



ACCESSIBLE PUBLISHING

RESEARCH PROJECT

*Association of Canadian Publishers
and eBOUND Canada*

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Canada

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Sponsoring Organizations

ACP is the national voice of English-language Canadian-owned book publishers. ACP contributes to the development and maintenance of vibrant, competitive book publishing companies, professionally managed, and owned and controlled in Canada, in order to support and strengthen the contribution that Canadian books make to Canada's cultural, economic and educational landscape. More information about ACP and its 115 members can be found at www.publishers.ca.

eBOUND Canada was incorporated in 2011 as a not-for-profit corporation. eBOUND Canada is a wholly-owned subsidiary of the ACP. It evolved from Canadian Publishers Digital Services, established by the ACP in March 2009, with the vision of making Canada a world leader in using digital technology to make every Canadian book—past, present and future—available and accessible to readers in Canada and around the world. eBOUND's mandate is to enable independent Canadian publishers to engage in the digital marketplace no matter their size or level of expertise. More information about eBOUND can be found at www.eboundcanada.org.

Research Organizations

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CENTRE FOR EQUITABLE LIBRARY ACCESS

The Centre for Equitable Library Access (CELA) is an accessible library service, providing books, magazines and newspapers to people with print disabilities in Canada in the formats of their choice. CELA's mission is to support public libraries in Canada in the provision of accessible collections for people with print disabilities in equal measure to that which is enjoyed by other members of their communities, and to champion the fundamental right of people with print disabilities to access media and reading materials in the format of their choice.

Rina Hadziev is the Executive Director of CELA. She was a member of the CELA board from 2016–2019 and has played a key role advocating for improved access to ebooks and digital audiobooks for libraries and their patrons through her participation with the Canadian Urban Libraries Council Digital Content Working Group. Rina has over 15 years of experience in public library leadership, with roles in public services, collections and technical services.

NNELS

The National Network for Equitable Library Service (NNELS) is a digital public library of books for people with print disabilities in Canada, and an advocate for an accessible and equitable reading ecosystem for all people in Canada. The goals of NNELS are to build capacity and employment opportunities for people with print disabilities, to advance the agenda of “born accessible” publishing, and to develop and maintain a digital

repository of accessible books for people with print disabilities in Canada, delivered through the network of public libraries in Canada.

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Introduction from Association of Canadian Publishers and eBOUND

In March 2019, the Government of Canada announced an investment of \$22.8 million over five years for the development of an initiative to support the sustainable production and distribution of accessible digital books by Canadian independent publishers. This funding will flow through the Canada Book Fund (Department of Canadian Heritage), with the goal of enhancing capacity so that books are “born accessible” as part of the digital production process. The initiative is market focused and is intended to shift the supply of accessible books from a system that largely relies on an exception to the *Copyright Act*, to one where accessible books are commercially available to individual and institutional customers at the time of publication.

At the invitation of the Canada Book Fund, the Association of Canadian Publishers (ACP) and eBOUND Canada and l'Association nationale des éditeurs de livres (ANEL) developed complementary proposals to conduct research intended to lay the groundwork for future phases of the national initiative. ANEL assumed responsibility for examining the Quebec and Canadian French-language market, with ACP and eBOUND conducting a parallel study in the English-language market.

With the funding support of the Canada Book Fund, ACP and eBOUND's research took place between October 2019 and March 2020 and included the following components:

- i. **An analysis of the current landscape for the production and distribution of accessible digital books in Canada, and potential market development for these books in the Canadian English-language market.**
- ii. **Recommendations for the implementation of a national standards and certification program, including defining the characteristics of an accessible digital book.**
- iii. **Development of a national strategy for awareness and training around accessible books for the publishing industry and related sectors.**

The research was conducted by publishing consultants and library professionals with complementary skill sets and subject matter expertise. The consulting teams had access to ACP and eBOUND's Accessible Publishing Advisory Panel, which includes publishers with technical knowledge of ebook production and standards, and also those with backgrounds in sales and marketing. Members provided input to the scope of the research, acted as a resource for ACP and eBOUND staff and the consultants throughout the project, and were given the opportunity to validate the project's findings before publication. A summary of project components follows:

i. Landscape Review

Consultants conducted a 360 review of the Canadian supply chain for accessible books outside of Quebec—from publisher to reader. Their work relied on a combination of existing and original research and was complemented by market research focused on readers with print disabilities, which was conducted by the National Network for Equitable Library Services (NNELS).

The landscape review includes:

1. *An assessment of the current availability of Canadian accessible books, both commercially and through libraries;*
2. *Identification of key players, devices and reading apps in the accessible books sector with respect to production, discovery, distribution, promotion, certification, etc.;*
3. *Review of publishers' current editorial and production workflows for accessible books;*
4. *Identification of challenges and gaps in the sector, including any technological issues currently impeding the consumption of accessible books; and*
5. *Market research on reading habits and preferences of people with print disabilities, including review of reading device functionality and apps, both library and commercial.*

ii. Standards and Certification

Research on existing accessibility standards and certification programs was conducted to help inform consultation on a common national standard for accessible ebook and audiobook production. This research was conducted with the understanding that any Canadian standard or program must be compatible with international standards. In their analysis, the consultants addressed issues of implementation and certification, and considered requirements for implementation for different types of books (e.g., fiction, non-fiction, illustrated children's books, other illustrated books, textbooks, cookbooks, etc.) in both accessible ebook and audiobook formats.

In making their recommendations, the consultants have:

1. *Reviewed existing standards developed by the international publishing and accessibility communities;*
2. *Researched past work in other jurisdictions (e.g., Italy, France and Australia); and*
3. *Studied the feasibility of implementing a certification program (e.g., Benetech) in Canada.*

iii. Awareness and Training Strategy

The report includes a recommended training strategy for the Canadian English-language publishing sector to inform training and professional development from 2020–2021 through 2023–2024 (the timeframe of the Government of Canada’s accessible publishing initiative). The plan leverages existing resources, programs and expertise wherever possible. The proposed strategy is also intended to raise awareness for the initiative across the Canadian publishing industry. A complementary strategy for the public library sector was developed in partnership by NNELS and the Centre for Equitable Library Access (CELA).

In developing these strategies, consultants:

1. *Took an inventory of existing training programs on accessible books and publishing;*
2. *Identified training gaps that needed to be filled for different stakeholders (e.g., publishing, librarians, retailers and others); and*
3. *Developed a training and awareness strategy for publishers and libraries in consultation with those communities.*



Part One: Landscape Review

A) “How do YOU Read?”, The Reader Perspective (NNELS)

EXECUTIVE SUMMARY

The “How do YOU Read?” study, conducted by the National Network of Equitable Library Service (NNELS), collected input from over six hundred people about the reading habits, needs and preferences of people with print disabilities in Canada. This summary conveys the study’s key findings and recommendations. The study’s supporting data can be found in the remainder of the report.

“I appreciate being able to speak about this, and hope that my voice is heard and it has a result.”

– “How do YOU Read?” focus group participant

KEY FINDINGS

1. Of the over six hundred people with print disabilities who participated in the “How do YOU Read?” study, most want and need a much greater number and selection of accessible books. Only 10% of survey respondents found it “very easy” to find sufficiently accessible books. There is a major need for more accessible books. This is essential for full inclusion of people with print disabilities.
2. Even if books are technically accessible, reading is often overly difficult to achieve. A very high number of study participants stated that learning and using book-reading technologies was very difficult, inconvenient and time-consuming.
3. There is a growing awareness that people with learning disabilities make up a greater percentage of people with print disabilities than has been previously understood; therefore, more research in this area is urgently needed, and outreach and services for people with learning disabilities need to be expanded.
4. Many people with print disabilities do not know about or are not able to take advantage of the resources, services and technologies that are available to them. This is especially true among groups that are currently under-served by these resources: readers of French, people with learning disabilities, physical disabilities and low vision, women, low-income people, Indigenous Peoples, People of Colour, people who live in non-metropolitan areas, children and youth, seniors, and people with recent-onset print disabilities.
5. Participants identified a significant need for more low-cost or free training and support about how to use reading technologies, and how to access other resources for people with print disabilities.

6. Audiobooks are by far the most popular accessible format, especially for fiction, entertainment and pleasure. 81% of survey respondents read audiobooks, including digital and CDs formats. Given the choice between reading an ebook and an audiobook, 61% of survey respondents would choose the audiobook. 90% of survey respondents prefer human-voiced narration.
7. About 25% of study participants cited costs—of reading technologies and/or books—as a barrier to reading.
8. Many study participants reported that disability subsidy programs were inadequate to meet their reading needs, and that these programs were inequitable among people with different kinds of disabilities and among people living in different parts of Canada.
9. About half of survey respondents (51%) purchase books, 58% in digital audio format and 54% in ebook format. About 25% of survey respondents spend between \$16 and \$40 per month on books. A higher percentage of women than men (55% vs. 47%) reported buying books, despite lower incomes.
10. Libraries are vital and well-used resources for people with print disabilities. The vast majority of survey respondents get books from their public library or from a library organization that provides shared services for people with print disabilities (such as NNELS or CELA).
11. There is a significant need for timely diagnosis and supportive follow-up for people with print disabilities, and especially for children with dyslexia and other learning disabilities. Study participants want professionals in the medical, educational, library and social work sectors to have a better understanding of the needs of people with print disabilities.
12. This study includes a significant number of people whose print disabilities stem from mental illness, intellectual disabilities or cognitive impairment. More research is needed to understand the reading needs of people with these kinds of disabilities.

KEY RECOMMENDATIONS

These key recommendations arise directly from the people with print disabilities who participated in the “How do YOU Read?” study. More details are provided in the “All Recommendations” section at the end of the report.

FOR PUBLISHERS:

Make an organizational commitment to accessibility. Learn about the social benefits and significant profits that would result from producing more accessible materials. Support accessibility legislation. Produce every book in an accessible format, to international accessibility standards, before or at the same time the print version is produced. Ensure availability and affordability of the full variety of

accessible formats. Re-evaluate existing book licensing terms and the use of DRM; revise terms to be as inclusive as possible. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.

Ensure that academic and occupational texts are fully accessible. Publish more audiobooks, mostly human-narrated. Provide accessibility metadata for all books, including information about narration style. Continue to publish more high-quality ebooks, as well as dual format (text with synchronous audio) digital books and decodable books. Use the data about format use and preferences of people with different disabilities and different demographic characteristics to better serve customers and potential customers, including under-served groups such as readers of French, people with learning disabilities, physical disabilities and low vision, women, low-income people, Indigenous Peoples, People of Colour, people who live in non-metropolitan areas, children and youth, seniors, and people with recent-onset print disabilities. Conduct targeted outreach to people with physical disabilities and people with learning disabilities in order to better meet their needs.

FOR LIBRARY ORGANIZATIONS THAT PROVIDE SHARED SERVICES FOR PEOPLE WITH PRINT DISABILITIES (such as NNELS and CELA):

Continue to increase the availability, selection and variety of accessible books. Increase the number of accessible Canadian books, especially in French. Quantify and monitor the number of accessible books available in Canada. Ensure that organizational websites and other interfaces are compatible with all reading technologies. Make it much easier and simpler to navigate, browse and download books from the organizations' websites. Work with libraries and providers of reading technologies to create easy-to-use search platforms that allow seamless searching and filtering for accessible material across all sites: commercial, library and public domain. Fully implement the Marrakesh Treaty to enable library users with print disabilities to access international works. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.

Implement a well-organized communications strategy to raise awareness about accessible reading services to all people with print disabilities, paying special attention to under-served groups such as readers of French, people with learning disabilities, physical disabilities and low vision, women, low-income people, Indigenous Peoples, People of Colour, people who live in non-metropolitan areas, children and youth, seniors, and people with recent-onset print disabilities. Ensure that the reading needs of these groups are well-understood and well-served by all accessible reading services. Conduct further research into the number of people in Canada with learning disabilities and their reading needs, and into the reading needs of readers of children and youth, French, Indigenous Peoples, and People of Colour with print disabilities.

Develop training program(s) in reading technologies and offer them to all public libraries in Canada. Support libraries to offer these training programs to their staff and users, and to tailor the programs according to each reader's needs. Develop and host an online resource centre for accessible reading that can be accessed by both libraries and library users. Respond in a timely way to user feedback and requests.

FOR PUBLIC LIBRARIES:

Significantly increase the availability, selection and variety of accessible books. Make it much easier and simpler to navigate, browse and download books on library websites and interfaces. Work with library organizations for people with print disabilities (such as NNELS and CELA) to deliver training programs in reading technologies for people with print disabilities, especially children and youth, low-income people, women, people living outside of metropolitan areas, Indigenous Peoples, People of Colour, people with learning disabilities, physical disabilities and low vision, and people with newly diagnosed disabilities, including seniors with age-related print disabilities.

Ensure that library staff has excellent training in accessibility, and that they help library users find accessible material locally, connect to library organizations for people with print disabilities (such as NNELS and CELA), and access other resources to support accessible reading. Ensure full accessibility to the library's digital and physical site, including a detailed online description of its accessibility features.

Make reading devices with assistive technologies available for on-site use and loan. Host book clubs and social events for people with print disabilities. Offer services specifically for people with print disabilities (for example, longer borrowing periods and more allowable holds). Use the data about the format use and preferences of people with different disabilities and different demographic characteristics to better serve all users. Fully implement the Marrakesh Treaty to enable library users with print disabilities to access international works. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.

FOR PROVIDERS OF READING TECHNOLOGIES:

This group includes developers, vendors and distributors of reading devices, assistive technologies and other hardware, apps and other reading software, and platforms that distribute reading content.

Significantly improve the quality, accessibility, ease-of-use, affordability and compatibility of reading technologies, including platforms that distribute reading content. Make an organizational commitment to accessibility. Support accessibility legislation. Learn about the social benefits and significant profits that would result from producing more accessible technologies. Build accessibility into mainstream technologies from the beginning (this is easier and less expensive than trying to add accessibility at the end). Work with libraries and library organizations to create easy-to-use search platforms that allow seamless searching and filtering for

accessible material across all sites: commercial, library and public domain. Work toward greater consistency across search platforms to make switching platforms easier for users. Ensure the security and privacy of users.

Respond to user feedback in a timely way. For assistive technology providers, make refreshable braille displays more affordable. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized. Use the data about the use of reading technologies by people with different disabilities and demographic characteristics to better serve customers and potential customers, including under-served groups such as readers of French, people with learning disabilities, physical disabilities and low vision, women, low-income people, Indigenous Peoples, People of Colour, people who live in non-metropolitan areas, children and youth, seniors, and people with recent-onset print disabilities.

FOR DISABILITY/SERVICE ORGANIZATIONS:

Work with libraries and library organizations for people with print disabilities (such as NNELS and CELA) to raise awareness about services for people with disabilities, especially to under-served groups. Work with libraries and library organizations to deliver training programs in reading technologies for people with print disabilities. Make reading devices and technologies available for on-site use, loan and/or rent.

Advocate for accessibility legislation that ensures mainstream accessibility for all content and reading systems. Advocate for equitable accessibility subsidy programs among those with different kinds of disabilities, and among those living in different regions of Canada. Advocate for the implementation of more robust accessibility education and training programs for the library, educational, medical and social work professionals who work with people with print disabilities. Advocate for timely diagnosis and supportive follow-up for all people with disabilities, especially children with dyslexia and other learning disabilities. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.

FOR THE GOVERNMENT OF CANADA:

Support the full inclusion of all people with print disabilities in Canadian society. Quantify and monitor the number of accessible books available in Canada, and the number of people with print disabilities in Canada (including people with learning disabilities). Conduct further research into the reading needs of people with learning disabilities who have print disabilities. Accurate and reliable information is essential for the journey toward full accessibility. Incentivize actions toward full accessibility with government funding. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.

FOR THE GOVERNMENT OF CANADA AND THE GOVERNMENTS OF PROVINCES AND TERRITORIES:

Ensure adequate accessibility legislation and adequate enforcement of accessibility laws. Review, enhance and monitor existing accessibility subsidy programs to ensure they are providing adequate support for the reading needs of individuals with print disabilities. Ensure that such programs are equitable among people with different disability types, and among people living in different regions of Canada.

Provide adequate funding for training and support programs for people with print disabilities, and for the organizations that provide resources, products and services to people with print disabilities. Provide the funding necessary to enable medical and educational professionals to provide timely diagnoses and supportive follow-up with appropriate training in reading technologies for all people with print disabilities, especially children. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.

CHAPTER 1. CONTEXT AND BACKGROUND OF THE HDYR REPORT

CONTEXT

The “How do YOU Read?” study (HDYR) has been undertaken by the National Network for Equitable Library Service (NNELS) with financial support from eBOUND and Association of Canadian Publishers (ACP) as part of the government of Canada’s five-year, \$22.8 million initiative to support the sustainable production and distribution of accessible digital books (Department of Finance, 2019).

NNELS is a digital public library of books for people with print disabilities in Canada, and an advocate for an accessible and equitable reading ecosystem for all people in Canada. The goals of NNELS are to build capacity and employment opportunities for people with print disabilities, to advance the agenda of “born accessible” publishing (books accessible from the very beginning), and to develop and maintain a digital repository of accessible books for people with print disabilities in Canada, delivered through the network of public libraries in Canada. With this background, NNELS is ideally positioned to do this work to explore the reading habits and preferences of people with print disabilities in Canada.

TERMINOLOGY USED IN THE HDYR REPORT

Among people with disabilities, there are different preferred terms to refer to disability: person-first language (i.e., “people with print disabilities”) and identity-first language (i.e., “print-disabled persons”). Person-first disability language, which puts the person first in order to emphasize each person’s humanity and individuality, came in reaction to earlier, medicalized disability language that defined people exclusively by their impairments and thus dehumanized people by labelling them as nothing more than their disability. It must be noted, however, that many people think of their disabilities as positive parts of who they are and prefer identity-first constructions that highlight their membership in a particular disability group, similar to using identity-first phrasing to describe someone’s race.

Both preferences are recognized and respected in this report. Most of the report will use person-first language (i.e., “people with print disabilities”), which is the language used by the government of Canada.

This report will use the term “print disability” rather than “perceptual disability,” unless specifically referring to the *Copyright Act* of Canada which uses the term “perceptual disability.”

In this report, the term “accessibility” means reasonable accommodation (necessary and appropriate modifications), as well as inclusive design for products and services to be usable by all people, to the greatest extent possible.

BACKGROUND

Print disabilities refer to a subset of disabilities that are defined as mobility, cognitive and visual impairments that prevent people from reading print. This includes “visual disabilities such as blindness, age-related macular degeneration, glaucoma and diabetic retinopathy, learning disabilities such as dyslexia, autism and brain injuries, and physical disabilities such as arthritis, multiple sclerosis, Parkinson disease and spine injuries” (Ciccone, p. 380). The *Canadian Survey on Disability, 2017* estimates that 1.5 million people or 5.4% of the population 15 years and older has a visual disability, and 4% or over one million people have a learning disability (Statistics Canada, 2018). There is a need for additional research into the number of people with learning disabilities; some studies estimate that the number of people with dyslexia alone is as high as 20% of the population (Yale Center for Dyslexia & Creativity). However, only 5 to 7 percent of books are made accessible in formats such as braille, audio and large print—and often only in developed countries (Innovation, Science and Economic Development, 2018).

In Canada, accessible or alternate formats for books have been produced by library organizations such as NNELS and the Centre for Equitable Library Access (CELA) that use an exception in the Canadian *Copyright Act* to produce accessible copies of books for people who have a perceptual disability (1985, s. 32). These accessible formats can be made available to any person with a print disability in Canada. In addition, beyond local production of alternate formats, Canada is able to exchange accessible material across international borders. In 2016, Canada became the 20th signatory on the Marrakesh Treaty, allowing international sharing of accessible format materials.

At the same time, while the numbers for published accessible material are low, technology has allowed unprecedented changes to the amount of material available to readers with print disabilities. The availability of accessible materials has skyrocketed because of digital formats, digital devices and assistive technologies that together allow material that has traditionally been inaccessible to suddenly be accessible. There is still a lot of work to be done in best practices and standards to create a truly accessible reading landscape, but it has been profoundly altered by technology. Readers with print disabilities who are also technologically savvy can now find a wide array of reading materials using assistive technology, including screen readers, text to speech applications, refreshable braille displays and screen magnifiers. Technology has allowed us to shift the conversation to born accessible content that can be used by all, including people with print disabilities.

Born accessible books are designed to be accessible from the start. This approach fosters inclusion and full participation in society. Accessible content is flexible, so that all readers can use it, regardless of the technologies or tools they use. Accessible design is by nature inclusive of people with disabilities. It applies to online content, including apps and websites, as well as to products. This means putting people first by including people with permanent, temporary, situational or changing disabilities.

The broad range of individual characteristics of the population with print disabilities means that there is significant diversity of reading needs and preferences. This means that more than one way to deliver the same content may be necessary, in order to accommodate user preferences or needs. The accessibility of a format depends on the reader's particular needs. Diversity of reading preferences can include physical items such as large print, braille and audiobooks on CD, or digital formats such as DAISY audio, electronic braille, MP3, EPUB, etext and others that allow for assistive technology devices and software to enable the reader to access the content. The type of assistive technology used varies according to disability. Readers who are blind or have low vision use screen readers with text to speech and/or braille displays, or screen magnification software. Some readers with mobility disabilities may use switches or voice controls. Readers with learning disabilities, as well as those with low vision, may adjust font styles and sizes, margins, and spacing to suit their individual needs. There is a complex dynamic interaction between the individual's condition and the contextual factors of the environment, as well as personal characteristics such as knowledge of assistive technology.

The central piece of this research is the user perspective. NNELS considers that readers with print disabilities are the experts on their own reading. This research study draws on theoretical approaches to disability that emphasize structural barriers present in society. This work fosters inclusion for people with disabilities. In the social model of disability, disability is the result of a complex set of conditions, many of them created by the social environment. This perspective is based on the notion that "disability" is a socially created problem, and an issue that can be addressed with the integration of individuals into society. In this framework, there is a focus on making environmental (and other) changes to eliminate barriers, a responsibility of society at large.

Inclusion requires the identification and removal of barriers (e.g., physical, procedural, visible, invisible, intentional and unintentional) that inhibit the participation of people with disabilities. This study was designed to give readers a voice and platform. People with print disabilities are experts about their own experiences and they have an integral role to play in the elimination of barriers. They can identify issues and help devise solutions.

DISABILITY LEGISLATION IN CANADA

The federal government and several provinces have created accessibility legislation and are working to become more inclusive and barrier-free. The paragraphs below provide a short overview of current and proposed legislation concerning accessibility. It is promising that federal and provincial accessibility legislation has been enacted or is in the works, as this will have a positive impact on the overall accessibility of reading—both on content and the technology used to read.

- The Accessibility for Ontarians with Disabilities Act (AODA) became law in 2005, making Ontario the first province in Canada to enact accessibility legislation of this scope. The AODA mandates a set of standards that public, private and non-profit organizations must comply with to create a barrier-free Ontario by 2025.

The standards include digital content in the Act's Information and Communication Standards, which conform with the World Wide Web Consortium's Web Content Accessibility Guidelines (WCAG).

- The Accessibility for Manitobans Act (AMA) became law in 2013, to create a more inclusive Manitoba by 2023 with legislation that aims to remove barriers for all Manitobans.
- The Nova Scotia Accessibility Act became law in April 2017. The accessibility standards that constitute the Act are under development, with information and technology as an important area of focus.
- Bill C-81, the Accessible Canada Act: An Act to Ensure a Barrier-free Canada, was introduced in parliament in June 2018 to ensure greater inclusion of people in Canada with disabilities. It became law in June 2019 after receiving Royal Assent. One of the purposes of the bill is to prevent accessibility barriers in information and communication technologies, including digital content and the technologies with which it is accessed.
- British Columbia's proposed Accessibility Act (Bill M 219), proposed in 2018, aims for an accessible British Columbia by 2024. The Act had its first reading in May 2018 and has not yet been finalized.

LITERATURE REVIEW

The "How do YOU Read?" study is the first of its kind in Canada. A literature review identified only a handful of similar studies about readers with print disabilities, especially readers with blindness or low vision, and their experiences in other countries. The studies referenced in this section document a range of agencies, institutions and disciplines looking into the needs of readers with print disabilities. To the best of our knowledge, no study has systematically analyzed the needs and preferences of the broader group of readers with different print disabilities.

In 2016, the Blind Foundation of New Zealand surveyed its library clients regarding the reading formats they used and preferred. The survey also asked questions about clients' access to computer technology and their personal assessment of their technological competency. There was a particular focus in the survey on the DAISY format and on services offering books by download. Analysis of the survey data shows that access to computer technology roughly matches the national profile. Use of computers generally declines with age, with iPhones and iPads being the exception. The DAISY format was reported as both the most used and the most preferred format for reading, though not so overwhelmingly as to suggest other formats can be dropped. Computer competency declines with age, but among the younger respondents there seemed to be both the ability and the confidence to download books, and some were already using that service provided by the library (Calvert, Creaser and Pigott, 2019).

Research commissioned by the Royal National Institute of Blind People (RNIB) in the United Kingdom explores the impacts of reading for pleasure on blind and partially

sighted adults. Data collected came from interviews, an online survey and six case studies. The results reveal that for the majority of participants, reading for pleasure was very important (especially to relax), and that almost two-thirds read for more than ten hours a week. The great majority of blind readers used multiple reading formats including traditional hard copy and digital formats. A quarter of participants were not always able to read in the way they preferred. The study considers implications for materials provision and presentation for libraries and charitable organizations in light of the findings. It recommends greater collaboration between producers in accessible formats, publishers and specialist library services to supply better reading materials to increase the availability of accessible formats, including ebooks (Spacey, Greaser, and Hicks, 2014).

The Libri Italiani Accessibili (LIA) project is an ongoing project that aims to provide a service capable of increasing the availability of digital publications in the market that are accessible to readers who are blind or have low vision (Mussinelli, 2012). The project is funded by the Italian Ministry for Culture, through the "Fund in favour of publishing for blind and visually impaired people." The project is coordinated and managed by the Italian Publishers Association and its service company, Ediser, in collaboration with the Italian Blind Union. The project is biennial, divided into a pilot stage and a working stage. The first stage, which concluded in late 2011, consisted of research, notably a survey on reading habits and use of technologies by blind and visually impaired readers. The most relevant results from the survey concern how much and how frequently blind and visually impaired people read: in a sample totaling 1,505 persons, the average of books read yearly is nine per capita, three times more than the national average of sighted readers. The survey also examined the availability and use of digital reading devices such as tablets and eReaders for blind or low vision readers. The survey was conducted in collaboration with the Italian Blind Union and the National Conference of University Delegates for Disability, coordinated by Università degli Studi Milano-Bicocca along with the main Italian survey company Doxa. LIA works toward a fully accessible publishing ecosystem, to benefit blind readers by providing them access to more content.

A research study about the reading preferences of citizens with visual impairments in the Slovak Republic (Vrabc and Petkacova, 2014) examined the current offering of specific media content for blind and partially sighted people and their needs and preferences. The focus of the study was on the reading materials available in audio formats and braille, and other resources available through the public library system. The authors found that because of the small numbers of people with visual impairments, rather than creating a large database of electronic books and magazines, it would be better to create accessible resources available online.

CHAPTER 2. “HOW DO YOU READ?” STUDY: METHODS

SCOPE

The primary purpose of the “How do YOU Read?” study (HDYR) was to learn about the reading habits, needs and preferences of people with print disabilities in Canada. The study’s primary audiences are the independent publishing sector and library community in Canada, and it is also accountable to all people with print disabilities. In addition, this report will be of use to many others, including federal and provincial/territorial governments, providers of reading technologies, disability/service organizations (including some seniors’ organizations), and members of the general public.

The study’s participation goals were approximately sixty people for the focus groups, and approximately five hundred people for the online survey. We achieved these goals, with 57 focus group participants and 595 survey participants. The study did not include interacting directly with children, due to the extra time required for adherence to standards for ethical research with children. However, the study did collect significant data about the reading needs of children with print disabilities by gathering input from the children’s parents.

ETHICS AND CONFIDENTIALITY

This study was conducted in adherence with the guidelines set out by the Tri-Council Panel on Research Ethics in Canada.

INFORMED CONSENT: Participants in the online survey and focus groups were informed of the themes and purposes of this study, the freedom to withdraw from the study at any point, as well as the possible risks of participating in the study. Participants were asked to sign a consent form to demonstrate that they understood what they were being asked to do and had given their consent. *See Appendix C: Survey Text for the consent form.*

CONFIDENTIALITY: All efforts were made to preserve the confidentiality and, for the survey participants, the anonymity of participants in this study. Any identifying information about survey participants was separated from their survey responses. Circulation of personal data was minimized among researchers, and researchers ensured their workspaces and tools were kept private.

Every attempt was made to conduct all aspects of the study with maximum respect and care for study participants. This included making all project tools and meeting spaces fully accessible for everyone, as well as striving to make all interactions with study participants respectful, timely and positive.

PROMOTION AND COMMUNICATIONS

The “How do YOU Read?” study was promoted by the NNELS team with input from key partners and informants. Study participants were recruited through a variety of channels: email, Twitter, Facebook, word of mouth and posters. All communications material was distributed in both French and English. Prizes and honoraria were given in order to drive participation.

Promotion of the study relied heavily on the outreach efforts of both NNELS and CELA, with targeted outreach to readers of French through relevant organizations including the Bibliothèque et Archives nationales du Québec (BAnQ), which offers all Quebecers with perceptual disabilities the Service québécois du livre adapté (SQLA).

Key informants were also asked to promote the study within their networks, and especially to help reach marginalized groups. In addition, hundreds of organizations were contacted directly, by email and/or telephone, and asked to promote the HDYR study among their members. These organizations included those that provide reading, employment and medical services for people with visual, learning and/or physical disabilities, as well as relevant community and social media groups based in Quebec, immigrant groups, refugee agencies, women’s organizations, educational institutions, and organizations for retired people.

STUDY ELEMENTS: KEY INFORMANT INTERVIEWS

Key informants for HDYR were selected by the NNELS team and included organizational leaders of groups serving people with print disabilities, visual disabilities, learning disabilities and physical disabilities. Also included were the NNELS accessibility testers, who have lived experience of low vision, learning disabilities and/or blindness. Interviews were conducted from December 2019 to January 2020. The purpose of the interviews was to gain a good overview of the topic of the book-reading habits and needs of people with print disabilities in Canada and to enlist informants’ help in promoting the online survey and focus groups. Interview responses were used to craft the questions for the “How do YOU Read?” online survey and focus groups.

Please see Appendix B for interview questions, and the Acknowledgements section for informants’ names and organizations.

STUDY ELEMENTS: ONLINE SURVEY

The questions for the HDYR online survey were crafted by the NNELS team, based on a review of the literature, analysis of the current context and informant interviews. The survey platform used was LimeSurvey. Before going live, the survey was tested by a team of NNELS accessibility testers. Every attempt was made to make the survey accessible to all people with print disabilities.

In order to participate in the survey, respondents needed to answer “yes” to three screening questions:

1. **Consent:** “You agree that you are of the age of majority, that you have read and understand the [consent] information on the previous page, and you agree to participate in the survey.”
2. **Canadian residence or citizenship:** “Do you currently live in Canada, and/or are you a Canadian Citizen?”
3. **Print Disability:** “Do you have difficulty reading a hard copy print book, even when wearing glasses or contact lenses?”

STUDY ELEMENTS: FOCUS GROUPS

Six “How do YOU Read?” focus groups were conducted, between February 20 and March 2, 2020. Four of the groups were in-person, held in the cities of:

- Vancouver, BC
- Edmonton, AB
- Toronto, ON
- Montreal, PQ

The remaining two focus groups were held online, using Zoom video conferencing. This allowed an opportunity for participation by people who could not attend the in-person groups, including people from all parts of Canada. Focus group participants were given the choice of participating in French or English, and the Montreal focus group was fully bilingual.

The purpose of the focus groups was to create a comfortable space in which participants could share their thoughts on key questions and develop their ideas through conversation with other people with print disabilities.

The discussion questions at the focus groups were:

1. How does reading contribute to your life?
2. How do you read? In which formats? Using which technologies?
3. How do issues such as accessibility, ease, availability and cost get in the way of your reading?
4. What would make your reading easier and more satisfying?

DATA ANALYSIS

Quantitative data from the HDYR online survey was analyzed using LimeSurvey’s embedded calculation tools and by comparing answers from different subgroups of respondents. For the survey data, all percentages have been rounded off to the nearest whole number to make the results easier to read.

Qualitative data from informant interviews, focus group discussions and open-ended survey questions was analyzed by open coding and inductive thematic analysis, whereby the researcher collects similar responses into categories, identifies emergent themes, finds meaning and draws conclusions based on the frequency, depth and intensity of responses.

CHAPTER 3. STUDY RESULTS

All discussions and conclusions are based on data from the “How do YOU Read?” study interviews, online survey and focus groups. Direct quotations from study participants are capitalized and set apart in quotation marks. *Recommendations related to each section can be found in Chapter 4: All Recommendations.*

Please note that some of the survey questions allowed respondents to select as many answers as applied. Therefore, percentages of responses sometimes add up to more than 100%.

SECTION 3A. DEMOGRAPHICS

The goal of HDYR was to include participants that represented all sectors of Canadian society, including people of diverse identities, income levels, genders, ages and regions, and with a diversity of print disabilities. Note that all statistical references in this section are from the 2016 Census, Statistics Canada.

NUMBER OF HDYR PARTICIPANTS: A total of 897 people responded to the online survey. Of those, 595 respondents passed the screening questions and completed more than half of the survey. A total of 530 people completed the whole survey. Our survey results are therefore based on responses from 595 people. A total of 57 people participated in the six focus groups, where they gave detailed, nuanced and extensive input.

PRINT DISABILITIES: The print disabilities of the majority of survey respondents stemmed from visual disabilities (80%). About 15% of respondents cited learning disabilities as the cause of their print disabilities, while 9% cited physical disabilities. See *Table 1 below.*

As for the focus group participants, 75% had visual disabilities, 19% had physical disabilities and 40% had learning disabilities. It is unknown how these proportions compare with the general population of people with print disabilities.

TABLE 1

Cause of Print Disability	Percentage of Survey Respondents*	Percentage of Focus Group Participants*
Visual disability	80%	75%
Physical disability	9%	19%
Learning disability	15%	40%
Other	8%	2%

* Please note that several of the online survey questions allowed respondents to choose more than one response; therefore, percentages might add up to more than 100%. In this case, several respondents have more than one kind of disability that is causing their print disabilities.

There is a growing awareness that people with learning disabilities make up a larger percentage of people with print disabilities than has been understood in the past.

Further research is needed to fully understand the intersection of learning disabilities and print disabilities, and to quantify the number of people in Canada who have a print disability. This designation needs to be better defined by the Canadian government and quantified by Statistics Canada so that people with print disabilities and service providers can organize appropriately.

PREFERRED LANGUAGE: Survey respondents were asked in which languages they preferred to read, and to choose as many as applied. Approximately 14% of respondents chose French, while 85% of respondents chose English. Of the 14% of respondents who chose French, about two-thirds also chose English as a preferred reading language. Among focus group participants, about 16% were Francophone. The percentage of Francophones in Canada is about 21-22%, so Francophones are significantly under-represented in our study data.

Approximately 5% of survey respondents chose a language other than French or English as their preferred reading language.

REGION: Survey respondents represented every region of Canada, with representation from the Territories (0.38%), Atlantic Canada (6%) and the prairie provinces (19%) in line with those regions' percentage of the Canadian population. B.C. (20%) was slightly over-represented according to its population, with Ontario (37%) slightly under-represented. Quebec was under-represented, with 23% of the Canadian population but only 12% of the survey respondents. However, Quebec was very well-represented at the focus groups, with 25% of focus group participants from Quebec.

