textbooks is usually a waste of money” and only 19% endorsing the statement “Instructors generally check the price of course materials before deciding to require them”.⁵

The high cost of tuition and textbooks can have a negative impact on potential students from lower socioeconomic backgrounds. High educational costs cause these individuals to be more prone to delay college enrollment than wealthier students. High textbook costs can also encourage students to take

³ Sprong, M. E., Dallas, B. K., & Upton, T. D. (2014). Post-secondary faculty attitudes toward inclusive teaching strategies. *The Journal of Rehabilitation*, 80(2), 12+. Retrieved from <http://link.galegroup.com.ezproxy.library.ubc.ca/apps/doc/A371189740/HRCA?u=ubcolumbia&sid=HRCA&xid=2621e317>.

⁴ Hong, B. S. (2015). Qualitative analysis of the barriers college students with disabilities experience in higher education. *Journal of College Student Development*, 56(3), 209-226.

⁵ Rajiv, S. J., & Jhangiani, S. (2017). Investigating the perceptions, use, and impact of open textbooks: A survey of post-secondary students in British Columbia. *International Review of Research in Open and Distance Learning*, 18(4) Retrieved from <http://ezproxy.library.ubc.ca/login?url=https://search-proquest-com.ezproxy.library.ubc.ca/docview/1934190047?accountid=14656>.

fewer classes per term, extending their time to graduation.⁶ Because individuals with disabilities already face higher risks of low income and lower employment rates, high textbook costs can be particularly disadvantaging to this population of potential students.

One of the initiatives that aims to address the problem of high textbook costs in British Columbia is the BCCampus Open Textbook initiative that focuses on providing open educational resources (OER). By increasing faculty adoptions of open textbooks, promoting OER collaboration, and facilitating the province's continued national and international leadership in OER innovation, BCCampus has been able to increase flexible teaching and learning options for educators and improve access to postsecondary education by saving students money on textbook costs.⁷ Due to the receipt of additional one-time funding in 2015, CAPER-BC was able to collaborate with BCCampus and Camosun College to create the BCCampus Open Education Accessibility Toolkit, a resource intended to provide resources for open textbook creators on how to ensure their resources are accessible. This collaborative project helps to ensure that accessibility is a consideration during the production of open resources, thus reducing the negative impacts of textbook expenses that are unique to the community of print impaired readers.

Supplementary materials present their own accessibility issues. These include online quizzes, study guides, three-dimensional models, animations, short videos, and interactive material that are stored remotely. These materials are accessed remotely by individual student license code (with no institutional license offered), and unavailable for remediation, through the publisher or otherwise. Even if they are available to accessibility staff, these online materials come in some of the most irremediable information formats. Unfortunately, some (like online quizzes or study guides) may be critical.⁸

Information and Communication Technology (ICT) for learning

For people with disabilities, the potential of ICT to reduce exclusion by breaking down barriers, increasing access to education, and improving education quality has been well documented. Technology can reduce or overcome barriers resulting from both the nature of the physical learning environment and methods of teaching delivery. Assistive technology of varying types exists to directly support the disabled student by reducing or overcoming the impact of a specific sensory, cognitive or physical impairment. Moreover, ICT can support independent learning for a disabled student by providing remote access to information in a variety of formats, including multimedia. For example, educational materials may be accessed through the internet, an institutional intranet, or a virtual learning environment. This can support multiple learning styles, facilitate communication with teaching staff and peers, and aid flexibility in assessment methods. As an effective way of enhancing the learning environment by presenting information and experiences in a variety of ways, accessible multimedia can be seen as a particularly powerful assistive technology in supporting effective learning.

⁶ Jung, E., Bauer, C., & Heaps, A. (2017). Higher education faculty perceptions of open textbook adoption. *International Review of Research in Open and Distance Learning*, 18(4) Retrieved from <http://ezproxy.library.ubc.ca/login?url=https://search-proquest-com.ezproxy.library.ubc.ca/docview/1934162809?accountid=14656>.

⁷ BCCampus 2017-18 Annual Report. Retrieved from <https://bccampus.ca/files/2018/06/2017-18-BCCampus-Annual-Review.PDF>.

⁸ Axelrod, J. (2018). Making materials accessible to students in higher education institutes: Institutional obligations, methods of compliance, and recommendations for future action. *Learned Publishing*, 31(1), 39-44. doi:10.1002/leap.1148.

Key findings and recommendations

Findings from Stakeholder Interviews

Stakeholders across all five groups agree that CAPER-BC is doing impressive work serving students. Organizations that are involved in similar work and collaborating or partner organizations who are directly involved in CAPER-BC's production process expressed how impressed they were with CAPER-BC's outputs, such as turnaround time and the quantity of different formats produced. The strength of collaboration between CAPER-BC and these organizations was rated as either *Strong* or *Very Strong*. Some recommendations were made as to how the collaboration could be even stronger. Overall, CAPER-BC's initiative in undertaking this research was seen as a testament to a commitment to continuous improvement of their services. Moreover, the respondents recognized that CAPER-BC's results have been achieved in an environment of limited resources.

Similarly, staff at Accessibility/Disability Services at mandated institutions rated CAPER-BC's quality of services mostly as *Very Good*. As well, it was noted that the quality of services has gotten better over time.

CAPER-BC staff reported that the quality of services has improved over the years. Changes in technology as well as production flows have facilitated the process. The services were rated as either *Good* or *Very Good*.

A total of 82.4% of the 110 students who responded to the survey rated the quality of services provided by CAPER-BC as *Good* (37.04%) and *Very Good* (45.37%).

These findings clearly suggest that levels of satisfaction with CAPER-BC are high among key stakeholders and along a range of important measures which pertain to production of materials in alternate formats. At the same time, there were a few specific areas where the findings appear to call for careful consideration of ways in which CAPER-BC can improve service offerings.

Summary of Key Themes from Stakeholder Interviews

Detailed descriptions of the interview themes are included in the tables later in the body of this report. Below is a summary of the main thematic areas that were identified as important for CAPER-BC to explore and consider in its programming. Most of the recommendations provided by the stakeholders are primarily a response to the broader changes in the sector (i.e.: increased demand for services, changes in technology). As well, a significant number of recommendations are encouragement to pursue projects that are already underway.

Advocacy – Strive to become a leading voice for accessibility in post-secondary education in British Columbia.

The interviews with stakeholders have identified that the provision of materials in alternate formats is a critical component of ensuring accessibility in post-secondary settings. Most of the respondents acknowledge that CAPER-BC's expertise goes beyond producing materials in alternate formats. Thanks to site visits and engagement in such initiatives as the BC Open Textbook Accessibility Toolkit project,

CAPER-BC is recognized as one of the leading experts in the area of accessible learning and is seen as an organization with a potential to take on a more proactive leadership role.

Another possible area for advocacy in which CAPER-BC has been encouraged to become further involved is the academic publishing industry. In recent years, the publishing industry has made significant progress towards accessibility in its standards. Publishers are starting to acknowledge that accessible publishing is aligned with their core mission to broadcast research and information to all constituents, as well as realizing that making publications more accessible makes them better for everybody. However, there is still a lot of work to be done in this area. CAPER-BC's commitment to serving clients who cannot use conventional print due to disabilities and its expertise in accessible formats should be utilized to facilitate stronger advocacy for accessibility within the publishing industry.

Collaboration and Communication – Work more closely with partners, mandated institutions, and students.

CAPER-BC is closely connected to organizations that provide similar services. However, survey respondents were interested in seeing more collaborative projects that focus on improving the transition experience of students moving from the K-12 system into post-secondary education, promoting publishing accessibility, and aligning technical support with the expertise of organizations such as AT-BC.

CAPER-BC staff works closely with Accessibility Services staff at mandated institutions. Stakeholders believe that closer collaboration with CAPER-BC can help mandated institutions serve as a stronger link between students and CAPER-BC.

Format Offerings – Provide more options for alternative formats, without reducing production speed or responsiveness.

Production related recommendations include the preferences that respondents shared about certain formats and their quality. Some of them expressed an interest in having audio, Braille, and tactile graphics formats available. Some respondents wanted CAPER-BC to focus on the quality of PDF documents as the quality of materials following simple optical character recognition (OCR) is not completely accessible.

Technology Support – Provide comprehensive technical support for working with alternate format materials.

Rapidly changing technology was one of the most prominent themes that was identified throughout the interviews. Most of the respondents commented on the increased complexity of technology and the technical support needed. Ensuring the continuity of services from providing materials in alternate formats to providing guidance on the use of software/hardware has been mentioned as one important areas of focus for CAPER-BC.

Priorities and projects arising within these themes

Advocacy

1. Advocate for accessibility in the academic publishing industry

a. Commercial publishers

Potential projects	Potential costs
Look to models in place at NNELS and AERO, set up system for publishers to proactively share files with CAPER-BC.	Any additional hardware and software to facilitate file sharing from publishers, time to work with publishers to develop sharing agreements.
Accessibility workshops for publishers.	Time to create workshops, money and expertise to run them, difficulty in gaining publisher buy-in.
Join Bookshare.	May be able to join for free, otherwise \$300 USD for up to 30 downloads.

b. Trades materials publishers

Potential projects	Potential costs
Work with Queen's Printer/ITA to ensure CAPER-BC receives copies of all trades modules as they come out – create a more proactive system instead of waiting for students to request.	Time on the part of Librarian to develop relationship with ITA.
Work with ITA to create born accessible materials - workshop for content creators?	Extra staff time to create and deliver a workshop on creating accessible trades materials.
Audit QP/ITA files, remediate prior to them going on sale.	Extra production staff needed for remediation work, need access to files prior to public release for sale to students.

c. In-house publishers at mandated institutions

Potential projects	Potential costs
Work with bookstores/print shops to support born accessible materials.	Increased travel budget to work more closely with remote institutions, temporary staffing increase to free up staff to focus on these projects.
Workshops for faculty (on what clean materials look like), print shop staff (on how to OCR and remediate electronic files).	
Encourage schools to offer electronic files as well as print options.	

2. Encourage and lead broad accessibility initiatives at mandated institutions

a. Accessible course packs

Potential projects	Potential costs
Work with Accessibility Services staff, bookstore/print shops, library staff, etc. at mandated institutions to develop policies to ensure course pack materials are born accessible.	Increased travel budget to work more closely with remote institutions, temporary staffing increase to free up staff to focus on these projects.

b. Faculty professional development

Potential projects	Potential costs
Offer professional development workshops for faculty at mandated institutions regarding accessibility topics.	Increased travel budget to work more closely with remote institutions, temporary staffing increase to free up staff to focus on these projects.

c. Improve accessibility of online education (including Learning Management Systems)

Potential projects	Potential costs
Work with mandated institutions educational technology or IT departments to increase awareness of accessibility issues in online education tools.	Increased travel budget to work more closely with remote institutions, temporary staffing increase to free up staff to focus on these projects.

Collaboration and Communication

1. Improve outcomes for students transitioning from the K-12 system into post-secondary

a. Reduce time needed for production of alternate format resources in their first semester

Potential projects	Potential costs
Earlier registration of students to CAPER-BC.	Difficulty in identifying students eligible for CAPER-BC services prior to enrollment. Need to work with Registrar Services and Accessibility Services at mandated schools.

b. Prepare students for entering postsecondary environment

Potential projects	Potential costs
Introduction of self-advocacy tools (such as an online workshop) for students.	Cost of developing and delivering these tools.

c. Advise students on best practices when approaching instructors for accommodations

Potential project	Potential costs
Development of self-advocacy tools such as descriptions of common accommodations or workshops on disclosure and working with faculty.	Cost of developing and delivering these tools.

d. *Prepare students for different formats and technology that they can be expecting*

Potential projects	Potential costs
Development and delivery of a toolkit for Accessibility Services offices on CAPER-BC specific transition issues, such as different formats and technology students may be expecting, and how to help introduce new technology to reluctant students.	Increased travel budget to work more closely with remote institutions, temporary staffing increase to free up staff to focus on these projects.

2. Strengthen relationship with partners, including AT-BC, PCAS, PRCVI, BCcampus

a. *Develop specific projects with partnering agencies that fulfill mandate of both organizations*

b. *Continue to pursue opportunities to promote BC's centralized service model*

Potential projects	Potential costs
Writing papers and presenting at conferences.	Travel and associated conference fees.

3. Improve communication/clarity with Accessibility Services offices at mandated institutions

a. *Increase understanding about services provided by different organizations in the sector*

Potential projects	Potential costs
Host a "mini-conference" (in collaboration with AT-BC, PCAS) for Accessibility Services staff. Provide in person and remote attendance options.	Technology to support remote attendance, cost of venue to host, time to develop content.

4. More direct line of communication with students

a. *Clarify the role of CAPER-BC within the larger post-secondary accessibility support environment (particularly with regard to the difference between CAPER-BC and AT-BC)*

Potential projects	Potential costs
Develop communication that will highlight the distinct roles and mandates of these separate programs.	Time needed to develop communication piece.

5. Closer relationship with Trades material publishers

See above notes for advocacy among academic publishers

Format Offerings

1. Math/STEM/Trades materials and other complicated resources

a. *Develop a proactive plan for MathML/dealing with complex resources*

b. *Educate Accessibility Services staff about options for complex resources and production timelines.*

2. Tactile Graphics/Braille

Potential projects	Potential costs
Become a resource for Braille/tactile graphics production recommendations for Accessibility Services offices.	Time to research options, communication outreach to mandated schools.
Produce Braille/tactile graphics in-house at CAPER-BC.	Small volume Braille printers cost ranging from \$1,800-\$5,000 USD, and large volume printers ranging from \$10,000-\$80,000USD (according to the American Foundation for the Blind). Training current staff in Braille Transcription (two year post secondary certificate) or hiring a Brailist (on contract or permanently). Cost of tactile graphics equipment would be less, but would still need significant investment in staff or training to make this happen.

3. Audio formats (human voice or synthetic)

Potential projects	Potential costs
Go back to producing audio format materials (examine if production was streamlined too much).	Extra production time for every request.
Explore a volunteer human voice program such as the one in place at UBC (while mindful of the Unionized environment CAPER-BC operates under).	Equipment and training costs for volunteers.
Create tutorials to walk Accessibility Services staff through creating their own audio files from CAPER-BC resources.	Time to create tutorials.

4. PDF Quality

PDF remediation experimentation already underway

Potential projects	Potential costs
Create minimum accessibility standards for PDF files.	Extra production time for every request.
Extend same standards to publisher files.	Extra production time for every request.

5. Address economic barriers that some students face

Potential projects	Potential costs
Advocate for textbook reimbursement/second copies to reduce hardship of having to send in textbooks.	Extremely expensive due to large number of requests/productions now undertaken by CAPER-BC each year.

Tech support

1. Accessibility Services Office staff/Faculty at mandated institutions

Potential projects	Potential costs
Create online tools to walk ASO staff through solutions to most common tech support issues.	Time to develop online tools, hardware/software needed to host and disseminate such tools.

2. Address the needs of students with a focus on those not eligible for AT-BC support

Potential projects	Potential costs
Create accessible online tutorials for working with common CAPER-BC formats with different types of technology.	Temporary staffing increase to free up staff to focus on these projects.

3. CAPER staff professional development

Potential projects	Potential costs
Develop comprehensive, proactive plan to get all staff up to speed on most common technical problems and how to solve them.	Staff time to participate in professional development activities, potential cost of outside experts for training programs.

Summary of Areas of Need and Cost Benefit Analysis for CAPER-BC

This section provides a summary of research findings from key stakeholder interviews, reviews of administrative data and literature review. The following tables are organized to report on the main priority needs and/or service gaps by key stakeholder groups as well as the evidence supporting the claim for the need. Each table outlines costs and benefits associated with the corresponding area of need. The following population groups are used to organize the main findings and possible next steps:

1. Organizations involved in similar works
2. Collaborating or partner organization
3. CAPER-BC staff
4. Accessibility/Disability Services staff
5. Students

There are some significant differences among organizations that are involved in similar work of producing materials in alternate formats. They differ in their targeted population groups (K-12 and post-secondary), mandate and formats provided (Braille is provided only at the K-12 level), extent of partnerships and collaborations, and the structure of the program.

Each priority need identified is placed within a specific CAPER-BC mandate area as identified in its funding letter.

A summary table is designated for each group, with each table being demarcated through a color change and title in the table heading.