About 63% of HDYR respondents live inside a large metropolitan area, while 29% live outside of one. Because all of the in-person focus groups were held in large cities, a higher percentage (91%) of focus group participants live in large metropolitan areas.

IDENTITY: Both the survey and focus groups had about 1.5 times as many female participants as male: 54% women and 36% men for the survey, and 49% women and 31% men for the focus groups. About 2% of survey respondents and 16% of focus group participants chose a gender of "Other," including non-binary. About 8% of survey respondents and 4% of focus group participants gave no response about their gender.

About 11% of survey respondents and 35% of focus group participants identified as a member of the LGBTQ+ community, with 6% of survey respondents and 2% of focus group participants giving no response about their sexual orientation.

Approximately 5% of people in Canada are Indigenous, including First Nations, Métis and Inuit Peoples. Indigenous Peoples made up 4% of focus group participants, and 2% of survey respondents. About 7% of survey respondents gave no answer to this question. It appears that Indigenous Peoples are under-represented in the study data.

People of Colour (referred to as "visible minorities" in the Canadian census data) are 22% of the Canadian population. About 23% of focus group participants identified themselves as people of colour, while only 6% of survey respondents did so. About 5% of survey respondents gave no answer to this question. It appears that People of

Colour are underrepresented in the survey data, although they are well represented in the more detailed focus group data. Since the term “People of Colour” is not yet widely used in Canadian society, it is also possible that some survey respondents in this group did not recognize or prefer this phrase to describe themselves.

INCOME: Among survey respondents, there is a good representation from different income brackets. About 16% of respondents claimed a household income of less than \$20,000 in the last tax year, and about 17% had an income of between \$20,000 and \$40,000. 20% of respondents brought in between \$40,000 and \$70,000, and another 20% had an income of over \$70,000. An unusually high percentage of respondents (27%) gave no answer to this question.

Among focus group participants, there was a significantly higher percentage of low-income people (37%), and a relatively lower percentage of higher income people (12%). See Table 2 below.

TABLE 2

Annual Income	Percentage of Survey Respondents	Percentage of Focus Group Participants
Less than \$20,000	16%	37%
\$20,001- \$40,000	17%	18%
\$40,001-\$70,000	20%	18%
\$70,000 or more	20%	12%
No answer	27%	16%

AGE: All age brackets were represented in the survey data, with children under the age of 14 and teens/young adults under-represented. There was also a diversity of ages among focus group participants; however, due to ethical considerations, no children participated in the focus groups. See Table 3 below.

TABLE 3

Age	Percentage of Survey Respondents	Percentage of Focus Group Participants
6 to 14 years old	3%	(Not eligible) 0%
15 to 24 years old	8%	(18 to 24 years old only): 7%
25 to 44 years old	21%	44%
45 to 64 years old	29%	30%
65 to 74 years old	19%	16%
75 years or older	16%	4%
No answer	4%	0%

Overall, HDYR reached a fairly good diversity of people with print disabilities in Canada. However, readers of French are significantly underrepresented in the study, and Indigenous Peoples, People of Colour, and people with learning disabilities

are somewhat underrepresented in the study. This demonstrates that the typical channels of communication used to reach people with print disabilities, even with our special outreach efforts through community organizations, did not reach a sufficient percentage of these groups. Further study of these groups' reading needs and preferences, targeted communications to spread awareness of services, and relationship-building is needed.

SECTION 3B. FAST FACTS FROM “HOW DO YOU READ?”

- 82% of HDYR survey respondents read digitally, and 54% read some version of hard copy (print, audio CDs or braille). Of people who read digitally, 59% do more than three-quarters of their reading this way.
- 90% of survey respondents like or love reading. 25% read 4–6 books per month, and another 25% read more than seven books per month!
- Why read?
 - 92% read for pleasure
 - 20% read for work
 - 45% read for study or research
- Reading what?
 - 84% read fiction
 - 18% read poetry and drama
 - 72% read non-fiction
 - 32% read textbooks
 - 14% read children's books
 - 2% read decodable books
- 96% of survey respondents have reliable internet access, at least some of the time.
- 95% use a computer or mobile device regularly.
- 61% would use technology more for reading if appropriate training and support were available.
- 82% of respondents say ease and convenience are important influences on how they get their books.
- In a choice between an audiobook and an ebook, 61% would choose the audiobook. Only 14% would choose the ebook.
- 90% of respondents prefer human-narrated audiobooks.
- Although 29% of survey respondents read hard copy print, only 6% choose it as their favourite format. Lack of accessible formats drives many readers to settle for print, even if reading hard copy print is difficult or painful.

SECTION 3C. AVAILABILITY OF BOOKS IN ACCESSIBLE FORMATS

The vast majority of participants in this study agreed that there is a tremendous shortage of books in accessible formats. Although the exact number of accessible books has not been quantified in recent years, study participants know from their experience that they cannot get the books they want in an accessible format.

“There is a chronic need for increased availability of books in multiple formats.”

“As a blind person I have suffered from an inadequate reservoir of reading material.”

Participants also noted that accessible books are not available in a timely way; for example, bestsellers in print format are usually made available months or years before an accessible version (if one is made available at all).

“Why can’t we get new releases at the same time as everyone else? Why should we have to wait?”

“I see public libraries will order large numbers of print copies and no audio copies, and when there are audio copies they are very limited with extremely long wait times. So with my needs I do not have a choice but I have to wait way longer than those without the print disability.”

HDYR survey respondents were asked to answer one short open-ended question: “If you could choose one thing that would make reading easier and more satisfying for you, what would it be? Please answer briefly.” This question identifies a respondent’s top priority. They might want or need twenty things to make their reading better, but here they need to choose their greatest need.

Remarkably, 27% of the people who answered this question chose greater availability of accessible books as their top priority. Their comments included passionate pleas for greater overall availability, as well as greater availability of the respondent’s preferred format such as audiobooks or braille.

Lack of availability has implications for the social, educational, work, family and leisure aspects of the lives of people with print disabilities. Not having a given book in an accessible format means being shut out of cultural conversations, falling behind in work and school, or not being able to read to one’s children.

“There I feel that it is extremely important that people with print disabilities have equal access to reading materials. We have not been given equal access to reading materials in the education system and/or from publishers supplying libraries and bookstores. Therefore, many struggle with literacy and the ability to keep up. They fall behind socially

because they haven't had the same information available to them in history, geography, language and grammar, mathematics, etc."

"On lack of availability: It would be wonderful to have what I need available. I know that there is a lot available [in print] and feel so shut out because of not being able to get it."

"I can't take part in a regular book club because I can't get the books in an alternative format."

Study participants stressed that the availability of accessible books is a human right, and fundamental for full inclusion in society. Everyone has the right to read. Reading is extremely important—for social, economic, personal, educational and work-related reasons. Reading is necessary in order to fully participate in our democracy and every aspect of our society. Reading should be as easy and accessible for people with print disabilities as it is for people without print disabilities. Canadian society recognizes the right to accessibility through human rights laws and provincial accessibility legislation. However, according to study informants, many of these laws are not being adequately reinforced at present.

"In order to achieve proper equality and accessibility, we [people with print disabilities] should be more aggressive in pursuing legal avenues, such as going to the Human Rights Tribunal, and demanding better enforcement of the AODA [Accessibility for Ontarians with Disabilities Act] and similar legislation."

HDYR study participants illuminated the social aspects of reading in some detail. Most reading has a social aspect; even if someone reads alone, they usually talk with others about the book, and often share the book itself. Sharing books is a big part of the social aspect of reading; many people with print disabilities found it painful and unjust that they could not share their books with others, even when they had paid for them.

There is a particular shortage of certain categories of books: textbooks and academic books are often available only in PDF format, which is not accessible to most people with print disabilities. Respondents noted a shortage of books by women, Canadian books, international literary works and books in languages other than French or English. Many readers of French expressed concern about the shortage of French-language books, particularly hard copy braille and well-narrated audiobooks. Participants also noted the shortage of children's audiobooks for grades 3–9, and of graphic novels and comics, both in audio and braille formats. Another exasperating shortage: series are often incomplete. One can get volumes 1, 2, 5 and 7, but not 3, 4 and 6. Many participants reported incredible frustration with these shortages.

"Access to Canadian content is limited as I depend on what Audible has."

“I have borrowed books that I wanted to read but came in audio format with impossible to follow PDF digital print.”

“Aussi, c’est désolant lorsqu’il manque un élément dans une trilogie.” [“Also, it is disappointing when one book is missing from a trilogy.”]

VARIETY OF FORMATS: Besides having greater availability of books overall, study participants were also very clear about wanting access to a variety of accessible formats.

“Books should be available in different formats, so we can choose the one we prefer.”

Different formats are appropriate for different uses. Most participants like audiobooks for pleasure reading while many prefer ebooks for work and study purposes. Those who read braille often prefer braille, especially for topics with manual, spatial or mathematical elements (e.g., cookbooks, math, science or “how-to” books). The variety of accessible formats is explored in more detail later in the report.

Finally, many study participants expressed the need to eliminate disparities in availability based on regional and disability differences. They acknowledge that certain disabilities are not as well recognized, and that people with certain disabilities and/or living in certain regions are not as well served.

“Unfortunately, in some parts of Canada, there is no financial support for the purchase of accessible reading devices. Consequently, poorer Canadians may have very limited access to accessible books.”

“An equally disabled person can have a vastly different set of supports and resources. It should be more equitable.”

One solution put forward by many study participants is that publishers should be required by law to produce an accessible version of every book they publish.

“If all publishers were producing conversion-ready ebooks, then I would truly be equal. If this ever happens, then accessibility would no longer be an afterthought.”

SECTION 3D. ACCESSIBILITY

Evaluating Accessibility

Availability and accessibility are closely linked. If books are not sufficiently accessible for the actual users, they are not available to those users. If they are accessible only to the technologically savvy or those with a lot of time to learn technology, they are not really accessible.

“It’s insulting to us that the accessibility is so bad.”

Technologies for Accessibility: Ease of Use

For most people with print disabilities, accessibility is enabled by technology. The term “reading technologies” is used here to refer to all the technologies that are necessary for reading digital books, including devices and other hardware, apps and other software, and platforms that distribute reading content. The term “reading technologies” does not refer to the digital file itself (the content); this study explores the file itself in the “Formats” section.

Many study participants stated that learning and using book-reading technologies was difficult, inconvenient and time-consuming. Fast-changing technologies mean that even if the skills required for reading are learned, new ones must be learned frequently and on an ongoing basis. Reading requires technological fluency with multiple platforms, websites, apps, devices and formats, all of which require different skills. At this point, using technology to read means the reader needs to invest a great deal of time, effort, learning and money. Study participants said that sometimes people with disabilities cannot make this investment and give up. Reading needs to be easier.

“It is difficult and frustrating to find the books that I want to read.”

“What would make the most difference? Simplified access. Needing many different software/apps is distracting and frustrating.”

“I would like to have affordable, patient help with technology. Often websites are hard to navigate with [screen reading program] VoiceOver and I give up before getting solutions.”

“It is way too time-consuming to sign up; I don’t have that much time just to navigate a website.”

The HDYR study found a strong correlation between accessibility and reading pleasure, and between accessibility and number of books read. That is, respondents who find it easy to read to find sufficiently accessible books say they enjoy reading more, and they read more books. Conversely, respondents who cannot find accessible books and cannot read easily do not enjoy reading as much and read fewer books. Since reading is fundamental to so many activities and rights in our society, it is easy to conclude that those who find it difficult to find and read books are losing out on many benefits of Canadian society, including education, employment, creative expression, pleasure, democratic participation and economic well-being.

To the question, “Overall, for the books you want to read (or listen to), how difficult is it to find sufficiently accessible books (hard copy and/or digital)?” about 19% of respondents answered “quite difficult” or “very difficult,” and 38% were neutral (equally

difficult and easy). The remaining 42% of respondents said it was “quite easy” or “very easy” to find sufficiently accessible books. See Table 4 below.

These data can obfuscate key differences, however. Some groups find it much more difficult to find sufficiently accessible books. Age is an important factor: almost half of children aged 6–14 (reported by their parents or caregivers) find it quite difficult or very difficult to find sufficiently accessible books, while only 13% find it quite easy or very easy. Young people aged 15–24 also find it more difficult than average. Reported ease of accessibility increases with increasing age, for every age group in the survey.

Income also greatly affects accessibility. About one-quarter of study participants cited cost as a barrier to accessibility. Many reading platforms and apps require a user to have a credit card, which is a barrier for many low-income readers. For survey respondents whose income is less than \$20,000 per year, a significantly higher percentage find it quite or very difficult to find sufficiently accessible books and a much lower percentage find it quite or very easy. Furthermore, ease of accessibility rises in every income bracket, until it declines slightly for the uppermost income bracket.

Accessibility is more difficult for respondents with learning disabilities. One third find it quite or very difficult to find sufficiently accessible books, and one third find it quite or very easy. Respondents with physical disabilities also find it more difficult than average to find sufficiently accessible books (26% find it quite or very difficult, compared to the survey average of 19%).

Finally, study data indicate that people who have had their disability for a shorter time are more likely to find it more difficult to find sufficiently accessible books than those who have had their disability for longer: 22% of survey respondents aged 65–74 with a disability of 2–9 years found it quite or very difficult to find sufficiently accessible books, whereas only 11% of those of the same age with a lifelong disability did so.

TABLE 4

How difficult to find sufficiently accessible books?	Survey Average	Age 6-14	Age 15-24	Income <\$20,000 /year	Learning Disabilities	Physical Disabilities	Age 65–74 2–9 years of disability	Age 65–74 Disability from birth
Quite/very difficult	19%	47%	28%	31%	33%	26%	22%	11%
Neutral	38%	40%	33%	40%	34%	36%	44%	39%
Quite/very easy	42%	13%	38%	29%	33%	38%	33%	50%

Combining this information with other data from the HDYR study creates a varied picture of accessibility:

One group (42% of respondents) is doing pretty well finding accessible books. They are more likely to live in a metropolitan area with a supportive library. They have a higher amount of physical ability, knowledge, comfort with technology, money and time to have learned about reading technologies and how to cope with their disabilities. In addition, books are available in formats that are accessible for this group. The message from

this group is that the system is working but could and should be easier. This group also includes some people who are reading print (which is certainly easy to find), even though reading print might be time-consuming, difficult or painful. These people might be using print because they do not have the access, support or resources to use alternatives.

Then there is a group that is really struggling (19% of respondents). This group is more likely to include people without adequate training and support, people living in a non-metropolitan area, those with newly diagnosed disabilities, a higher percentage of people with learning disabilities and physical disabilities, and people without enough money for the necessary reading technologies. It also includes people for whom accessible reading technologies and/or books are not available; for example, some people with physical disabilities who are not able to access ebooks or audiobooks without funding for specific assistive devices and the training to use them, or some people with learning disabilities, especially children with dyslexia who need more audiobooks, audio and digital/print combo books, and decodable books. For the 19% with these characteristics, the accessibility problem is severe enough to prevent them from reading as much as they need or want to.

The third group (38%) sits somewhere in the middle, managing but not thriving.

So, in summary, almost 20% of study participants have a real problem finding and reading sufficiently accessible books. Among the 38% of participants who are managing, many are frustrated by how complex, ever-changing and time-consuming the accessible reading process is. Even among the 42% of people who say finding accessible books is quite easy, many relayed stories of frustration, lost time and difficulty in relation to reading.

Overall, accessibility must be enhanced by simplifying and improving the technology and making the various technological components compatible with each other. Multiple study participants reported giving detailed feedback to providers of reading technologies (developers, vendors and distributors) about how their products could be made more accessible. However, they reported not receiving replies and/or not seeing the necessary changes. Overall, accessibility must be enhanced by simplifying and improving the technology and making the various technological components compatible with each other.

Support and Training to Enhance Accessibility

One of the most striking findings of HDYR is the hope and freedom that could be available to people with print disabilities through more support and training. For people with print disabilities, reading requires a great deal of knowledge, familiarity with diverse technologies, a high level of technical ability and ongoing learning. Many survey respondents reported not being familiar with certain formats and reading technologies, with some not being aware of the type of formats and reading technologies that they themselves were using.

“I do not understand what format I use.”

“I am not familiar with device options.”

During the focus group conversations, facilitators heard small group participants eagerly trading information about resource programs, reading services, reading technologies and new formats with other participants at their table. Participants showed a pronounced thirst for knowledge, a great capacity for giving and receiving support, and an ardent desire for social connection with other people with print disabilities. This community has a tremendous potential for learning, and for the abilities and freedom learning can unleash.

“I would borrow ebooks from my library if someone would teach me how.”

Participants in the HDYR study had many diverse and creative recommendations for structuring support and training for people with print disabilities, as well as for people who provide services to their community.

1. PROPAGATE THE CONCEPT OF “PRINT DISABILITIES:” There is a need for more awareness about the concept of print disabilities. Many people with print disabilities and service providers do not know that the category of “print disabilities” exists, and that there are services specifically for this group.

“Today I found out that I have a new disability. It’s called a print disability, and I can get some help for it.”

2. PROMOTE EXISTING SERVICES AND TECHNOLOGIES: The fastest way to support more people with print disabilities is to educate users, library staff and teachers about the services and technologies that already exist. A very high number of HDYR participants (most of whom are linked into existing networks enough to have heard about the HDYR study) were not aware of existing services or technologies. For example, many participants did not know that CELA and NNELS exist, that their children’s schools are required to provide material in an accessible format, that many books are available in audio formats, or that easy solutions already exist for their particular needs.

3. EDUCATE AND TRAIN PEOPLE WITH PRINT DISABILITIES: Technological ability is a major accessibility issue; there is a lot to learn in order to access digital books. Some people lost their vision or print ability later in life, and perhaps were not very experienced with technology before that. Now they have to learn a lot about technology just in order to read. This can be a huge barrier.

Participants identified a significant need for more low-cost or free training for people with print disabilities and in the use of reading technologies. A remarkable 61% of survey respondents say they would use technology more for reading if more training and support were available. Within certain subgroups, this percentage is even higher, indicating a very high need for and interest in more training.

“I am finding the learning curve to be very steep. My age is also a factor. I require more practice to master skills. I would love to have access to human tutors, maybe in a classroom setting, to learn the technological skills I require to function independently. Although I live in the GTA, these services are not a reality. Certain groups offer services, but they are token, not organized and not leading to real results.”

“I’d love to have some form of training in how to be independent in doing some of these fancy things the blind now have around to use. I did not use adaptive equipment until my later years and find it hard to do so now.”

Training could take place through libraries or disability/service organizations, could happen in person, by phone or online, and should include space and support for peer-led groups as well as expert-led groups. Current training services are reportedly very fragmented among libraries, schools, universities, service groups and trainers in assistive technology. More funding and trainers are needed.

4. CREATE A CENTRALIZED RESOURCE CENTRE: Many study participants expressed a strong desire and need for a centralized service centre for people with print disabilities. A centre would provide contact information for all services that might be of interest to people with print disabilities, such as:

- Advocacy and service organizations made up of or serving people with print disabilities, including medical and social support organizations
- All the sources of accessible books, whether free (Project Gutenberg), by loan (library organizations such as NNELS and CELA), or by purchasing on commercial platforms (Amazon, Audible, Kindle, etc.)

“Though I’m experienced with technology which enables me to read, my challenge concerns availability of accessible titles in one place. Currently, I search CELA, Amazon, YouTube and the public library and this is time consuming.”

- Reading technologies used by people with print disabilities, including reviews
- Book formats used by people with print disabilities
- Suggestions and tools for organizing peer support groups, networking, knowledge exchange and socializing (e.g., book clubs)

Ideally, this centralized resource would have staff to assist people with print disabilities who need information on how to find books, how to use reading technologies, or other issues related to print disabilities. This resource centre could find a natural home at NNELS, CELA or another similar organization.

5. EDUCATE AND TRAIN OTHERS: Many participants in the HDYR study expressed the need for more education not only for people with print disabilities, but for others, including government, service organizations, teachers, librarians, publishers, providers of reading technologies and the public. In order for the reading goals of people with print disabilities to be achieved, all of these groups need to become educated about the preferences, ideas and buying power of people with print disabilities.

A key piece of education is how many people with print disabilities there really are in Canada. Although precise numbers are not known, it is recognized that there are many more people with print disabilities than was estimated even a decade ago. This is due in large part to the growing awareness about the numbers of people with learning disabilities. More research is needed in this area.

Publishers and providers of reading technologies (hardware and software) are vitally important in the journey to full accessibility. HDYR participants have a lot of detailed feedback and ideas for these sectors.

Many HDYR participants and informants observed that teachers and librarians need a lot more education about accessibility. In the short term, a lot of information could be conveyed to these professionals through brief training modules. In the longer term, upgrades to the Special Education and Library and Information Studies curricula are suggested.

Medical and social workers also need to be educated and involved in increasing accessibility for people with print disabilities. Focus group participants explained that the moment of diagnosis of the print disability is crucial. If a person is given good support and access to resources at the time of diagnosis, they will be much more likely to be successful at reading over the coming years (and at all the activities that reading enables, whether educational, occupational, social or economic). Furthermore, timely diagnosis will prevent the stigma that comes with not being able to read. This is particularly relevant for people with learning disabilities.

“Not only is the technology a challenge for my son, but the emotional/mental attitude toward reading has been impacted over the years. He has struggled with being ‘different’ and his inability to read, write and spell has had a huge impact on his confidence and social life. He has been the target of teasing and bullying.”

Timely diagnosis is particularly important for children with dyslexia and other learning disabilities. Study participants explained that if children with dyslexia are diagnosed early enough, many can learn to read print successfully. However, once they have passed a certain age, that window of opportunity slams shut.

“Early diagnosis and the proper supports from schools is so necessary [for children with dyslexia].”

6. FUND INDIVIDUAL NEEDS: Participants report that they have to spend more to get accessible materials and specialized reading technologies—some of which is extremely expensive—yet people with disabilities have less money. About one quarter of HDYR study participants cited costs (of reading technologies and/or books) as a major barrier to reading. According to Statistics Canada, most people with disabilities have a lower than average income.

HDYR focus group participants recommend that government programs subsidize (or better subsidize) reading technologies and/or books for people with print disabilities, and furthermore, that these subsidy programs (and disability tax credits) should be equivalent across Canada.

“[For accessibility], a person should have not only access to the books but also affordable technology.”

“I wish money did not limit my access to books in formats I can use.”

Participants stressed that these disability subsidy programs also need to be monitored to ensure they are meeting expectations. Most of the existing programs do not allow people to update their technology often enough to retain the ability to find, download and read accessible books. In addition, most disability subsidy programs do not (but should) cover “mainstream” devices that can be used for reading, such as phones, tablets and computers.

*“The **biggest** difference that could be made for my son is having funding made available through the school district for purchasing a laptop for school and study that included the software. Even on a loan basis. I cannot afford it for him, and yet this would alone make a **huge** difference in his independence and preparation for any post-secondary training and study.”*

“I am one of the lucky (i.e., wealthy) Canadians who can afford the technology to bring audiobooks within reach. Making not only the books/magazines/newspapers available in alternate formats but supporting the technology to use the alternate and augmented formats is the key to accessibility.”

“Technology is developing quickly and there are now very easy-to-use devices. There should be no reason that technology gets in the way of peoples’ reading. These devices should be available to all, through government programs, CNIB or libraries.”

7. FUND ORGANIZATIONAL NEEDS: Organizations that are made up of people with print disabilities and/or that serve or advocate for people with print disabilities also need funding. Such organizations provide valuable services, often filling structural gaps. These organizations provide resources such as free reading technologies, specialized libraries, training, support and gathering spaces for people with print disabilities, as well as accessibility consulting for government and businesses. Such organizations can also provide legal advocacy; many study participants expressed enthusiasm for much stronger accessibility legislation along with effective enforcement of the legislation.

Funding for organizations should include libraries and library organizations for people with print disabilities. They are one of the few organizations that are available to almost everyone with a print disability in Canada and are therefore one of the first stops when people with print disabilities are looking for help with accessible reading.

“Support of public libraries is crucial for access to a wide range of books. Books provide readers with education, information and experiences they might otherwise not get.”

In order to include and support people with print disabilities, disability and service organizations, including libraries and library organizations, deserve substantial and dedicated funding.

8. CREATE AN ADVOCACY AND SELF-SUPPORT ORGANIZATION MADE UP OF PEOPLE WITH PRINT DISABILITIES: Several focus group participants saw the benefit and potential of forming a self-support and advocacy organization specifically for people with print disabilities. Such an organization would provide mutual support and education, along with appropriate advocacy to advance the rights of people with print disabilities.

“We can appreciate that people have different needs and we can lobby together.”

“Together, we can fly!”

All of the above actions are highly recommended by HDYR participants as ways to provide support and training for people with print disabilities. These steps would greatly enhance accessibility and inclusion for all people with print disabilities.

SECTION 3E. READING TECHNOLOGIES: USE AND COMFORT

As mentioned above, HDYR participants have a lot of suggestions for ways to make reading technologies more accessible. What are these reading technologies? What technologies do people with print disabilities use, and how comfortable are they learning new technologies?

Use of Reading Technologies

The reading technologies used regularly by the most respondents are computers and mobile phones (each of them is used by 56% of respondents). Electronic book players are used by 40% of respondents, and tablets are used by 35%. Braille notetaker devices are used by 7% of respondents.

Respondents preferred certain brands of the different devices, by a wide margin: Windows/PC for computers, iPads and iPhones for tablets and phones, and Victor Readers for electronic book players. See Table 5 below.

TABLE 5

Devices	% of respondents who use this device	Most popular brand
Desktop or laptop computer	56%	Windows/PC: 85%
Tablet	35%	iPad: 77%
Mobile phone	56%	iPhone: 77%
Electronic book player	40%	Victor Reader brands: 87%
Braille notetaker	7%	N/A
Other	16%	N/A

Respondents also use other reading devices such as Kobo/Kindle players, iPods, MP3 players, and closed-circuit TV (CCTV) or scanners connected with either a TV, screen reader or braille notetaker.

When it comes to assistive technologies, the highest number of respondents use a screen reader (47%), followed by a read aloud function in an app on a device (37%). Many respondents use screen adjustments (31%), and quite a few use a magnifying device (19%). About 5% of respondents use voice control, switches or eye tracking technologies.

TABLE 6

Assistive Technologies	% of respondents who use this technology
I use a screen reader.	47%
I use a read aloud function in an app on my device.	37%
I read with a refreshable braille display.	11%
I read with my eyes, and adjust colour, fonts, spacing, etc. to my needs.	31%
I use voice control, switches or eye tracking technologies.	5%
I use a magnifying device.	19%
Other	12%

Respondents also use scanners with Optical Character Recognition (OCR), ZoomText, TV and CCTV.

Regardless of what reading technologies respondents use, they have to learn new skills and technologies frequently. How comfortable are respondents with learning new technologies? About two-thirds of respondents rated themselves as quite or very comfortable. Only 13% of respondents said they were quite or very uncomfortable learning new technologies. *See Table 7 below.*

However, data from the focus groups presents some challenge to these reported comfort levels. Many focus group participants expressed their feelings of being overwhelmed, confused and frustrated about having to constantly learn new and ever-changing technologies in order to read.

TABLE 7

How comfortable learning new technologies?	Percentage of Respondents
Quite/very uncomfortable	13%
Equally comfortable and uncomfortable	22%
Quite/very comfortable	66%

When asked if they would use technology more for reading if appropriate training and support were available, 60% said yes, 17% said no, and 20% said they did not know. The unknowing 20% could mean that the respondent would decide about the training based on cost, style of teaching or convenience, or that they are just not very enthusiastic about using technology more for reading.

Technology Use and Comfort, Based on Age and Disability

The ways respondents use reading technologies—and their comfort with learning new technologies—varies according to age, length of disability and type of disability.

Technology Use and Comfort: Age

More younger adults than older adults are comfortable learning new technologies. *See Table 8 below.* Comfort is highest among the age 15–44 group, with 76% saying they are quite comfortable or very comfortable learning new technologies. That percentage decreases slightly for the middle-aged group (to 71%), then starts declining for seniors (62%) and dropping off significantly for older seniors (46%).

Respondents also use reading technologies differently according to their age. *See Table 8 below.* Among most younger adults (ages 15–44), the mobile phone is the most popular reading device: about 78% of respondents use it. The same group uses computers at almost the same rate, about 72%.

Among most older adults (over age 65), the electronic book player is the most popular device by a slim margin, used by just over half of respondents. However, computers are also used by about half of respondents in this age group, and tablets are used by about 40%.

The middle-aged cohort (ages 45–64) falls halfway between the younger and older adults. They use computers and phones for reading at lower rates than young adults, but at higher rates than older adults. Middle-aged respondents use electronic book players and tablets at higher rates than young adults and at lower rates than older adults.

Over half of children aged 6–14 read books on a tablet (at 56%, the highest percentage of any age group), and almost one-third read on a computer. Only 13% read on a phone.

As for assistive technologies, screen readers are used by more respondents than read aloud functions across all age groups, except for the youngest and oldest cohorts. About half of respondents aged 15–74 use a screen reader (46–56%), while just over a third of the same group use a read aloud function in an app (32–40%).

Conversely, about half of people ages 6–14 and over 75 use read aloud functions, while less than one quarter of them use a screen reader.

About 30% of people over the age of 65 use magnifying devices, while these devices are used by only about 15% of the rest of the adult population.

TABLE 8

	Age 6–14	Age 15–24	Age 25–44	Age 45–64	Age 65–74	Age 75+
<i>Percentage of respondents who are quite/very comfortable learning new technologies</i>						
	53%	76%	75%	71%	62%	46%
<i>What devices do you use regularly for reading (or listening)?</i>						
Desktop or laptop computer	31%	73%	71%	56%	54%	42%
Tablet	56%	33%	26%	38%	40%	43%
Mobile phone	13%	78%	77%	63%	48%	25%
Electronic book player	6%	20%	22%	44%	52%	55%
Braille notetaker	0	8%	10%	8%	6%	3%
<i>What assistive technologies do you use for reading with your device?</i>						
Screen reader	19%	55%	46%	56%	47%	21%
Read aloud function in an app on my device	50%	40%	33%	32%	39%	48%
Refreshable braille display	6%	10%	18%	12%	8%	1%
I read with my eyes, and adjust colour, fonts, spacing, etc. to my needs.	56%	40%	40%	28%	35%	25%
Voice control, switches or eye tracking technologies	13%	10%	6%	5%	4%	6%
Magnifying device	19%	10%	17%	14%	29%	30%

Technology Use and Comfort: Length of Disability

To explore the ways that length of disability affects technology use and comfort, the researchers examined the cohort of respondents aged 65–74. This group was chosen

because about 62% of respondents in this group are quite or very comfortable learning new technologies, which is close to the average percentage for all ages. Responses from people in this age group were categorized according to the length of time they had had their disability:

- 2–9 years
- 10 or more years, but not since birth
- Since birth

Even though the age of the three groups is the same, they use reading technologies at different rates. A higher percentage of those with a more recent disability use tablets for reading (56% compared to an average of 40% for the other groups), while a higher percentage of those with longer-term disabilities use electronic book players (58% compared to 33% of those with a more recent disability) and screen readers (55% compared to 22% of those with a more recent disability). Fairly high percentages of all three groups use the phone for reading; the highest percentage of phone users are the respondents who have had a disability since birth (64%, compared to an average of 45% for the other groups).

One explanation for these results is that respondents with a more recent disability (2–9 years) learned to read accessible books on devices they already had (tablets and phones). Since it takes longer to learn and become comfortable with new and different technologies, it makes sense that a higher percentage of people with longer-term disabilities use specialized technologies like screen readers and electronic book players.

Among the aged 65–74 cohort, comfort with learning new technologies increases dramatically with length of disability. The percentage of respondents comfortable with learning new technologies increased with length of disability, from 56% for people with a disability of 2–9 years, to 61% among those with a disability of 10 or more years, to a remarkable 79% in people with a lifelong disability. In the same vein, the percentage of respondents uncomfortable learning new technologies decreases with the length of their disability, from 22% among those with a disability of 2–9 years, to 9% among those with a disability of 10 or more years, to 7% in people with a lifelong disability. *See Table 9 below.*

TABLE 9

	Ages 65–74 Length of Disability: 2–9 years	Ages 65–74 Length of Disability: 10+ years, but not since birth	Ages 65–74 Length of Disability: Since birth
Quite/very uncomfortable learning new technologies	22%	9%	7%
Equally comfortable and uncomfortable	22%	30%	14%
Quite/very comfortable learning new technologies	56%	61%	79%

These results speak to the effect of time and support. With more time, people learn more skills, learn to access more resources and receive training, all of which increase people's comfort with technologies. This also speaks to the importance of people receiving timely diagnoses and training and support at the time of or soon after diagnosis/occurrence of disability. In many cases, diagnosis of dyslexia and other learning disabilities takes an unreasonable amount of time (several years) and occurs too late in the child's development to intervene with full effectiveness. If people's technological skill and comfort can be supported from the beginning of the occurrence of their disability, they will receive all the benefits of a lifetime of reading.

For information about use of technology based on type of print disability, see Section 3G4. Subgroups: Disability Types.

Feedback About Reading Technologies

Throughout the HDYR study, participants shared a great deal of detailed and constructive feedback about the technologies they use for reading. This report does not present these very detailed pieces of feedback, but participants reported that this feedback is being given to the providers of reading technologies. Study participants also told us that most providers of reading technologies do not respond to this feedback.

BORROWING/RENTING: Many study participants want to be able to borrow and rent reading technologies (for example, electronic book players, refreshable braille displays and eReaders) from libraries, companies and community organizations.

MANY WEBSITES, APPS AND COMMERCIAL/LIBRARY PLATFORMS are complicated and difficult to navigate for people with print disabilities, and basic accessible and security needs are not being met.

“A reliable app needs to be designed for blind or low vision library users that is user-friendly.”

“People with print disabilities end up sacrificing our privacy for accessibility. This is not fair.”

Compatibility among different parts of a user's reading system is a particularly common and difficult issue. For example, study participants report frequent problems when using a screen reader to access websites and apps. Respondents said they want to be able to read a given book across multiple apps, and want to be able to easily use voice, keyboard, eye gaze or gestures to give commands.

“[My eReader] interferes with my eye gaze software and crashes my PC.”

DRM (the Digital Rights Management system used by many technology companies to limit the reading of a digital book file to a single user) creates many restrictions and difficulties, particularly if the app through which the book is accessed is not accessible. Many study participants would like the DRM system to be eliminated or improved, and/

or for providers of reading technologies to ensure that the whole reading system is accessible. Some respondents refuse to buy a book that is bound by DRM.

“DRM restrictions that tie me to a particular brand’s products are a deal breaker for me. If I invest money in a book, I need to have it fully accessible to me regardless of changes and glitches in the company.”

“DRM is less of a problem than it used to be, but we’re still forced to hope for accessibility and if the native app is not accessible, there’s little we can do. Such is the case with ebooks in RBdigital, OverDrive, Libby and other apps. DRM-using companies need to step up and take responsibility for the accessibility of the platforms we are forced to use.”

HARDWARE presents its own difficulties. The requests of study participants are simple: affordable and quality technology for the diversity of accessibility needs. Participants reported that a lot of available technology is cost-prohibitive, poor quality, prone to breakage and inconvenient, as well as needing upgrading too often.

“Operating system upgrades have made some of my digital devices obsolete!”

The ability to adjust volume, sound frequency, font, colour, and contrast, and to zoom in and out, is very important to many study participants. Users also said eReaders should be more accessible and adaptable. They are expensive, the firmware is buggy, and even the lowest volume setting is too loud for some readers. One of the major electronic book players is said to have a poor battery life, and the buttons break frequently. Its build quality has deteriorated over the last several years, but it is still expensive. Some reading devices are easy to use and of good quality, which proves that designing quality devices is possible. Users would like all reading technologies to be subject to quality control and to meet certain standards.