Key Findings Related to *Organizations involved in similar work*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Maintaining, developing, and strengthening partnerships with other agencies, services and consortia through the creation and sharing of resource materials.	Build stronger collaboration with K-12 to introduce unfamiliar formats such as electronic Braille to K-12 educators and mitigate transition from K-12 to post-secondary environment.	<p>Interviewees agree that new postsecondary students experience a period of adjustment as they adapt to new environments. Students with disabilities must also become familiar with the process of arranging for accommodations. Postsecondary students are expected to advocate for themselves for any accommodations they require, which can be an unfamiliar and intimidating process.⁹</p> <p>In British Columbia, students with visual impairments have access to Braille in K-12 where such access is viewed as fundamental for literacy development.</p>	<ul style="list-style-type: none"> • Time to build connections with groups and individuals working with K-12 students. • Additional funding to develop and produce outreach tools. 	<ul style="list-style-type: none"> • Improved transition experiences for students with disabilities.
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the on-line community.	Continue to pursue MathML initiatives to improve access to students in trades and other technical fields.	<p>Organizations involved in similar work recognize the value of MathML format for addressing the increasing number of students with disabilities in trades and STEM courses. The production time of materials that contain formulas, graphs and other technical elements is longer than that for simpler formats. MathML can be an important component of transitioning from K-12 to post-secondary education.</p> <p>Formats like MathML need to be supplemented by the tactile equivalents both in schools and post-secondary institutions to ensure there is a smooth transition and that there is no steep learning curve for students who are used to having access to Braille in K-12.</p>	<ul style="list-style-type: none"> • Staff professional training. • Longer production time. 	<ul style="list-style-type: none"> • Improved access to textbooks from technical fields of study.

⁹ Ostrowski, C. P. (2016). Improving Access to Accommodations: Reducing Political and Institutional Barriers for Canadian Postsecondary Students with Visual Impairments. *Journal of Visual Impairment & Blindness*, 110(1), 15-25.

Key Findings Related to *Organizations involved in similar work*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers, and the on-line community.	Increase audio file production by exploring the option of recruiting volunteers to audio record certain textbooks.	<p>In August 2017, CAPER-BC changed their production policy to only provide mp3 format in exceptional circumstances. This policy change was enacted to reduce production costs and time, after an environmental scan indicated that CAPER-BC was one of only a minimal number of alternate format providers that still produced mp3 format. According to CAPER-BC's 2017-18 Annual Report, the average production time for mp3 file in 2017/2018 was 17.8 days compared to 9.6 days in 2015/2016. One of the ways that was suggested for reinstating the production of mp3 format while maintaining increased production efficiency is to develop a volunteer strategy that would focus on attracting volunteers willing to audio record textbooks and other materials. As an example, NNELS provides recording kits to volunteers at UBC Crane Library who are asked to do voice recordings of the books.</p> <p>Although the number of students with visual impairments and students who are blind has remained relatively the same over the years and the mp3 option is available, the interviewees recognized the value of having access to audio files.</p>	<ul style="list-style-type: none"> Cost of equipment to lend to volunteers. Resources for developing a volunteer program, including training to ensure quality of finished product. 	<ul style="list-style-type: none"> Increased access to textbook in audio format.

Key Findings Related to *Organizations involved in similar work*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Developing and delivering training tools and workshops to inform disability coordinators, librarians and related personnel and students about alternate formats, CAPER-BC services, and accessible on-line learning.	Build stronger relationships with publishers.	<p>Most of the interviewees agree that working closely with publishers is an important part of the overall strategy to improve production efficiency and the quality of produced materials.</p> <p>Collaboration with publishers include two main directions:</p> <ol style="list-style-type: none"> 1) Requesting and receiving original electronic files: <ul style="list-style-type: none"> • The quality of the file received directly from the publishers is much higher than the quality of the material that goes through Optical Character Recognition (OCR) and that might still require cleaning. 2) Advocacy efforts to make publishing industry more aware of accessibility and work towards making published materials more accessible to begin with. <ul style="list-style-type: none"> • Organizations like NNELS are actively involved in working with publishers in advancing accessible publishing. Their advocacy efforts include workshops for publishers, e-book audits as well as a conference that is aimed at bringing together a number of publishers together. 	<ul style="list-style-type: none"> • Time and resources needed for building partnerships with publishers. • Need to expand CAPER-BC's mandate to include publisher advocacy. • Costs of building infrastructure that would allow publishers to proactively share their files with CAPER-BC as they do with other organizations such as AERO. 	<ul style="list-style-type: none"> • Better access to materials in alternate formats at the publisher level. • A more comprehensive and proactive approach to accessibility and inclusion for students in post-secondary institutions.

Key Findings Related to *Organizations involved in similar work*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Developing and delivering training tools and workshops to inform disability coordinators, librarians and related personnel and students about alternate formats, CAPER-BC services, and accessible on-line learning.	Provide accessibility expertise to Open Textbook initiative.	The respondents expressed an opinion that with initiatives like Open Textbook, it is important for accessibility to be a key part of the production process. Currently, there is no guarantee that open textbooks put accessibility at the forefront. CAPER-BC can play a pivotal role in ensuring that the open textbook initiative takes into consideration the accessibility needs of students with disabilities.	<ul style="list-style-type: none"> Additional time and other resources for this initiative. 	<ul style="list-style-type: none"> Stronger collaboration with Open Textbook and other similar initiatives; Increased access of free and accessible materials for students.

Key Findings Related to *Collaborating or Partner Organizations*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Developing and delivering training tools and workshops to inform disability coordinators, librarians, and related personnel and students about alternate formats, CAPER-BC services and accessible on-line learning.	Take a greater leadership role in accessibility.	<p>Respondents agree that CAPER-BC plays a pivotal role in the post-secondary sector, however the transactional nature of services prevents CAPER-BC from assuming more leadership in the area of accessibility advocacy. Currently, there is more focus on day-to-day operations rather than on long-term vision. There is neither room for such leadership due to the production pressure nor is their funding for initiatives like that. There might be a need for governance and organizational review that will help define CAPER-BC's role more clearly.</p> <p>The changing education landscape also makes it necessary to re-evaluate CAPER-BC's role. Instructors structure their courses by engaging with a variety of different materials and media from textbooks to handouts, from online videos to textbooks' supplemental materials. CAPER-BC can utilize their expertise in the area to enhance the overall accessibility of education experience.</p>	<ul style="list-style-type: none"> Re-evaluation of CAPER-BC's current model. 	<ul style="list-style-type: none"> Opportunity to apply CAPER-BC's unique skills and role in promoting access on a bigger scale. Better responsiveness to the changing educational and technological environment.

Key Findings Related to *Collaborating or Partner Organizations*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
<p>Maintaining, developing, and strengthening partnerships with other agencies, services, and consortia through the creation and sharing of resource materials.</p> <p>Encouraging collaborative mechanisms with other provincial groups such as BCcampus and the British Columbia Electronic Library Network.</p>	<p>Focus on translating the participation of partner organization in each other's advisory committees into more specific, actionable projects.</p>	<p>Partner organizations are looking for more opportunities to collaborate on projects that specifically relate to transition of students with disabilities from K-12 to post-secondary environment.</p> <p>For example: CAPER-BC was involved in the production of the Accessibility Toolkit with BCCampus. How can CAPER-BC collaborate on similar projects with other partner organizations such as AT-BC, PCAS, PRCVI, etc?</p>	<ul style="list-style-type: none"> • Extra time necessary for librarians to take on these types of projects without detrimental effects on CAPER-BC's daily operations. • Budget for extra travel to partake in collaborative work. 	<ul style="list-style-type: none"> • Better transition from K-12 to post-secondary settings for students with disabilities. • More streamlined services provided by different organizations.

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
<p>Continuing to improve responsiveness to, and communication with, students, disability coordinators, librarians, and other stakeholders regarding requests for accessible resource material.</p> <p>Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students' needs.</p>	Continuously monitor opportunities for increasing efficiencies.	<p>Within the mandate, the quality of services is rated by staff as very good. Depending on the needs of the students as they relate to aspects of delivery, there is a significant degree of flexibility that staff exhibit. Staff responds to time pressure by providing students with sections of the produced material to ensure they have access to some material before the whole order is complete.</p> <p>In addition, over the years, a great deal of effort has been put into streamlining different aspects of service delivery, for example, the transition from CD to TitanFile delivery system; improvement of office space layout; and staff's proactive stance in educating themselves about emerging technology trends. The responsiveness to students' needs is reflected in the decision to start producing MathML format and decisions to stop producing certain formats like audio, that were based on survey results and conversations with stakeholders.</p>	<ul style="list-style-type: none"> • Pressure to maintain a high quality of services in the environment of limited resources, including precarious staff. • Student dissatisfaction due to decisions to stop producing certain formats. 	<ul style="list-style-type: none"> • Improved responsiveness and increased efficiency, including reduced delivery times.