Refreshable braille displays are treasured by many people who are blind, but are cost-prohibitive for many. Study participants advocate for government funding for refreshable braille displays and want to be able to borrow them from libraries and community service centres. Another suggestion is to have a refreshable braille display (the largest possible, allowing nine lines or forty cells) in every library.

Participants in the HDYR study rated this topic—the importance of easy-to-use, convenient, high-quality and affordable reading technologies that are all compatible with each other—as more important than any other topic except overall availability of accessible books. Respondents would really like providers of reading technologies to hear them, and to respond to their need for these vital resources.

SECTION 3F. ACCESSING BOOKS

Formats

According to the HDYR study, people with print disabilities use a variety of formats, with some definite favourites.

Digital reading is very popular among survey respondents: 81% read digitally, while 54% read some version of hard copy (print, audio CDs or braille). Notably, people who read digitally tend to do most of their reading digitally: a full 81% of digital readers do more than half of their reading digitally, and 59% do more than three-quarters of their reading digitally. *See Table 10 below.*

Input from focus groups and interviews supports the idea that once people learn to read digitally (that is, once they learn to use the software, hardware and platforms required to access and read digital books), they tend to do more and more of their reading digitally. This speaks to the importance of having appropriate training and support available for people to learn digital reading skills.

TABLE 10

What percentage of your reading is digital?	Percentage of Respondents
1-25%	7%
26-50%	11%
51-75%	22%
76-100%	59%

Format Preferences

In terms of format preferences, audiobooks are the runaway favourite: 71% of survey respondents read digital audiobooks, and 33% read using audiobooks on CD. In total, 81% of respondents read audiobooks of some kind. The majority of participants (61%) would choose an audiobook over an ebook. *See Table 11 below.*

In line with the above, audiobooks are purchased by the highest percentage of book buyers (58%) and are the “first-choice format” for the highest percentage of respondents (50%).

Human-voiced audiobooks are a great deal more popular than synthetic-voiced. A remarkable 90% of survey respondents said they prefer a human narrator, and two-thirds of that 90% stated a sole preference for human voice narration. Participants report that a synthetic voice does not work at all for many people with print disabilities, especially people with dyslexia and other learning disabilities. However, diversity is everywhere: some people with learning disabilities prefer synthetic-voiced audiobooks. For some respondents, this issue was not important as availability.

“Availability of the title I want is the most important criteria, far more important than human versus synthetic.”

Ebooks are also popular: while they are the favourite format of only 16% of respondents, they are the second favourite format of 26% respondents, read by 52% of respondents and purchased by 54% of buyers. Well-formatted ebooks are greatly appreciated by readers in all contexts and are particularly appreciated by people who read for the purposes of study and work. Many respondents sang the praises of ebooks:

“If it is light reading mostly for entertainment, I might go for audio, but otherwise, I prefer the consistency and efficiency of electronic [ebook].”

“I love using ebooks, using audio with synchronized highlighting within the ebooks.”

“I prefer text first as I can read at a faster rate, use braille display if I wish, manipulate the text in copy & paste, etc.”

Multiple respondents reported using both digital formats simultaneously and would like more books to be available in this dual format.

“I sometimes get both, and read audiobook and check searchable details in ebook.”

“An EPUB with synchronized text and audio would obviously be ideal! :)”

About 24% of respondents read some version of hard copy print: 19% read regular print books and 14% read large print. Many respondents requested access to more books in large-print hard copy. Even so, hard copy formats are the first-choice format for only 6% of respondents. A relatively high percentage of book-buying respondents purchase hard copy books (36%). This is due partly to the fact that all the books these people buy for others would likely be included in this total. Also, respondents reported buying hard copy books to support favourite or local authors, even if they themselves could not read the book.

Most relevant for understanding the hard copy statistics, multiple study participants related the ways they adapt the hard copy print book using a photocopier, OCR device, scanner/screen arrangement or magnifying device. Readers of all genres reported this kind of adaptation, and it was particularly common in the reading of academic texts.

“If buying hard copy regular print books, it is for purposes of scanning or creating an accessible format such as scan document for reading and research.”

“Je vais photocopier en plus gros caractères.” [“I will make larger-print photocopies.”]

“I use apps to read hard copy formats—it’s a bad way to do it.”

“It is hard.”

“I use the PAL-Reading Services, volunteers read my physical copies of the books onto a CD as MP3 Files.”

TABLE 11

Format	% of respondents who read this format	Of respondents who buy books, % who buy this format	% of respondents who choose this format as first choice
Ebooks	52%	54%	16%
Digital audiobooks	71%	58%	50%
Audiobooks on CD	33%	16%	8%
Total audiobooks	81%	N/A	58%
Hard copy regular print books	14%	36%	6%
Hard copy large print books	19%	12%	6%
Total print	24%	39%	12%
Hard copy braille	14%	7%	6%
Ebraille formats	10%	4%	2%
Total braille	17%	9%	8%
Other	12%	4%	5%

Finally, braille formats are read by a total of 17% of respondents: 14% read hard copy braille and 10% read ebraille. Braille readers are a minority, but very committed. About 9% of total respondents purchase braille formats: 7% buy hard copy braille and 4% buy ebraille. About 6% of survey respondents chose hard copy braille as their first-choice format, while 2% chose ebraille formats.

Focus on Print-Preferring Readers

A small percentage (12%) of all HDYR survey respondents choose hard copy print (either regular print or large print) as their favourite format. The researchers were curious about why people who have print disabilities prefer this format, so the characteristics of this group were examined in some detail.

The first characteristic that came to light was that print-preferring readers on average like reading less and read fewer books than other readers with print disabilities. A significantly lower percentage of print-preferring readers like or love reading (75%, vs. 90% of total respondents). In addition, a smaller portion of this group reads four or more books per month: 25%, vs. 54% of total respondents.

The second characteristic of the print-preferring group is that they generally have more vision than other people with print disabilities.

- 33% have no difficulty or some difficulty seeing, compared to 16% of total survey respondents.
- 69% have no difficulty or some difficulty reading a hard copy print book, compared to 18% of total respondents. Only 31% of this group have a lot of difficulty or cannot read a hard copy print book at all, compared to 80% of total respondents.
- Most of the print-preferring group have episodic disability: for 61% of them, their ability to read a hard copy print book is limited never, rarely or sometimes, compared to 16% for all respondents. Likewise, the ability to read a hard copy print book is limited often or always for only 39% of this group, vs. 82% of total survey respondents.

Disability Types: The proportions of disability types among the print-preferring readers is quite different from the proportions within the total respondents. See *Table 12 below*. Notably, the percentages of people with physical disabilities, learning disabilities and “other” are almost double among the print-preferring respondents, compared to total respondents. We know that a higher percentage of people with learning disabilities read hard copy print, sometimes in conjunction with audio formats, and sometimes because they have not had access to, or training in, digital reading technologies.

TABLE 12

Disability Type	Among total respondents	Among print-preferring respondents
Visual disability	80%	62%
Physical disability	9%	15%
Learning disability	15%	34%
Other	8%	18%

TECHNOLOGY: A higher percentage of print-preferring readers do not know how to find or use book-reading technology (23%, vs. 12% of total respondents). A higher percentage of print-preferring readers also find it quite or very difficult to find sufficiently accessible books (32%, vs. 20% of total respondents), and a lower percentage find it very or quite easy (30%, vs. 41% for total respondents). A lower percentage of print-preferring readers is quite or very comfortable learning new technologies (57% vs. 66% of total), and a higher percentage would use technology more for reading if appropriate training and support were available (69% vs. 60% of total respondents).

A significantly lower percentage of this group has had their condition since birth (33%, vs. 41% of total respondents), and a slightly lower percentage has had their condition for 10 or more years, but not since birth (30%, vs. 33% of total respondents). We know from other study data that people who have had their disability longer tend to become more comfortable and proficient with reading technologies.

AFFORDABILITY: 62% of print-preferring respondents (vs. 57% of total respondents) cite affordability as an influence in where they get their books. About 67% would buy more books if they were more affordable (vs. 61% of total respondents). A higher percentage of people in this group are low income (25% vs. 16% of total respondents). Many low-income people find it difficult to afford the technology for reading.

AGE: The print-preferring group has a significantly higher percentage of young people aged 6–44 (54%, vs. 32% of total respondents), and a lower percentage of people aged 45 and older (44%, vs. 64% of total respondents). Only 3% of the print-preferring group is 75+, while 16% of the total respondents is 75+.

PURPOSE OF READING: A significantly higher percentage of the print-preferring group read for the purpose of work (26%, vs. 18% of total respondents), and for study (62%, vs. 43% of total). Not surprisingly since the print-preferring group includes a higher percentage of children, a higher percentage of the print-preferring group reads children’s books (31%, vs. 14% of total respondents).

A higher percentage of the print-preferring group are women (69% vs. 54% of total respondents), use a magnifying device for reading (38%, vs. 19% of total respondents), and cite limited time and energy as a barrier to reading (34% vs. 15% of total respondents).

In summary, it appears that the group of people with print disabilities who state a preference for reading hard copy print might do so for some of the following reasons:

- Many print-preferring readers have the ability to read print, at least some of the time. Many participants state that they want to use the vision they have, even if it is limited. Many participants simply like the experience of reading hard copy print.
- A higher percentage of print-preferring readers are reading books for academic and work purposes; fewer of these kinds of books are accessible.
- Some members of this group cannot afford the technologies required for reading in non-print formats.
- Some print-preferring readers do not know how to use the technologies required for reading in non-print formats. Episodic and recent-onset disabilities can create a confusing and changing situation where the decision to invest in buying and learning new technologies is not clear-cut.

Since HDYR data show that the above challenges are creating barriers, reducing reading pleasure and diminishing reading for print-preferring readers, it is very important that these readers be offered appropriate training and sufficient resources for reading in a variety of ways. Some of these readers might find other, non-print formats more satisfying and enjoyable if proper support is given.

Choice and Use of Formats

Although each respondent has their preferred format(s), most HDYR participants read in several different formats, and they stress the importance of having the choice of a variety of formats. Different formats are preferred or required for different subjects, contexts and needs.

“It’s fairly recent that I’ve been getting books electronically. This shift is because it makes so much more available to me.”

“I like to read print braille with my grandchildren, so we can read together.”

“I need a text file for spelling and audio with a good voice to study with.”

“Audiobooks are great when I’m on the go!”

“When you’re reading something like a cookbook, you want to keep it and use it over and over. You want it to be in braille, not audio, because it’s easier to find the right page and refer back to while you’re cooking.”

“I like ebooks for study and learning: I can review portions of the text, highlight and take notes.”

“What I like about the Raz-Kids app is that it has the digital book [my son] can read but it has an option to be read to him too, plus there are a few questions afterwards about the book which help him process the information he’s just read. The trouble is he loses access to the app when not in school.”

Some respondents related the experience of dual disability, which often requires access to several or alternative formats.

“I’m blind, but I also have a significant hearing loss, which limits my ability to use some text-to-speech options. So, the more available formats the better.”

Having access to a variety of formats was emphasized by HDYR participants as a fundamental necessity. Choice is essential both at the individual level (for each person) and at the community level (that there be books available in a variety of formats for the wide diversity of needs, circumstances and preferences in the print disability community).

“[I want] variety just as the sighted take for granted. Tech and math I want and need to ‘see’ as in hard copy braille. Poetry and plays I want to read for myself without intrusions by narrators.”

Use of Specific Formats

AUDIOBOOKS: Most study participants love the audiobook format. The connection with the human voice is very important; therefore, the quality of recording and of narration is vital. If the narration is poor, many participants say they cannot listen to it. Many also say they cannot listen to synthetic-voice audiobooks at all.

Many, even most, of the study participants state very strong preferences for certain types of voices (and they often disagreed with each other about what kind of voices were best): neutral vs. passionate, male vs. female, a certain aged voice for different genres, accented according to the book's subject matter or non-accented, and/or for books read by a full cast of characters with sound effects (graphic audio) vs. a single narrator.

“I prefer a reader just to read and not do voices or accents so that my imagination can create choices and characters as one does when reading a hard copy book.”

“I love graphic audio...it's like a movie for the ears.”

Audiobook publishers would be wise to develop and advertise different “product lines” of audiobooks to meet the different preferences, to include specific data about narration style in the book's description and to enable audio sampling so that potential readers can check out the narration style. Many audiobook users find the reading of page numbers, index, glossary, etc. very distracting, and would like it to be optional to hear these elements. Readers also want to be able to adjust the reading speed of audiobooks on any device.

“[I would like to know] which audiobooks are narrated by a synthetic voice and which are narrated by a human voice because I currently don't discover that until I've downloaded the book.”

Audiobooks are described as life-changing by some people, especially people with learning disabilities.

“When I discovered audiobooks in my twenties it was like a whole new world opened up to me.”

Study participants described watching children go from hating reading to loving it with the introduction of audiobooks. The survey data, focus group input and informant interviews all provided numerous examples of people of all ages with learning disabilities describing how they read with their eyes and ears simultaneously, and how that method greatly enhances learning. Some children's book players offer this dual format in a fully accessible and effortless package.

Participants would like a much bigger selection of high-quality audiobooks and would like audiobooks' prices to be in line with print books. Many found it very unjust that audiobooks are about twice the price of print books.

EBOOKS: Ebooks are beloved by many who read them, and even preferred by a small percentage of participants. Numerous participants particularly appreciate using ebooks for study and work. Many respondents use a screen reader or read aloud app at the same time as reading with their eyes, having adjusted the screen to their needs. Well-formatted ebooks can also be read on refreshable braille displays, which is a benefit for many readers of braille. Some users report that ebooks display in too dense a format, and they would like to be able to break up the text and/or display only one sentence at a time. Users would also like to be able to highlight and take notes in their ebooks.

Many participants stress the importance of ebooks meeting international standards for accessibility. Participants, especially students, teachers and researchers, want publishers to learn that PDF files are not accessible to most people with print disabilities. In fact, a lot of academic and other complex content is currently inaccessible. Tables, images and figures need to be properly formatted and/or described, the text needs to be well-structured with headings clearly defined, in-text citations must be readable, and digital content needs to have page numbers and, in the case of poetry, line numbers.

“Je suis à l’université. Je dois beaucoup lire et c’est très difficile. Les revues scientifiques sont souvent en format PDF, ou dans des formats inconstants. L’idéal serait d’avoir un standard dans le but de gérer plusieurs variétés de formats.” [“I am at university. I have to read a lot and it is very difficult. Scientific journals are often in PDF format, or in inconsistent formats. The ideal would be to have a standard to manage several varieties of formats.”]

BRILLE: Many braille users and advocates know that people who have had visual disabilities since birth who learn braille as children have higher rates of educational and economic success (Ryles, 1996). Braille is extremely helpful for learning spelling, syntax, spatial skills, a second language and graphics.

“Ne permettez pas à nos enfants aveugles ou non voyant de devenir illettrés en éliminant le braille de l’enseignement des jeunes aveugles ou mal voyants. Le braille les oblige à lire comme il se doit. Il permet aussi de préciser l’orthographe et la grammaire.” [“Do not allow our blind or visually impaired children to become illiterate by eliminating braille from their education. Braille forces them to read [properly], and makes it possible to learn spelling and grammar.”]

Those who read braille tend to love it and often choose hard copy braille as their favourite format. At the same time, users acknowledge that braille is bulky and hard to get, and that not many books are available in this format. Reading braille digitally is a good alternative to hard copy braille for many users, but refreshable braille displays are overly expensive.

“I am so so passionate about braille. Would love more low-cost braille solutions so everyone that wants to can use electronic braille or get hard copy braille in all libraries.”

“I recognize that audio is a useful tool, but nothing replaces braille when it comes to literacy. Braille in general and refreshable braille in particular have affected my life in ways that could never be overstated.”

According to the HDYR study participants, hard copy braille will always be essential, with digital braille also important.

Even as digital books become more available, maintaining the current variety of accessible book formats is essential. People with print disabilities are a very diverse group, and people have very different needs based on their abilities and disabilities, resources, access to training, purpose of reading, and preferences.

Accessing Books through Libraries and Library Organizations for People with Print Disabilities

Libraries and library organizations are vital and well-used resources for people with print disabilities. In all, 82% of survey respondents get their favourite format from some kind of library. Almost half of survey respondents (49%) get their favourite format from their local public library or school/college/university library, while 59% do so from library organizations for people with print disabilities such as CELA, NNELS or Bookshare.

Note that the accessibility services of school and university libraries were not examined in depth in this study. With that being said, a number of HYDR participants emphasized the vital importance of strong support from their child’s school in meeting the child’s reading needs, and in of pointing parents to other accessibility reading services such as NNELS and CELA. The reading needs of children and youth with print disabilities, and the critical role that schools and universities play in meeting these needs, requires further research.

Public Libraries

SERVICES: Respondents credit their local librarians with helping them find books that are both accessible and interesting to them. Some public libraries host clubs, classes or one-on-one training for people with print disabilities, and these are much appreciated.

“I am very fortunate to live in this community with top notch library accessibility. I enjoy the best services from all the staff working at these libraries, Capilano and Lynn Valley branches, they make my life so much happier and fulfilling. Forever grateful.”

The HDYR study received a lot of input about how libraries could improve service for people with print disabilities. The most important change would be for public libraries to increase the availability, selection and variety of books.

“Providing only bestsellers in accessible formats does a tremendous disservice to Indigenous and local authors. Books teach us about our history both local and national, and everyone including the disabled community should have equal access to that wealth of material.”

*“Waitlists for audiobooks at public libraries are usually more than six months long. There are **no** audiobooks at the school library.”*

Library platforms and library services should be fully accessible.

“I find public library digital services such as RBdigital, cloudLibrary and OverDrive to be difficult to use and not 100% accessible.”

“[The Library apps are so cumbersome]; I am a little outraged that I am driven to platforms like Audible, [which are] user friendly but costly.”

“As a blind person, my library card is not even accessible to me.”

Library staff must be well-trained in accessible reading technologies (hardware and software), formats, challenges and solutions. They should be able to provide training and support to library users, including one-on-one assistance. Library staff should know about library organizations that provide shared services for people with print disabilities (such as NNELS and CELA), promote these services to their users and help them get signed up.

“I often find it difficult to access information about available books and book sources. I wish there were places to turn to that would give hands-on help that are easy to access and/or have ready access to training as well as to technology. Getting accessible format books often takes many steps.”

“Schools don’t know about NNELS or CELA. Even my public library did not know about it and I live in a suburban area.”

HDYR participants would like for their local libraries to have reading devices with assistive technologies available for use at libraries, and also to have devices available for loan and/or rental. Every library should have at least one computer terminal that is fully accessible, enabled with a screen reader and other accessibility features. People with print disabilities would like their libraries to have a section that would provide specific services for them, and to host clubs and social events for people with

print disabilities (or for everyone, ensuring they are accessible to people with print disabilities).

“My local library should have a branch just for people with print disabilities. It used to. What happened? I want to be able to go to a place to find books, get support and talk with other people with print disabilities.”

“We need more frequent meetings, especially with the good food. We are isolated, and this helps us socialize. Going to a library helps us meet people who have the same interests and we can spend our time efficiently talking to each other, asking questions and learning new stuff.”

HDYR participants want public libraries to allow library users to place interlibrary loans themselves, online, and to loan digital books via interlibrary loans. Finally, libraries ought to provide different conditions/rules for people with print disabilities when appropriate. For example, some people with print disabilities need longer borrowing periods, more renewals or more allowable holds. Some should have priority access to certain formats if that is all they can read.

*“People without print disabilities might want an audiobook, but [some] people with print disabilities **need** an audiobook. We should have priority.”*

“My library only gives a limit of two books per month so I have to use other methods and other libraries under different family members’ names.”

PHYSICAL ACCESSIBILITY: Many study participants with physical disabilities and learning disabilities find that their local libraries are not physically accessible. Participants reported that libraries are often cramped, have too many stairs, and are too noisy and bright for many users with disabilities that include severe pain and fatigue, autism, severe migraines, and Attention Deficit Disorder (ADD). A quiet environment, with natural or adjustable lighting, more places to sit comfortably, and even recliners for those who need them, would make a huge difference for many library users. Washrooms for people of non-binary genders are also necessary for full inclusion.

“My library feels overwhelming: hot, loud, stressful and difficult to use the devices.”

“Libraries do not have space for me and my wheelchair, and the shelves are too high.”

“Libraries should have low-stim ‘pods’, tiny rooms where we can go to read.”

Study participants also suggested that libraries post detailed and up-to-date accessibility information on their websites, keeping in mind people with diverse disabilities including blindness, autism and (often invisible) pain/fatigue syndromes.

“Virtual tours or location photos on a branch’s website could help people feel prepared to enter the space, especially if they have access needs.”

Library Organizations for People with Print Disabilities

Study participants had a lot of feedback—some of it very detailed and specific—for library organizations that provide shared services for people with print disabilities (such as CELA and NNELS). This report captures the main themes.

HDYR study participants expressed a great deal of appreciation for the services that organizations like NNELS and CELA provide and described how having these services has opened up their reading and their lives.

“I can find books on virtually any topic I am interested in. I am deeply grateful...[this] has immensely improved the quality of my life. Thank you!”

However, a significant number of study participants did not know about these library organizations for people with print disabilities until participating in this study. Participants suggested that CELA and NNELS promote their services to a wider range of people with print disabilities by advertising on public library websites and platforms (such as OverDrive) or including promotional bookmarks inside large-print books and audio CDs they get from their public libraries.

“I have been reading alt-format books for several years, but I had not heard about NNELS or CELA until now.”

Of primary importance, study participants want organizations like NNELS and CELA to increase the availability, selection and variety of books. As part of that, the libraries need to better serve the reading needs of children with print disabilities.

“My mom is having difficulty getting children’s books for me.”

Participants gave a large number of comments asking that services such as CELA and NNELS make it much easier, simpler and faster to navigate their websites, search for books using more effective filters, and download them to a variety of common devices. Other improvements to the websites would include providing basic operating instructions that can be consulted as needed, more information about the books’ accessibility information (metadata) and narration style, and a clarification of the audiobook format. (Many respondents believe that only human-narrated books should be called audiobooks.)

“I used to enjoy searching for books, but now it’s time consuming and frustrating.”

“Since the technical requirements are considerable, all my audiobooks are downloaded for me, by someone with visual ability.”

Also requested by a large number of participants, and borne out by 60% of the online survey respondents, was training—training to all users who needed it, on all different kinds of reading technologies.

“I am a fairly competent user of technology and also resourceful at finding books. Still, I was not aware about how to use EPUB files until two years ago. Concise and accurate information for users about reading applications, file formats, and options for technology and resources is necessary.”

Library users want NNELS, CELA and the SCLA arm of BAnQ to cooperate more with each other in order to optimize services to people with print disabilities, to reduce wait times, and to respond to user feedback and book requests in a timely way. Participants also want these library organizations to offer them opportunities to engage in more of the social aspects of reading, such as access to extensive recommended reading lists, discussion forums and online book clubs.

“What might be fun is to have a small space for up to five comments from the recent readers of each book.”

Finally, people with print disabilities want services such as CELA and NNELS to take full advantage of the benefits of the Marrakesh Treaty, which would allow people in Canada easier and better access to U.S. and international content.

“Je trouve qu’en 2020 et tenant compte du traité de Marrakech, je trouve dommage qu’il n’y ait pas encore d’ententes entre les bibliothèques qui permettraient d’accéder à tous les livres adaptés en n’ayant qu’un seul abonnement.” [“I find that in 2020 and taking into account the Marrakesh Treaty it is a pity that there are not yet agreements among the libraries that would allow access to all accessible books with only one subscription.”]

“When doing doctorate research as a Canadian attending an institution in the U.S., copyright rules did not allow me to access in Canada because I was at a U.S. institution and the U.S. institution could not send me resources because I was in Canada.”

In summary, libraries and library organizations for people with print disabilities are the “front line” of service to people with print disabilities, and their leadership on the above points will help our society take a huge leap toward full accessibility and inclusion of

people with print disabilities. Adequate funding from all levels of government for these important initiatives is essential.

Accessing Books Commercially

Just over half of HDYR survey respondents (51%) report that they buy books. Of that group, 12% spend under \$5 per month, and 33% spend \$6–\$15/month. Almost as many (28%) spend \$16–\$40/month, and 10% spend over \$40/month. About 17% of respondents did not answer the spending question. See *Table 13 below*.

TABLE 13

Average \$ amount spent on books	Percentage of respondents
\$1–\$5 per month	12%
\$6–\$15 per month	33%
\$16–40 per month	28%
More than \$40 per month	10%
No answer	17%

Large percentages of these book buyers purchase fiction (81%) and non-fiction (70%); while about 35% purchase academic books. Smaller percentages of purchasers buy children’s books (22%), poetry and drama (20%), and decodable books (3%).

The 38% of purchasers who spend the most on books (over \$16/month) purchase approximately the same proportions of genres as all survey respondents. However, they buy 4–8% more fiction, poetry and drama, and academic books, and 11% more non-fiction.

The most-purchased formats are digital audiobooks (by 58% of purchasers) and ebooks (by 54%), followed by hard copy regular print at 36%. About 16% of buyers buy audiobooks on CD, 12% buy large print, 7% purchase braille, and 4% ebraille. Even though the market for braille is relatively small, it is full of passionate readers. Many braille-reading participants told us that they would buy and read more in braille formats if more books were available in these formats.

Higher spenders buy formats in about the same proportions as all respondents. However, higher percentages of higher spenders buy the following formats: 75% buy digital audiobooks, 60% buy ebooks and 41% buy hard copy regular print. About 17% of higher spenders buy audiobooks on CD, 9% buy braille and 5% buy ebraille.

More Likely to Buy

When all respondents were asked what would make them more likely to buy books, the largest percentage (61%) cited affordability as a major factor in purchasing. If the books or subscriptions were more affordable, people would be more likely to buy them. Almost half of respondents (49%) cited accessibility as important to their purchasing decisions, while almost as many (45%) cited “good selection.” About one third of

respondents (34%) would be more likely to buy books if online stores were easier to use, while 30% of respondents would find buying more attractive if they knew the book’s accessibility features (metadata) ahead of purchasing. See Table 14 below.

“My iPhone and ebook publishers have made a tremendous difference making their apps accessible to VoiceOver. This has utterly liberated me in terms of building a personal collection of books paying the same prices as others pay for the same books. Keeping book costs down will help me read more.”

About 14% of respondents cited other factors that would make them more likely to purchase books:

- Being able to share or give away the book
- Having it be priced the same as the hard copy print book
- Liking the book enough to want to read it repeatedly
- The ability to easily transfer the book between devices (several mentioned the important feature of maintaining the reader’s place when transferring between devices)
- Knowing ahead of time that the book would work with their device or assistive technology (for example, their particular screen reader)
- For audiobooks, being able to hear a sample of the narration
- The beauty of the book itself

When the higher spenders were asked what would make them more likely to purchase books, their priorities were the same as those of the total respondents (affordability, accessible formats, good selection, easy online stores and knowing accessibility features). However, a higher percentage of the higher spenders (11–14% more) rated accessibility and “good selection” as important.

Purchasers from the highest two income brackets (earning more than \$40,000 per year) also had the same priorities as the other groups. However, fewer people in the higher income group rated “affordability” as an important factor.

TABLE 14

What would make you more likely to buy books?	Total Purchasers	Higher Spenders	Higher Income
Having access to a good selection of books that interest me	45%	59%	42%
Online stores that are easy to use	34%	42%	36%
Having access to books in formats that meet my accessibility needs	49%	60%	48%

What would make you more likely to buy books?	Total Purchasers	Higher Spenders	Higher Income
Knowing the book's accessibility features (such as image description, adjustable fonts and colours) before buying.	30%	35%	26%
Affordability	61%	64%	53%
Other	14%	13%	17%

Since more than one third of all respondents value online stores that are easy to use, how did they rate commercial platforms such as Kobo and Kindle for accessibility and ease of use?

About 11% of purchasers said commercial platforms were not accessible at all, 12% said they were somewhat inaccessible and 35% were neutral.

“Access to commercial platforms can depend on the platform and technology you use. It can be frustrating to buy a book and realize you cannot play it in another application.”

About 30% of purchasers find the commercial platforms fairly accessible, while only 12% find them very accessible. Obviously, there is a lot of room for improvement in this area.

The data shows there is a lot of room for improvement in this area. Search platforms are an essential part of the reading system for most people with print disabilities, and HDYR participants provided countless examples of problems using these platforms. Providers of reading technologies would ease the lives of all readers with print disabilities if they would improve the functionality and accessibility of these platforms and ensure their compatibility with the other elements of accessible reading systems.

Characteristics of Higher Spenders

Higher spending purchasers—those who spend more than \$16/month on books—are more likely to be women, live in one of the Prairie provinces, have learning disabilities, be higher income, have had their disability from birth, be 25–64 years of age, and have more difficulty than average reading and finding accessible books.

- Women make up 54% of all survey respondents, but 61% of the higher spenders.
- People whose primary residence is in Alberta, Saskatchewan or Manitoba make up only 19% of all survey respondents, but 23% of the higher spenders.
- People with learning disabilities make up only 15% of survey respondents, but 20% of the higher spenders.
- People who have had their disability from birth make up only 41% of survey respondents, but 47% of the higher spenders.

- Not surprisingly, a larger percentage of higher spenders have higher incomes. While people who have an annual household income of \$70,000 or more make up only 20% of survey respondents, they are 37% of higher spenders.
- One quarter of higher spenders were 25–44 years of age; about another third (36%) were 44–64 years of age. These percentages are 5–7% higher than among the total respondents.
- Data about children aged 6–14 make up only 3% of the total survey data, but 5% of high spender data. This is fairly insignificant if this data point is taken in isolation; however, input from key informants and focus group participants strongly supports the idea that there are a large number of children with learning disabilities who are struggling to read print and need alternative formats. Therefore, one factor driving higher spending on books is almost certainly parents struggling to acquire accessible books for their young children with learning disabilities.
- Although higher spenders have about the same comfort level as other respondents learning new technologies, a larger percentage of higher spenders report difficulty in finding sufficiently accessible books.
- While 41% of all survey respondents found it quite easy or very easy to find sufficiently accessible books, only 37% of higher spenders did so. (This is even with the advantage of their ability to buy more books.)
- This indicates that one driver for higher spending is sheer frustration. If accessible material cannot be found in school and library settings, people will often purchase it if they can afford to do so. This conclusion is strongly supported by input from focus group participants.

“I’ve spent a fortune on books the last few years. Most of the time I can’t get the book so I order it on Amazon. It’s expensive to read because there’s no accessibility.”

Certain categories of people are likely to spend more on books than others. Some of this purchasing appears to be driven by lack of accessibility in schools and libraries, while some seems to be driven by preference.

SECTION 3G. SUBGROUPS

The following sections explore responses from HDYR participants based on four categories: gender, language, residence (in metropolitan areas and outside of them) and type of disability (blindness, low vision, learning disabilities and physical disabilities). These categories are explored in order to acknowledge the significant diversities within the print disability community, and to highlight important differences within the four groups.

Section 3G1. Subgroups: Gender

There were significant differences among male and female survey respondents.

Reading Habits

A higher percentage of women report reading in hard copy formats.

- 60% of women read some of their books in hard copy (print, braille or CDs), while only 47% of men do so.
- Similarly, 46% of women's reading is digital, while 56% of men's reading is digital. For example:
 - 50% of women (vs. 56% of men) read ebooks.
 - 69% of women (vs. 78% of men) read digital audiobooks.
 - 36% of women (vs. 30% of men) read audiobooks on CD.
- The most significant difference in formats is in the area of hard copy print: 19% of female respondents vs. only 6% of male respondents said they read large print books. Similarly, 23% of women vs. 10% of men read regular print books. It follows that a higher percentage of women therefore use a magnifying device: 14% of women vs. 8% of men.

A higher percentage of women read more books:

- 30% of women respondents read seven or more books per month, compared to 19% of men.
- While the great majority of all respondents of both sexes (86% of women and 79% of men) read fiction, female respondents were less likely than men (28% vs. 37%) to read academic and textbooks. More women than men (18% vs. 7%) read children's books; this is not surprising since women are more likely than men to be caregivers to children.

Barriers and Preferences

Women face more reading barriers than men. Only 51% of female survey respondents – compared to 67% of men – stated that it was quite easy or very easy to read books as much as they wanted to, in the ways they wanted to.

Barriers of cost, availability, technology and mobility were more prevalent for women than for men.

- 64% of women (compared to 55% of men) said they had trouble getting the books they wanted in a sufficiently accessible format.
- 25% of women (vs. 19% of men) stated that reading devices, software or books are too expensive.
- 14% of women (compared to 8% of men) said they did not know how to find or use the technology required to find a book.

- 15% of women (compared to 10% of men) said they had difficulties getting to a bookstore or library to get a hard copy book.
- Of the survey respondents, more women than men (12% vs. 5%) said that what made reading difficult was a physical disability. From the comments shared by respondents, we know that their physical disabilities were caused by conditions such as ALS, post-concussion syndrome, multiple sclerosis, pain and fatigue syndromes, and arthritis. Are disabling diseases more common among women than men, especially among older people?
- More women than men (23% vs. 18%) stated that they have had their disability for 2–9 years (e.g., recent onset vs. lifelong). Certain diseases of aging related to vision affect women at higher rates than men. According to the U.S. National Institutes of Health, people with age-related macular degeneration and cataracts are 1.5 to 2 times more likely to be female (National Institutes of Health, n.d.).

A higher percentage of women than men stated that they chose their favourite format because it was more accessible. Conversely, a higher percentage of men chose availability: “Books I want are available in this format.”

- Accessibility: 59% women vs. 49% men
- Availability: 42% women vs. 51% men

It is possible to interpret these data as women trading availability for accessibility. With higher barriers of technological accessibility for women, they might be settling for less availability of their desired reading material.

Technology

According to the survey, women and men also differ in their use of technology. 49% of women vs. 65% of men use a computer to read books. Probably related, only 38% of female respondents vs. 56% of male respondents use a screen reader to read books. Interestingly, only 38% of female computer users vs. 59% of male computer users use a Windows/PC computer.

40% of female respondents (compared to 20% of males) said they read with their eyes, and adjust fonts, spacing and colour to their needs.

Fewer women than men are comfortable learning new technologies. 60% of women vs. 74% of men stated that they were quite comfortable or very comfortable learning new technologies. More women than men (63% vs. 58%) said they would use technology more for reading if appropriate training and support were available.

Getting Books

Women and men differ in where they get their books as well. See Table 14 below. A higher percentage of women than men (54% vs. 41%) get books in their favourite format from their public library, while a higher percentage of men than women (65% vs. 57%)

use a shared library service for people with print disabilities such as CELA, NNELS or Bookshare. A higher percentage of men than women (35% vs. 26%) get books in their favourite format from public domain sites, while a slightly higher percentage of women than men buy books online (39% vs. 35%) or in person (12% vs. 10%).

TABLE 14

Where do you get books in your first choice of format?	Women	Men
Borrow from public libraries, college/university libraries or school library	54%	41%
Borrow from centralized services for people with print disabilities	57%	65%
Download free public domain ebooks and audiobooks from the internet	25%	34%
Buy online (e.g., Amazon, Apple Books)	39%	35%
Buy in person at a bookstore or other store	12%	9%

Buying Books

According to the survey data (and borne out by many other sources) a higher percentage of men than women are wealthier. For those survey respondents with an annual income of \$40,000 to \$70,000, the difference was small (22% of men vs. 19% of women). The difference was slightly greater in the higher income bracket: 24% of men vs. 20% of women claimed an annual income of over \$70,000. Furthermore, as stated above, 25% of women (vs. 19% of men) cite cost as a barrier to reading as much as they would like.