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students' needs.	Continue improving the quality of PDF files.	<p>Rezoning, a process that allows to differentiate between a text portion from an image, table and figure portions, is very time consuming and is not possible with a high volume of requests that need to be fulfilled within a short timeframe.</p> <p>In addition, there are only two scanning stations, and that makes it challenging to ensure a high quality of each produced material.</p> <p>Yet, by improving the quality of PDF documents, there is a potential to increase the usability and the overall accessibility of the produced material.</p>	<ul style="list-style-type: none"> Increased turnaround time. Additional scanning station. Additional staff time. 	<ul style="list-style-type: none"> Improved quality of PDF files. Improved accessibility of materials.
Continuing to improve responsiveness to, and communication with, students, disability coordinators, librarians, and other stakeholders regarding requests for accessible resource material.	Continue improving communication with accessibility services staff at mandated institutions.	<p>CAPER-BC staff noted that communication related to the workflow is important for ensuring that materials sent to students meet their needs.</p> <p>Changes in Accessibility Services staff are not always communicated to CAPER-BC in a timely fashion, thus maintaining up-to-date contact information remains a challenge. More structured communication with Accessibility Services office staff would facilitate information exchange.</p>		<ul style="list-style-type: none"> Improved communication between Accessibility services staff and CAPER-BC staff.

Key Findings Related to CAPER-BC Staff

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
<p>Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the on-line community.</p> <p>Developing and delivering training tools and workshops to inform disability coordinators, librarians and related personnel, and students about alternate formats, CAPER-BC services, and accessible on-line learning.</p>	<p>Focus on improving the accessibility of other course material (besides textbooks) and work with faculty to educate them about the importance of prioritizing accessibility in the delivery of their teaching materials.</p>	<p>Some of the CAPER-BC staff noted the increasing importance of supplementary course materials. Instructors might not be aware of students' accessibility needs and might not have knowledge about how to make their delivery method accessible. Students might also be apprehensive about disclosing their disabilities to instructors for fear of negative consequences. Possible solutions could include disability awareness training for instructors, training for students and instructors on their respective rights and responsibilities, and guidelines for instructional best practices.¹⁰</p> <p>Moreover, with online modes of instruction becoming more prevalent, it is instrumental to ensure that students with perceptual disabilities have access to these materials.^{11 12}</p>	<ul style="list-style-type: none"> • Additional resources needed to develop capacity to work with supplementary course materials. • Potential resistance from instructors who have stronger connection with the Accessibility Services staff at their institution. • Need to work more closely with Accessibility Services staff and students at mandated institutions. 	<ul style="list-style-type: none"> • Improved classroom experience for students with disabilities.

¹⁰ Ostrowski, C. P. (2016). Improving Access to Accommodations: Reducing Political and Institutional Barriers for Canadian Postsecondary Students with Visual Impairments. *Journal of Visual Impairment & Blindness*, 110(1), 15–25. Retrieved from

<http://ezproxy.library.ubc.ca/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ccm&AN=112265633&site=ehost-live&scope=site>

¹¹ Developing Guidelines for Evaluating the Adaptation of Accessible Web-Based Learning Materials. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1108435.PDF>

¹² Universal design for online courses: applying principles to pedagogy. Retrieved from <https://www.tandfonline-com.ezproxy.library.ubc.ca/doi/abs/10.1080/02680513.2014.991300>

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers, and the online community.	Provide direct service to students.	<p>By allowing students to receive files directly rather than through the Titan file system, CAPER-BC staff have an opportunity to address any technical issues that students might have on the spot.</p> <p>There is a general agreement that some students who are not diagnosed and thus are not eligible to request accommodations are not receiving the services they need. If students do not want to self-disclose and/or they feel stigmatized if they do it, they might face significant barriers in their education and in accessing materials in alternate formats.</p> <p>The remote nature of CAPER-BC services and the current Canadian copyright environment make it difficult to create a direct conduit between students and CAPER-BC. Their Accessibility Services office is needed to assess their eligibility for CAPER-BC services, and copyright laws prevent the distribution of alternate format files to individuals who have not disclosed a print disability.</p>		

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
<p>Continuing to improve responsiveness to, and communication with, students, disability coordinators, librarians, and other stakeholders regarding requests for accessible resource material.</p> <p>Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students' needs.</p>	Provide more comprehensive technical support to students.	<p>The respondents recognized that the provision of materials in alternate formats exists in the context of the complex technological environment that is characterized by a fast pace of changes, diversity of the available software and hardware, and the varying degree of accessibility of this technology.</p> <p>There is an overall agreement that technical support is an important component of providing materials in alternate formats. For example, students may request help opening the files on their devices, assistance with text-to-speech programs, and information on how to use alternate formats on their Mac computers.</p> <p>Alternate formats are irrelevant without the use of certain technologies that make the access possible. It is this understanding that makes it important for CAPER-BC to move from what is currently characterized as a sporadic technical support toward a more comprehensive model. Regular staff technical training will ensure staff are more prepared to respond to technical support queries from students and accessibility services staff.</p> <p>A designated technical support person might be a valuable resource for students and accessibility services staff.</p>	<ul style="list-style-type: none"> • Additional resources needed to provide comprehensive technical support. • Additional staff training that might be needed. 	<p>Better continuity of services provided by CAPER-BC, AT-BC and Accessibility services staff at mandated institutions. Students who are not eligible for AT-BC services will find such services especially beneficial.</p>

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students' needs.	Continue balancing staffing needs with production needs.	<p>CAPER-BC staff assessed current staffing levels as satisfactory.</p> <p>One of the challenges that CAPER-BC continually faces is the uneven distribution of requests throughout the year resulting in unpredictable staffing needs. As a way to address this challenge, CAPER-BC relies on on-call staff. Langara's assistance with managing human resources facilitates the process of balancing staffing needs. However, the concern is that with an increasing demand for services and the complicated nature of technological changes it will be more complicated to meet the need and plan accordingly.</p> <p>It is also challenging to retain staff, maintain morale, and ensure all staff have proper training in these precarious positions. It is estimated by the staff that about 50-60% of what assistants do are learned on the job.</p> <p>Despite CAPER-BC being creative in addressing these challenges, some of the emerging issues related to staff turnover that affect service delivery are difficult to manage.</p>	<ul style="list-style-type: none"> • Risk of overestimating or underestimating staffing needs. • Potential challenges in retaining staff. • Continuous staff training. 	<ul style="list-style-type: none"> • More efficient use of resources.

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Developing and delivering training tools and workshops to inform disability coordinators, librarians and related personnel, and students about alternate formats, CAPER-BC services and accessible on-line learning.	Ensure the staff are provided with professional development opportunities to continuously improve the quality of services.	CAPER-BC staff shared their commitment to improving their skills. Some of the technical training has been undertaken only because additional funding became available. With new technology emerging all the time, more reliable funding will allow CAPER-BC to plan better for professional development opportunities.	<ul style="list-style-type: none"> • Identification of the most relevant professional development opportunities. • Additional resources that need to be dedicated to regular professional development work. 	<ul style="list-style-type: none"> • Improved quality of services.
Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students' needs.		CAPER-BC staff agree that the ongoing development of the repository will streamline the process by allowing Accessibility Services staff to bypass the request process and access the materials directly. The repository will eliminate the need for staff to process requests for items already held in CAPER-BC's collections. Instead, the disability services coordinators will either be able to download the materials directly or the CAPER-BC staff will be able to email the requested material directly to students.	<ul style="list-style-type: none"> • Resources to build and maintain the repository. • \$13,083.00 one-time set-up cost. • \$6,012.50 ongoing yearly cost. 	<ul style="list-style-type: none"> • More streamlined delivery of services. • Reduced turnaround for student requests. • More time for CAPER-BC staff to dedicate to production of new resources.