Despite the differences in income, a higher percentage of women than men (55% vs. 47%) buy books. Not surprisingly given their format choices, more women than men (22% vs. 13%) buy hard copy print books. More women than men (45% vs. 36%) buy fiction and more women than men (15% vs. 6%) buy children’s books.

In terms of what would encourage people to purchase a book, women’s and men’s choices are very similar. However, more women than men (32% vs. 27%) said they would be more likely to buy a book if they knew the book’s accessibility features such as image description, adjustable fonts and colours (metadata) before buying.

In summary, women and men with print disabilities appear to read quite differently. Many of the differences seem to be related to comfort with and knowledge of reading technologies: a lower percentage of women are adept at using reading technologies, and this has all kinds of ripple effects. While respecting every reader’s individual choices, service providers should take these differences into account, and make a targeted effort to offer training and support to women readers with print disabilities.

Section 3G2. Subgroup: Readers of French

This section focuses on HDYR respondents who chose French as one of their preferred reading languages and compares them to respondents who chose English. This section

is based on responses from 86 survey respondents, in addition to input from French-reading focus group members and informant interviews.

Note that 62% of the survey respondents who chose French as one of their preferred reading languages also chose English as one of their preferred reading languages. Therefore, these results are not from a perspective that is exclusively Francophone.

Overall, participants reported that the availability of accessible format books is significantly lower in French than in English. Furthermore, there are serious shortages in certain formats in French (braille and audiobooks), and the quality of French audiobooks is often very poor. This information creates an interpretive framework for the results below.

“I am dismayed that CELA does not handle hard copy contracted French braille—I am deprived of half of my national heritage.”

“Les livres audio en versions françaises sont épouvantables.”
[“French version audiobooks are appalling!”]

A significantly higher percentage of French readers (65%) than English readers (57%) read in hard copy (print, braille or audiobooks on CD), while a very slightly higher percentage (2%) of French readers read in digital formats. See Table 15 below.

TABLE 15

French Readers	English Readers
65% read hard copy	57% read hard copy
89% read digitally	87% read digitally

Fewer readers of French (48%) than readers of English (59%) read more than three quarters of their books digitally. These data are consistent with the idea that readers of French need to read in more formats due to overall lack of availability. Also consistent with lower availability of French-language books, fewer readers of French than English readers read seven or more books per month (15% vs. 26%).

French readers rated ease of finding the books they wanted the same as English readers, but French readers reported that finding sufficiently accessible books was very difficult. A higher percentage of French readers than English readers (25% vs. 18%) said this was quite difficult or very difficult, while a much lower percentage of French readers than English readers (33% vs. 43%) said that finding sufficiently accessible books was quite easy or very easy. The reading barriers identified by French readers were similar to those identified by English readers, except that a higher percentage of French language readers said that their technology did not work well (60% of French respondents vs. 55% English respondents).

According to the survey data, French readers use computers and braille notetaker devices at significantly higher rates than English readers. About 66% of French readers

use computers for reading, compared to only 56% of English readers, while 15% of French readers use a braille notetaker for reading, compared to 6% of English readers.

French readers use assistive devices at different rates as well. More French readers use screen readers and refreshable braille displays than English readers. *See Table 16 below.*

TABLE 16

Assistive Device	French Readers	English Readers
Screen reader	54%	44%
Refreshable braille display	19%	10%

French readers' comfortable use of braille reading technologies might explain why French readers appear to have lower interest in technology training. When asked if they would use technology more for reading if appropriate training and support were available, only 49% of French-reading respondents said yes, compared to 63% of English respondents.

Formats

While about the same percentage of French readers read digital audiobooks and large print hard copy books as English readers, more French readers read regular print books (29%, vs. 21% of English readers). *See Table 17 below.*

About 39% of French readers read some kind of hard copy print books (regular or large print), compared to 31% of English readers. Correspondingly, a higher proportion of French readers use hard copy reading aids such as magnifiers and rulers. The higher number of French readers reading hard copy print could be due to the low availability of good quality audiobooks in French.

Braille is about twice as popular among French readers as it is among English readers: 27% of French readers read hard copy braille and 19% read ebraille, while only 12% and 10% of English readers do so. About twice the percentage of French readers also chose either braille or ebraille as their favourite format (13%, vs. 7% of English readers). Furthermore, more of the French hard copy braille readers also read ebraille (67%) than English readers (61%).

It must be noted that a higher percentage of French-reading survey respondents than English-reading respondents (57% vs. 51%) happen to be blind or legally blind, which probably has some impact on the French readers' preference for braille. However, even taking this fact into account, the marked preference for braille among French readers is significant and interesting.

TABLE 17

Formats read	Percentage of French Readers	Percentage of English Readers
Ebooks	49%	55%
Digital audiobooks	73%	73%
Audiobooks on CD	27%	33%
Braille	27%	12%
Hard copy large print	16%	14%
Hard copy regular print	29%	21%
Ebraille	19%	10%
Other	10%	12%

Sources of Books

Readers of French get their books differently than readers of English. Both groups use library organizations for people with print disabilities (such as NNELS and CELA) at roughly the same rate (57–59%), but fewer French readers get books from their public libraries (only 36%, compared to 51% of English readers). On the other hand, a higher percentage of French readers than English readers (38% vs. 30%) report downloading their books from public domain sites. When purchasing books, a lower percentage of French readers buy online, while a higher percentage of French readers buy in person.

TABLE 18

French Readers	English Readers
32% buy online	38% buy online
18% buy in person	11% buy in person

Ease and convenience are the biggest influences on where French-reading respondents get their books, and this is an influence for more French readers than for English readers (91% vs. 82%). Cost is cited as an influence for fewer French readers than for English readers (45% for French vs. 61% for English).

Given the choice between an ebook and audiobook, the same percentage of French and English would choose an ebook (15%). However, fewer French readers than English readers would choose an audiobook (53% vs. 61%), and more French respondents chose the “not sure” option (12% vs. 5%). Both of these responses could be due to the average quality of French-language audiobooks being relatively poor.

“La qualité des livres audio dépend de la qualité du narrateur et/ou narratrice. La qualité de lecture et d’interprétation est souvent très mauvaise. S’il vous plait, veuillez à améliorer au maximum la narration de livres, spécialement en ce qui concerne des livres audios offerts en bibliothèque.” (“The quality of audiobooks depends on

the quality of the narrator. The quality of the reader and their interpretation is often quite poor. Please optimize the narration, especially of audiobooks offered in libraries.”)

Similarly, while French readers (along with English readers) express a strong preference for human vs. synthetic voice narration in audiobooks (58%), the French readers were more tolerant of synthetic voice narration. About 14% of French readers vs. only 5% of English readers agreed with the statement that “human-narrated and synthetic voice are equally preferable.”

The experience of finding, downloading, opening and navigating digital books is difficult for a significantly higher percentage of French readers than for English readers. These aspects of accessibility created barriers for 6–12% more French readers than for English readers. It is not clear why this is the case.

Buying Books

Approximately the same percentage of French readers as English readers (50%) purchase books, but in markedly different formats. Significantly fewer French book-buyers purchase digital books (44%, vs. 54–58% of English book-buyers), almost twice as many French buyers purchase hard copy braille and about 1.5 times as many French book-buyers purchase hard copy print (both large print and regular print). See Table 19 below.

TABLE 19

Formats purchased	Percentage of French Book-Buyers	Percentage of English Book-Buyers
Ebooks	44%	57%
Audiobooks	44%	58%
Audiobooks on CD	17%	15%
Braille	14%	8%
Hard copy large print	19%	11%
Hard copy regular print	56%	36%
Ebraille	0%	4%

GENRES: French readers and English readers bought fiction books at roughly the same rates. However, a higher percentage of French readers than English readers bought non-fiction books (75% vs. 68%) and poetry and drama books (28% vs. 20%).

On the other hand, a lower percentage of French readers bought textbooks and academic books (28% compared to 37% of English readers) and children’s books (11% vs. 23% of English readers). It is important to note that, when it comes to actually *reading* these genres, the percentage of French readers equaled or surpassed the percentage of English readers. It is possible that a smaller proportion of French readers purchase academic and children’s books simply because these genres are less available in French.

A higher percentage of French readers spend more money on books. About 45% of French book-buyers, compared to 36% of English book-buyers, spent more than \$16 per month on books. About 17% of French buyers spent more than \$40 per month, compared to 9% of English buyers. Average incomes among the two groups are about the same, although there was a slightly higher percentage of French-readers in both the lowest-income and highest-income groups.

A higher percentage of French book-buyers (10% more) are quite or very happy with commercial platforms. When asked what would make them more likely to buy books, 8–9% more French readers than English readers chose easy-to-use online stores and fully accessible books. Notably, 14% fewer French readers than English readers cited affordability as a factor in making them buy more books. For English readers, the number one factor likely to influence the buying of more books was affordability (64% of respondents); for French readers, the most important factor was accessibility (55% of respondents).

In summary, readers of French with print disabilities seem to have fairly different reading habits, needs and preferences than readers of English. Overall availability of books is lower for French readers, and this likely affects the formats they read (more hard copy print than English readers). French readers’ much higher use of braille is remarkable and may be of interest to braille educators and advocates. Of note is the finding that higher percentages of French readers report that their reading technologies do not work well, that they have trouble finding sufficiently accessible books, and that they have more difficulties finding, downloading, opening and navigating digital books. The reasons for these findings are not clear, and further research is recommended.

Section 3G3. Subgroups: Non-metropolitan Residence

There are small but illustrative differences between HDYR respondents who live in metropolitan areas and those who live outside metropolitan areas. It should be noted that our sample of readers from outside metropolitan areas contained a higher percentage of people with visual disabilities than the metro readers, and a slightly lower percentage of high-income readers.

A lower percentage of people who live outside metro areas (37%) found it easy to find sufficiently accessible books, compared to 45% of those who live in metropolitan areas. See Table 20 below.

TABLE 20

How difficult is it to find sufficiently accessible books?	Total Respondents	Non-metropolitan Areas	Metropolitan Areas
Quite/very difficult	19%	19%	19%
Neutral	38%	44%	36%
Quite/very easy	42%	37%	45%

“I’ve heard that if one has access to a large city library, it’s easier to download a greater variety of both ebooks and audiobooks. If those of us in smaller communities could do the same, it would help folks have access to more titles than are available in smaller towns.”

In terms of technology use, a higher percentage of respondents from outside metro areas use tablets for reading (42%, compared to 34% of metropolitan respondents), while a lower percentage use phones (53%, vs. 58% of metro readers), electronic book players (35%, vs. 41% of metro readers) and braille notetaker devices (4% vs. 8%).

“I never learned to read on a refreshable braille device or how to use it. If I knew how, I might use one. I live in a small rural town and I am the only braille reader here.”

A lower percentage of readers who live outside of metropolitan areas were quite or very comfortable learning new technologies (60%, compared to 69% of metro readers). When asked if they would use technology more for reading if appropriate training and support were available, 65% of non-metro respondents said yes (compared to 60% of metro respondents).

“I live three hours away from a major centre and I basically have to teach myself new technology.”

In terms of formats, a higher percentage of respondents from outside metro areas listen to audiobooks on CD (37%, vs. 32% of metro respondents), more hard copy large print (21%, vs. 12%), but less braille (10%, vs. 16% of metro respondents) and ebraille (5%, vs. 13%). A higher percentage of non-metro respondents also chose audiobooks as their favourite format (51%, vs. 46% of metro respondents).

Good selection and availability are an influence on where books are obtained for a higher percentage of non-metro readers (87%) than metro readers (81%). A slightly higher percentage of respondents from outside metropolitan areas get books by buying online (40% vs. 37% metro readers), but a smaller percentage of non-metro readers obtain books from free public domain sites (26% vs. 32% metro readers).

In terms of purchased books, a higher percentage of non-metro readers buy hard copy formats: audiobooks on CD (12%, vs. 6% of metro readers), hard copy large print (10%, vs. 4% of metro readers), and (by a small amount) hard copy regular print (21%, vs. 19% of metro readers).

In summary, a higher percentage of readers living outside of metropolitan areas have trouble finding accessible books. Our study data indicates that training in the use of reading technologies is greatly lacking everywhere, and even more so in non-metropolitan areas. The lack of availability of accessible books and lack of training in technology for non-metro readers likely drives the other findings for this group, such as non-metro readers’ lower comfort with technology, and higher rates of reading and

buying hard copy formats. Greater awareness of and access to training and support would allow readers living outside metropolitan areas to have the same choices and level of accessibility as readers living in metropolitan areas.

Section 3G4. Subgroups: Disability Types

This section compares the responses of four different groups of HDYR survey respondents: people with blindness, low vision, learning disabilities and physical disabilities. Note that many respondents described having more than one type of disability, so the groups are not mutually exclusive.

The blindness group includes people who stated that they are blind or legally blind. The low vision group includes people who told us that they are not blind and can see with “some difficulty” or “a lot of difficulty,” with low vision due to cataracts, dry eyes and various eye diseases, including age-related diseases. Respondents with learning disabilities ascribed their print disabilities to dyslexia, ADD, ADHD, autism, intellectual disabilities, fetal alcohol syndrome, and learning and auditory processing disorders. The respondents with physical disabilities had conditions such as spinal injuries, ALS, Rett syndrome, multiple sclerosis, post-concussion syndrome, arthritis, chronic pain and fatigue syndromes, fibromyalgia, allergies, cognitive impairment, migraines, PTSD, anxiety, depression, and obsessive-compulsive disorder.

This study revealed that there is a significant segment of the print disabilities community that has print disabilities due to mental illnesses, intellectual disabilities and cognitive impairment. More research on the reading needs of these groups is needed.

Demographics of the Disability Types

As noted in previous sections of this report, characteristics of age, gender, income and metro/non-metro residency can affect the ways people read. Therefore, we will explore these characteristics of survey respondents in the four disability types before exploring the respondents’ reading habits. *See Table 21 below.*

In terms of age, the learning disabilities group included a far higher percentage of young people than the other groups: 34% of respondents with learning disabilities were under the age of 24, and 80% were under the age of 44. In contrast, 6–11% of respondents in the other groups were under the age of 24, and 22–42% were under the age of 44. On the other side of the age continuum, the low vision group included a significantly higher percentage of seniors 65 and older than did the other groups: 47% (compared to 38% of the blind group), 24% of the physical disabilities group and a lone 1% of the learning disabilities group.

TABLE 21
(Percentage of each disability type according to age, gender, income and residence)

Demographic	Survey Average	Blind	Low Vision	Physical Disabilities	Learning Disabilities
Youth: 6–24 years old	11%	6%	11%	6%	34%
Younger adult: 25–44 years old	21%	16%	16%	36%	46%
Middle adult: 45–64 years old	29%	33%	26%	32%	18%
Seniors: 65 and older	35%	38%	47%	24%	1%
Women	54%	49%	68%	70%	54%
Lower income: <\$20,000/year	16%	12%	15%	30%	29%
Higher income: >\$70,000/year	20%	21%	17%	4%	22%
Living in a metropolitan area	63%	62%	56%	64%	71%

Through the lens of gender, a much higher percentage of people in the low vision and physical disabilities groups were women (68% and 70% respectively) compared to the 54% survey average. Medical research shows that more women than men have age-related eye diseases such as cataracts and AMD, as well as certain degenerative conditions such as rheumatoid arthritis (National Institutes of Health; Centre for Disease Control and Prevention, n.d.).

In terms of income, there are significant differences among the four disability types: a significantly higher percentage of people in the physical disabilities and learning disabilities group (29–30%) were low income, i.e., households earning less than \$20,000 per year, compared to the 16% study average. In the case of the learning disabilities group, this lower income might be explained somewhat by the much higher percentage (34%) of people who are under the age of 24 (though note that the income for children would have been their family’s household income).

As noted above, reading habits are influenced by whether the reader lives in a metropolitan area or not. There are some significant variations in residence among the four disability types. Notably, a lower percentage of people with low vision live in metropolitan areas (56%, compared to 63% survey average). On the other hand, a higher percentage of survey respondents with learning disabilities live in metro areas (70%, compared to the 63% survey average). This information about residence is unlikely to apply to the general population of people with the different disability types; however, it should be kept in mind when considering this study’s reading data for the different disability groups.

Reading and Accessibility

According to the participants in this study, a higher percentage of people with learning disabilities have significant difficulties finding and reading accessible books. It follows that a lower percentage of respondents with learning disabilities enjoy reading, and that a lower percentage read a lot of books. Indeed, even among people who took the reading survey (which would tend to bias the data toward people who are in the library network, and who are connected to reading enough that they would take a long survey),

7% of respondents with learning disabilities said they dislike or hate reading, compared to only 4% of respondents with physical disabilities, 4% of respondents with low vision and 1% of people who are blind. On the other end of the scale, only 73% of people with learning disabilities said they like or love reading, compared to 88% of people with low vision, 92% of people with physical disabilities and 95% of people who are blind.

“Dyslexia takes the joy out of reading and learning for students who are not adequately supported in public schools and who have to find resources on their own [or with the help of their parents].”

The number of books read also varies greatly according to disability type. Survey respondents with learning disabilities or low vision report reading fewer books: 27% of people with learning disabilities and 21% of people with low vision read one book or fewer per month, compared to 10% of people with physical disabilities and 8% of people who are blind. The corollary to this is that fewer people with learning disabilities or low vision read four or more books per month: 43% and 46% respectively, compared to 63% of people who are blind and 66% of people with physical disabilities.

A higher percentage of people with learning disabilities have difficulty finding sufficiently accessible books: 33%, vs. 26% of people with physical disabilities, 25% of people with low vision and 16% of people with blindness. Similarly, a lower percentage of people with learning disabilities find it quite easy or very easy to find accessible books: 33%, in contrast with 38% of people with physical disabilities, 40% of people with low vision and 45% of people who are blind. See Table 22 below.

TABLE 22

How difficult is it to find sufficiently accessible books?	Blindness	Low Vision	Physical Disabilities	Learning Disabilities
Quite/very difficult	16%	25%	26%	33%
Equally comfortable and uncomfortable	39%	35%	36%	34%
Quite/very easy	45%	40%	38%	33%

While the percentages are most extreme for respondents with learning disabilities, it should be noted that people with physical disabilities and people with low vision have significantly more difficulty finding accessible books than people who are blind. This could be because services for people with print disabilities are not nearly as well-known among people with learning and physical disabilities, and even among people with low vision (especially among people with recent-onset low vision).

Technologies and Formats

High percentages of HDYR respondents from all four disability types said they would use technology more for reading if appropriate training were provided: 56% of people who are blind, 60% of people with physical disabilities, 67% of people with low vision

and a full 76% of people with learning disabilities. These numbers point to the need for more training and support for all people with print disabilities, and to the importance of conducting targeted outreach initiatives to people with low vision, learning disabilities and physical disabilities.

In terms of assistive devices, screen readers are used by a far higher percentage of people who are blind (67%) compared to people with other print disabilities. See Table 23 below. A significantly higher percentage of people with learning disabilities (compared to people with other disabilities) use a read aloud function on an app on their device (50%). A higher percentage of people with physical disabilities (66%) and low vision (61%) use their eyes for reading, sometimes with the use of screen adjustments, a magnifying device or other aids.

Multiple respondents with physical disabilities reported that they experienced great difficulty, fatigue or pain from carrying and holding hard copy print books, and/or turning the pages. Greater availability and selection of fully accessible books would give these people more format choices. For those who want to continue to read print, there is also a need for better book-holders and similar aids.

TABLE 23

Assistive Device/Technology	Low Vision	Blind	Learning Disability	Physical Disability
Screen reader	18%	67%	21%	24%
Read aloud function in apps	35%	36%	50%	38%
Refreshable braille display	2%	16%	1%	0%
I read with my eyes, and adjust colour, fonts, spacing, etc. to my needs	61%	15%	51%	66%
Voice control, switches or eye tracking technologies	5%	5%	11%	14%
Magnifying device	32%	19%	12%	20%
None of the above	6%	7%	18%	10%

Note that the age distributions of the survey respondents in the four disability types might be affecting the data on use of assistive devices. For example, 80% of respondents with learning disabilities are under age 44, and the study data demonstrates that a higher percentage of this age group in general uses apps on tablets/phones rather than computers.

Format preference varies significantly according to disability type. More people with physical disabilities than with other print disabilities read some of their books digitally: 90% of people with physical disabilities, vs. 83% of people with learning disabilities and 80–81% of people with visual disabilities (blind and low vision). Furthermore, a higher percentage of digital readers with physical disabilities read most of their books digitally: 66% of respondents with physical disabilities read over three quarters of their books digitally, while the percentages are 57% for people who are blind, 37% for people with low vision and only 32% for people with learning disabilities.

The preference for audiobooks over ebooks varies significantly among the four disability types. The preference ratio for audiobooks to ebooks is almost 10:1 for people who are blind, and about 3:1 for people with low vision. For people with learning disabilities, the ratio is barely 2.5 to 1, while for people with physical disabilities, the ratio is 1:1. That is, the same percentage of people with physical disabilities prefer audiobooks as prefer ebooks. See Table 24 below.

TABLE 24

Preference	Blind	Low Vision	Learning Disabilities	Physical Disabilities
Prefer ebooks	7%	19%	23%	36%
Prefer audiobooks	67%	58%	56%	36%

Among all disability types, most people (74–87%) prefer human narration to synthetic voice narration, and over two-thirds of those prefer it strongly. At the same time, a higher percentage of people with physical disabilities and learning disabilities find synthetic voice acceptable (14-16%, vs. 10% of people who are blind and only 5% of people with low vision).

In terms of specific formats, a higher percentage of people with physical disabilities read ebooks than any other format (64%). In addition, this percentage is much greater than in people with the other types of disabilities (50–52%). See Table 25 below. Many respondents with physical disabilities shared their difficulties carrying, holding and turning pages of print books, and with scrolling and clicking when reading on a device.

Audiobooks are popular among all disability types, with 61–77% of all four groups reading them. The highest percentage who read audiobooks is among people who are blind (77%). The highest percentage of people who read audiobooks on CD (39%) is also among this group. Braille and ebraille is read almost exclusively among people who are blind (23% and 15% respectively, compared to 0–2% among other disability types), while hard copy print formats are quite popular within the low vision, learning disabilities and physical disabilities groups (36–48% of people in these groups read some of their books in a hard copy print format).

TABLE 25

Formats Read	Blind	Low Vision	Learning Disabilities	Physical Disabilities
Ebooks	50%	50%	52%	64%
Audiobooks	77%	63%	61%	62%
Audiobooks on CD	39%	34%	24%	34%
Braille	23%	1%	1%	0%
Hard copy large print	7%	32%	16%	18%
Hard copy regular print	5%	36%	48%	38%
Ebraille	15%	2%	0%	0%
Other	13%	12%	15%	14%

Now turning to the favourite formats among the different disability types, a much higher percentage of people with physical disabilities chose ebooks as their favourite format: 40%, vs. 18% of people with low vision, 17% of people with learning disabilities and only 13% of people who are blind. On the other hand, a higher percentage of people who are blind (53%) chose digital audiobooks as their favourite format. This format was the first choice of a fairly high percentage of people with low vision and learning disabilities as well (43% and 40% respectively), whereas it was the favourite format of only 28% people with physical disabilities.

Notably, hard copy print formats are listed as the favourite format by 26% of people with learning disabilities, 23% of people with low vision, 18% of people with physical disabilities and only 3% of people who are blind. However, as shown in Table 24 above, hard copy print formats are read much more than they are preferred. For example, hard copy regular print books are read by 38% but preferred by only 18% of people with physical disabilities, read by 48% but preferred by only 26% of people with learning disabilities, and read by 36% but preferred by 23% of people with low vision. Presumably, readers would choose their favourite format more often if it were available, but many readers end up with the default of hard copy print because the books they want are not available in a sufficiently accessible format.

“I am living with ALS. I love reading a good old-fashioned book, however, my arms are not strong enough to hold it. It is easier to read from a tablet. However, it is difficult to get titles I want from the library.”

Buying Books

There are significant differences among the four disability types when it comes to buying books. While only 46–47% of people with visual disabilities (blind and low vision) report that they buy books, 70% of people with learning disabilities and 66% of people with physical disabilities state that they do so. About 61% of book-buyers with physical disabilities and 58% with low vision buy ebooks, compared with only 53% of buyers who are blind and 47% of buyers with learning disabilities. Conversely, more people who are blind (71%) buy audiobooks, compared with only 40–42% of people with low vision, learning disabilities or physical disabilities.

For buyers of hard copy regular print books, the difference among the four groups is even more pronounced: this format is purchased by only 18% of people who are blind, but 45% of people with physical disabilities, 55% of people with low vision and 65% of people with learning disabilities. These numbers should be considered alongside the fact that many people buy hard copy regular print books because many of the books people want to read are not accessible, and that people buy hard copy print books as gifts more often than other formats.

In summary, there are marked differences in the reading habits, needs and preferences of people in the four disability types. These differences should be considered when planning outreach, training and support initiatives, in order to ensure that all people

with print disabilities have access to similar reading resources and can make reading choices that best meet their needs. There is likely to be continued diversity in the needs and preferences among the four disability groups, and information about this should be used—by publishers, providers of reading technologies, libraries and library organizations for people with print disabilities—to better serve these groups.

CHAPTER 4. ALL RECOMMENDATIONS

This section contains all of the HDYR Study recommendations, arranged according to the sections of the report. These recommendations include the Key Recommendations as well as more detailed recommendations. Actions are recommended for five groups:

- Libraries and library organizations: Local public libraries and library organizations that provide shared services for people with print disabilities (such as NNELS and CELA).
- Publishers: Organizations that publish books in any format.
- Governments: Law and policy makers at the federal and provincial/territorial levels.
- Providers of reading technologies: Technology developers, vendors and distributors who provide readers with reading devices, assistive technologies and other hardware, reading apps and other software, and platforms that distribute reading content.
- Disability/service organizations: Groups that provide support for self-organizing and advocacy, and/or resources and services for people with disabilities. This would include aspects of some senior citizens' organizations.

RECOMMENDATIONS

Section 3A. Demographics

1. *For federal and provincial/territorial governments and library organizations that provide shared services for people with print disabilities (such as NNELS and CELA):*
 - a. Conduct further research in order to quantify the number of people with learning disabilities and the percentage of people within that group that has print disabilities.
 - b. Conduct further research into the reading needs of people with print disabilities, including people with learning disabilities and children and youth.
2. *For the federal government:*
 - a. Create and define a formal designation of “print disability” and count people with print disabilities in the census. This is necessary so that people with print disabilities and service providers can organize appropriately.
3. *For disability/service organizations and library organizations for people with print disabilities (such as NNELS and CELA):*
 - a. Concerning people with print disabilities who read in French and/or live in Quebec, have learning disabilities, or are Indigenous or People of Colour:
 - i. Build relationships with these groups.

- ii. Promote existing resources and services for people with print disabilities to these groups.
- iii. Conduct further research into these groups' reading needs and preferences.

Section 3B: Fast Facts

There are no recommendations from this section.

Section 3C. Availability of Books in Accessible Formats

All recommendations from the previous sections, plus:

1. *For federal government and library organizations for people with print disabilities:*
 - a. Quantify the percentage of accessible books in Canada (including both mainstream formats such as ebooks and audiobooks and specialized formats such as braille and DAISY), and then monitor this percentage on an ongoing basis, with a goal of 100% accessibility.
2. *For publishers:*
 - a. Produce every book in an accessible format, before or at the same time the print version is produced.
3. *For federal and provincial/territorial governments:*
 - a. Enforce the law in jurisdictions that have human rights and accessibility/disability legislation that requires reading equity for people with disabilities. In jurisdictions that do not have adequate legislation, legislate equity for people with print disabilities.
 - b. Use government funding to incentivize actions toward full accessibility.
4. *For disability/service organizations:*
 - a. Advocate for accessibility legislation that ensures mainstream accessibility for all content and reading systems.

Section 3D. Accessibility

All recommendations from previous sections, plus:

1. *For federal and/or provincial/territorial governments:*
 - a. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.
 - b. Provide adequate funding for training and support programs for people with print disabilities and the organizations that provide resources, products and services to people with print disabilities.

- c. Review and improve existing accessibility subsidy programs and disability tax credits to ensure that they are providing adequate support for the reading needs of individuals with print disabilities.
 - d. Ensure that these programs are equitable among people with different kinds of reading disabilities and are equitable across different regions of Canada.
 - e. Monitor these programs on an ongoing basis to ensure that they are evolving to meet the rapidly changing reading needs of people with print disabilities.
2. *For disability/service organizations:*
- a. Advocate for equitable accessibility subsidy programs and disability tax credits among people with different disabilities and living in different regions of Canada.
3. *For library organizations for people with print disabilities (such as NNELS and CELA):*
- a. Develop training program(s) in reading technologies and offer them to all public libraries in Canada.
 - i. Support libraries to offer these training programs to their staff and users, and to tailor the programs according to each reader's age, length of disability, type of disability, preferences and needs.
 - ii. Ensure that readers are exposed to the full variety of reading technologies so they can choose what works best for their needs.
 - iii. Ensure hands-on training is widespread and easily available in all areas of Canada, as well as online.
 - iv. Support targeted efforts to raise awareness about these training programs to under-served groups including children and youth, low-income people, women, people living outside of metropolitan areas, Indigenous Peoples, People of Colour, people with learning disabilities, physical disabilities and low vision, and people with newly diagnosed disabilities, including seniors with age-related print disabilities.
 - b. Implement a well-organized communications strategy to raise awareness about accessible reading services among all people with print disabilities. As part of this campaign:
 - i. Develop a promotional kit to provide public libraries easy ways to promote these services.
 - ii. While promoting services to all people with print disabilities, pay special attention to under-served groups (see above).
 - iii. Propagate the concept of "Print Disabilities."
 - c. Develop and host an online resource centre for accessible reading that can be accessed by both libraries and library users with print disabilities. The

online centre would provide a comprehensive collection of information about, services for, and opportunities to connect among, people with print disabilities.

4. *For libraries:*
 - a. Deliver training programs for people with print disabilities, as above.
 - b. Work with library organizations for people with print disabilities to raise awareness about accessible reading services among all people with print disabilities.
5. *For libraries and library organizations for people with print disabilities:*
 - a. Take full advantage of the Marrakesh Treaty to enable library users with print disabilities to obtain more accessible international content.
6. *For disability/service organizations, library organizations for people with print disabilities (such as CELA and NNELS) and public libraries:*
 - a. Encourage the development of more in-depth accessibility education and training programs for the library, educational, medical and social work professionals who work with people with print disabilities.
 - b. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.
7. *For publishers and providers of reading technologies:*
 - a. Given the benefit to people with print disabilities and to society at large, and given the significant buying power of people with print disabilities, make an organizational commitment to accessibility.
 - b. Learn about the accessibility needs and buying power of people with print disabilities.
 - c. Consult with and hire people with print disabilities to ensure their expertise is being fully utilized.
8. *For providers of reading technologies:*
 - a. Improve reading technologies to enhance quality, accessibility, ease-of-use, affordability and compatibility among component parts.
 - b. Work toward greater consistency across search platforms to make switching platforms easier for users.
 - c. Work with libraries and library organizations to create easy-to-use search platforms that allow seamless searching and filtering for accessible material across all sites: commercial, library and public domain.

Section 3E. Reading Technologies: Use and Comfort

All recommendations from previous sections, plus:

1. *For provincial governments:*
 - a. Provide the funding necessary to enable medical and education professionals to provide timely diagnoses (and supportive follow-up with appropriate training in reading technologies) for all people with print disabilities. This is of vital importance for children with dyslexia and other learning disabilities.
2. *For disability/service organizations:*
 - a. Advocate for timely diagnosis of dyslexia and other print disabilities, and for supportive follow-up with appropriate training in reading technologies.
 - b. Advocate for the implementation of more in-depth accessibility education and training programs for the library, educational, medical and social work professionals who work with people with print disabilities.
3. *For public libraries and disability/service organizations:*
 - a. Make reading devices and technologies available for in-person use, loan and/or rent.
 - b. Maintain a resource list of local organizations that have reading devices and technologies available for use, loan or rent.
4. *For providers of reading technologies:*
 - a. Ensure that the privacy and security of users of reading technologies is protected.
 - b. Provide accessible channels for meaningful feedback from users. Use the feedback to improve the quality of products.
5. *For publishers:*
 - a. Re-evaluate existing book licensing terms and the use of DRM; revise terms to be as inclusive as possible.

Section 3F. Accessing Books

All recommendations from previous sections, plus:

1. For providers of reading technologies, libraries and library organizations for people with print disabilities:
 - a. Conduct specific outreach to readers of hard copy print who have or may have print disabilities and provide education about accessible reading formats and training if appropriate.
2. *For publishers:*
 - a. Ensure that academic and occupational texts are fully accessible.

Accessing Books: Formats

All recommendations from previous sections, plus:

1. *For publishers:*
 - a. Ensure that even as the overall percentage of accessible books increases, a full variety of formats continues to be made available: ebooks, especially in EPUB format, audiobooks (digital and on CD), braille and ebraille. Most readers with print disabilities read in a variety of formats, and people with print disabilities have diverse needs.
 - b. Publish more dual-format digital books—which offer both text and synchronized audio—and more decodable books. Both of these are very important for many children with dyslexia.
 - c. Ensure that all digital books meet international accessibility standards. EPUB files are flexible and popular.
 - d. Publish more audiobooks to meet the high demand.
 - i. Use human narration in most audiobooks while continuing to improve the quality of synthetic voice.
 1. Include specific data about narration style in descriptions of audiobooks.
 2. Enable audio sampling so that potential readers can preview the narration before buying or borrowing the book.
 - ii. Price audiobooks the same or less than print books.
 - iii. Have the narrator spell out the name of the book’s author, but make it optional to hear page numbers, index, glossary, etc.
 - iv. Consider creating several different “product lines” of audiobooks to appeal to different narration preferences (dramatic, neutral, etc.). There appear to be enough readers of audiobooks to support multiple product lines.
 - e. Publish more ebooks to meet the growing demand.
 - i. Make academic and other complex content accessible, including tables, images and figures properly formatted and/or described, well-structured text with clearly defined headings, readable in-text citations, page-numbered digital content, and line-numbered poetry. Note that most PDFs are not accessible.
 - ii. Include a link to the digital copy with all print books.
 - iii. Make it possible to break up the text of an ebook so that the screen shows only a chosen portion of text at a time.
 - iv. Provide an option for synchronized highlighting of the text.
 - v. Enable users to highlight and take notes in the text.

2. *For providers of reading technologies, governments, disability/service organizations and library organizations for people with print disabilities:*
 - a. Work together to make refreshable braille displays more affordable and available. This will support the continued use of braille, which is so important for educational and economic success among people who are blind.
3. *For providers of reading technologies:*
 - a. Make it easier to rewind audiobooks to find certain phrases or sections, especially in non-fiction audiobooks.
 - b. Make it possible to adjust the reading speed of audiobooks on every reading device.
 - c. Coordinate devices so that the reader's place is held even across different reading devices.

Accessing Books through Libraries and Library Organizations

All recommendations from previous sections, plus:

1. *For public libraries:*
 - a. Increase availability, selection and variety of accessible books.
 - i. Increase the number of Canadian books, the variety of books for children, books by women, books in French and books in languages other than French or English (according to the local population).
 - b. Ensure all library platforms, services and spaces are fully accessible.
 - i. Provide detailed accessibility information for all library platforms, services and spaces.
 - ii. Make library platforms easier to use.
 - iii. Make libraries more accessible to people with a range of disabilities.
 - iv. Have at least one computer terminal in every library that is fully accessible, enabled with a screen reader and other accessibility features.
 - c. Ensure library staff are well-trained in accessible reading technologies (hardware and software), formats, challenges and solutions.
 - i. Ensure library staff are knowledgeable about NNELS and CELA, promote these services to their users, and help them sign up.
 - ii. Enable library staff to provide support to library users with print disabilities, including one-on-one assistance.
 - iii. Have a section or desk in the library that specializes in support for readers with print disabilities.

- d. Have reading devices with assistive technologies available for use and loan.
 - e. Host book clubs and social events for people with print disabilities, (and/or for everyone, ensuring they are fully accessible to people with print disabilities).
 - f. Provide different conditions/rules for people with print disabilities when appropriate. Consider longer borrowing periods, an increased number of allowable renewals and concurrent holds, easier access to interlibrary loans, and priority access to certain formats if that is the only format the person can read.
2. *For library organizations for people with print disabilities (such as NNELS and CELA):*
- a. Continue to increase the availability, selection and variety of accessible books.
 - b. Technologies
 - i. Make it much easier and simpler to navigate, browse and download books from the organizations' websites.
 - ii. Ensure that the organizations' websites and interfaces are compatible with all reading technologies.
 - iii. Work with libraries and providers of reading technologies to create easy-to-use search platforms that allow seamless searching and filtering for accessible material across all sites: commercial, library and public domain.
 - c. Ensure that the reading needs of under-served groups are well-understood and well-served by accessible reading services. Conduct further research into the reading needs of readers of French, Indigenous Peoples, and People of Colour.
 - d. NNELS, CELA and SQLA (a service of BAnQ) should cooperate more with each other in order to optimize services to people with print disabilities.
 - e. Respond to user feedback and book requests in a timely way.

Accessing Books Commercially

All recommendations from previous sections, plus:

1. *For publishers: Data shows a lot of potential growth in sales of digital books if certain needs are met.*
 - a. Publish more accessible books so there is better selection.
 - b. Improve the accessibility of all books.
 - c. Make accessible books more affordable.
 - d. Display the book's accessibility features (accessibility metadata).
 - e. Previous recommendations, especially the ones regarding more training and support for people with print disabilities and easier-to-use reading technologies, would also significantly expand the market for digital books.

Section 3G. Subgroups: Gender, Readers of French, Non-Metropolitan Residence and Disability Types

All recommendations from previous sections, plus:

1. *For library organizations for people with print disabilities (NNELS and CELA, in cooperation with BAnQ):*
 - a. Review the findings from the “How do YOU Read?” study in light of other data about the needs of readers of French with print disabilities.
 - i. As needed, conduct further research about the reading habits, needs and preferences of this group.
 - b. Address the needs of French-speaking readers with print disabilities:
 - i. Evaluate the availability, selection and variety of accessible books in French (especially audio and braille formats).
 - ii. Evaluate the overall quality of French audiobooks.
 - iii. Increase the number of accessible Canadian books in French.
2. *For publishers, providers of reading technologies, libraries and library organizations for people with print disabilities:*
 - a. Become educated about the differences in the ways people with print disabilities read.
 - i. Note the differences between women and men, between readers of French and readers of English, between metropolitan and non-metropolitan readers, and among readers with different types of disabilities.
3. *For libraries and library organizations for people with print disabilities:*
 - a. Use the data about format use and preferences of people with different disabilities and different demographic characteristics to better serve library users.
 - b. Ensure that people with all kinds of disabilities and demographic characteristics have access to and training in all formats, so they can make informed choices about their format use.
4. *For publishers:*
 - a. Use the data about format use and preferences of people with different disabilities and different demographic characteristics to better serve customers and potential customers.
 - b. Reach out to people with physical disabilities and learning disabilities in order to better meet their needs.

CHAPTER 5. CONCLUSION AND ACKNOWLEDGEMENTS

CONCLUSION

At the conclusion of this report, we invoke again the passion, determination and optimism of the hundreds of people with print disabilities who shared their ideas with us during the “How do YOU Read?” study. We are optimistic about the actions that will be taken as a result of this study, we are determined to keep advocating for full accessibility, and we share the study participants’ passion for the learning, connection and pleasure that reading brings to our lives.

*“I was about to give up on reading because I felt I was alone.
Now I know people understand and care. I am grateful for
that, and hopeful.”*

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B) Landscape Review: The Publishers' and Marketplace Perspective (Davy, Howson and Lee)

OVERVIEW

The consultants have conducted a review and analysis of the Canadian supply chain (outside of Quebec) for accessible ebooks and audiobooks, with the following objectives:

1. **To identify challenges and gaps at different stages of the accessiblebook supply chain. This included the identification of barriers to production, distribution and discovery of accessible books.**
2. **To recommend best practices for marketing and selling accessible works.**
3. **To identify market-led incentives for creating accessible works.**

The consultants did this work concurrently with Standards and Certification (See Part Two: Standards and Certifications). The recommendations here are informed by the work done for Standards and Certifications.

Both Standards and Certifications and The Publisher's and Marketplace Perspective were prepared at the same time as "How do YOU Read?", The Reader Perspective and the Training and Outreach Strategy.

METHODOLOGY

The consultants conducted thirty interviews as follows:

- Thirteen in-depth interviews with publishers from across Canada and across the sector including: scholarly/educational, children's, trade/literary publishers with revenues larger than \$1 million, trade/literary publishers smaller than \$500,000 and Indigenous publishers. Publishers interviewed had different degrees of expertise in making accessible digital books and audiobooks.
- Five ebook and audiobook retailers and library wholesalers in regard to digital distribution of accessible files and metadata.
- Six leaders in accessible publishing initiatives such as LIA and Benetech, as well as organizations such as Inclusive Publishing, Firebrand, DAISY and Book Industry Study Group.
- Six alternative format suppliers, librarians, international publishers and users of the certification systems mentioned above.

For a list of organizations interviewed please see Appendix E.

The consultants attended the NNELS Accessible Book Summit and the ACP Audiobook Symposium to get a better understanding of the accessible ebook and audiobook ecosystem, as well as a NNELS focus group for users and the 2020 Ontario Library Association Super Conference.

The consultants researched international marketing initiatives that promote the advantages of accessible digital books for the entire marketplace.

BACKGROUND CONTEXT: THE MOVE TO ACCESSIBILITY IN DIGITAL PUBLICATIONS

There are several key external factors that are focusing attention on born accessible ebooks and audiobooks. These factors have both increased publishers' ability to make content more accessible and made it more imperative that they do so.

They are:

1. Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled (MARRAKESH TREATY)

The Marrakesh Treaty was adopted on June 27, 2013, in Marrakesh and it forms part of the body of international copyright treaties administered by the World Intellectual Property Organization (WIPO)¹. It has a clear humanitarian and social development dimension and its main goal is to create a set of mandatory limitations and exceptions for the benefit of the blind, visually impaired and otherwise print disabled (VIPs).²

Canada became the 20th signatory to Marrakesh on September 30, 2016; the U.S. became the 50th, on February 8, 2019. As the single most important export market for Canadian publishers, the U.S. signing widened the accessible book market significantly. Many of the key retailers, such as OverDrive, are based in America, and with the U.S. signing on to the Marrakesh Treaty, U.S. companies are supposed to abide by the accessibility legal framework set out therein, although it is unclear as to whether or not compliance is being enforced.

The Treaty requires two main actions from countries who sign on, with the proviso that they may do so in keeping with their own legal systems. In brief, these are:

1. To provide for a limitation or an exception to copyright in order to allow those with print disabilities, as well as organizations enabling access to alternate format materials for those with such disabilities, to undertake any changes needed to make a copy of a work in an accessible format;

1 <https://www.wipo.int/about-wipo/en/> WIPO is the global forum for intellectual property services, policy, information and cooperation. It is a self-funding agency of the United Nations that is comprised of 192 member states, including Canada. It creates and delivers a broad range of related programs and activities, including administering a range of international copyright treaties, that are approved by member states. The Marrakesh Treaty is one of those.

2 <https://www.wipo.int/treaties/en/ip/marrakesh/>

2. To allow the exchange across borders of those accessible copies produced according to the limitation and exceptions provided in the Treaty, or in accordance with the operation of law.³

It should be noted that, in accordance with paragraph four of Article 4 of the Treaty, the specific exceptions in Canada's national copyright law for the making and providing of accessible format copies for the benefit of persons with print disabilities are confined to works which, in the particular accessible format, cannot be obtained commercially under reasonable terms within the Canadian market or within the destination market, as applicable.

This exception was not part of the United States ratification of the Treaty.

2. STANDARDIZATION OF EBOOK AND AUDIOBOOK FORMATS

EPUB 3.2, the current version of EPUB as of the date of this report, is designed with accessibility in mind⁴, making it easier than ever for publishers to create born accessible⁵ ebooks. *EPUB 3 is discussed further in Standards and Certification.*

Accessibility standards for audiobooks will be finalized by the W3C with a current publication target date in mid-2020. Preliminary information on the developing audiobook standards is available on the W3C website for those who would like to review it.⁶

Publishers should be aware that standard audiobooks are not necessarily fully accessible, as audiobooks produced for commercial use are often lacking accessibility features such as navigation, described images including front covers and equitable access to all content of the book. Publishers should discuss the emerging accessibility standards with their audio production suppliers.

3. INCREASE IN PROVINCIAL AND NATIONAL REGULATORY REQUIREMENTS FOR ACCESSIBLE EDUCATION MATERIALS

Ontario's Accessibility for Ontarians with Disabilities Act (AODA)⁷ is a good example of this move to a more barrier-free environment. The AODA mandates a set of standards with which public, private and non-profit organizations must comply. The objective

3 Main Provisions and Benefits of the Marrakesh Treaty, page 4, Obligations https://www.wipo.int/edocs/pubdocs/en/wipo_pub_marrakesh_flyer.pdf

4 The DAISY Consortium, which is involved in EPUB's standardization, says "EPUB offers the greatest opportunity for mainstream accessibility requirements—i.e., it delivers the possibility of offering ebooks to print impaired readers at the same time, in the same format and at the same price as everyone else." <https://daisy.org/activities/standards/epub/>

5 "Born accessible" is simply the idea that ebooks should be made accessible as they're being created, rather than remediated or converted into alternate formats after publication. Benetech, the nonprofit organization which coined the term, has more information about the born accessible movement here: <https://benetech.org/our-work/born-accessible/> and BookNet has a basic primer here: <https://www.booknetcanada.ca/blog/2019/6/20/producing-born-accessible-books>

6 <https://www.w3.org/TR/audiobooks/#audio-accessibility>

7 <https://aoda.ca/the-act/>

is to create a barrier-free Ontario by 2025. Of specific relevance to publishers is the Information and Communication Standard, which outlines requirements for organizations to create, provide and receive information and communications in ways that are accessible for people with disabilities⁸. Requirements under this standard apply to producers of educational and training materials as well as to educational and public libraries.

Both Manitoba and Nova Scotia have similar Accessibility Acts⁹ and other provinces are working on developing their own. British Columbia expects to pass new accessibility legislation in 2020. More information on specific provincial requirements is available in the Disability Legislation in Canada section in “How do YOU Read?”, The Reader Perspective.

At a national level, the Accessible Canada Act came into force on July 19, 2019, and establishes a framework to create a barrier-free Canada. It applies to the federally regulated private sector as well as the federal government and related organizations. However, its impact will be more broadly felt as those organizations will be required to establish a mechanism for receiving and addressing feedback on accessibility from anyone who interacts with them.¹⁰ At the time of the writing of this report, the Departmental Plan 2020–2021¹¹ describes the activities of setting up this new department and the results expected. In brief, this department will work to: develop new and review existing accessibility standards; support innovative research; and share information about identifying, removing and preventing accessibility barriers. Timelines are currently unavailable.

It is important to note that the federal and provincial acts are somewhat siloed. As noted above, the federal acts are for federally regulated private sectors and the provincial acts pertain to provincially regulated companies, which means they must have their head office (where they are taxed) based in the province to which the regulations apply.

4. AVAILABILITY OF FUNDING

The federal government’s 2019 budget announced an investment of \$22.8 million over five years to support sustainable production and distribution of accessible digital books by Canadian independent publishers through the Canada Book Fund. The first year of funding was completed by March 31, 2020. The rest of the funding will be divided over the next four years as follows:

8 <https://aoda.ca/a-guide-to-the-integrated-accessibility-standards-regulation/>

9 <https://siteimprove.com/en-ca/blog/a-complete-overview-of-canada-s-accessibility-laws/>

10 <https://www.canada.ca/en/employment-social-development/news/2019/07/canadas-first-federal-accessibility-legislation-comes-into-force.html>

11 <https://www.canada.ca/en/accessibility-standards-canada/corporate/reports/departmental-plan/2020-2021.html>

2020–2021: \$5 million
2021–2022: \$6 million
2022–2023: \$4 million
2023–2024: \$2 million

This funding is to enable publishers to lay the groundwork for sustainable production and distribution of accessible digital books well into the future.

5. INCREASE IN INTERNATIONAL REGULATORY REQUIREMENTS FOR ACCESSIBLE MATERIALS

The U.S. government requires that all digital material developed, procured or maintained by the federal government be accessible to people with print disabilities.¹² At this time, publishers will not face legal consequences for providing inaccessible ebooks—but their customers, especially those in the educational sectors, are facing lawsuits over their purchase and use of inaccessible materials.¹³

6. IT'S THE RIGHT THING TO DO

According to NNELS, numbers from Statistics Canada suggests that about 10% of Canadians¹⁴ may have some sort of a print disability, which limits their ability to read in traditional print format. More details on these statistics can be found in “How do YOU Read?”, The Reader Perspective. In an aging population, many people who do not currently have a print disability may do so in the future. NNELS also suggests that less than 5% of published works are available in accessible formats.

It is important for everyone to have an equal opportunity to read in a format that makes books accessible. No one should be shut out from accessing knowledge or just reading for the joy of it, especially if there are tools readily available for publishers to make their content more accessible. Interviewees from across the sector confirmed that they feel creating accessible books is the right thing to do.

FINDINGS

CHALLENGES AND GAPS

The Reader Experience

The reader experience has been addressed in the “How do YOU Read?”, The Reader Perspective section of this report but we want to acknowledge, as we highlight the publishers’ perspective, that although the recommendations we are making, if implemented, will address a number of the concerns for readers in Canada who

12 <https://www.law.cornell.edu/uscode/text/29/794d>

13 The University of Minnesota Duluth's Accessible Technology Team maintains a list of such lawsuits at <https://www.d.umn.edu/~lcarlson/atteam/reports/litigation/lawsuits.html>

14 <https://nnels.ca/about>

have print disabilities, they will not address all their concerns. Specifically, users are concerned about how difficult learning and using book-reading technologies is (see “How do YOU Read?”, The Reader Perspective) and how challenging it is to access these technologies. Unfortunately, publishers cannot address those particular concerns. However, according to the NNELS survey, people with print disabilities are also concerned about the lack of availability of accessible books, the difficulty in finding books that are accessible and the timing of availability of accessible books (“How do YOU Read?”, The Reader Perspective Availability of Books in Accessible Formats).

These are concerns which publishers can and should address.

Publishers

The consultants interviewed a variety of publishers of all types and sizes to identify challenges and gaps at different stages of the accessible book supply chain. This included the identification of barriers to production, distribution and discovery of accessible books.

The following challenges and gaps were found:

Production

1) What Does Accessible Mean?

A number of publishers were unaware that not all ebooks or audiobooks are accessible, and therefore believed they were making accessible ebooks and audiobooks when, in fact, they were not. Many were not sure what the term born accessible means. They remain unsure of the standards for accessible files and the effect of implementation on their production workflow.

2) Do We Have the Capacity?

Though publishers want to be able to make accessible ebooks, many of them are small and lack the capacity at this time to change their workflow significantly. Other small publishers are dependent on third-party providers for their ebook and audiobook production, and do not know if these providers are capable of creating born accessible EPUBs.

Despite the simplicity and adaptability of the EPUB 3 format, many publishers labour under the misconception that making ebooks accessible is difficult, and beyond their financial and skill resources. Reluctance to undertake substantial changes in workflow is a particularly strong obstacle.

3) What is it Going to Cost Me?

Many publishers felt that they would need to add staff and change their workflow in order to make ebooks and audiobooks accessible. Their concern is that costs may substantially increase, especially for smaller, tightly run companies that have very limited capacity.

4) *What about Highly Illustrated Books?*

Historically, there has been little interest from the trade or library market for ebooks for formats like picture books, cookbooks or graphic novels. The object sells better than the file.

Children's books in particular are more difficult to make accessible for three reasons:

- a) *There is no agreed-upon accessible ebook standard for highly illustrated content. While EPUB 3 was designed with accessibility in mind and is an excellent solution for the majority of publications, at the time of this report, ebooks that are highly illustrated are still not easily adapted into accessible ebooks and there is no standard format for these types of books.*
- b) *Children's publishers already have tight margins due to the retail price of print books. If a different production process must be implemented in order to make accessible picture books, then there must be a good return on that investment.*
- c) *Many children's publishers license digital rights for their picture books to third parties who stream the ebooks. At the time of writing this report, these licensees do not display books in accessible formats.*

Distribution

1) *Aren't People with Print Disabilities Already Being Served?*

Many publishers felt that the print disabilities community has access to services by expert organizations such as CNIB, National Network for Equitable Library Service (NNELS) or, for educational purposes, members of the organization Canadian Association of Educational Resource Centres for Alternate Format Materials (CAER), who can create the materials that are needed in an efficient and expert manner. Many publishers felt that, by supplying files to these organizations, they were meeting the needs of those with print disabilities. However, the reality is that the existing services do not have the capacity on their own to meet the demand, as clearly demonstrated by the NNELS "How do YOU Read?" report.

2) *Are the Major Retailers Accepting My Accessible Ebook Files?*

Many publishers were concerned that, even after doing the extra work to create accessible ebook files, the ebook would not retain its accessibility features when accessed using the software or hardware of the major ebook retailers.

Discoverability

1) *How will Readers Find my Accessible Books?*

Many publishers felt that even if they were working to make ebook files accessible, since the metadata is not displayed, readers would not be able to find those books.

Trade and Library Retailers

The consultants interviewed a range of trade and library retailers of all types and sizes to identify challenges and gaps at different stages of the accessible ebook supply chain. This included the identification of barriers to distribution, discovery and access of accessible books.

The following challenges and gaps were found:

Distribution

1) Availability of Accessible Files

Publishers may be sending accessible files to retailers, but most publishers are not communicating the accessibility features in the metadata. Without accessibility metadata, retailers cannot be sure that the files they are receiving are accessible.

Discoverability

1) Accepting Accessibility Metadata

Only two retailers we interviewed accepted accessibility metadata. One of those two noted that they could only improve their user experience if the metadata was good and available; their experience was that publishers were not submitting the metadata. Another noted that while they display information about some accessibility features, they do not necessarily pull that information from the data sent by publishers.

None of the retailers exposed the metadata sent by publishers, so even when publishers do submit it, it does not facilitate customers' discovery of accessible books.

2) Marketing to People with Print Disabilities

No retailers we interviewed were actively marketing directly to the print disabilities community, although one retailer was working with organizations such as Dyslexia Canada, which was helpful in testing the accessibility of different fonts.

Many of the retailers interviewed were aware that their customers are aging and recognized the growing need to be able to service this market.

3) Access

The interface between the application and the user is often inaccessible. Even if the ebook is itself accessible, if the digital storefront or application on which the ebook offered is inaccessible, people with print disabilities may not be able to find, buy or read the book.

There is movement toward Web Content Accessibility Guidelines (WCAG) compliance in websites and reading applications, as driven by regulations such as AODA.

SUMMARY OF CHALLENGES AND GAPS

The preceding outlines the challenges and gaps that have emerged from our research. A repeated overarching concern that was gathered from the interviews with publishers, retailers and facilitators was: Is the market for accessible materials large enough to justify the investment required?

A number of publishers interviewed indicated that they did not see any interest from the marketplace for accessible books. In their experience, sales for EPUBs are negligible, especially for those books that are highly illustrated. With many competing pressures to grow existing revenue channels, publishers need to feel more confident in generating a return on investment.

The federal government is offering significant support to Canadian publishers to invest in sustainability in creating accessible ebooks and audiobooks, but a number of publishers interviewed wondered whether the current government support will be ongoing beyond the existing fund. Whether this support is sufficient to sustain born accessible production of ebooks beyond the life of the fund, especially since standards for illustrated books and audiobooks have not been confirmed at this time, remains to be seen, but as long as the funding exists, we believe Canadian publishers should take the opportunity to move forward with this important work.

RECOMMENDATIONS

We have focused our recommendations on areas where we feel publishers can make an impact: improved files, improved metadata, and building awareness of the availability of accessible ebooks and audiobooks.

Recommendations for production standards and certification are outlined in Part Two: National Standards and Certification.

1) EDUCATION AND AWARENESS

Our research indicates there is a general lack of awareness around what accessibility is and how to achieve it. Many of the concerns expressed by publishers—that creating accessible books is expensive and challenging and that there is no market—can be addressed through education and awareness. This an area of opportunity for organizations such as eBOUND, ACP and provincial organizations, possibly working with NNELS or CELA, to foster awareness through full-day conferences, webinars, the development of implementation guides, etc. (as discussed in Part Three: Training and Outreach Strategy):

- a) *Publishers need to be educated on what accessible ebook files are and how they can build a workflow to create born accessible ebooks. This is outlined in more detail in Part Two: Standards and Certification (see “Awareness Sessions”) and is distinct and separate from hands-on training.*

This awareness building needs to involve the entire publishing house ecosystem from author to sales and marketing.

- b) Many publishers would benefit from an accessibility auditing service of files, workflow and websites that will raise their awareness of how prepared they are (or are not), and identify what work is required for them to create accessible files with robust accessibility feature metadata. This is something that could be provided by an organization such as eBOUND working with organizations serving the print disabilities community. This is discussed in more detail in Part Two: Standards and Certification.*

2) ADVOCACY AND AWARENESS BUILDING

To address the issues with discoverability expressed by both publishers and retailers, we recommend that eBOUND and ACP work collaboratively across the sector to address the complexity of the supply chain for accessible digital publications:

- a) Continue to work with the federal government to expand the current accessibility initiative to retailers and librarians. The objective will be to enable retailers and librarians to consistently display accessibility metadata. This will highlight the work that publishers have done to create accessible digital publications.*
- b) Work with BookNet to influence and support publishers to send accessibility metadata and with retailers to accept and display it to the customer.*
- c) Influence existing organizations, such as 49th Shelf, to update their sites to display accessibility data to readers, teachers and librarians.*
- d) Work with organizations such as NNELS, CELA and CAER to make them aware of the steps publishers are taking to make accessible files.*
- e) Work with digital asset management software providers, bibliographic metadata databases and content delivery systems (such as Ingram CoreSource, BooksoniX, Firebrand's Title Management and others) to ensure accessibility feature metadata can be entered, stored and distributed, and work with publishers to ensure they understand how best to use their software to create and send this metadata.*

3) ACCESSIBLE WEBSITES AND APPLICATIONS

It is clear from both our research and NNELS' focus groups that websites and applications used to purchase, market and read digital publications need to be accessible.

- a) Continue to work with the federal government to ensure funding for publishers to create WCAG compliant websites where possible.*
- b) Work with organizations serving the Canadian publishing community to ensure website accessibility.*

- c) *Work collaboratively with customer-facing organizations to ensure their reading applications, digital storefronts and discoverability tools are accessible.*

4) MARKETING

In order to take advantage of the existing market for accessible publications, we recommend publishers build marketing capacity by addressing the following points:

- a) *Metadata, Metadata, Metadata: Publishers must ensure their metadata properly reflects the accessibility features in their files. Accessibility metadata can and should be in the EPUB 3 file's schema.org metadata¹⁵ as well as in the ebook's bibliographic metadata.¹⁶*
- b) *If the file is born accessible, and especially if it is published at the same time as the print book, ensure the accessibility features are highlighted in all marketing materials from tip sheets to catalogues. Start including this information in all marketing efforts where possible.*
- c) *Work with all awards to highlight not only the available formats, but also those that are born accessible. This should be especially important for government-sponsored literary prizes such as the Governor General's Literary Awards, BC and Yukon Book Prizes and the Trillium Book Award.*
- d) *Work with organizations such as Dyslexia Canada or CARP (Canadian Association of Retired Persons) to build awareness in their communities that publishers are increasing access to ebooks by building accessible files.*
- e) *Work with the library community to build awareness of accessible books as publishers increase inventory of such books.*
- f) *We recommend ACP, eBOUND and provincial organizations continue conversations with CNIB and ECW. Both can provide audiobook production services to publishers and publisher associations and are well-equipped to keep up with the evolving audiobook standards.*
- g) *Build on the marketing of audiobooks that was discussed at the ACP Canadian Audiobook Symposium.*

5) ILLUSTRATED BOOKS

We recommend funding be made available to publishers for training to learn best practices for creating image descriptions.¹⁷ Funding could also be made available to organizations such as eBOUND to provide services such as creation of image descriptions for publishers who do not have the capacity themselves or to provide training for those who do.

15 <https://www.w3.org/Submission/epub-a11y/#sec-discovery>

16 <https://www.editeur.org/files/ONIX%203/APPNOTE%20Accessibility%20metadata%20in%20ONIX.pdf>

17 Image descriptions such as alt text is are used to “ensure the information a user needs to receive from an image is provided in text form.” (<http://kb.daisy.org/publishing/docs/html/images.html>). It is text that describes an image and is usually read by screen-reading technologies.

CONCLUSION

The consultants set out to identify challenges and gaps at all stages of the accessible book supply chain and to propose options for marketing and selling accessible ebooks and audiobooks. After interviews and research, we determined that the challenges and gaps stemmed largely from a lack of education and understanding and can be addressed by increasing awareness.

There are, of course, technical issues (as discussed in Part Two: National Standards and Certification Review). And there are issues surrounding availability, access and discoverability that will require cooperation across the entire Canadian publishing sector. However, we believe that Canadian independent publishers can be a force for change. If enough publishers create born accessible ebooks, market them and communicate their availability to their trading partners, those trading partners will see the value in exposing accessibility metadata, creating accessible platforms and marketing to the print disabilities community.

The information and recommendations presented here emerge from the sector interviews and the research and are designed to meet the specific needs and goals of the Canadian-owned publishing sector.



Part Two: Standards and Certification Review (DAVY, HOWSON AND LEE)

National Standards and Certification Recommendations

SUMMARY

The international book publishing community is rapidly adopting a body of standards and best practices which will ensure that, from the very beginning of the development process for any literary work, digital files are created in a way that will result in ebook and audiobook formats that are fully accessible to people with a print disability¹⁸. The goal is to make accessibility a given, rather than an add-on.

Referred to as “born accessible”¹⁹, this process is being driven by a combination of standards set by both international and domestic regulatory organizations, the evolution and adoption of various software platforms that makes it possible, and the development of training certification programs that are broadly recognized as enabling publishers to reach established standards.

There are a number of organizations that have taken the lead in developing and encouraging the implementation of common standards and certification programs, and they, in turn, have a number of key initiatives relevant to the Canadian publishing community.

Recommended Key Standards for Canadian Publishers by International Organizations

ORGANIZATION: THE WORLD WIDE WEB CONSORTIUM (W3C)

Overview: “The World Wide Web Consortium (W3C) is an international community where Member organizations, a full-time staff, and the public work together to develop Web standards.”²⁰

The W3C develops and publishes “protocols and guidelines that ensure long-term growth for the Web.”²¹ Among those are three that are relevant to accessible ebook publishing: EPUB 3²², the Web Content Accessibility Guidelines (WCAG)²³ and EPUB Accessibility 1.0.²⁴

18 A print disability is any disability that prevents or inhibits a person from reading a literary, musical, artistic or dramatic work in its original format and includes people who:

- are blind or visually impaired to the extent that corrective lenses will not allow them to access regular-sized print;
- have a physical disability that impacts their access to print media; and
- have a reading, perceptual, or comprehension disability, including those with learning disabilities, who require specialized software.

The above definition is taken from the Department of Canadian Heritage Book Fund Glossary

19 “Born accessible” refers to building accessible books right from the beginning, and building the process into current ebook production workflows, instead of taking apart and updating books post-production to make them accessible. <https://www.booknetcanada.ca/blog/2019/6/20/producing-born-accessible-books>

20 <https://www.w3.org/Consortium/>

21 <https://www.w3.org/Help/>

22 <https://www.w3.org/publishing/epub3/epub-spec.html>

23 <https://www.w3.org/TR/WCAG20/>

24 <https://www.w3.org/Submission/epub-a11y/>

EPUB 3

“EPUB 3 defines a distribution and interchange format for digital publications and documents. The EPUB format provides a means of representing, packaging and encoding structured and semantically enhanced Web content—including HTML, CSS, SVG and other resources—for distribution in a single-file container. This specification represents the second major revision of the standard. EPUB 3 has been widely adopted as the format for digital books (ebooks), and this revision continues to increase the format’s capabilities in order to better support a wider range of publication requirements, including complex layouts, rich media and interactivity, and global typography features.”²⁵

EPUB 3²⁶ is the leading mainstream ebook standard. The standard is maintained by W3C, and the current version, EPUB 3.2, has many features allowing for accessibility.

EPUB 3.2 is a “minor revision” to the EPUB 3 specification. It includes a specific recommendation that EPUB publications conform to EPUB Accessibility 1.0 (see “EPUB Accessibility 1.0” on page 92 for more details), in addition to more technical changes.²⁷ EPUB 3.1, the previous EPUB revision, did not see wide adoption.²⁸ As of the time of writing, it is highly recommended that publishers use EPUB 3.2.

In our conversations with publishers and other stakeholders, it became clear that many publishers are still creating their ebooks using the older EPUB 2 specification. This is frequently due to comfort: their workflow is set to create EPUB 2 and they know how to create EPUB 2.

However, EPUB 2 has limited accessibility features and is less accessible than EPUB 3.2. Notably, EPUB 2 lacks the robust navigation features which can—and should—be used in EPUB 3.2. In order to create accessible ebooks, publishers should be using EPUB 3.2.

Note: While highly illustrated books such as children’s picture books, cookbooks and graphic novels can be created as fixed-layout EPUBs, there is no recognized accessible standard for this type of content as yet.

EPUB Accessibility 1.0

“Overview: The primary source for the production of accessible Web content is the W3C Web Content Accessibility Guidelines (WCAG) 2.0. This specification (EPUB Accessibility 1.0) leverages the extensive work done to establish benchmarks for accessible content, and the same four high-level content principles—Perceivable,

25 <https://www.w3.org/publishing/epub3/epub-spec.html>

26 Throughout this document, we will be using EPUB to refer to EPUB 3 unless otherwise stated

27 A complete list of the changes made in EPUB 3.2 can be found at <https://www.w3.org/publishing/epub3/epub-changes.html>

28 A discussion of the issues that EPUB 3.1 faced can be found here: <https://www.w3.org/blog/2018/04/why-specs-change-epub-3-2-and-the-evolution-of-the-ebook-ecosystem/> and here: <https://www.publishersweekly.com/pw/by-topic/digital/content-and-e-books/article/80545-it-s-time-to-move-to-epub-3-2.html>

Operable, Understandable and Robust—are central to creating accessible EPUB Publications. Although it has always been possible to create EPUB Publications with a high degree of accessibility, this specification sets formal requirements to meet to certify content as accessible. These requirements provide Authors²⁹ a clear set of guidelines to evaluate their content against and allow certification of quality.”³⁰

EPUB Accessibility 1.0 lays out three categories of compliance which apply to EPUBs: they must be discoverable, accessible and optimized. Conformance reporting is done within the metadata of the EPUB³¹ and conformance to EPUB Accessibility 1.0 is encouraged by the Book Industry Study Group (BISG)³².

EPUB Accessibility 1.0 is designed to separate accessibility guidelines from the technical steps required to meet those guidelines. Its companion document, EPUB Accessibility Techniques, provides “guidance on how to meet the EPUB Accessibility discovery and accessibility requirements for EPUB Publications.”³³

Most certification programs and accessibility assessment tools are built on the guidelines laid out in EPUB Accessibility 1.0.³⁴

While EPUB Accessibility 1.0 can be applied to older versions, it is recommended that publishers create EPUB 3.2.

Note: Audiobooks

At the time of submitting this report there is no set standard for accessible audiobooks. The W3C Publishing Working Group is in the process of developing them and there is a public draft working document³⁵ available. The timeline is to have these standards confirmed in 2020.

Web Content Accessibility Guidelines (WCAG)

Overview: “Web Content Accessibility Guidelines (WCAG) 2.0 covers a wide range of recommendations for making Web content³⁶ more accessible. Following these guidelines will make content accessible to a wider range of people with disabilities,

29 “The person(s) or organization responsible for the creation of an EPUB Publication. The Author is not necessarily the creator of the content.”

30 <https://www.w3.org/Submission/epub-a11y>

31 <https://www.w3.org/Submission/epub-a11y/#sec-conf-reporting>

32 BISG Guide to Accessible Publishing 2019, p20

33 <http://idpf.org/epub/a11y/techniques/techniques.html>

34 This includes ACE by Daisy (<https://inclusivepublishing.org/toolbox/accessibility-checker/>) and Benetech’s GCA (<https://benetech.org/our-work/born-accessible/certification/>). Fondazione LIA’s certification program relies on ACE, which means it too is built on EPUB Accessibility 1.0 (Fondazione LIA p11).

35 <https://www.w3.org/TR/audiobooks/>

36 Because EPUBs and DAISY are built on web technologies such as HTML and CSS, the WCAG guidelines can be applied. The W3C has published EPUB Accessibility 1.0, which builds on the WCAG but provides specific guidelines for creating accessible EPUBs.

including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity, and combinations of these. Following these guidelines will also often make your Web content more usable to users in general.”³⁷

In addition to the four principles which provide a foundation for web accessibility³⁸, the WCAG³⁹ lays out non-technology specific success criteria for creating accessible content. Since the criteria are testable, it is possible to conform to the WCAG. Conformance has three levels: level A, AA and AAA, where AAA is the highest level.

WCAG AA⁴⁰ conformance is a legal obligation in several territories under specific circumstances. For example:

- In Canada, public-facing web content for which the Government of Canada is responsible must meet WCAG conformance level AA as per the “Standard on Web Accessibility.”⁴¹
- In Ontario by January 1, 2021, all public websites and web content posted after January 1, 2012 must meet WCAG 2.0 Level AA other than criteria 1.2.4 (live captions) and 1.2.5 (pre-recorded audio descriptions).
- In the United States, Section 508 of the Rehabilitation Act covers accessibility requirements for the federal procurement of electronic content and requires that content to meet WCAG AA conformance.⁴²

ORGANIZATION: EDITEUR

“EDiTEUR is the international group coordinating development of the standards infrastructure for electronic commerce in the book, ebook and serials sectors.”⁴³

EDiTEUR develops and maintains several key standards used throughout the publishing supply chain for metadata creation and distribution.⁴⁴ These are not ebook production standards but are critical for discoverability. The standard relevant to this report is ONIX for Books⁴⁵, which EDiTEUR describes as “the international standard for

37 <https://www.w3.org/TR/WCAG20/>

38 Those principles are that accessible web content must be “perceivable, operable, understandable and robust.” <https://www.w3.org/TR/WCAG20/#intro-layers-guidance>

39 As of the time of writing, the current version is WCAG 2.0.

40 The WCAG does not recommend requiring AAA conformance: “It is not recommended that Level AAA conformance be required as a general policy for entire sites because it is not possible to satisfy all Level AAA Success Criteria for some content.” <https://www.w3.org/TR/WCAG20/#conformance-reqs>

41 <https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=23601>

42 <https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-ict-refresh/final-rule/text-of-the-standards-and-guidelines#E205-content>

43 <https://www.editeur.org/2/About>

44 <https://www.editeur.org/2/About/#standards>

45 The current release of ONIX for Books is ONIX 3.0. Throughout this report we will be referring to ONIX 3.0 unless otherwise stated.

representing and communicating book industry product information in electronic form.”⁴⁶ ONIX can carry accessibility metadata about individual ebooks and audiobooks which can then be displayed by retailers⁴⁷. ONIX codelist 196⁴⁸ identifies the accessibility metadata that can be used to describe an ebook. If the Canadian publishing industry decides on a certification program, a request can be made to EDItEUR to add a value to 196 so that a certification seal could be released in the metadata.