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Developing and delivering training tools and workshops to inform disability coordinators, librarians and related personnel, and students about alternate formats, CAPER-BC services and accessible on-line learning.	Continue providing training to Accessibility Services staff and librarians at mandated institutions.	<p>Accessibility Services staff at different institutions are an important connection between the students and CAPER-BC staff. If staff are not trained accordingly and do not have sufficient knowledge about alternate formats and CAPER-BC workflows, it makes CAPER-BC's processes less responsive to students' needs.</p> <p>As a result, the site visits and library tours that CAPER-BC Accessibility Librarians conduct are an important component of CAPER-BC's mandate. By educating the librarians and Accessibility Services staff at different institutions, CAPER-BC focuses on accessibility more broadly with a goal of facilitating student access.</p>	<ul style="list-style-type: none"> • Additional staffing to allow Accessibility Librarians time to develop training materials and travel to deliver workshops and other training. • Additional funding for travel. 	<ul style="list-style-type: none"> • Improved understanding of accessibility issues among staff at mandated institutions.
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers, and the online community.	Provide materials in tactile graphic formats.	Some staff also expressed an interest in exploring tactile graphic formats. The introduction of this format would require staff to develop new and specialized skills. CAPER-BC occasionally borrows such materials from PRCVI, however there is a limited number of materials in the PRCVI collection that can be used in post-secondary settings.	<ul style="list-style-type: none"> • Additional resources for training staff and acquiring equipment or identifying contractors who can provide the service. 	<ul style="list-style-type: none"> • Improved access to materials in alternate formats for students with visual impairments.

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Encouraging collaborative mechanisms with other provincial groups such as BCcampus and the British Columbia Electronic Library Network.	Build stronger collaboration with the publishers that focus on trades materials.	With the number of students with disabilities in trades fields growing, one of the areas that is recognized as an area of potential development is a collaboration with the provincial authorities and trades publishers with the goal of receiving information about materials that will be used in the trades education in upcoming academic periods. If copies of these materials could be provided to CAPER-BC ahead of time, there is the potential for more proactive creation of alternate format versions. Due to the condensed nature of many trades programs, this would help to ensure that students receive materials when they need them.	<ul style="list-style-type: none"> Dedicated time and resources for building collaboration with specific publishers and the provincial authorities. 	<ul style="list-style-type: none"> Improved access to materials with technical content.
Maintaining, developing and strengthening partnerships with other agencies, services, and consortia through the creation and sharing of resource materials.	Develop closer collaboration with AT-BC.	<p>CAPER-BC and AT-BC have had a long history of collaboration, however, there have not been any active collaborative projects between the two organizations.</p> <p>Based on the inseparability of alternate formats, hardware and software, some staff emphasized the importance of close collaboration with AT-BC in a form of regular workshops and even potential space sharing.</p>		<ul style="list-style-type: none"> Increased opportunity to learn from each other. Increased expertise in assistive technology among CAPER-BC staff and a deeper understanding of alternate formats among AT-BC staff.

Key Findings Related to *CAPER-BC Staff*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Encouraging collaborative mechanisms with other provincial groups such as BCcampus and the British Columbia Electronic Library Network.	Educate publishers and advocate for more accessible formats.	<p>Some respondents suggested that there should be multiple voices speaking up for students with disabilities in the publishing industry. The publishing industry exists in the realm of copyright laws and intellectual property regulations. Such context makes it challenging for CAPER-BC to navigate the process of requesting PDF copies of the textbooks. Although the electronic versions of the textbooks are not widely accessible, the quality of the publisher files tends to be higher than the quality of the scanned OCR files.</p> <p>Aiding in creating accessible open educational resources and working in concert with other interested parties can create a stronger collaborative voice for working toward accessibility within the current publisher and copyright environment.</p>	<ul style="list-style-type: none"> Designated resources for developing collaboration with the publishing industry. 	<ul style="list-style-type: none"> Reduction of turnaround time. Improved quality of materials in alternate formats.

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Continuing to improve responsiveness to, and communication with, students, disability coordinators, librarians, and other stakeholders regarding requests for accessible resource material.	Introduce changes to the current model by establishing a direct line of communication between CAPER-BC and students.	<p>Most of the accessibility services staff rated the quality of services as good or very good. CAPER-BC was described as responsive, timely, open and efficient. Instruments, such as the weekly pickup report, allow staff at mandated institutions to know whether a student has downloaded material. These reports were cited as another means of communication.</p> <p>Some respondents, however, expressed an interest in having direct communication between CAPER-BC staff and students to ensure a better troubleshooting if necessary. Also, some staff at accessibility services expressed an interest in letting students send requests directly to CAPER-BC bypassing the staff at accessibility offices. Such direct communication does not diminish the importance of the support provided by accessibility services staff in other areas.</p> <p>Overall, accessibility services staff expressed an interest in moving beyond the transactional nature of collaboration with CAPER-BC and move towards a wider accessibility framework.</p> <p>Some accessibility services staff recognized the potential of the BC model consisting of organizations with very specialized expertise like CAPER-BC, however, they believe that the full potential of this expertise is underutilized.</p>	<ul style="list-style-type: none"> Transition to a new model of service delivery. 	<ul style="list-style-type: none"> Better responsiveness to student concerns that might arise after they receive the requested material. Quicker turnaround time for student requests.

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Encouraging collaborative mechanisms with other provincial groups such as BCcampus and the British Columbia Electronic Library Network.	Build collaboration with publishers. As part of the initiative, increase collaboration with publishers, expand the subscription services to Bookshare and other similar services.	<p>Some accessibility services staff suggested that by requesting a file directly from the publishers, CAPER-BC can save considerable amount of time and focus on other priorities, such as technical support to students.</p> <p>Requesting books from publishers prior to receiving the requests from the institutions is suggested as a proactive alternative to the current approach.</p> <p>The supplemental content to the textbooks is becoming an important component of the learning package.</p> <p>Currently, some Accessibility Services office staff believe that access to materials received directly from publishers is individualized; that is, once the request for an item (usually a high-quality PDF file) is made on behalf of a specific student, and once the item is altered for accessibility and becomes available via CAPER-BC, it is available only to that student, who needs to provide a receipt as a confirmation that the hard copy of the book has been purchased.</p> <p>Many publishers will not allow requests without a specific person attached to them due to the way they interpret Canadian copyright law. This limits how proactive CAPER-BC can be in requesting materials in advance of student requests.</p>	<ul style="list-style-type: none"> • Designated time and other resources to develop collaborations with publishers. • Potential need to re-prioritize resources. 	<ul style="list-style-type: none"> • Faster turnaround time. • Better quality of some materials in alternate formats.

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the on-line community.	Produce tactile images.	<p>Some accessibility services staff reported that when some students request tactile images, the institutions have to contract organizations outside the province to provide them.</p> <p>For older non-traditional students who are used to a certain format, such as Braille, it is suggested that they have access to that option.</p> <p>CAPER-BC is currently neither mandated nor funded to produce tactile images.</p>	<ul style="list-style-type: none"> Staff resources and training. Specialized equipment necessary for tactile graphic production. 	Improved access to textbooks for students with visual impairments.
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the on-line community.	Improve the quality of PDF documents.	A number of accessibility services staff complained about the quality of the PDF documents that they receive. Students are reportedly having difficulty accessing the content using their screen-reading software.	<ul style="list-style-type: none"> Additional staff/equipment. Increased turnaround time for all productions, especially during periods of peak demand. 	Improved quality of materials in PDF format.

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the on-line community.	Produce audio and e-text files.	<p>Some institutions complained that the number of technical problems from students increased after CAPER-BC stopped producing audio files. Mp3 format files using automated voices are less preferable. Moreover, for students who are not used to using assistive technology, audio is one of the easiest formats to use.</p> <p>Some Accessibility Services coordinators felt that even though some student request e-text, the tendency is for CAPER-BC to provide them with a PDF file. As gatekeepers who determine students' accessibility needs, Accessibility Services staff want to make sure that their students' needs are met.</p>	<ul style="list-style-type: none"> Increased cost of producing materials in these alternate formats. Increased turnaround time for all productions. 	Improved access for students who cannot use PDF format.
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the on-line community.	Provide guidelines for production in Braille.	Some institutions reported that they occasionally receive requests from students who use Braille, and they have to identify contractors who provide this service. Among the vendors mentioned by the accessibility services staff are Canadian Braille Service and T-Base Communications. Although Accessibility Services staff agree that provision of Braille and tactile graphics might not be sustainable, they discussed the difficulties with identifying the vendors and working out the logistics with them. One of the ways that CAPER-BC can facilitate the provision of Braille services is through helping the institutions communicate the requirements for a tactile or Braille format.	<ul style="list-style-type: none"> Additional training for CAPER-BC staff. 	Improved access to students who rely on Braille.