Application Note: Providing Accessibility Metadata in ONIX⁴⁹

EDItEUR has created a document outlining the methods used to convey accessibility information in ONIX. While this document does not explain how to create an accessible ebook, and is thus not a production standard, it does explain how to tell retailers and users that an ebook is accessible and is a key part of discoverability.

RECOMMENDED KEY GUIDELINES AND DOCUMENTATION

There are documents developed as best-practices guides and documentation for creating accessible ebook publications. These documents are not approved as standards but are nonetheless useful reference documents.

ORGANIZATION: BOOK INDUSTRY STUDY GROUP (BISG)

Publication: **BISG Guide to Accessible Publishing**

The BISG Guide to Accessible Publishing contains an introduction to accessible publishing, technical cheat sheets, tips, code samples and a thorough discussion of the U.S. legal requirements. It is itself an accessible EPUB, and it can be deconstructed to serve as an example. It is an excellent resource for any publisher hoping to make accessible content.⁵⁰

ORGANIZATION: DAISY CONSORTIUM

Publication: **Accessible Publishing Knowledge Base**

46 <https://www.editeur.org/83/Overview/>

47 While retailers, data aggregators and some digital library wholesalers accept ONIX metadata as discussed above, most libraries use a different metadata format called MARC. MARC can also carry accessibility information, but most trade publishers do not create their own MARC records for their digital publications. Currently there is no clear conversion from ONIX to MARC, but investigation into this is being done by the W3C Publishing Working Group Accessibility Task Force: <https://github.com/w3c/publ-a11y/wiki/Accessibility-Task-Force>

48 <https://onix-codelists.io/codelist/196>

49 ONIX for Books Product Information Message Application Note: Providing Accessibility metadata in ONIX

50 The BISG Guide to Accessible Publishing can be found on the BISG’s website. It is a free resource, but it has to be “added to cart” to be downloaded.

“The Accessible Publishing Knowledge Base provides best practices for creating accessible digital publications. Its primary focus is on EPUB but can be used as a reference for any HTML-based format.”⁵¹

The DAISY Accessible Publishing Knowledge Base is a live web publication that contains techniques for accessible digital publications. It takes a “techniques-first approach,”⁵² which allows it to be easy to reference as-needed throughout the production process.

STANDARDS AND CERTIFICATIONS BODIES

There are four organizations that currently provide accessibility certification, or the tools for self-certification, to ebooks⁵³ or to publishers’ workflow. These certifications and tools function in different ways, but all ensure that the ebooks meet the accessibility criteria laid out above. Accessibility certification can and should be carried in the EPUB package metadata.⁵⁴

ORGANIZATION: BENETECH

See Appendix F for more information about Benetech.

Program: **Benetech Global Certified Accessible (GCA)**

Program type: **External Certification**

“Global Certified Accessible (GCA) is the first-ever program to certify the accessibility of ebooks, which is particularly critical in today’s education market. Benetech’s GCA has an ambitious goal—to help publishers build born accessible content to ensure that everyone has equal access to materials critical for education. Benetech’s economical two-stage approach to certification involves accrediting a publisher’s workflow to ensure that all titles produced through that process are accessible from the start.”⁵⁵

Benetech⁵⁶ has created a certification program to ensure a publisher’s catalogue is accessible. First, Benetech works with the publisher to ensure their production processes and workflows will allow for the creation of accessible ebooks. Once a publisher’s workflow has been approved, Benetech will evaluate ebook files using the EPUB Accessibility 1.0 specification, the WCAG conformance levels and additional accessibility features. Once the publisher has enough files that meet Benetech’s certification criteria, the publisher is granted a subscription license to auto-certify

51 <http://kb.daisy.org/publishing/docs/>

52 <https://matt.garrish.ca/2017/11/accessible-publishing-knowledge-base/>

53 Since there is no accessibility standard for audiobooks or highly illustrated books there is no certification program at this time.

54 Using <meta property="a11y:certifiedBy">

55 <https://benetech.org/our-work/born-accessible/certification/>

56 Benetech is “a non-profit that empowers communities with software for social good.” (<https://benetech.org/about/>). They do a great deal of work that is outside of the scope of this project.

products produced by that workflow.⁵⁷ Benetech will then perform quarterly audits to ensure the publisher is continuing to create accessible ebooks.

Benetech will also certify third-party ebook conversion vendors. Certified vendors become “Benetech Approved Vendors.”⁵⁸

Benetech GCA certification allows the use of the GCA logo and GCA metadata. Ebooks certified by GCA will be available in Benetech’s retail store (which is being hosted by Ingram’s VitalSource).

ORGANIZATION: FONDAZIONE LIBRI ITALIANI ACCESSIBILI (LIA)

See Appendix G for more information about Fondazione Libri Italiana Accessibili.

“Fondazione LIA is a non-profit organization created in 2014 by the Italian Publishers Association that promotes books and reading through awareness-raising events, research on digital accessibility, training courses and consultancy activities. LIA is part of an international network of organizations dealing with accessibility of contents.”⁵⁹

LIA has written a guideline called “Ebooks for All: Towards an Accessible Publishing Ecosystem.” This publication lays out an overview of accessible ebook publishing for “all the players in the book value chain: content producers, aggregators and digital distributors, online bookstore and platforms, developers of reading solutions and organizations managing the books in print catalogues.”⁶⁰ It also recommends a clear accessible compliance workflow: EPUBCheck, then Ace by DAISY and then a human check.⁶¹ In order to facilitate that human checking process, LIA has created a program to control and certify born accessible EPUBs.

Program: **LIA**

Program Type: **External Certification**

“Our experts can check the accessibility of your publications, convert your titles into international digital accessible formats, create the standard metadata describing the accessibility features and certify them as accessible with the LIA label.”⁶²

The LIA program is similar to Benetech’s GCA, as it provides third-party certification that comes with the use of a logo, metadata and an accessible ebook storefront.⁶³ However, the LIA program checks and certifies each individual ebook before publication.

57 <https://benetech.org/our-work/born-accessible/certification/>

58 <https://benetech.org/our-work/born-accessible/certification/>

59 Ebooks For All: Towards an Accessible Digital Publishing Ecosystem, p42

60 “, p5

61 “, p6

62 “, p41

63 <https://catalogo.fondazioneia.org/>

According to *Publishing Perspectives*, LIA's program has "the cooperation of some 80 percent of Italy's publishing companies."⁶⁴

ORGANIZATION: THE DAISY CONSORTIUM

"The DAISY Consortium is a global consortium of organizations committed to developing global solutions for accessible publishing and reading, in partnership with civil society, publishing and technology industries, standards bodies and governments."⁶⁵

DAISY manages and maintains the DAISY standard for Digital Talking Books⁶⁶, but the consortium is also involved in the standardization of EPUB.⁶⁷ DAISY has created two tools and one program to help ebook authors create born accessible ebooks.

Program: **Ace by DAISY**

Program Type: **Accessibility testing tool**

"Ace by DAISY is a free, open source tool designed to check the accessibility of EPUB files at any point in a publishing workflow. It has been developed to assist in the evaluation of conformance to the EPUB Accessibility Specification."⁶⁸

Ace is a piece of software that can be used to run automated accessibility tests on EPUBs. It generates a report with information on violations, metadata, document outlines and images.

However, Ace does not include a manual human-led accessibility testing protocol.

Ace is useful both for publishers using an external certification program (as it allows them to test their ebooks before certification) and for those who are self-certifying. It is not itself a certification program.

Program: **Ace SMART**

Program Type: **Accessibility testing tool**

"The DAISY Consortium has developed Ace SMART, an online accessibility reporting system. **SMART** stands for **S**imple **M**anual **A**ccessibility **R**eporting **T**ool. SMART can integrate with Ace by DAISY. This tool provides manual conformance checks necessary to ensure conformance with EPUB and WCAG requirements. Together they provide the most complete method for accessibility conformance testing of EPUB publications."⁶⁹

64 <https://publishingperspectives.com/2019/11/italy-publishing-rolls-out-its-new-accessible-reading-program-fondazione-lia/>

65 <https://daisy.org/about-us/governance/vision-mission/>

66 <https://daisy.org/activities/standards/daisy/>

67 <https://daisy.org/activities/standards/epub/>

68 <https://daisy.org/activities/software/ace/>

69 <https://daisy.org/activities/services/smart/>

SMART adds a manual testing protocol to Ace. It guides the user through a manual checking process to ensure compliance. Unlike Ace, it is not free. Like Ace, it is not a certification program.

Program: ***Inclusive Publishing Partner Program***

Program Type: **Accessibility testing tools and technical support**

“The DAISY Consortium are pleased to introduce the new Inclusive Publishing Partner initiative, offered to the publishing industry as a way to support the production of mainstream digital content accessible to all readers, irrespective of their ability. We have an exciting range of benefits outlined to enable participating organizations to be at the forefront of development and to receive expert support and guidance.”⁷⁰

Becoming an Inclusive Publishing Partner comes with access to SMART (see above), auto-generation of accessibility metadata, access to support and technical expertise, and a listing on the DAISY and Inclusive Publishing sites.

Inclusive Publishing recommends that small organizations would benefit from becoming an Inclusive Publisher Partner as they can offer the support and guidance that a larger organization would gain from an in-house accessibility advocate.⁷¹

The Inclusive Publishing Partner Program is not a certification program but provides access to tools and technical support that can help publishers self-certify.

CERTIFICATION RECOMMENDATIONS

After speaking with many stakeholders across the publishing sector, the consultants have concluded that certification in general is an important part of accessible ebook publishing and can be recommended. Certification will help create an environment of trust across the supply-chain.

- With certification, a base standard will be created that will give publishers confidence that their work will be standardized.
- Publishers can trust that their certified ebooks are truly accessible and will suit the needs of their readers.
- Retailers and librarians can trust that the files being supplied to them by publishers are accessible and can trust the metadata they receive about accessibility features is accurate and reliable.
- Educators can trust that the content they are requesting for their classes will meet legal requirements and standards.
- Readers can trust that the ebook they have purchased or borrowed will have the accessibility features they need.

70 <https://inclusivepublishing.org/inclusive-publishing-partner/>

71 <https://inclusivepublishing.org/inclusive-publishing-partner/faq/>

A move toward certification will increase publisher awareness, confidence and capability, even before a final certification process is decided upon and in place.

In our research, we came across three certification sub-types: workflow certification, individual book certification and self-certification.

WORKFLOW CERTIFICATION: Primarily provided by Benetech and certified using the Global Certified Accessible program (GCA). Publishers or conversion houses are trained and have their workflows certified as producing accessible books.

Having spoken to Benetech and to a currently certified publisher, we believe that Benetech's GCA is a robust and well-supported system that will work well within the Canadian marketplace, and that licensing Benetech's system is a better option for Canadian publishers than a custom-built workflow certification solution.

INDIVIDUAL BOOK CERTIFICATION: While this is currently primarily provided by LIA, there is no North American equivalent. A publisher sends every book they want certified to the certification authority before distributing to retailers and libraries.

After having spoken with LIA and to a currently certified publisher, we have some concerns about the LIA's applicability to Canadian publishers. However, we feel that a similar 'made-in-Canada' solution could be developed.

SELF-CERTIFICATION: Publishers use best practice guidelines and tools to create their own workflow and certify their own books at their own pace. Ebooks with accessibility metadata sent without information about a certification authority are assumed to be self-certified.

After speaking with publishers and other stakeholders, we are not suggesting self-certification.

In summary, based on an analysis of the research, three potential recommendations have emerged:

OPTION 1: A COMBINED WORKFLOW AND INDIVIDUAL BOOK CERTIFICATION

Option 1 is the most ambitious and robust. In this option, we would recommend certifying both workflow and individual books. The workflow certification would be managed by eBOUND licensing Benetech’s GCA and would involve training and ongoing support.

The second piece would be certification of individual books. This piece could be managed by a partner organization that could create a robust accessibility testing procedure, including both automatic testing using tools such as Ace, and manual tests performed by accessibility experts. This would allow non-ACP member publishers and French-language publishers to have their books certified. We would recommend creating a national seal, to be sent with the metadata, which could be displayed by retailers, libraries, CataList, 49th Shelf and other sites—a process that the partner organization could potentially manage.

Strengths	Weaknesses
<ul style="list-style-type: none"> • Certifying each book individually guarantees accessible publications, while certifying workflow ensures that most books will be accessible before they reach the certification stage (reducing the time it would take to certify each book). • Currently, the international community is split between certifying workflow and certifying individual books. If Canada does both, it will be prepared to follow the retailers in whichever direction they go. • With a larger partner organization managing the individual book certification process, multinational publishers could submit their ebooks to be certified, thus significantly expanding the reach of the program (and increasing the chance that retailers will display the seal). • The larger partner organization could reach out to digital booksellers and libraries and work with them to increase buy-in for accepting and exposing accessibility metadata. • This is the most robust option, which will help the industry grow in capacity to meet international standards. 	<ul style="list-style-type: none"> • Could be hard to manage. • Certifying individual books—even with a certified workflow—will add some time to a publisher’s production schedule. Our research shows that many publishers would find that onerous. • No guarantee of buy-in from all parties. • A program this large would be hard to sustain without consistent funding

Proposed Process for Option 1

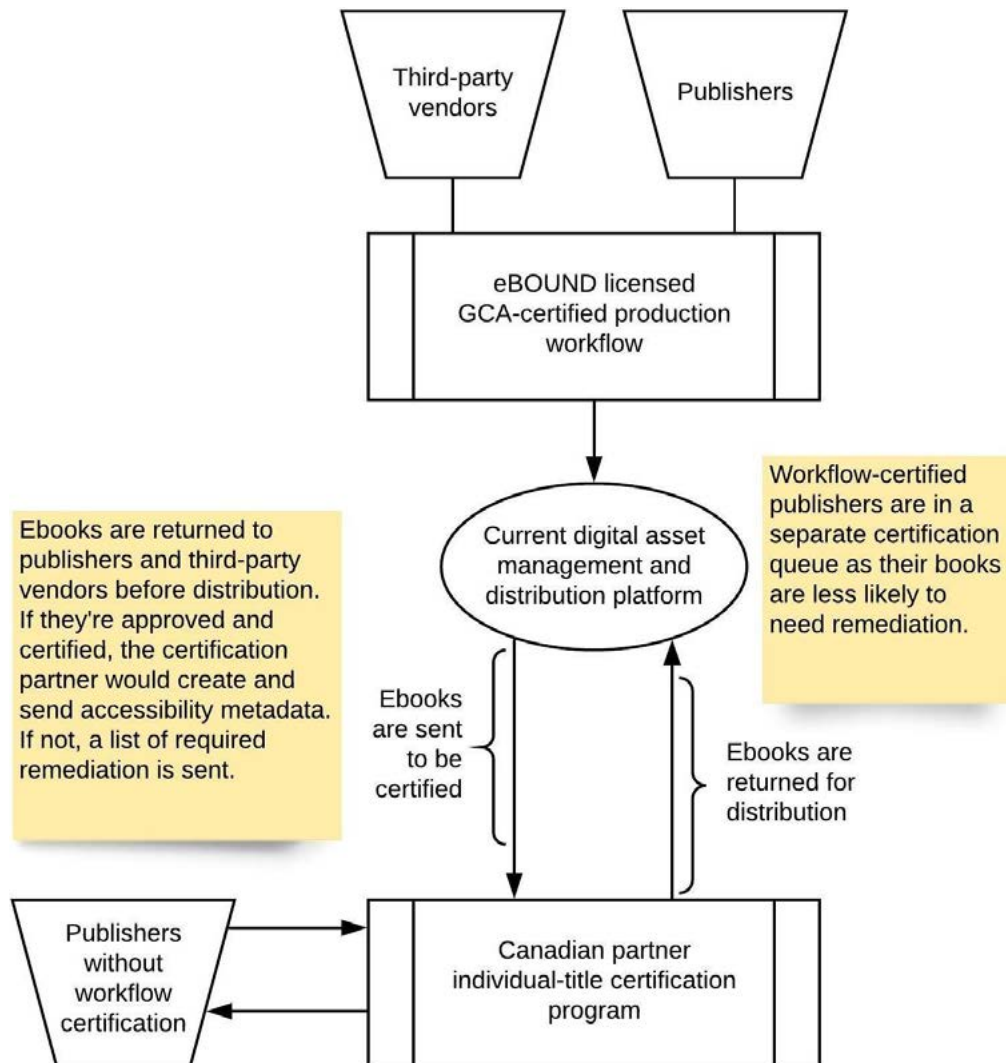


Figure 1: Option 1 Proposed Process

The following steps are displayed in the flowchart above.

1. Level 1: Third-party vendors and Publishers.
2. Level 2: eBOUND licensed GCA-certified production workflow of the third party vendors and publishers.
3. Level 3: The “Current digital asset management and distribution platform”. Books are added into here from 2 directions:
 - a. From vendors or publishers who have had their workflow certified
 - b. From individual ebooks from publishers without certification that are sent to be certified and then returned for distribution.
4. After approval and certification, the certification partner would create and send accessibility metadata. If not, a list of required remediation is sent.
5. Workflow-certified publishers are in a separate certification queue as their books are less likely to need remediation.
6. Level 4 can also be accessed by publishers without workflow certification. These partners feed titles back up to Level 3, into the digital asset management and distribution platform.

OPTION 2: WORKFLOW CERTIFICATION

For option 2, we recommend that ACP/eBOUND licenses Benetech's GCA program to create a made-in-Canada workflow certification program for publishers and third-party vendors. eBOUND would need to provide support and training and perform quarterly spot-checks to ensure compliance. Using this option, eBOUND could also manage a list of third-party vendors who have a certified accessible workflow and could recommend these vendors to publishers who are not prepared to create their ebooks in-house.

We would also recommend that BookNet add accessibility features to their metadata ingestion reporting, increase their training on the use of accessibility metadata within ONIX, and reach out to retailers, library wholesalers and libraries about exposing that metadata.

Strengths

- Easier to manage than option 1.
- While certifying workflows may take some time, it will not add any time at all to the actual production process (an idea that appealed to many of the publishers we spoke to).
- Certifying workflows allows eBOUND to create a list of recommended outsourcing partners, which ensures publishers who do not create their books in-house are not left out of the process.
- Certifying workflows is a very sustainable option, as publishers can continue to make ebooks according to their workflow even if funding runs out.
-

Weaknesses

- Retailers are less interested in displaying a workflow certification seal. This lack of exposure reduces discoverability and increases reliance on retailers displaying individual pieces of accessibility metadata.
- This puts the onus on publishers to create accessible books (and even with an accessible workflow there is no guarantee the books will be perfect every time). This may mean a potential loss of trust in the system if consumers purchase a book which is certified, but not actually accessible.

Proposed Process for Option 2

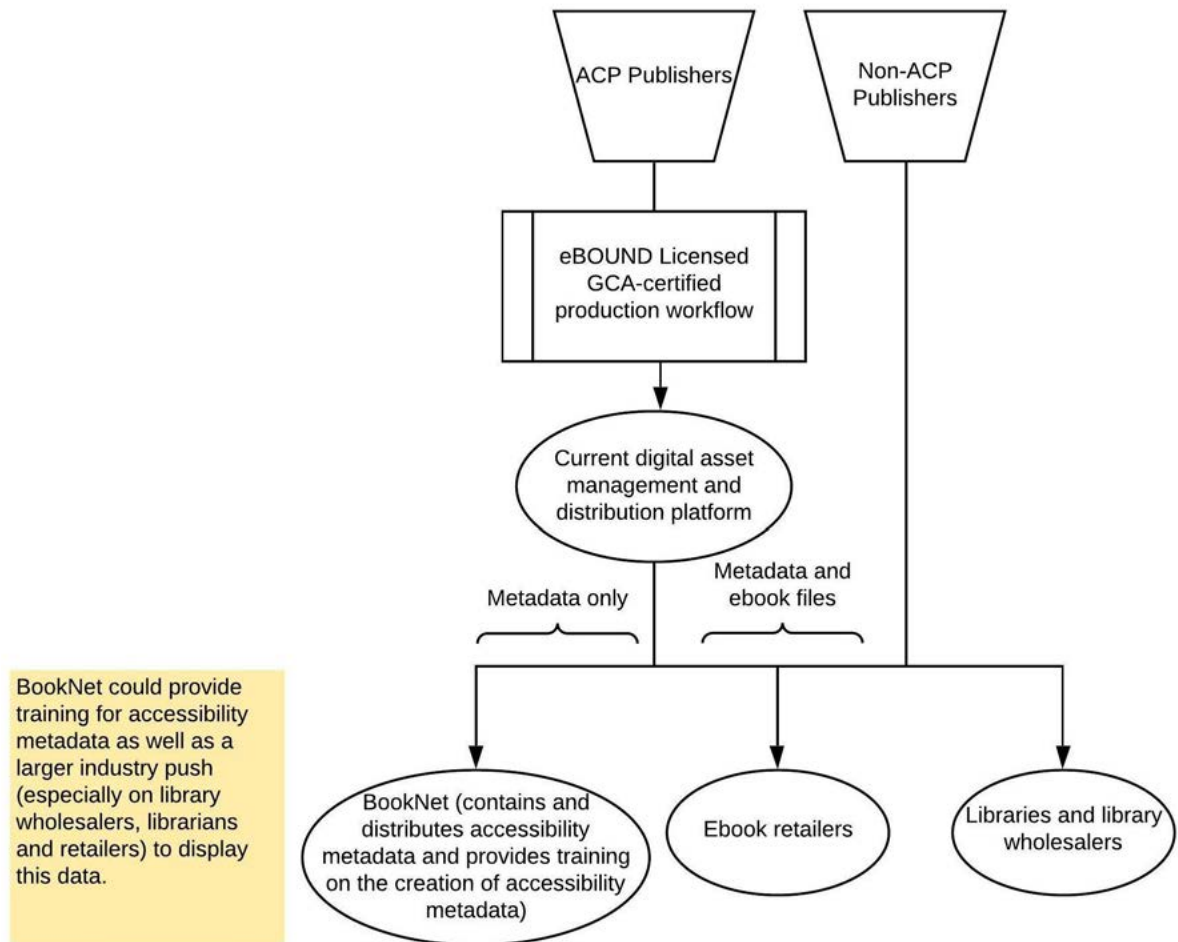


Figure 2: Option 2 Proposed Process

The following steps are displayed in the flowchart above.

1. Level 1: ACP Publishers and Non-ACP Publishers. If an ACP Publisher, proceed to Level 2.
2. Level 2: eBOUND Licensed GCA-certified production workflow, continues on to Level 3, the Current digital asset management and distribution platform, and that flows to Level 4 either as:
 - a. Metadata only, or
 - b. Metadata and Ebook files.
3. Non-ACP Publishers, go directly to Level 4.
4. Level 4:
 - a. BookNet contains and distributes accessibility metadata and provides training on the creation of accessibility metadata
 - b. Ebook retailers
 - c. Libraries and library wholesalers

OPTION 3: INDIVIDUAL BOOK CERTIFICATION

For option 3, we would recommend that individual books be certified before going on sale. In this option, as in option 1, we recommend a partner organization create a robust individual book testing procedure including both automatic and manual testing. We recommend that this process be managed by a larger partner, ideally one with stakeholders from the large multinational publishers and some of the ebook retailers, as a larger partner may be able to secure more buy-in (our research has shown that buy-in from the big players will be necessary in order to create a meaningful certification program). As in option 1, we recommend creating a seal to be displayed by retailers as well as in CataList and on 49th Shelf.

Strengths	Weaknesses
<ul style="list-style-type: none">• Guarantees all books with a seal are actually accessible.• May have more retailer/library buy-in.• May have more consumer trust.• Allows large multinationals to participate in the certification program.•	<ul style="list-style-type: none">• Would add a significant amount of time to publishers' production schedules.• Is not very useful for publishers who use third-party vendors to create their ebooks—if an ebook requires accessibility remediation, the publisher would need to negotiate that remediation with their vendor.

Proposed Process for Option 3

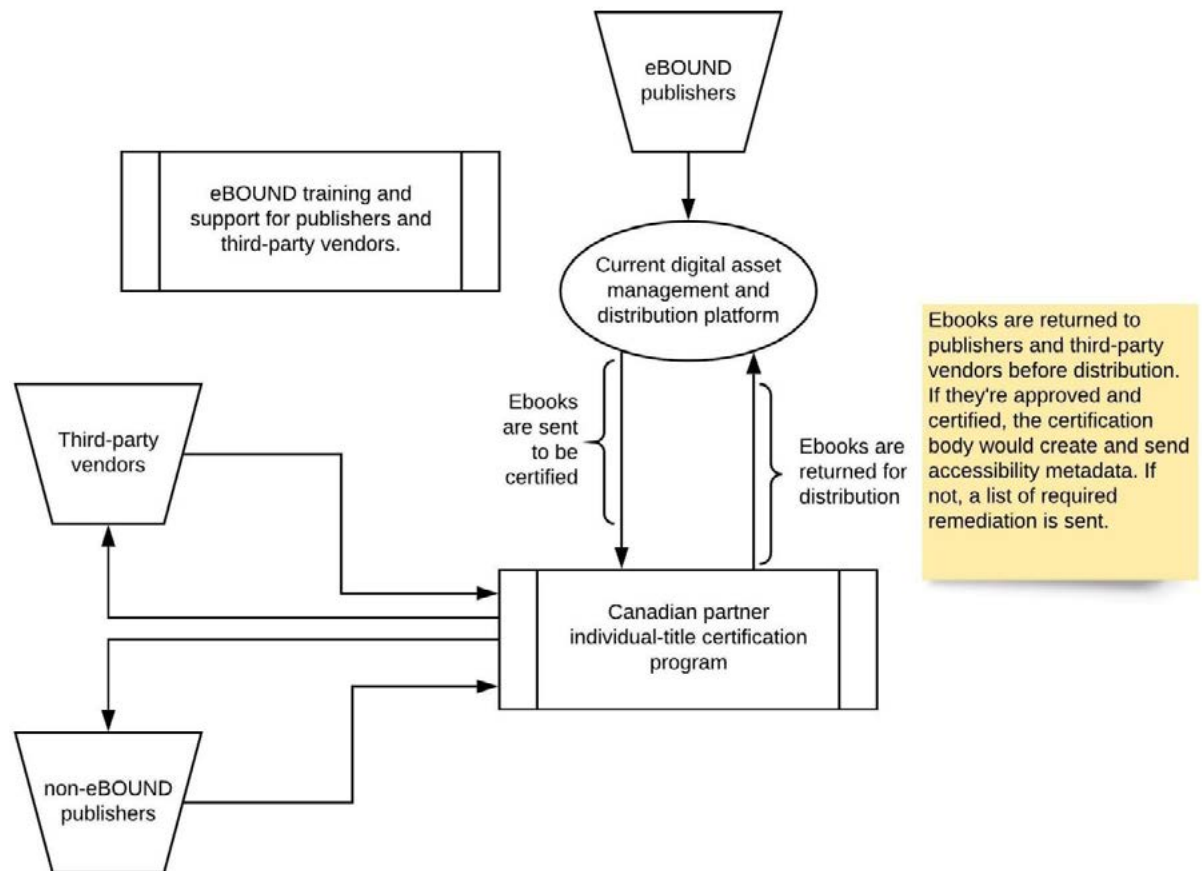


Figure 3: Option 3 Proposed Process

The following steps are displayed in the flowchart above.

1. Level 1:
 - a. eBOUND publishers
 - b. Third-party vendors
 - c. Non-eBOUND publishers.
2. If eBOUND publisher, then go to Level 2
3. Level 2: Current digital asset management and distribution platform.
4. From Level 2, EBooks are:
 - a. Sent to be certified at Level 3
 - b. Returned to Level 2 for distribution.
5. Ebooks are returned to publishers and third-party vendors before distribution.
 - a. If approved and certified, the certification body would create and send accessibility metadata.
 - b. If not, a list of required remediation is sent.
6. Third-party vendors, then go to Level 3 and back again to Third-party vendors.
7. If a non-eBOUND publisher, they go to Level 3 and back again to non-eBOUND publishers.
8. Level 3: Canadian partner individual-title certification program.

THE PATH TO CERTIFICATION

While certification is very important, it is only one part of a larger push toward making Canadian ebooks accessible. Before embarking on a certification program, there are many smaller steps that ACP and eBOUND can undertake that will help prepare Canadian publishers for certification. And once that program is in place, there are a few steps to take that will help ensure Canadian ebooks continue to be accessible into the future.

Awareness Sessions

Recommended timing: *immediately*

Many of the publishers we spoke with were uncertain about what accessible ebooks are and what accessibility means (see The Publisher's and Marketplace Perspective, Findings section on page 122 for more information). We recommend beginning any push toward accessibility with awareness training. eBOUND could partner with NNELS, CELA, CNIB or other groups that work closely with the print disabilities community to create awareness around accessibility issues and what an accessible ebook should look like. More details on awareness building can be found in Part Three: Training and Outreach Strategy.

In our research, we spoke to publishers who praised the technology demonstrations run by NNELS accessibility testers and the talks given by accessibility consultancy Access Changes Everything.

Accessibility Audits

Recommended timing: *concurrently with awareness building*

Once publishers are aware of accessible ebooks as a concept, ACP and eBOUND can move on to determining where publishers currently stand: Are they making accessible ebooks already? If not, are they close? What steps will they need to take to begin? Are their websites accessible? Are they creating and distributing accessibility metadata? What technical training or guidelines will they need to be prepared for a certification program?

Our research showed publishers across the whole spectrum—from publishers who weren't aware of accessible ebook publishing at all through to publishers who are leaders in the field. A wide-scale audit is an opportunity for ACP and eBOUND to work with technical experts and accessibility testers to get a real sense of where all of their publishers are in practical terms.

Certification Pilot Program

Recommended timing: *after an audit has been conducted*

Once an audit has been completed, publishers who are already creating accessible ebooks (or publishers who are close) should be selected to be involved in a pilot certification program. How this pilot program will work will depend on which of the certification options previously outlined is chosen.

Certification Readiness Training

Recommended timeline: *concurrently with pilot program*

eBOUND and ACP can offer hands-on technical sessions, both in person and via webinar, to help publishers who create their own ebooks prepare those ebooks for certification as part of a certification readiness program.

This program should include a focus on creating EPUB 3.2, with the goal of moving all ACP member publishers away from older, less accessible standards.

This certification readiness training could include the creation of a technical accessibility implementation guide. This guide should be very in-depth and technical, building on the standards and documentation outlined in this chapter of the report, with step-by-step descriptions, real-world examples and checklists to ensure accessibility. This is an opportunity for ACP and eBOUND to work with the selected certification authority and technical experts to create a functional guide for all Canadian publishers.

If it is determined that licensing Benetech's GCA program is the right certification program for Canadian publishers, working with Benetech GCA to ensure the implementation guide will create born accessible publications would be extremely beneficial and would lead to easier certification down the road.

Retailers and Metadata

Recommended timing: *concurrently with pilot program*

Once an audit has been completed, eBOUND can work with BookNet to help publishers with accessible titles send the appropriate metadata. At that point, talks should begin with retailers to ensure that accessibility feature metadata is being exposed to readers and displayed on retailer websites.

Our research shows that some retailers will consider exposing accessibility feature metadata once they know publishers can send it. Having that data exposed would significantly improve discoverability.

Support and Sustainability

Recommended timeline: *ongoing*

We recommend that both eBOUND and BookNet provide training on accessibility metadata and that eBOUND perform spot-checks to ensure that publishers with accessible ebooks (whether they have certified their workflows or each individual book) are sending that metadata.

We also recommend the creation of a national seal (as mentioned above) which could then be sent in the metadata. Although we have no guarantee that retailers will display a seal, regardless of whether it is for workflow or individual books, it is possible for Canadian industry players over which ACP and eBOUND have influence, such as 49th

Shelf, CataList, SalesData and others, to do so. However, for reasons of sustainability and transparency, we recommend retailers and libraries display the accessibility feature metadata as sent by the publishers in addition to the seal.

Finally, we recommend that the technical accessibility implementation guide be kept up-to-date in order to ensure publishers are following current standards.

In all cases, we recommend ACP and eBOUND work with people with print disabilities as much as possible. The lived experience of readers who use accessibility features is invaluable in all stages of accessible ebook production, distribution and marketing.



Part Three: Training and Outreach Strategy

A) Publishers, Colleges and Retailers (Ross)

The purpose of this report is to recommend a training and awareness strategy that would support ACP's goal of increasing the number of accessible titles available from independent Canadian publishers.

To arrive at the recommendations, an inventory of existing training options was conducted to avoid duplicating existing services and to identify training gaps. (The inventory is attached to this document as Appendix H.) Interviews were conducted with Canadian colleges that offer training in the development of accessible content to determine whether the training available would meet the needs of publishers. Interviews were also conducted with a number of organizations, both for-profit and not-for-profit, that provide accessibility support and training to publishers.

Additionally, the executive directors of regional and other publishing associations, the Writers' Union of Canada and Editors Canada were consulted about both training and awareness among their members. Other industry stakeholders consulted include BookNet, Access Copyright, eBOUND, 49th Shelf, NNELS, CELA and Benetech. A selection of independent Canadian publishers from across the country was also interviewed. (A list of those consulted is attached to this document as Appendix I.)

Concurrent with this research, a team of consultants conducted a landscape review and developed a set of recommendations for a certification process and a set of standards to be adopted by Canadian publishers producing accessible content. The suggestions for training and awareness presented here may need modification depending on the certification process and standards ultimately decided upon.

TRAINING STRATEGY

The goal of the strategy is to enable independent Canadian publishers to produce born accessible books. To do this, Canadian publishers will need a range of supports and training. Training needs differ for publishers who produce their own ebooks and for those who outsource production.

Publishers who outsource the production of their ebooks and audiobooks will need training to understand what they need to specify for their suppliers. Many need awareness training about the issues accessible content addresses for its users and the language and terminology that is used. They need to learn to about adjustments to their metadata that are needed. All publishers will need to be made aware of the certification process itself.

Digital content production has, so far, had little impact on editorial staff but, for a publisher to produce born accessible content, editors will need to be trained to incorporate consideration of described images, or alt text, as well as navigation

considerations into their workflows. Both editors and authors may need training in the creation of alt text.

Many publishers who produce their own ebooks have already taken some measures to make their books accessible. Currently, most do not have access to a certification process to identify issues preventing accessibility. Once a process has been determined, training will be needed for these publishers to remedy problems identified and to amend their production practices going forward.

INVENTORY OF EXISTING TRAINING PROGRAMS

Many accessibility training programs of various kinds are available. For the purpose of this project, the focus was on accessibility training pertaining to content production. The available training has been broken down by target audience.

TRAINING FOR COMPLIANCE WITH PROVINCIAL ACCESSIBILITY LEGISLATION IN THOSE PROVINCES THAT HAVE PASSED LEGISLATION

Training for compliance with provincial legislation is freely available online in Ontario. Other provinces that have passed accessibility legislation have also developed online resources to help organizations comply with the regulation. The inventory includes a link to the training available in Ontario as an example. These training programs do offer some guidance to publishers about accessibility requirements for websites, public documents, physical premises and so forth. However, the focus of the inventory was to find training that could support ACP's efforts to increase the number of accessible books produced by independent Canadian publishers.

TRAINING FOR ACCESSIBLE WEB DESIGN

A number of community colleges as well as a number of private firms offer training for accessible web design with programs varying from a couple of sessions to a full semester. Most Canadian publishers do not currently have accessible websites. Many publishers outsource website development and maintenance.

TRAINING FOR ACCESSIBLE EBOOK PRODUCTION

For the most part, training for producing accessible ebooks has been offered in Canada sporadically in the form of stand-alone workshops and professional development sessions. There have been a number of sessions at Tech Forum in the past and unfortunately this year's conference had to be cancelled due to COVID-19. The plan is to offer next year either in person or virtually.

Most of the Canadian industry experts who have delivered accessibility training at these professional development workshops or webinars hold full-time jobs not focused on their training activity. As such, their availability to develop or provide ongoing training on a regular basis is limited.

The only regularly scheduled training currently offered in Canada that is specific to the creation of accessible ebooks is a course in the Ryerson Certificate in Publishing taught by Monique Mongeon of BookNet. The course teaches ebook production (EPUB 3) and integrates accessibility as part of the regular workflow. Students also have access to documentation about the process of ebook production.

Both Humber College and Centennial College teach ebook production using EPUB 3 in their publishing programs, though neither currently includes accessibility considerations as part of the curriculum. Humber is exploring the addition of accessibility training to their course. The program at Centennial is more of an overview of publishing and devotes less time to instruction on ebook production. They are exploring whether it would be possible to integrate metadata identifying accessible content into the course for their next cohort.

Editors Canada produced a webinar on accessibility for editors in 2018. Once standards have been determined, Editors Canada plans to incorporate accessibility considerations into all their existing webinars as well as developing additional sessions to address any gaps. Editors Canada has moved all their training online.

NNELS has also run training sessions across Canada in the past. Currently, NNELS is working with CELA on a pilot project with a team of six English-language and five French-language publishers to produce accessible titles. NNELS also publishes guidelines for the creation of accessible content and it's anticipated that additional guidelines will be one of the outcomes of the pilot project.

Publishers working with Benetech receive customized training to fix any titles that do not pass their certification process. However, Benetech's services are cost prohibitive for most independent Canadian publishers. What some publishers do is cede the rights to Benetech for them to produce proprietary accessible books distributed at no charge to their clients.

Benetech also works with organizations, including publishers, to transform their workflow and processes to create born accessible content.

LIA offers support and training to publishers who use their certification service in Italy and are keen to offer their services in other territories.

Two U.S.-based firms, Inclusive Publishing and Deque, offer both customized and online training options. Again, these solutions are too costly for most independent publishers.

Apart from occasional workshops, there are no training programs for publishing staff looking to upgrade their skills and processes to produce born accessible books.

I found three organizations in Canada prepared to develop customized accessibility training for publishers similar to the support offered through Benetech and LIA. Two are colleges (Mohawk and Humber) that offer publishing programs. However, accessibility training at both schools is part of the Faculty of Media and Creative Arts rather than the publishing stream. In each case, the Media faculty would work

with their publishing colleagues to develop customized training sessions to support this project if desired. The third organization is David Berman Communications, a communications firm that has specialized in accessibility training for twenty years. David Berman himself is a designer who has worked in publishing. His communications firm has worked with government and other large entities.

Unlike Benetech and LIA, the potential Canadian training partners are not affiliated with a certification program or process.

TRAINING FOR ACCESSIBLE AUDIOBOOK PRODUCTION

All of the independent Canadian publishers producing audiobooks outsource production. No training programs for the production of accessible audiobooks were found. Several of the organizations already mentioned can provide customized training and have produced guidelines and other resources to aid in the development of accessible audiobooks.

TRAINING RECOMMENDATIONS

Conversations with individual publishers, as well as with the executive directors of industry associations, clearly indicate that quite a broad range of training options is needed to increase the number of accessible books being produced by Canadian publishers. Most of the associations consulted, and many individual publishers, have applied for, or indeed have already received, funding to support their own efforts to address accessibility. There is potential for some of these projects to overlap duplicating research and development costs.

Canadian publishers have a history of working together to address common challenges that could otherwise overwhelm individual firms. In addition to support for industry associations, the Department of Canadian Heritage has helped Canadian publishers develop critical infrastructure organizations like Access Copyright, BookNet, 49th Shelf, and eBOUND. A similar industry-wide approach to support the production and marketing of Canadian accessible content is needed to make it possible for independent Canadian publishers to participate. It would also help to avoid duplication and to sustain the development of accessible content beyond the life of the project.

The recommendation is for a training strategy with three components:

1. Development of an online Accessibility Reference Resource for Canadian publishers.
2. Development of tutorials or workshops for specific, common subjects that can be delivered online or at in-person workshops.
3. An affordable certification process with ongoing support and Quality Assurance.

ACCESSIBILITY REFERENCE RESOURCE

Moving toward a born accessible workflow is a significant challenge for most Canadian publishers that will require resources many do not have. A number of the publishers consulted suggested that a single source of information, created specifically for publishers, would be helpful. Publishers producing their own ebooks are frustrated by how difficult it has been for them to locate the resources they need to make their books accessible. Publishers who outsource production are frustrated by the lack of available suppliers or the additional expense involved if a supplier can be found.

Many resources specifically designed to help publishers address accessibility are already available online for free. But, as one publisher said, “It’s a steep learning curve. It feels like ebooks all over again. I don’t know where to start.”

The reference resource should be a living document, updated as changes to standards, legislation or production processes occur.

To help guide publishers through the process, flowcharts that illustrate born accessible workflows for different types of ebooks and audiobooks (straight text, with illustrations, etc.) and include links to relevant resources at each project stage would be useful.

Additionally, this resource should contain a glossary of terms used to talk about accessible content and a summary of accessibility legislation affecting publishers.

WORKSHOPS AND TUTORIALS

Training for publishers who are outsourcing production could be delivered as either online or face-to-face workshops as the content for these will tend to be the same.

Publishers could be referred to the reference resource for refreshers and updates.

All of the regional publishing associations, as well as LPG, ACUP, Editors Canada and TWUC expressed interest in professional development sessions specific to their audiences. Most have also applied to DCH for funding for accessibility projects of their own (and many of these have already been approved). While many of these projects are focused on production, there is a risk of duplication of effort around training. An industry-wide effort, coordinated with regional and other associations, would help to avoid duplication of the effort required to research and develop training sessions.

Publishers specifically expressed a need for training in the following areas:

- greater awareness of what accessible books are and how they are used;⁷²
- for publishers outsourcing production, guidance on what to demand of their suppliers;

⁷² Publishers should continue to work closely with the organizations that support the people with print disabilities. Many publishers referenced the importance of demonstrations of the use of accessible content in helping them to understand the issue. This outreach should include editorial staff and authors, not just heads of firms.

- development of descriptive text or alt text;⁷³
- amending workflows to produce born accessible books;
- navigation considerations for audiobook production;
- metadata identifying accessible content; and
- marketing accessible content.⁷⁴

Training on most of these topics can be delivered through tutorials or workshops. Awareness and marketing training are more suited to in-person sessions where publishers can meet with their peers and others in the chain to learn from each other.

Trainings sessions should be archived as part of the reference resource.

ONE-ON-ONE SUPPORT

Once a certification process has been determined, publishers whose books fail certification will need training and support to remedy violations identified by the process. As issues will vary from publisher to publisher and across different types of books, one-on-one support like that offered by Benetech or LIA is recommended.

eBOUND could fill this role for independent Canadian publishers as they already provide one-on-one support to publishers around digital content production and marketing. eBOUND already has expertise in both ebook production and metadata management and the majority of independent Canadian publishers use their services for ebook production and distribution. eBOUND has also been involved in audiobook production and distribution and is already working with the CNIB, CELA and NNELS to support accessible content production.

eBOUND could work with one of the organizations providing customized training to fill any gaps in expertise they have in dealing with the production of accessible books. All of the training organizations discussed offering “train-the-trainer” solutions. This would mean that Canadian publishers would have the affordable ongoing support from accessibility experts within the industry that is needed to sustain the development of accessible books going forward.

AWARENESS STRATEGY

ACP’s design of this project has laid much of the groundwork for creating awareness. Most stakeholders and influencers have already been made aware of the project and many are actively involved.

73 Editors Canada and The Writers’ Union of Canada both expressed interest in training for creating alt text.

74 Most publishers are skeptical that their accessible content will have enough commercial potential to cover the additional expense of producing it. Affordable initiatives promoting the content and opportunities to learn from peers who have developed successful strategies would be useful.

The recommendation is to continue to work with these groups to create awareness in three key areas:

1. what accessible content is and why it is needed;
2. the production and certification processes required to produce accessible content; and
3. where and how accessible content can be found and acquired.

For each of these areas, ongoing communication among stakeholders and influencers is needed.

The initial need is to make publishers and other stakeholders aware of accessibility issues and what accessible content should look like. These efforts could be shared by eBOUND with regional publishing associations, and other groups such as ACUP, LPG, TWUC and Editors Canada. Through BookNet, these efforts could be shared with multinational publishers.

Once a certification process has been determined, publishers will need to be made aware of it as well as of training and other resources they can access to produce and certify their accessible books. Others involved in accessible content creation such as authors, freelance editors, and ebook and audiobook producers should be part of this awareness outreach. A certification seal like Benetech's GCA would be useful in helping to identify accessible content as well as for unifying communications about the project around a single brand.

Finally, retailers, librarians and users of accessible content will need to be made aware of the content that is available to them. Existing platforms such as CataList, 49th Shelf and Access Copyright could display the seal as well as accepting and displaying metadata that identify accessible content. The seal could also be used in catalogues maintained by the organizations supporting people with print disabilities. Publishers should continue to work with organizations that support readers with print disabilities to encourage retailers and libraries to display the seal and to help to promote accessible content.

COMMUNICATIONS

Publishers can easily be kept informed of the project, its progress and developments, and the points at which they can optimally get involved through presentations by project spokespeople at regular industry events⁷⁵ and through updates in ACP, eBOUND and other stakeholder newsletters and social networks.

Using press releases marking project milestones to create and maintain awareness of the project and its progress is recommended. Influencers and other stakeholders could

⁷⁵ All of the industry associations contacted as part of the project research were prepared to make time at their AGMs or other regular meetings for presentations or project updates. Though many of these meetings may be cancelled, postponed or conducted virtually due to COVID-19, whatever alternatives arise will offer opportunities to raise awareness.

share these with their larger networks to broaden the reach of the awareness campaign. For example, BookNet could share the press releases with those who signed up for Tech Forum. Though the event was postponed due to the pandemic, the emphasis on accessibility in the schedule suggests strong interest among those who planned to attend. Similarly, NNELS could share press releases with the attendees of their Accessibility Summit. Educational institutions are typically the ones who approach publishers looking for accessible books and should be part of the awareness outreach.

The press releases could be referenced in the social media platforms used by stakeholder organizations. They would also help to keep funders and legislators informed.

Project milestones celebrated in the press releases could help to bring publishers, retailers and librarians on board by:

- highlighting alignment with legislation;
- creating awareness of the accessible content available; and
- identifying those retailers or libraries that were displaying or promoting the content.

For the project to be successful, ongoing communication among all members of the chain is necessary. Once content is available, publishers, industry support organizations and the organizations supporting print-disabled readers will need to work together to engage retailers, wholesalers, educational institutions and librarians in promoting the accessible books to users.

B) Public Libraries in Canada (NNELS & CELA)

CONTEXT

This study has been undertaken by NNELS and CELA with financial support from eBOUND and ACP as a part of the Canadian federal government's investment of \$22.8 million over five years for the development of an initiative to support the sustainable production and distribution of accessible digital books (Department of Finance, 2019). This study develops an awareness and training strategy for public libraries to support the distribution of books in accessible formats (ebooks and audiobooks) and includes recommendations for a four-year training plan (2020–2023).

NNELS is a digital public library of books for people with print disabilities in Canada, and an advocate for an accessible and equitable reading ecosystem for all people in Canada. The goals of NNELS are to build capacity and employment opportunities for people with print disabilities, to advance the agenda of born accessible publishing, and to develop and maintain a digital repository of accessible books for people with print disabilities in Canada, delivered through the network of public libraries in Canada.

CELA is an accessible library service, providing books, magazines and newspapers to people with print disabilities in Canada in the formats of their choice. CELA's mission is to support public libraries in Canada in the provision of accessible collections for people with print disabilities in equal measure to that which is enjoyed by other members of their communities, and to champion the fundamental right of people with print disabilities to access media and reading materials in the format of their choice.

TERMINOLOGY

Among people with disabilities, there are different preferred terms to refer to disability: person-first language (i.e., “people with print disabilities”), and identity-first language (i.e., “print-disabled persons”). Person-first disability language, which puts the person first in order to emphasize each person's humanity and individuality, came in reaction to earlier, medicalized disability language that defined people exclusively by their impairments and thus dehumanized people by labelling them as nothing more than their disability. It must be noted, however, that many people think of their disabilities as positive parts of who they are and prefer identity-first constructions that highlight their membership in a particular disability group, similar to using identity-first phrasing to describe someone's race. Though both preferences are recognized and respected, this report will use person-first language (i.e., “people with print disabilities”), which is the language used by the government of Canada.

This report also uses the term “print disability” rather than “perceptual disability,” unless specifically referring to the Copyright Act of Canada which uses the term

“perceptual disability.” Print disabilities refer to a subset of disabilities that are defined as mobility, cognitive and visual impairments that prevent people from reading print.

This report also uses the broad term “library staff” to refer to any of the staff involved in decisions and services regarding accessibility in libraries or library-related organizations, as staff may or may not be professional librarians.

BACKGROUND

Libraries and library organizations worldwide “have long been advocates of providing materials in accessible formats to people with print disabilities” (Hill, 2013, p. 137). However, for the most part, this has been done as part of a separate service or organization, distinct from library service to the general population. This has led to a schism in service, where accessibility is often an afterthought in the development and offering of the mainstream services of the library, and accessible content and systems are often only available in a separate service or repository. In Canada, both NNELS and CELA offer such separate services to public libraries to fulfill the need to supply accessible formats to people with print disabilities. Some of the larger city and regional libraries also have their own separate departments for accessible services, which focus on providing services to a variety of patron groups including those with print disabilities, and may also provide services to those who require home delivery or other specialized services.

Some libraries also have physical collections reserved for users with print disabilities such as MP3 CDs, DAISY CDs, commercial audiobooks on CD, braille books or large print books.

Public libraries in Canada have always strived to offer services to disadvantaged and marginalized populations, but have been challenged to envision new ways to provide inclusive, mainstream service for people with print disabilities that has accessibility built into it. Inclusive service certainly falls under the framework of more contemporary models of disability theory (Jaeger, 2018), which seeks to place disability as a socially created problem that is best addressed by full integration into society (Schmetzke, 2002) and organizations. Some of the challenges and tensions between separate or inclusive service for people with print disabilities revolve around the exception in the Copyright Act (1985, s. 32) which allows for a non-profit organization to make a more accessible format without rights holder permission, but **only** for people with print disabilities. This exception provides a tremendous benefit that is essential for equitable access to information for those with print disabilities, but at the same time, it represents a separate stream of service, different than an inclusive mainstream service.

The services of CELA and NNELS have evolved to work in both areas. With centralized repositories and services, they provide a level of access for people with print disabilities that would be unattainable if each individual library were responsible for providing the service within their existing capacity. Just as importantly, the implementation and nurturing of CELA's and NNELS' services in Canada's public libraries has elevated

awareness among public library staff of the needs of people with print disabilities in Canada, inspiring an overall improvement in inclusive service and measurable steps toward reducing barriers and enabling users to have greater participation in their communities.

The public library community in Canada is vast and diverse. There is no one-size-fits-all solution for all public libraries. Even statistics for the number of public libraries in Canada are hard to come by because of the variety of organizational structures. From Mary Cavanagh's research in 2013 she notes, "There are many types of public library systems in Canada—municipal, county, regional, First Nations, etc., organized differently across all provinces and territories. Quebec and First Nations communities have perhaps the most distinctive public library histories reflecting their unique cultural and historical traditions within Canada." As of 2013, she calculated 625 public library systems and 2,996 public library branches in Canada (Cavanagh, 2013). Seven years later, the current edition of Database Directories' Canadian Libraries lists 1,052 library systems with 3,363 branches in 2019 (Database Directories, 2020). The Canadian Urban Libraries Council (CULC) publishes an annual report (latest is 2018) on statistics of the CULC members; this includes libraries or library systems that serve a population of over 100,000. This offers a snapshot of the larger public libraries. In 2018, there were 40 municipal or regional library systems that fell into this category (CULC, 2018).

An accessible library experience for accessing ebooks and audiobooks requires three things: accessible content, an accessible platform/interface from which to find and borrow that content, and an accessible way in which to consume the content. To build a truly equitable and accessible library service, libraries need to develop, invest in and maintain support and processes for all three areas that allow for everyone, regardless of print disability, to gain access to this material.

Library collections budgets are generally insufficient to meet the wide range of community needs and expectations. As a result, difficult decisions must be made when determining what materials or resources will be selected. While libraries will always provide some kind of accessible collection as part of their commitment to equity and inclusion, they are unlikely to provide enough to meet the needs of users with print disabilities unless the materials meeting those needs are being well used by that audience in addition to being used by a broader section of the community. While use statistics and cost per use are not the only factors used to evaluate collections and determine future spending, they are an important part of the process. In order for libraries to maintain and increase investment in accessible materials, library services and programs are needed to support and promote the discovery and use of these materials.

This report sets out to identify the awareness and training needs of the variety of public libraries across Canada on accessibility and how to integrate and incorporate accessibility into all of their services, with a particular focus on ebooks and audiobooks.

REVIEW OF EXISTING TRAINING RESOURCES ON ACCESSIBILITY FOR PUBLIC LIBRARIES

In review of what accessibility training resources currently exist for public libraries, it was surprising how little there actually is. Organizations such as NNELS, CELA, CFLA/FCAB, Project Enable, ASGCLA, the provinces of Alberta and Ontario, and the Australian Library and Information Association have strong training resources and/or policies, however none currently offer a comprehensive training resource well suited for Canadian public libraries.

RECOMMENDED RESOURCES:

CANADA

Province of Alberta

Alberta has a standards and best practices document with a section on accessibility in public libraries as well as a provincial operational policy that addresses the role of the Public Library Services Branch (PLSB) and the library role in serving patrons with print disabilities.

- > <https://www.alberta.ca/services-for-persons-with-print-disabilities.aspx>

Centre for Equitable Library Access (CELA)

Resources for libraries about various accessible formats and how to use CELA and Bookshare services.

- > <https://celalibrary.ca/services/services-for-public-libraries/webinars-and-events>
- > <https://celalibrary.ca/help/accessible-formats>

Canadian Federation of Library Associations (CFLA/FCAB)

Guidelines to provide libraries of varying types, sizes and resources with recommended practices for strategic planning, policy and service development.

- > <http://cfla-fcab.ca/en/guidelines-and-position-papers/guidelines-on-library-and-information-services-for-people-with-disabilities/>

National Network for Equitable Library Service (NNELS)

Resources about various accessible formats, reference interview tips and how to use NNELS' services. Deeper into the website are other accessibility reviews and information.

- > <https://nnels.ca/library/training>
- > <https://www.accessiblepublishing.ca/>

Province of Ontario

Legislation rules, deadlines and suggestions for libraries to follow to meet accessibility standards in Ontario.

- ➔ <https://www.ontario.ca/page/accessibility-rules-public-libraries>
- ➔ <https://www.aoda.ca/library-accessibility-features/>
- ➔ <https://ocul.on.ca/accessibility/sites/default/files/OCUL%20Accessibility%20Toolkit%20-%20ENG%20-%20v2.0%20%28May%202014%29.pdf>

Ontario Colleges Library Service (OCLS) and Library eResources Accessibility Project (LEAP)

The primary purpose of LEAP is to assist Ontario college libraries in upholding accessibility best practices and becoming compliant with the requirements of the AODA, particularly ensuring the accessibility of electronic resources.

- ➔ <https://www.ocls.ca/services/research/aoda-research>

United States

Association of Specialized Government and Cooperative Library Agencies (ASGCLA), a Division of the American Library Association

Offers a variety of library accessibility toolkits and paid learning opportunities.

- ➔ <https://www.asgcladirect.org/resources/>
- ➔ <http://www.ala.org/asgcla/online-learning/accessibility-academy>

Project Enable

Provides free, foundational training designed specifically for public, and academic or school librarians worldwide to help them gain the knowledge and skills needed to create inclusive and accessible libraries that meet the needs of all students.

- ➔ <https://projectenable.syr.edu/>

INTERNATIONAL

Australian Library and Information Association

Policies and guidelines on accessibility requirements for public libraries and suggestions for libraries on how to make their own assessment tools and develop local policies and guidelines.

- ➔ <https://www.alia.org.au/about-alia/policies-and-guidelines/alia-policies/guidelines-library-standards-people-disabilities>
- ➔ <https://www.tandfonline.com/doi/full/10.1080/24750158.2017.1298399>

DAISY Consortium

A global consortium of organizations who contribute expertise in standards working groups, develop guidelines and checklists so that best practices are clear and widely available, and promote reading systems that ensure the best possible reading experience.

- <https://daisy.org/>
- <https://inclusivepublishing.org/>

ADDITIONAL RESOURCES:

CANADA

Province of British Columbia

https://engage.gov.bc.ca/app/uploads/sites/543/2019/09/7006_Framework-for-Accessibility-Legislation_WebFinal.pdf

Government of Canada, Bill C-81

<https://www.parl.ca/DocumentViewer/en/42-1/bill/C-81/royal-assent>

Manitoba Library Consortium Inc.

<http://www.mlcinc.mb.ca/accessibility/>

Province of Nova Scotia

<https://novascotia.ca/accessibility/public-sector-bodies-toolkit.asp>

Rick Hansen Foundation

<https://www.rickhansen.com/>

Toronto Public Library

<https://www.torontopubliclibrary.ca/terms-of-use/library-policies/accessibility-people-disabilities.jsp>

UNITED STATES

Bookshare (Benetech)

<https://www.bookshare.org/cms/>

National Library Service for the Blind and Print Disabled (Library of Congress)

<https://www.loc.gov/nls/>

INTERNATIONAL

International Federation of Library Associations (IFLA) Libraries Serving Persons with Disabilities Section

<https://www.ifla.org/lpd>

METHOD

This study draws on interviews with 17 different librarians or library staff working in public libraries or public library organizations from across the country. It is limited to public libraries that provide service in English, or both English and French. A cross-section of people involved in accessibility and/or collections were interviewed, representing libraries and library organizations based on size (small, medium, regional and large), location (rural/urban, BC, Alberta, Saskatchewan, Manitoba, Ontario, Yukon and Nova Scotia) and type of service (public library, library consortium, non-profit accessible reading service and provincial public library services). Please see Table 1 below for a breakdown of organizations.

The purpose of the interviews was to help identify awareness and training needs and gaps in the area of accessibility, with a particular emphasis on accessible ebooks and audiobooks. A phone interview was conducted with each participant using the following questions, which were provided to the interviewees in advance:

1. Please tell us who you are, the library or organization you are from, and what role you have at your organization.
2. How does accessibility intersect with your work?
 - a. Specific resources? Or services or programs?
 - b. Ebook and audiobook collections
 - c. Licensed resources
 - d. Physical collections (devices, braille, large print, audio CDs, magnifiers, etc.)
3. What do you wish you knew about accessibility?
4. What do you wish others in your organization knew about accessibility?
5. What resources, tools or training would make it easier for you to factor accessibility into your decisions?
6. What are the most significant challenges you see in incorporating accessibility in all aspects of library work?
7. How does accessibility fit into the mission of your library or organization? Is it a priority and/or should it be more of a priority? Explain.

8. How do you think the future should look for services to people with print disabilities in your library or organization?
- Next two years
 - Next ten years

TABLE 1: LIST OF ORGANIZATIONS

Library/ Organization Name	Province	Size	Urban/Rural
Fraser Valley Regional Library	British Columbia	Large regional	Urban/Rural
Halifax Public Library	Nova Scotia	Regional	Urban
Ottawa Public Library	Ontario	Large	Urban
Regina Public Library	Saskatchewan	Medium	Urban
South Interlake Regional Library –Stonewall	Manitoba	Very small	Rural
West Vancouver Memorial Library	British Columbia	Small	Urban
Southern Ontario Library Service (SOLS)	Ontario	Library consortium	Rural/Urban
Alberta–Public Library Services Branch	Alberta	Provincial public services branch	Rural/Urban
Manitoba–Public Library Services Branch	Manitoba	Provincial public services branch	Rural/Urban
Nova Scotia Provincial Library	Nova Scotia	Provincial public services branch	Rural/Urban
Yukon Public Libraries	Yukon Territory	Territorial library system	Rural/Urban
Centre for Equitable Library Access (CELA)	National	Non-profit accessible reading service	Rural/Urban
National Network for Equitable Library Service (NNELS)	National	Non-profit accessible reading service	Rural/Urban

KEY THEMES AND SUPPORTING THEMES

Results from the interviews were compiled and key themes were identified to help inform the awareness and training needs for public libraries in the area of accessibility around ebooks and audiobooks. When considering accessibility, it is difficult to only extract the accessible ebook and audiobook portion; the accessibility of ebooks and audiobooks is interconnected and dependent on many other aspects of library services. In addition to the key themes, supporting themes were also identified, as they are integral to understanding the entire ecosystem of equitable reading and accessibility in

libraries. In addition to the interviewees, the expertise of NNELS and CELA staff were used to build upon the key and supporting themes. Information was compiled from NNELS' "How do YOU Read?" study (See Chapter 4). People with print disabilities who participated in HDYR verified many of the issues and opportunities for improvement identified by the interviewees.

Two concepts are foundational in order to understand the themes and recommendations of this report:

1. The interconnected requirements for an accessible library experience.
2. The factors that influence the development and maintenance of library collections.

KEY THEMES

1. Training for Public Services Staff

In general, accessibility training for public services library staff was seen as a priority. "Public services" refers to services in the public realm such as reference and answering questions, training sessions and programming for users, readers' advisory, circulation, and other services that focus on direct interaction with the library's community. With a focus on accessibility of digital resources, key training areas for these staff primarily revolve around gaining the skills and knowledge needed to provide the best service possible to all people, including those with print disabilities. The following needs were identified:

Training Outcomes

- a. Having respectful and comfortable interactions with people with print disabilities, and a good understanding of the variety of print disabilities that exist.
- b. Knowing the accessibility features of each digital resource (e.g., licensed resource or reading platform such as Lynda.com or OverDrive) and ability to instruct users on their use.
- c. Programming and instruction on digital resources using methods and tools that are accessible.
- d. Understanding and teaching the different technologies, including software, hardware and assistive technologies (e.g., screen readers, magnifiers, refreshable braille display, etc.).
- e. Developing library outreach programs with and for users with print disabilities.

2. Hardware/Software/Assistive Technology

Library staff need to understand the landscape of technologies and assistive technologies that are most useful to people with print disabilities to ensure all library users reach the content they need. In addition to the foundational public services staff training needs listed in #1 above, the following areas were identified:

Training Outcomes

- a. Staying current on appropriate hardware/software options for accessible reading and making recommendations for library purchasing for lending.
- b. Providing information to users on hardware/software funding opportunities from government or other organizations.

3. Accessibility of Public Library Website and/or Apps to Navigate and Find Material

Another gap identified was how to evaluate a website and/or app for accessibility and how to make it more accessible. This could include any number of interfaces that a library offers to access content via the web or a dedicated app, including: searching and navigating the library catalogue or discovery layer; searching and navigating the library website; searching and navigating licensed resources (e.g., Lynda.com or Mango Languages); and searching and navigating ebook, audiobook and streaming video platforms (e.g., OverDrive, cloudLibrary, RBdigital, hoopla). Some of these interfaces may be under library control (e.g., the library's website) but most are developed and maintained by a technology vendor, and thus the accessibility features are dependent on the vendor. There are some accessibility reports for different vendor platforms that are available (see accessiblepublishing.ca), but for the most part, this is an area that needs more active work and development. Areas of training are as follows:

Training Outcomes

- a. Evaluating accessibility of the library catalogue or ILS (integrated library system) or discovery layer capabilities.
- b. Building a well-structured and accessible library/municipality-maintained library website.
- c. Understanding accessibility standards for technology and websites.
- d. Evaluating accessibility in library apps and web interfaces for licensed resources.

4. Legislation and Accessibility Requirements

Legislation impacts accessibility and libraries need to be aware of the various provincial, territorial and federal legislation on accessibility. Provincial/territorial legislation is at various stages across the country and library staff need to understand their own local requirements with regards to offering accessible services. In addition, understanding the Copyright Act, including the exception for people with perceptual disabilities, also helps library staff understand the full range of legislation that affects and enables access to information for people with print disabilities. Areas identified are as follows:

Training Outcomes

- a. Understanding provincial/territorial legislation on accessibility (impact on library services, procurement, vendor responsibility).
- b. Understanding federal legislation (impact on library services, procurement and vendor responsibility).
- c. Understanding Copyright Act and the perceptual disability exception.

5. Shared Training Repository and Resources

Much of the awareness and training needs in public libraries are common across all libraries, though they do differ. There was a clear recognition from interviewees of the need for a shared repository for accessible resources and information on how to build training programs both for library staff and users as well as a need for collaboration across libraries to build awareness. An organization such as NNELS or CELA (or perhaps jointly) is well positioned to host this kind of online resource centre.

Training Outcomes

- a. Learning from other communities and organizations to build training.
- b. Collaborating nation-wide around accessibility in libraries (e.g., listservs, monthly calls, webinars).

Supports

- a. A centralized training repository for library staff on accessibility.

6. Guidelines for Selection, Acquisition and Licensing

This area may be the most significant in terms of ensuring that accessible books are purchased and distributed through libraries. Libraries purchase ebooks and digital audiobooks through library-specific vendors who provide both the content and the technology platform. The most common platforms include OverDrive, cloudLibrary, RBDigital, hoopla and De Marque; each library, depending on their budget, may provide access to one or more of these platforms.

Many smaller libraries participate in shared consortial purchasing of ebook and digital audiobook content and often the purchasing decisions are made by a central consortial or provincial government entity. The need for establishing a rubric or criteria for accessibility of vendor platforms or resources, understanding how to evaluate what vendors have to offer, and learning how to advocate for technology changes to both content and platform with the vendor, are all areas that were identified as training gaps. In addition, sharing accessibility evaluation and reports on the various vendor platforms is seen as critical, such as on accessiblepublishing.ca.

Training Outcomes

- a. Developing and using knowledge of how to test for accessibility when considering purchase/licensing of a digital library resource.

- b. Advocating for accessibility with vendors and publishers.

Supports:

- a. A set of public library industry-common terms and definitions regarding accessibility in license agreements and RFPs.
- b. A matrix/rubric for accessibility evaluation.
- c. A centralized repository for good/bad/recommended products to consult when making purchasing decisions.

7. Accessibility in Metadata and Cataloguing

Having accessible materials and trained staff is important, but if information about the accessibility of content is not available or not displayed, the material will not be found or used.

In libraries, metadata and cataloguing determine how findable material is in the various platforms (catalogue, discovery layer, ILS, app). In the case of ebooks and digital audiobooks, metadata is generally created by publishers and provided to libraries by the hosting platform; metadata is often inconsistent and may or may not include accessibility information. While there is facility in cataloguing rules to indicate accessibility, library staff have a varying degree of control over the records in library interfaces and how they are displayed. The records seen in the library catalogue may be provided by the platform and imported by the library staff, in which case the staff can theoretically add to and edit them—assuming they have the resources and expertise, and that the public interface will display the necessary fields. On the other hand, more and more libraries are integrating their digital collections into their catalogue, which has some mainstream user experience advantages but also means the records are often delivered via an API from the vendor, and library staff have little to no control over what is included or displayed. Similarly, many users choose to interact with the mobile app for the platform they are using, and libraries generally have little to no ability to affect the information and display in the vendor-developed app interfaces. To address these issues, the key needs are:

Training Outcomes

- a. Knowing the metadata and cataloguing fields and options related to description of accessibility.
- b. Advocating for the creation of useful and consistent accessibility metadata from publishers, and provision and use of that metadata by the vendors that develop and deliver the reading platforms.
- c. Advocating for display and use (e.g., filtering, searching) of relevant accessibility metadata and catalogue fields in all public interfaces.
- d. Advocating for display of accessible information for library staff doing selection (in a large platform that offers a variety of formats and materials,

library staff cannot intentionally select accessible ebooks/audiobooks if they cannot identify which ebooks/audiobooks are accessible).

SUPPORTING THEMES

In addition to the key themes above, there were a number of supporting themes that are connected to accessibility in libraries but are outside the scope of this study. The supporting themes refer to accessibility more broadly in libraries; they are important because library acquisitions and collections are influenced by use—if libraries are not accessible, accessible material will be used less, which may mean less will be purchased as time goes on. Supporting themes are as follows:

Accessible Buildings and Spaces

- a. Ensuring accessibility of physical building.
- b. Ensuring accessibility of signage and navigation.

Accessibility in Library Programs

- a. Ensuring all library programs are accessible (e.g., storytime, digital lab workshops, book clubs, etc.).
- b. Understanding additional costs of running programs to ensure accessibility.

AWARENESS AND TRAINING STRATEGY: 4 YEAR PLAN (2020–2023)

Guiding Principles for Training

- Training and resources should be created and delivered with input and expertise from users with print disabilities and organizations serving people with print disabilities (e.g., CNIB, VIRN, etc.).
- Training and resources should be iterative and should belong to the library community.
- Plan should be incorporated into existing models wherever possible, to optimize the likelihood of a diverse group participating (e.g., library conferences, library association interest group gatherings, etc.).
- All training resources produced (e.g., videos, documents, websites, etc.) should be accessible.
- Plan should include measurable outcomes.

YEAR 1: 2020

- Survey and consult with a broad selection of library staff to identify:
 - needs specific to different roles (collections, IT/systems, public services, accessibility specialists);

- training model preferences (self-paced or live, individual or group, reading or interactive, train the trainer, etc.); and
 - interest in badging/certification on accessibility and/or being part of an ongoing supportive learning cohort.
- Consult and work with people with print disabilities to ensure their expertise is being fully utilized.
 - Determine what bodies/organizations will provide training, including funding needs and sources.
 - Determine training required based on survey responses and draft schedule for 2021–2023.
 - Determine requirements and location for shared training repository, including funding needs and sources.
 - Identify people in user community and library community who are/can be resources.
 - Advocate with library leaders to make accessibility a priority. Dedicate resources, include staff time for training, and incorporate into strategic planning.
 - Advocate with conference planning bodies, association interest groups, etc., about the plan, the importance of accessibility training and the need for including sessions in their planning for the next three years.
 - Provide introductory training opportunities in a range of formats for all library staff on the variety of print disabilities that exist and how to have respectful and comfortable interactions with people with print disabilities.
 - Develop an evaluation framework for training.
 - Develop an evaluation framework for the supports created.

YEAR 2: 2021

- Consult and work with people with print disabilities to ensure their expertise is being fully utilized.
- Populate and promote a shared training repository.
- Develop and deliver training sessions for current year. A full range of training may require different streams for different roles, so this year should focus on developing and delivering training that is common to multiple roles, and developing the more specialized training for collections, IT/systems, public services and accessibility specialists that will be delivered in years three and four.
- Develop a set of public library industry-common terms and definitions regarding accessibility in license agreements and RFPs.