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students' needs; Developing and delivering training tools and workshops to inform disability coordinators, librarians, and related personnel and students about alternate formats, CAPER services and accessible on-line learning.	Provide comprehensive technical support.	<p>Most of the Accessibility Services staff expressed an interest in CAPER-BC's technical support services. Some Accessibility Services staff reported they have a small number of students who do not use CAPER-BC services because they do not want to part with their book for a long time or because they are unsure whether the requested material will be compatible with their technology.</p> <p>An additional factor that makes technical support a great need is the complexity of navigating a system of accommodations as anew or recently diagnosed student or someone with little experience of using assistive technology. In addition, feelings of being overwhelmed and stigma are listed as some of the reasons why students might not be reaching out for help when they need it.</p>	<ul style="list-style-type: none"> • Designated staff time for technical support. • Technical training for staff in assistive technology. 	Better continuity between the provision of materials in alternate formats and technical support (hardware and software used).

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers, and the online community.	Work with faculty to improve accessibility of their course package materials.	<p>Considering the diversity of educational materials, it becomes increasingly important to ensure accessibility of all educational materials.</p> <p>Working with various stakeholders to create accessible course materials may reduce the need for CAPER-BC to produce class materials and other “consumables”, as instructors, librarians, and Accessibility Services staff at mandated institutions will have a better understanding of how to create born accessible educational materials.</p>	<ul style="list-style-type: none"> Additional staff and other resources. 	Improved classroom experience for students with disabilities.
Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students’ needs.	Streamline the current request process.	There have been suggestions to improve the process of requesting materials by eliminating the need to fill out the registration form and the request form simultaneously.	<ul style="list-style-type: none"> Time and other resources to explore ways to improve efficiencies. 	Improved efficiency of service provision.

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
<p>Continuing to improve responsiveness to, and communication with, students, disability coordinators, librarians, and other stakeholders regarding requests for accessible resource material.</p> <p>Developing and delivering training tools and workshops to inform disability coordinators, librarians, and related personnel and students about alternate formats, CAPER-BC services and accessible online learning.</p>	<p>Deepen collaboration between CAPER-BC and mandated institutions.</p>	<p>The overall quality of collaboration has been rated as very strong. However, the respondents recognized a potential for improving the quality of collaboration to include training guides (on the use of the website resources, staff training).</p>	<ul style="list-style-type: none"> Additional staff and other resources. 	<p>Better awareness about the services provided by both CAPER-BC and Accessibility Services Office at mandated institutions.</p>

Key Findings Related to *Accessibility Services*

Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the online community.	Advocate for textbook reimbursement.	<p>Some students experience a significant financial burden by having to purchase a hard copy of the book and have it converted into an alternate format.</p> <p>CAPER-BC used to refund students for the price of the textbook that students need to purchase to have it converted into an alternate format. This service is not available anymore. By having to buy new copies of the textbooks and often not being able to sell them, students with disabilities are disadvantaged compared to other students.</p> <p>Accessibility Services staff suggest that students might not be willing to mail in their textbook and have it rebound. Textbook cost can be a barrier to requesting CAPER-BC services.</p>	<ul style="list-style-type: none"> Time and other resources to pursue advocacy efforts. Assuming a relatively low assumption of an average textbook cost of \$100 CDN, the 889 productions undertaken by CAPER-BC in 2018/19 would have cost \$88,900 CDN to reimburse, almost one-fifth of CAPER-BC's entire operating budget. 	Improved access to CAPER-BC services for students who experience economic barriers.

Key Findings Related to <i>Students</i>				
Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing efficiencies by lending alternate formats, consulting on best solutions, communicating through a variety of electronic and personal means, and following up with surveys to determine students' needs.	<p>Provide an option to use the formats on different devices (iPhone, iPad) and in ways that do not require downloading.</p> <p>Develop an app to access the materials.</p>	Proliferation and high use of smart phones, iPads and readers makes the access to materials in alternate formats on these devices a preference that many students expressed. There was some confusion about the roles that Accessibility Services and CAPER-BC played in the process. There was an idea about developing a designated CAPER-BC app.	Costs to develop and implement tools that would allow more direct file sharing with students.	<ul style="list-style-type: none"> • More efficient student access to files. • Clearer understanding of the different roles of CAPER-BC, their Accessibility Services office, and AT-BC.
Continuing to improve responsiveness to, and communication with, students, disability coordinators, librarians, and other stakeholders regarding requests for accessible resource material.	Build more awareness about CAPER-BC's services and the kind of support available	<p>Some students noted that they would like more information available on the kinds of services provided by CAPER-BC.</p> <p>In the past, CAPER-BC communicated more frequently with students, but some expressed irritation at the quantity of communication. Balance is needed to ensure essential information is being conveyed without overwhelming students with too much outreach.</p>		
Developing and delivering training tools and workshops to inform disability coordinators, librarians, and related personnel and students about alternate formats, CAPER-BC services and accessible online learning.	Provide technical support.	A variety of formats and devices used to access them created a need for technical assistance in navigating access to the materials using different software and hardware.	Designated time and other resources to develop technical support tools.	<ul style="list-style-type: none"> • Less student difficulties when accessing resources. • Convenient tool to point students and Accessibility Services staff to when troubleshooting access issues.

Key Findings Related to <i>Students</i>				
Mandate	Priority Need	Evidence of Need/Potential Challenges	Costs	Benefits
Increasing learner access to alternate formats to ensure equity of access, support, institutional effectiveness, and program diversity by establishing and maintaining appropriate liaisons with clients, service providers and the online community.	Provide audio format	Some students expressed a need for audio format to become available.	Increased turnaround time for all requests	Improved student access to their preferred alternate format.
Continuing to improve responsiveness to, and communication with, students, disability coordinators, librarians, and other stakeholders regarding requests for accessible resource material.	Improve turnaround time.	Although more than 80% of respondents rated the quality of services provided by CAPER-BC as Good or Very Good, some students wanted a more time-efficient service. Most of them recognized that the publishing industry's willingness to provide textbook in accessible formats is one of the important factor in lowering the turnaround time.	Turnaround time corresponds closely with staffing levels. Additional funding would be necessary to add any permanent staff.	Quicker access to resources.

Appendix A

CAPER-BC Prioritization Matrix Workshop

The workshop was intended to narrow down a list of recommendations that were developed based on the qualitative interviews with five groups of stakeholders, including CAPER-BC staff. The goal of the workshop was to:

- develop consensus on what should be considered CAPER-BC priorities;
- generate project ideas associated with each priority recommendation.

The workshop consisted of a presentation that provided an overview of the main findings of the DRAFT report and explained the process of building a prioritization matrix.

After sharing the recommendations outlined in the DRAFT report, CAPER-BC staff were invited to share their thoughts on the information that had been shared with them.

CAPER-BC staff brought up on a few aspects of the recommendations and expressed an interest in pursuing some of them, however, a few points for consideration have been raised:

- **Tech support**
As much as there was an overall recognition of the importance of tech support, some staff emphasized the importance of involvement of other stakeholders, including accessibility services staff and IT personnel at the mandated institutions. Tech support requires multi-pronged approach due to its complexity.
- **Collaboration and communication**
Similar to tech support, transition support services for students who transition from secondary to post-secondary settings also requires a buy-in from other organizations such as PRCVI, AT-BC and others. Some staff shared their experiences of working with faculty at mandated institutions. There is still some resistance to adapt the learning materials to make them accessible for learners with different needs. One of the ways this reluctance can be overcome is through sharing best practices on creating accessible course pack materials. These best practices can be shared not only with faculty but also with bookstores, copyright office, print shops, and libraries to maximize the outreach.
- **Advocacy**
There were some concerns expressed about the recommendation to consider returning to the practice of book cost reimbursement for students. It was suggested that the project would require a significant administrative effort for CAPER-BC to undertake. Some staff expressed an interest in being an advocate for accessible formats on a provincial, rather than federal level. By focusing on the provincial level, there is a lot of potential for becoming a leading voice on accessibility issues.

Overall, one of the main concerns brought up during this discussion was a fear of taking on too many projects and initiatives that might become unsustainable if the funding level is not maintained or increased year-to-year.

Workshop Outcomes

Nine CAPER-BC staff were broken down into three groups that were assigned to evaluate each group of recommendations that consisted of Advocacy, Collaboration and Communication, Tech Support and Format Offerings using the criteria of Impact and Do-ability.

Based on preliminary research and CAPER-BC staff's input, "Do-ability" (positioned across the matrix axis) was defined by the following characteristics:

- cost,
- effort,
- maintaining existing service,
- mandate/support,
- time (short-time/long-term/time constraints),
- involvement of other groups/dependencies.

Meanwhile, "Impact" (positioned down the matrix axis) included the following characteristics:

- change in structure,
- change in mandate,
- change in nature of work,
- change of knowledge,
- change in culture,
- benefits for stakeholders (from minimum to maximum).

Depending on how easy/hard the recommendations were for their Do-ability and on how low/high the Impact was, each team assigned a specific recommendation (written on post-it notes of different colours) to a specific place on the matrix.

A significant number of recommendations were rated as High Impact and Hard to Do. Essentially, all these recommendations were clustered in the top left corner of the matrix. Among such recommendations are some related to Format Offerings, Collaboration and Communication, and Advocacy. Among some of the Do-ability concerns expressed by the group are:

- develop closer relationships with trades materials' publishers,
 - buy-in is needed;
- address economic barriers that students face (textbook reimbursement),
 - not part of the mandate,
 - too much administrative burden on CAPER-BC.

The following recommendations were agreed upon by CAPER-BC staff:

- continue improving the quality of PDF documents,
- collaborate with accessibility services staff on potential opportunities to connect with faculty,
- provide expertise on universal design,
- collaborate with in-house publishers and educate them on accessible publishing practices,
- seek out and engage in professional development opportunities,
- provide tech support but ensure that a range and scope of projects is clearly defined.

The final part of the workshop focused on developing ideas for projects associated with a list of agreed upon recommendations that CAPER-BC has collectively decided to move forward on.

Continue improving the quality of PDF documents:

- communication with clients,
 - costing;
- purchase software,
- develop and deliver training webinars.

Collaborate with accessibility services staff on potential opportunities to connect with faculty:

- introductory package for new Accessibility Services staff,
- video about CAPER-BC's services,
- development and distribution of flyers,
- sort out the mailing list.

Provide expertise on universal design:

- information on the website about availability of universal design training,
- information about Open Textbook initiative,
- best practices course pack,
- encourage accessibility services to share.

Appendix B

Survey for mandated institution Accessibility/Disability Services staff

As you may be aware, SPARC BC has been contracted by the CAPER-BC to conduct a Needs Assessment and Cost Benefit Analysis. As a staff member at an institution within CAPER-BC's service mandate, you have important experiences and insights that can inform the findings of the Needs Assessment. By completing this important survey, you are making it possible to understand how CAPER-BC meets the needs of its clients and what it can do to improve.

The survey should take approximately 20 minutes to complete. Your participation in the survey process is entirely voluntary. You may skip any question that you do not want to answer and you may end the survey at any time. Any information that is collected will be reported in thematic and/or summary format only. Your responses will remain anonymous, unless you provide written consent to have a specific comment attributed to you or your organization. Any requests for the use of non-anonymous quotes will be submitted by a representative of SPARC BC in follow up to the interview.

So we do not miss anything you might say, we would like to record this conversation so we may transcribe this interview. Once we finish transcribing this interview, the audio will be deleted.

By participating in this interview, you are consenting to have this information used by SPARC BC to complete a needs assessment and cost benefit analysis for CAPER-BC.

1. Do you agree to participate in this survey?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

2. What institution do you work for and what is your role there?

3. How would you rate the quality of services provided by CAPER-BC?

1	2	3	4	5	6
Very poor	Poor	Fair	Good	Very good	Don't Know/No Opinion

4. What can be done to improve them and why?

5. How has the quality of services provided by CAPER-BC changed over the course of your experience working with them?

1	2	3	4	5	6
Gotten much worse	Gotten slightly worse	Stayed the same	Gotten slightly better	Gotten much better	Don't Know/No Opinion

6. What are the biggest factors contributing to changes in the quality of CAPER-BC services over time?

7. Are there any services that should be provided in addition to the existing services?
 Yes
 No
 Please specify: _____
8. What are the main challenges facing students that require materials in alternate formats?
9. Is there any follow-up in the event of cancelled requests?
 Yes
 No
 Please specify: _____
10. Do you provide any technical support to students?
 Yes
 No
 Please specify: _____
11. How does technical support facilitate or hinder the quality of services?
12. Are there any students who might not be receiving the services that they need or who are underserved by CAPER-BC?
 Yes
 No
 Please specify: _____
13. How can CAPER-BC ensure that all students who need their services receive them?
14. How would rate the strength of collaboration between CAPER-BC and the Accessibility Services staff at mandated institutions?
- | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------|-----------------|-------------------|--------|-------------|-----------------------|
| Not at all strong | Slightly strong | Moderately strong | Strong | Very strong | Don't Know/No Opinion |
15. What can be done to improve this collaboration?
16. Do you work with publishers?
 Yes
 No
17. What role do publishers play in facilitating/hindering the work of converting materials into alternate formats?
18. What is the impact of the rising demand on CAPER-BC over the last few years?

Appendix C

Survey for CAPER-BC staff

As you may be aware, SPARC BC has been contracted by the CAPER-BC to conduct a Needs Assessment and Cost Benefit Analysis. As a CAPER-BC staff member, you have important experiences and insights that can inform the findings of the Needs Assessment. By completing this important survey, you are making it possible to understand how CAPER-BC meets the needs of its clients and what it can do to improve.

The survey should take approximately 15-20 minutes to complete. Your participation in the survey process is entirely voluntary. You may skip any question that you do not want to answer and you may end the survey at any time. Any information that is collected will be reported in thematic and/or summary format only. Your responses will remain anonymous, unless you provide written consent to have a specific comment attributed to you or your organization. Any requests for the use of non-anonymous quotes will be submitted by a representative of SPARC BC in follow up to the interview.

So we do not miss anything you might say, we would like to record this conversation so we may transcribe this interview. Once we finish transcribing this interview, the audio will be deleted.

By participating in this interview, you are consenting to have this information used by SPARC BC to complete a needs assessment and cost benefit analysis for CAPER-BC.

1. Do you agree to participate in this survey?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

2. What is your role at CAPER-BC?

3. How would you rate the quality of services provided by CAPER-BC?

1	2	3	4	5	6
Very poor	Poor	Fair	Good	Very good	Don't Know/No Opinion

4. What can be done to improve them and why?

5. How has the quality of services provided by CAPER-BC changed over the course of your employment?

1	2	3	4	5	6
Gotten much worse	Gotten slightly worse	Stayed the same	Gotten slightly better	Gotten much better	Don't Know/No Opinion

6. What are the biggest factors contributing to changes in the quality of CAPER-BC services over time?

7. Are there any services that should be provided in addition to the existing services?
 Yes
 No
 Please specify: _____
8. What are the main challenges facing students that require materials in alternate formats?
9. Is there any follow-up in the event of cancelled requests?
 Yes
 No
 Please specify: _____
10. Do you provide any technical support to students?
 Yes
 No
 Please specify: _____
11. How does technical support facilitate or hinder the quality of services?
12. Are there any students who might not be receiving the services that they need or who are underserved by CAPER-BC?
 Yes
 No
 Please specify: _____
13. How can CAPER-BC ensure that all students who need their services receive them?
14. How would rate the strength of collaboration between CAPER-BC and the Accessibility Services staff at mandated institutions?
- | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------|-----------------|-------------------|--------|-------------|-----------------------|
| Not at all strong | Slightly strong | Moderately strong | Strong | Very strong | Don't Know/No Opinion |
15. What can be done to improve this collaboration?
16. Do you work with publishers?
 Yes
 No
17. What role do publishers play in facilitating/hindering the work of converting materials into alternate formats?
18. What is the impact of the rising demand on CAPER-BC over the last few years?

Appendix D

Survey for collaborating or partner organizations/institutions

CAPER-BC Advisory Committee includes representatives from the following organizations:

- Assistive Technology BC
- The Council of Post-Secondary Library Directors
- Vancouver Community College Program for the Visually Impaired
- Industry Training Authority
- BCcampus

The role of the advisory committee is to advise CAPER-BC of student needs, give feedback on products and services provided by CAPER-BC, and share information about needs, trends, opportunities, and technology.

As you may be aware, SPARC BC has been contracted by the CAPER-BC to conduct a Needs Assessment and Cost Benefit Analysis. As an organization that collaborates with CAPER-BC, you have important experiences and insights that can inform the findings of the Needs Assessment. By completing this important survey, you are making it possible to understand how CAPER-BC meets the needs of its clients and what it can do to improve.

The survey should take approximately 20 minutes to complete. Your participation in the survey process is entirely voluntary. You may skip any question that you do not want to answer and you may end the survey at any time. Any information that is collected will be reported in thematic and/or summary format only. Your responses will remain anonymous, unless you provide written consent to have a specific comment attributed to you or your organization. Any requests for the use of non-anonymous quotes will be submitted by a representative of SPARC BC in follow up to the interview.

So we do not miss anything you might say, we would like to record this conversation so we may transcribe this interview. Once we finish transcribing this interview, the audio will be deleted.

By participating in this interview, you are consenting to have this information used by SPARC BC to complete a needs assessment and cost benefit analysis for CAPER-BC.

1. Do you agree to participate in this survey?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

2. What services do you provide?

3. In what capacity does your organization work with CAPER-BC?

4. How would rate the strength of collaboration with CAPER-BC?

1	2	3	4	5	6
Not at all strong	Slightly strong	Moderately strong	Strong	Very strong	Don't Know/No Opinion

5. How can this collaboration be improved to further facilitate student access to alternate format materials?

6. How would you rate the quality of services provided by CAPER-BC?

1	2	3	4	5	6
Very poor	Poor	Fair	Good	Very good	Don't Know/No Opinion

7. Would you say CAPER-BC services have improved, worsened, or stayed about the same over the history of your collaboration?

8. Are there any services that CAPER-BC should be providing in addition to the existing services?

9. How important are CAPER-BC's services to the BC Post-Secondary community?

1	2	3	4	5	6
Not at all important	Slightly important	Moderately important	Important	Very important	Don't Know/No Opinion

10. Are there any students who might not be receiving the services that they need or who are underserved by CAPER-BC?

11. How can CAPER-BC ensure that all students who need their services receive them?

12. What is the impact of the rising demand on CAPER-BC over the last few years?

13. What are the main challenges facing students with disabilities in accessing education?

Appendix E

Survey for Students

As you may be aware, SPARC BC has been contracted by the CAPER-BC to conduct a Needs Assessment and Cost Benefit Analysis. As a recipient of CAPER-BC services, you have important experiences and insights that can inform the findings of the Needs Assessment. By completing this important survey, you are making it possible to understand how CAPER-BC meets the needs of its clients and what it can do to improve.

The survey should take approximately 20 minutes to complete. Your participation in the survey process is entirely voluntary. You may skip any question that you do not want to answer and you may end the survey at any time. Any information that is collected will be reported in thematic and/or summary format only. Your responses will remain anonymous, unless you provide written consent to have a specific comment attributed to you or your organization. Any requests for the use of non-anonymous quotes will be submitted by a representative of SPARC BC in follow up to the interview.

So we do not miss anything you might say, we would like to record this conversation and transcribe the interview. Once we finish transcribing this interview, the audio will be deleted.

By participating in this interview, you are consenting to have this information used by SPARC BC to complete a needs assessment and cost benefit analysis for CAPER-BC.

1. Do you agree to participate in this survey?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

2. What post-secondary institution do you attend?
3. What do you study?
4. What alternate formats do you request from CAPER-BC?
- ☐ PDF
 - ☐ MP3
 - ☐ E-text
 - ☐ Kurzweil
 - ☐ Large print
5. How did you learn about CAPER-BC and the services that it provides?
6. On average, how long do you have to wait for the requested material?
- ☐ 1-3 days
 - ☐ 4-7 days
 - ☐ 7-10 days
 - ☐ More than 10 days

7. Do you require any format that is NOT provided by CAPER-BC?

Yes

No

If yes, please specify: _____

8. Please rate how easy it is to navigate the materials that you receive from CAPER-BC

1	2	3	4	5
Not at all easy	Somewhat easy	Easy	Very easy	Don't Know/No Opinion

9. Do you use CAPER-BC services more during a certain time of the semester?

Yes

No

If yes, please specify: _____

10. Have you ever had to cancel your request to have the material(s) converted into alternate formats?

Yes

No

If yes, why? _____

11. How would you rate the quality of services provided by CAPER-BC?

1	2	3	4	5	6
Very poor	Poor	Fair	Good	Very good	Don't Know/No Opinion

12. Where else do you access materials in alternate formats from?

13. Do you use open textbooks?¹³

Yes

No

If yes, please specify: _____

14. If yes, do you find open textbooks easy to use and navigate?

15. What types of technology do you use to access materials in alternate formats?

¹³ Open textbooks are high-quality college texts with an "open" copyright license allowing the material to be freely accessed, shared and adapted. Open textbooks are typically distributed online at no cost and can be purchased in a variety of other print and digital formats at a low cost, including hard bound copies. Retrieved from <https://studentpirgs.org/open-textbooks/about>

16. Are the instructors and other staff at your institution understanding of your accessibility needs?

1	2	3	4	5	6
Not at all understanding	Slightly understanding	Somewhat understanding	Moderately understanding	Very understanding	Don't Know/No Opinion

17. What would help improve your access to materials in alternate formats and why?

18. Are you eligible for Canada Student Grant for Students with Permanent Disabilities (CSG-PD)¹⁴?

Yes

No

Not sure

¹⁴ Non-repayable grant of up to \$8,000 per program year for full-time or part-time students for the purchase of exceptional education-related services and/or equipment. Retrieved from https://studentaidbc.ca/sites/all/files/form-library/appendix_8.PDF

Appendix F

Survey for organizations involved in similar work

As you may be aware, SPARC BC has been contracted by the CAPER-BC to conduct a Needs Assessment and Cost Benefit Analysis. As an alternate format provider offering similar services to CAPER-BC, you have important experiences and insights that can inform the findings of the Needs Assessment. By completing this important survey, you are making it possible to understand how CAPER-BC meets the needs of its clients and what it can do to improve.

The survey should take approximately 20 minutes to complete. Your participation in the survey process is entirely voluntary. You may skip any question that you do not want to answer and you may end the survey at any time. Any information that is collected will be reported in thematic and/or summary format only. Your responses will remain anonymous, unless you provide written consent to have a specific comment attributed to you or your organization. Any requests for the use of non-anonymous quotes will be submitted by a representative of SPARC BC in follow up to the interview.

So we do not miss anything you might say, we would like to record this conversation so we may transcribe this interview. Once we finish transcribing this interview, the audio will be deleted.

By participating in this interview, you are consenting to have this information used by SPARC BC to complete a needs assessment and cost benefit analysis for CAPER-BC.

1. Do you agree to participate in this survey?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

2. What organization do you represent?

3. How do students know about your organization and the services that it provides?

4. What types of alternate format materials do you provide? (Mark all that apply)

- ☐ PDF
- ☐ MP3
- ☐ e-text
- ☐ Kurzweil
- ☐ Large print
- ☐ EPub
- ☐ E-book
- ☐ Other: _____

5. What alternate formats are requested most commonly from your organization?

6. What is your organization's average turnaround time?
7. Do you rely on borrowing materials from partnering organizations?
Yes
No
If yes, how often do you rely on borrowing materials and what is the average response time to provide a borrowed material to a student?
8. As a provider of alternate materials to students, how do you ensure production efficiency?
9. What do you think has the most significant impact on your ability to provide clients with alternate format materials in a timely fashion?
10. Do you provide technical support to students?
Yes
No
If yes, please specify: _____
11. How does technical support facilitate or hinder the quality of services?
12. Do you collaborate with other organizations that support your work
Yes
No
If yes, please specify: _____
13. Do you work with publishers
Yes
No
14. What role do publishers play in facilitating/hindering the work of converting material into alternate formats?
15. Do you manipulate publisher files to make them more accessible?
16. Do you work with open textbooks?
17. If yes, do you find open textbooks more or less accessible than resources from the more traditional publishing model?