- Develop a matrix/rubric for accessibility evaluation. Facilitate or develop a centralized source of information on the accessibility of library products/platforms for library staff to consult when making purchasing decisions.
- Evaluate training outcomes and efficacy of supports.
- Ensure continued funding to deliver training and ensure maintenance and currency of training and supports.

YEARS 3 AND 4: 2022–2023 (may change depending on Year 1 and Year 2 results)

- Consult and work with people with print disabilities to ensure their expertise is being fully utilized.
- Develop and deliver training sessions that include more specialized training for specific roles.
- Work with libraries, library consortia and government bodies to ensure accessibility is included in the procurement process.
- Advocate with library leaders to make accessibility a priority, include it in their strategic planning and dedicate resources, including staff time for training.
- Advocate with conference planning bodies, association interest groups, etc., about the plan, the importance of accessibility training and the ongoing need for including sessions on accessibility in their planning.
- Evaluate training outcomes and efficacy of supports.
- Ensure continued funding to deliver training and ensure maintenance and currency of training and supports.

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- *Catherine Kelly*, Nova Scotia Provincial Library
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- *Meagan Richards*, PLSB Manitoba
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- *Melissa Yu Schott*, Yukon Public Libraries

Conclusion

This report provides a snapshot of the landscape for accessible books and publishing in Canada as of spring 2020 and will serve its intended purpose: to help inform the Canadian publishing industry, public libraries, the accessible publishing community and government in mapping their next steps with respect to the accessible publishing initiative announced last year. At the same time, the publishing landscape has changed dramatically in the weeks since this research was completed; the COVID-19 public health emergency and related economic crisis is affecting the entire book supply chain and changing the way libraries serve patrons. The long-term impact on the sector is, at this writing, still unknown, and any changes in the capacity of publishers and their partners must be considered as ACP, eBOUND, and other stakeholders navigate their next steps.

Despite an evolving landscape, the recommendations included within this report offer publishers and publishing service organizations a framework to continue the implementation of best practices and standards that will support the production and distribution of Canadian books that are born accessible. The report makes clear that players across the supply chain all have roles to play in reaching this objective. For ACP and eBOUND, this work will fall into the following categories:

- Further **research**, including examination of technical standards and certification for audiobooks, picture books, graphic novels, and highly illustrated titles; and market research on the distinct needs of the trade and educational markets.
- **Development and promotion of best practices for publishers**, including for accessible ebook and accessible audiobook production, alternative text creation, and other accessible content development, and the piloting of Benetech certification in Canada.
- **Delivery of professional development and training** for Canadian independent book publishers on topics in accessible publishing.
- Continued **outreach** to library and retail partners to ensure accessible content is available for purchase or borrowing by readers with print disabilities.

ACP and eBOUND look forward to moving into this next phase of work in support of the accessible publishing initiative, and to continued partnership and collaboration with partners across the book supply chain.

References and Further Reading

“How do YOU Read?”, The Reader Perspective

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Appendices

Appendix A: Glossary of Terms

Accessible Content: Content that can be read by all users; incorporates accessible formatting standards into its design.

Assistive Technology: An encompassing term for software and technological devices that have been developed with features that enable people with disabilities to access digital content.

BAnQ: Bibliothèque et Archives Nationales du Québec.

Born accessible: Books that are accessible from their inception.

CELA/CAEB: Centre for Equitable Library Access/Centre d'accès équitable aux bibliothèques

Digital Publishing: The publishing of works designed to be read using technology, such as a computer, mobile devices, e-readers, etc.

Digital Rights Management (DRM): Refers to systems used by many technology companies to limit the reading of a digital book file to a single user. DRM can create significant barriers, particularly if it prevents the content being read by voice to speech technologies.

EPUB: An ebook file format that uses the “.epub” file suffix. An EPUB file is a compressed file that contains all the text, images, CSS, HTML, XML, navigation information, etc. that make up an ebook.

NNELS/RNSEB: National Network for Equitable Library Service/Le réseau national de services équitables de bibliothèque

Refreshable braille display: A refreshable braille display is a hardware device that can be connected to a computer or mobile device and converts text into braille in real time. It contains sets of pins that are raised and lowered to form the braille encoding, which allows users to read by touch.

Screen magnifier: Software that interfaces with a computer's graphical output to present enlarged screen content, so that people with low vision can see the content.

Screen Reader: A screen reader is software that runs at the same time as other programs and reads aloud the text that is displayed on the computer or mobile screen, enabling a blind person to use a computer or mobile device such as a phone or tablet to navigate menus and read content within applications.

SQLA: Service québécois du livre adapté

Text-to-Speech (TTS): Refers to the process of synthesizing speech audibly.

Appendix B: Questions for Key Informants

1. What is your role and your organization's mandate in relation to people with print disabilities? Please describe any previous experience working with people with print disabilities. May we acknowledge you in our final report?
2. Are you aware of any research that explores the reading needs of people with print disabilities?
3. In order for people with print disabilities to participate fully in the reading world, what needs would have to be met?
4. How well do you see these needs being met at this point?
5. What are the barriers to these needs being met? What are the main gaps in services you are aware of?
6. What would best meet the unmet needs?
 - a. Better access to existing technologies (through awareness-raising, funding, training, support)
 - b. Funding (For what products or services? Through what kinds of funding programs?)
 - c. New technologies (what kinds?)
 - d. Greater technological accessibility of existing platforms: websites and reading apps used to search, access and consume content
 - e. More books and better variety of books being available
 - f. Other
7. NNELS will be conducting an online survey and several focus groups directly with people with print disabilities about their book reading habits and needs. Do you have any particular suggestions about how to make these activities most accessible and effective? E.g., format, questions, assistive devices, etc.?
8. Will your organization help us spread the word about the survey? If so, how should we follow up with you?
9. We want to ensure we get input from a diversity of people with print disabilities, who may have needs for specific content, technologies and accessibility. Can you help us contact people with print disabilities who are Indigenous, racialized, LGBTQ+, low income, have multiple disabilities or live in rural areas?

THANK YOU!

Appendix C: Survey Text

HOW DO YOU READ? A SURVEY OF THE READING NEEDS AND HABITS OF PEOPLE WITH PRINT DISABILITIES IN CANADA

Welcome! Thank you for taking part in the “How do YOU Read?” survey!

The information you share here will help make reading easier and more accessible for thousands of Canadians. Your input is very important.

This survey is being conducted by NNELS (the National Network for Equitable Library Service), in partnership with the Association of Canadian Publishers and eBOUND Canada. Funding has been provided by the Government of Canada.

To thank you for your input, we invite you to enter a prize draw for one of two Android tablets. See below.

During this 15-30 minute survey, you will be asked about your book reading habits, needs and preferences. You will also be asked about your reading challenges or disabilities, and about your characteristics (e.g., age, gender).

IMPORTANT: For the purposes of this survey, “reading” refers to audio and braille as well as print material in either hard copy or digital format. Reading happens via ears, eyes or fingers.

You may leave any question blank or withdraw from the survey at any time. Your participation is completely voluntary, your responses will be kept anonymous, and only researchers involved in this study will have access to the survey information.

We have tried to make this survey accessible for all users. Answering some of the survey questions will trigger new questions, and a screen reader will read out new questions as they pop up.

Feel free to ask a friend or family member to help you fill out this survey. If you have any questions about the survey, please email support@nnels.ca.

If you choose to share your contact information, it will be used only in the ways you select:

- To enter your name in the prize draw
- To send you a digital copy of the final report
- To contact you about participating in a follow-up focus group

Your contact information will not be linked to your answers.

Your contact information will not be shared with anyone.

If you are a parent of a child with print disabilities, please answer the survey questions about your child. You may complete one survey for each family member who has a print disability.

By selecting “YES” below, you are stating that:

- You are of the age of majority,
- You understand the above information, and
- You agree to participate in the survey.

Yes/No

[If they click NO, say thank you and stop the survey]

In which language do you want to take this survey? [This will be built into the survey]

- French
- English

This survey is open to people who have difficulty reading hard copy print books. This difficulty may be due to visual disabilities, physical disabilities or learning disabilities.

This survey is open to current residents of Canada, and to Canadian citizens living outside of Canada.

SURVEY QUESTIONS

1. Do you have difficulty reading a hard copy print book, even when wearing glasses or contact lenses?
 - a. I have no difficulty.
 - b. I have some difficulty.
 - c. I have a lot of difficulty.

[If they check “no difficulty,” say thank you and end the survey.]

2. Do you currently live in Canada, and/or are you a Canadian Citizen?
 - Yes
 - No

[If no to #2, say thank you and stop the survey.]

SECTION A: READING PREFERENCES, CHALLENGES AND SOLUTIONS

1. What are your preferred reading languages? Check all that apply.

- a. English
 - b. French
 - c. Other, please specify. [Offer up to three more choices]
2. Do you read (or listen) to books in hard copy or digital format? Hard copy means print, braille or audio CDs. Digital means using a computer or device. Check all that apply.
- a. Hard copy
 - b. Digital
 - c. Not sure

[Conditional] If yes to digital, ask:

What proportion of your reading (or listening) is digital?

- a. 0%
 - b. 1-25%
 - c. 26-50%
 - d. 51-75%
 - e. 76-100%
3. How much do you like reading/listening to books (hard copy or digital)?

Rate from 1 to 5, where:

↔ 1= I hate it! and 5= I love it!

4. How easy is it to read (or listen to) books as much as you want to, in the ways you want to?

↔ Rate from 1 to 5, where:

↔ 1= Very difficult! and 5= Very easy!

5. Approximately how many books (hard copy or digital) do you read/listen to per month?

- a. 1 book or fewer
- b. 2-3 books
- c. 4-6 books
- d. 7 or more books

6. What makes it difficult to read (or listen to) as many books as you want, in the way you want to? Check all that apply.

- a. I can't get the books (hard copy or digital) that I want in a sufficiently accessible format.
- b. I don't know how to find or use the technology required.
- c. I understand the technology, but it doesn't work very well.

- d. I have difficulties getting to a bookstore or library to get the hard copy book.
 - e. The devices, software or books are too expensive for me.
 - f. I don't have time or energy.
 - g. Other, please specify.
7. Overall, for the books you want to read (or listen to), how difficult is it to find sufficiently accessible books (hard copy or digital)?
- ➔ Rate 1-5, where 1 = Very difficult and 5 = Very easy
8. What is the primary purpose of your book reading/listening (hard copy or digital)? Check all that apply.
- a. Work
 - b. Pleasure, family and social
 - c. Study (education and research)
 - d. Other, please specify.
9. What genres or types of books (hard copy or digital) do you read/listen to? Check all that apply.
- a. Fiction (e.g., science fiction, fantasy, romance, novels, etc.)
 - b. Poetry and Drama
 - c. Non-fiction (e.g., biography, travel books, history, etc.)
 - d. Textbooks and/or academic books
 - e. Children's books
 - f. Decodable books (for some readers with dyslexia)
 - g. Other, please specify.
10. Do you have reliable internet access, at least some of the time, in your home, school, library or community?
- a. Yes
 - b. No
 - c. Not sure
11. Do you use a computer or mobile device regularly (in your home, school, library or community)?
- a. Yes
 - b. No
 - c. Not sure
12. What devices do you use regularly for reading (or listening)? Check all that apply.
- a. Desktop or laptop computer
 - i. Windows/PC
 - ii. Apple

- iii. Other
 - b. Tablet
 - i. Android
 - ii. iPad
 - iii. Other
 - c. Mobile phone
 - i. Android
 - ii. iPhone
 - iii. Other
 - d. Electronic Book Player (e.g., DAISY)
 - i. Victor Reader
 - ii. Plectalk
 - iii. BookSense DAISY player
 - iv. Other DAISY player
 - v. Other
 - e. Braille Notetaker
 - f. Other device, please specify
 - g. None of the above.
13. What assistive technologies (software or hardware) do you use for reading with your device? Check all that apply.
- a. I use a screen reader (e.g., NVDA, JAWS, or Voiceover)
 - b. I use a read aloud function in an app on my device.
 - c. I read with a refreshable braille display.
 - d. I read with my eyes, and adjust colour, fonts, spacing, etc. to my needs.
 - e. I use voice control, switches or eye tracking technologies.
 - f. I use a magnifier (electronic or physical).
 - g. Other, please specify.
 - h. None of the above.
14. How comfortable are you learning new technologies?
- Rate from 1 to 5, where:
 - 1=Very uncomfortable and 5=Very comfortable
15. Would you use technology more for reading if appropriate training and support were available?
- Yes
 - No

• Don't know

16. In what formats do you read (or listen to) books? Check all that apply.

- a. I download ebooks to a device (e.g., mobile phone, laptop, computer, tablet).
- b. I download audiobooks to a device (e.g., mobile phone, laptop, computer, tablet).
- c. I listen to audiobooks on CD.
- d. I read hard copy braille.
- e. I read hard copy large print books.
- f. I read hard copy regular print books.
- g. Ebraille
- h. Other format, please specify.

17. What are your two favourite formats?

[Survey limits them to two choices, and ranks them]

- a. Ebooks downloaded to a device (e.g., mobile phone, laptop, computer, tablet)
- b. Audiobooks downloaded to a device (e.g., mobile phone, laptop, computer, tablet)
- c. Audiobooks on CD
- d. Hard copy braille
- e. Hard copy large print books
- f. Hard copy regular print books
- g. Ebraille
- h. Other format, please specify.

18. Why do you prefer your first choice of format? Check all that apply.

- a. This format is easy to use.
- b. This format is enjoyable.
- c. Books I want are available in this format.
- d. This format is more accessible for me than other formats.
- e. Other reason, please specify.

19. How do you get books in this format? Check all that apply.

- a. Borrow from public libraries, college or university libraries, or school library
- b. Borrow from centralized services for people with print disabilities: (e.g., CELA, NNELS, Bookshare, etc.)
- c. Download free public domain ebooks and audiobooks from the internet
- d. Buy online (e.g., Amazon, Apple Books)
- e. Buy in-person at a bookstore or other store
- f. Other, please specify.

[Skip back to Q. 17 so they can see what they chose]

20. Why do you prefer your second choice of format? Check all that apply.

[Repeat questions 18 and 19 for their second favourite format.]

21. What influences your choice of how you get your books?

- a. Ease and convenience
- b. Low cost
- c. Good selection and availability
- d. Other, please specify.

22. If you could choose between an ebook and an audiobook of the same title, which would you choose?

- a. Ebook
- b. Audiobook
- c. It depends, please specify.
- d. Not sure

23. If you listen to audiobooks, what kind of narration do you prefer?

- a. I prefer to listen to human-narrated audiobooks only.
- b. I prefer to listen to synthetic voice audiobooks (computer generated) only.
- c. I prefer to listen to human-narrated audiobooks, but also listen to synthetic voice.
- d. I prefer to listen to synthetic voice audiobooks, but also listen to human-narrated.
- e. Human-narrated and synthetic voice are equally preferable.
- f. Don't know

24. What would improve your experience of using an ebook or audiobook on your device? Check all that apply.

- a. Making it easier to find books on library websites or commercial platforms such as Kindle or Kobo.
- b. Making it easier to download and open books.
- c. Making the book fully accessible, including chapter navigation, image descriptions, adjustable fonts, margins, colours, etc.
- d. Other, please specify.
- e. N/A

25. If you read hard copy braille, do you also read with a refreshable braille display?

- a. Yes, often
- b. Yes, sometimes
- c. Very seldom or not at all
- d. N/A

26. Do you read hard copy large print or regular print books?

- Yes
- No

27. If yes, what aids do you use? Check all that apply.

- a. I use a magnifying glass or magnifying device.
- b. I use a ruler.
- c. I use a hardware scanner or camera device with read aloud capabilities.
- d. Other, please specify.
- e. None (I don't use any aids.)

28. Do you currently buy books in any format?

- Yes
- No

If so, in what formats do you buy books? Check all that apply.

- a. Ebooks downloaded to a device (e.g., from Amazon, Apple Books etc.)
- b. Audiobooks downloaded to a device (e.g., Audible, Kobo etc.).
- c. Audiobooks on CD
- d. Hard copy braille
- e. Hard copy large print books
- f. Hard copy regular print books (bookstores, etc.)
- g. Ebraille
- h. Other format, please specify.

If so, in what genres or types?

- a. Fiction (e.g., science fiction, fantasy, romance, novels, etc.)
- b. Poetry and Drama
- c. Non-fiction (e.g., biography, travel books, history, etc.)
- d. Textbooks and academic books
- e. Children's books
- f. Decodable books (for some readers with dyslexia)
- g. Other, please specify.

If so, approximately how much do you spend?

- a. \$1-\$5 per month
- b. \$6-\$15 per month
- c. \$16-40 per month
- d. more than \$40 per month

29. If you buy books online, how would you rate commercial platforms such as Kobo and Kindle for accessibility and ease of use?

Rate from 1-5, where 1 = Not accessible at all and 5 = Very accessible

N/A

30. What would make you more likely to buy books? Check all that apply.

- a. Having access to a good selection of books that interest me
- b. Online stores that are easy to use
- c. Having access to books in formats that meet my accessibility needs
- d. Knowing the book's accessibility features (such as image description, adjustable fonts and colours) before buying.
- e. Affordability
- f. Other, please specify

SECTION B: INFORMATION ABOUT YOUR READING DIFFICULTIES

1. What makes it difficult for you to read a hard copy print book? Check all that apply.

- a. Visual disability
- b. Physical disability (e.g., limited movement)
- c. Learning disability

[Depending what they have selected, the survey goes to the appropriate questions below.]

2. With your glasses or contact lenses if applicable, which of the following best describes your ability to see? Choose the one that best describes you.

- a. I have no difficulty seeing a printed page
- b. I have some difficulty seeing a printed page
- c. I have a lot of difficulty seeing a printed page, but am not blind or legally blind
- d. I am blind or legally blind

3. Do you have a physical disability that impedes your ability to read a hard copy book? For example, limited motion or dexterity of arms or hands?

- ↔ Yes
- ↔ No

4. Do you have a condition that makes it difficult for you to read or learn? This may include learning disabilities such as dyslexia, hyperactivity, attention problems, or other conditions.

- ↔ Yes
- ↔ No

5. Has a teacher, doctor or other health care professional ever told you that you had a learning disability?

- Yes
- No

6. If yes to either 4 or 5, ask:

What makes reading difficult? Check all that apply.

- a. Dyslexia
 - b. Undiagnosed reading difficulties
 - c. ADD or ADHD
 - d. Other, please specify
7. How much difficulty do you have reading a hard copy print book because of this condition or these conditions?
- a. No difficulty
 - b. Some difficulty
 - c. A lot of difficulty
 - d. I cannot do it at all
8. How often does this condition or these conditions limit your ability to read a hard copy print book?
- a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always
9. What is the nature of your condition(s)?
- a. Permanent
 - b. Temporary
 - c. Episodic
 - d. Unknown
10. How long have you had the condition(s) that makes reading difficult?
- a. I've had this condition since birth
 - b. 10+ years (not from birth)
 - c. 2–9 years (not from birth)
 - d. 1 year or less
 - e. Not sure

SECTION C: OTHER INFORMATION ABOUT YOU

We are asking the following questions to ensure that our survey includes a broad cross-section of Canadian society. Your information will be kept private. Only researchers involved in this study will have access to it.

1. In what region of Canada do you live? Please select the region where you have your home address. If you do not have a home address, select the region where you spend the majority of your time.
 - a. Yukon, Northwest Territories or Nunavut
 - b. British Columbia
 - c. Alberta, Saskatchewan or Manitoba
 - d. Ontario
 - e. Quebec
 - f. Maritime provinces
 - g. Other, please specify
2. Where is your primary residence?
 - a. Within a large metropolitan area: urban or suburban
 - b. Outside of a large metropolitan area: in a town or rural area
 - c. Not sure or N/A
3. What is your gender?
 - a. Female
 - b. Male
 - c. Other, please specify.
 - d. Prefer not to answer
4. What is your age (or the age of the child whose reading habits you are describing)?
 - a. 6 to 14 years old
 - b. 15 to 24 years old
 - c. 25 to 44 years old
 - d. 45 to 64 years old
 - e. 65 to 74 years old
 - f. 75 years or older
5. Have you immigrated to Canada within the last five years?
 - a. Yes
 - b. No
 - c. Prefer not to answer
6. Do you identify as an Indigenous Person (including First Nations, Métis or Inuit)?
 - a. Yes
 - b. No
 - c. Prefer not to answer
7. Do you identify as a Person of Colour?
 - a. Yes

- b. No
 - c. Prefer not to answer
8. Do you identify as a member of the LGBTQ+ community?
- a. Yes
 - b. No
 - c. Prefer not to answer
9. What was your net household/family income in the last tax year?
- a. Less than \$20,000
 - b. \$20,001-\$40,000
 - c. \$40,001-\$70,000
 - d. \$70,000 or more
 - e. Prefer not to answer

You are almost finished!

31. If you could choose one thing that would make reading easier and more satisfying for you, what would it be? Please answer briefly.
- [Open-ended, short (two lines)]
32. Please tell us anything more about your reading experiences, challenges or ideas. Feel free to share at some length: up to 1000 characters, or about two paragraphs.
- [Open-ended, longer (8 lines)]

If you want to:

- Enter the prize draw
- Find out about focus groups
- Receive a copy of the final report

Click here.

[If they click, they are directed to a separate page (outside the survey) that says:

1. Would you like to enter your name into the prize draw?
 - Yes, I consent.
 - No, I do not want to enter my name in the draw.

2. Are you interested in participating in a focus group about the reading needs and habits of people with print disabilities? During the last two weeks of February and early March 2020, we will hold online focus groups, along with in-person focus groups in Vancouver, Edmonton, Toronto and Montreal.
 - Yes, please contact me ASAP with more information

- No, thank you.

3. Would you like to receive a digital copy of our final report?

- Yes
- No

Please provide your name and contact information. Your name and contact information will not be released to any other entity.

- Name
- Email address
- Alternative contact information (optional)

Thank you!

You have now completed the survey.

END OF SURVEY

COMMENT LISEZ-VOUS ? UN SONDAGE SUR LES BESOINS ET LES HABITUDES DE LECTURE CHEZ LES PERSONNES AU CANADA QUI ONT UNE DÉFICIENCE DE LECTURE DES IMPRIMÉS.

Merci de participer au sondage « Comment lisez-vous » !

Les informations que vous partagez dans ce sondage nous aideront à rendre la lecture plus facile et plus accessible à des milliers de Canadiens et Canadiennes. Votre contribution est très importante.

Ce sondage est mené par le Réseau national de service de bibliothèque équitable (RNSEB), en partenariat avec l'Association des éditeurs canadiens (Association of Canadian Publishers) et eBOUND Canada. Le financement a été fourni par le gouvernement du Canada.

Pour vous remercier de votre contribution, nous vous invitons à participer à un tirage au sort pour l'une des tablettes Android. Voir ci-dessous.

Au cours de ce sondage de 15 à 20 minutes, vous serez interrogés sur vos habitudes de lecture de livres, vos besoins et vos préférences. Vous serez également interrogés en ce qui concerne vos difficultés de lecture ou vos handicaps ainsi qu'au sujet de vos caractéristiques personnelles, par exemple votre âge et votre sexe.

Important : Au sens de ce sondage, « lecture » fait référence à l'audio et au braille, ainsi qu'aux documents imprimés en format papier ou en version numérique. La lecture se fait par les oreilles, les yeux ou les doigts !

Vous n'êtes pas obligés de répondre à toutes les questions. Vous pouvez aussi vous retirer de ce sondage à tout moment. Votre participation est complètement volontaire, vos réponses resteront anonymes et seuls les chercheurs impliqués dans cette étude auront accès aux informations du sondage.

Nous avons essayé de rendre cette enquête accessible à tous les utilisateurs. Le fait de répondre à certaines questions du sondage déclenchera de nouvelles questions et un lecteur d'écran lira les nouvelles questions à mesure qu'elles apparaissent.

N'hésitez pas à demander à un ami ou à un membre de votre famille de vous aider à remplir ce sondage. Si vous avez des questions, veuillez nous envoyer un courriel à support@nnels.ca.

Si vous choisissez de partager vos coordonnées, celles-ci seront utilisées seulement de la façon que vous avez sélectionnée de les partager :

- Pour entrer votre nom au tirage au sort
- Pour vous envoyer une copie numérique du rapport final
- Pour vous contacter au sujet d'une participation à un groupe de discussion de suivi

Vos coordonnées ne seront pas liées à vos réponses et ne seront partagées avec aucune personne.

Si vous êtes le parent d'un enfant ayant une déficience de lecture des imprimés, veuillez répondre aux questions du sondage concernant votre enfant. Vous pouvez remplir un sondage pour chaque membre de la famille qui a une difficulté de lecture des imprimés.

En sélectionnant « OUI » ci-dessous, vous déclarez que :

- Vous êtes majeur.
- Vous comprenez les informations de la page précédente.
- Vous acceptez de participer au sondage.

Oui/Non

Cette enquête est ouverte aux personnes qui ont des difficultés à lire des livres imprimés. Cette difficulté peut être due à des déficiences visuelles, physiques ou à des troubles d'apprentissage.

Cette enquête est ouverte aux résidents actuels du Canada et aux citoyens canadiens vivant à l'extérieur du Canada.

QUESTIONS DU SONDAJE

1. Avez-vous de la difficulté à lire un livre imprimé version papier, même lorsque vous portez des lunettes ou des verres de contact ?

- a. Je n'ai aucune difficulté
 - b. J'ai quelques difficultés
 - c. J'ai beaucoup de difficultés, ou je ne peux pas le faire du tout
2. Vivez-vous actuellement au Canada ou êtes-vous citoyen canadien ?
- Oui
 - Non

SECTION A: HABITUDES ET PRÉFÉRENCES DE LECTURE

1. Quelles sont vos langues préférées de lecture ? (Si vous sélectionnez "Autre" veuillez saisir la ou les langues que vous préférez lire dans l'espace prévu)
- a. Anglais
 - b. Français
 - c. Autre (veuillez préciser)
2. Lisez-vous ou écoutez-vous des livres en version papier ou en version numérique ? La version papier signifie imprimer, braille ou en CD audio. Le numérique signifie l'utilisation d'un ordinateur ou un appareil. Cochez toutes les cases qui s'appliquent
- a. Copie papier
 - b. Numérique
 - c. Pas certain

Quelle proportion de votre lecture (ou écoute) est numérique?

- a. 0%
 - b. 1-25%
 - c. 26-50%
 - d. 51-75%
 - e. 76-100%
3. Dans quelle mesure aimez-vous lire ou écouter des livres (sur papier ou livres numériques)?

Échelle de 1 à 5, où :

- 1 = Je déteste lire
- 5 = J'adore lire

4. 4. Dans l'ensemble est-il facile de lire ou d'écouter des livres (sur papier ou numériques de la manière que vous le souhaitez?)

Échelle de 1 à 5, où

- 1 = très difficile
- 5 = très facile

5. En moyenne, environ combien de livres (sur papier ou en format numérique) lisez-vous ou écoutez-vous par mois ?
- a. 1 livre ou moins
 - b. 2-3 livres
 - c. 4-6 livres
 - d. 7 livres ou plus
6. Qu'est-ce qui rend difficile la lecture ou l'écoute d'autant de livres (sur papier ou numériques) que vous souhaitez et de la manière dont vous voulez? Cochez toutes les cases qui s'appliquent.
- a. Je ne peux pas obtenir les livres (papier ou numériques) que je veux dans un format suffisamment accessible
 - b. Je ne sais pas comment trouver ou utiliser la technologie requise
 - c. Je comprends la technologie, mais ça ne marche pas très bien
 - d. J'ai du mal à me rendre dans une bibliothèque ou une librairie pour obtenir le livre en format papier
 - e. Les appareils, logiciels ou livres sont trop chers pour moi
 - f. Je n'ai ni le temps ni l'énergie
 - g. Autre (veuillez préciser)
7. En général, en ce qui concerne les livres que vous souhaitez lire ou écouter, est-il difficile de trouver ces livres suffisamment accessibles (format papier ou numériques) ?

Sur l'échelle de 1 à 5, où :

- 1 = très difficile
- 5 = très facile

8. Quel est l'objectif principal de la lecture ou de l'écoute de votre livre (format papier ou numériques) ? Cochez toutes les cases qui s'appliquent.
- a. Pour le travail
 - b. Pour le plaisir, la famille et l'aspect social
 - c. L'étude (éducation et recherche)
 - d. Autre (veuillez préciser)
9. Quels genres ou types de livres (format papier ou numériques) lisez-vous ou écoutez-vous ?
- a. Fiction (par exemple : science-fiction, littérature fantastique, romans sentimentaux, romans, nouvelles, etc.)
 - b. Poésie et pièces de théâtre

- c. Ouvrages généraux (par exemple : biographie, livres de voyage, histoire, etc.)
 - d. Manuels ou livres pédagogiques
 - e. Les livres pour enfants
 - f. Livres décodables (pour certains lecteurs et lectrices dyslexiques)
 - g. Autre (veuillez préciser)
10. Avez-vous un accès à l'Internet fiable, au moins une partie du temps, dans votre maison, école, bibliothèque ou communauté ?
- a. Oui
 - b. Non
 - c. Pas certain
11. Utilisez-vous régulièrement un ordinateur ou un appareil mobile (à la maison, à l'école, à la bibliothèque ou dans la communauté) ?
- a. Oui
 - b. Non
 - c. Pas certain
12. Quels appareils utilisez-vous régulièrement pour lire ou écouter ? Cochez toutes les cases qui s'appliquent.
- a. Ordinateur de bureau ou portable
 - i. Windows / PC
 - ii. Apple
 - iii. Autre
 - b. Tablette
 - i. Android
 - ii. iPad
 - iii. Autre
 - c. Téléphone portable
 - i. Android
 - ii. iPhone
 - iii. Autre
 - d. Lecteur de livre électronique (par exemple, DAISY)
 - i. Victor Reader
 - ii. Plectalk
 - iii. Lecteur BookSense DAISY
 - iv. Autre lecteur DAISY
 - v. Autre

- e. Preneur de notes en braille
 - f. Autre appareil (veuillez préciser)
 - g. Aucune de ces réponses
13. Quelles technologies d'assistance (logiciel ou matériel) utilisez-vous pour lire avec votre appareil ? Cochez toutes les cases qui s'appliquent.
- a. J'utilise un lecteur d'écran (par exemple) NVDA, JAWS ou VOICEOVER)
 - b. J'utilise une fonction de lecture à haute voix dans une application sur mon appareil
 - c. Je lis avec un afficheur braille dynamique
 - d. Je lis avec les yeux et j'adapte la couleur, les polices, l'espacement, etc. selon mes besoins
 - e. J'utilise la commande vocale, les commutateurs ou les technologies de suivi oculaire (oculomètre / suiveur oculaire).
 - f. J'utilise un appareil grossissant (exemple, une loupe)
 - g. Autre (veuillez préciser)
 - h. Aucune de ces réponses
14. Dans quelles mesures êtes-vous à l'aise avec l'apprentissage de nouvelles technologies ? Dans une échelle de 1 à 5, où :
- 1 = pas du tout à l'aise
 - 5 = très à l'aise
15. Utiliseriez-vous davantage la technologie pour la lecture si une formation et un soutien appropriés étaient offerts ?
- Oui
 - Non
 - Je ne sais pas
16. Dans quels formats lisez-vous ou écoutez-vous des livres ? Cochez toutes les cases qui s'appliquent.
- a. Je télécharge des livres électroniques sur un appareil (par exemple : téléphone mobile, ordinateur portable, tablette)
 - b. Je télécharge des livres audios sur un appareil (par exemple : téléphone mobile, ordinateur portable, tablette)
 - c. J'écoute des livres audios sur CD.
 - d. Je lis le braille sur papier
 - e. Je lis des livres imprimés en gros caractères
 - f. Je lis des livres imprimés sur papier

- g. Je lis avec un afficheur braille dynamique
- h. Autre format (veuillez préciser)

Nous allons vous poser des questions sur vos deux principaux choix de format.

- 17a. Quel est votre premier choix de format ?
- i. Les livres électroniques téléchargés sur un appareil (par exemple : téléphone mobile, ordinateur portable, ordinateur, tablette)
 - ii. Les livres audios téléchargés sur un appareil (par exemple : téléphone mobile, ordinateur portable, ordinateur, tablette)
 - iii. Les livres audios sur CD.
 - iv. Copie papier en braille
 - v. Les livres imprimés en gros caractères
 - vi. Les livres imprimés de façon régulière
 - vii. Braille numérique
 - viii. Autre format (veuillez préciser).
- 18a. Pourquoi préférez-vous votre premier choix de format ? Cochez toutes les cases qui s'appliquent.
- i. Ce format est facile à utiliser
 - ii. Ce format est agréable
 - iii. Les livres que je veux sont offerts dans ce format
 - iv. Ce format est plus accessible pour moi que les autres formats
 - v. Autre raison (veuillez préciser)
- 19a. Comment obtenez-vous des livres dans le format de votre choix ? Cochez toutes les cases qui s'appliquent.
- i. J'emprunte auprès des bibliothèques publiques, collégiales, universitaires ou de la bibliothèque scolaire
 - ii. J'emprunte auprès de services centralisés pour les personnes ayant des difficultés de lecture des textes imprimés (par exemple, CELA, NNELS, Bookshare, etc.)
 - iii. Je télécharge gratuitement des livres électroniques et des livres audios du domaine public sur Internet
 - iv. J'achète en ligne (exemple Amazon, Apple Books)
 - v. J'achète en personne dans une librairie ou dans un autre magasin
 - vi. Autre (veuillez préciser)
- 17b. Quel est votre deuxième choix de format ?

- i. Livres électroniques téléchargés sur un appareil (par exemple : téléphone portable, ordinateur portable, ordinateur, tablette)
 - ii. Livres audios téléchargés sur un appareil (par exemple : téléphone portable, ordinateur portable, ordinateur, tablette)
 - iii. Livres audios sur CD
 - iv. Braille sur copie papier
 - v. Livres imprimés en gros caractères
 - vi. Livres imprimés de façon régulière
 - vii. Braille numérique
 - viii. Autre format (veuillez préciser)
- 18b. Pourquoi préférez-vous votre deuxième choix de lecture ? Cochez toutes les cases qui s'appliquent.
- i. Ce format est facile à utiliser
 - ii. Ce format est agréable
 - iii. Les livres que je veux sont offerts dans ce format
 - iv. Ce format est plus accessible pour moi que les autres formats
 - v. Autre raison (veuillez préciser)
- 19b. Comment obtenez-vous des livres dans ce format ? Cochez toutes les cases qui s'appliquent.
- i. J'emprunte auprès des bibliothèques publiques, collégiales, universitaires ou de la bibliothèque scolaire
 - ii. J'emprunte auprès de services centralisés pour les personnes ayant des difficultés de lecture des textes imprimés (par exemple : CELA, NNELS, Bookshare, etc.)
 - iii. Je télécharge gratuitement des livres électroniques et des livres audios du domaine public sur Internet
 - iv. J'achète en ligne (par exemple : Amazon, Apple Books)
 - v. J'achète en personne dans une librairie ou dans un autre magasin
 - vi. Autre (veuillez préciser)
20. Qu'est ce qui influence votre choix sur la façon dont vous obtenez vos livres ?
- a. Facilité et commodité
 - b. Les bas prix
 - c. Bonne sélection et disponibilité
 - d. Autre (veuillez préciser)

21. Si vous pouviez choisir entre un livre électronique et un livre audio du même titre, lequel choisiriez-vous ?
- a. Un livre électronique
 - b. Un livre audio
 - c. Cela dépend (veuillez préciser)
 - d. Je ne suis pas certain
22. Si vous écoutez des livres audios, quel type de narration préférez-vous ?
- a. Je préfère écouter uniquement des livres audios narrés par une voix humaine
 - b. Je préfère écouter uniquement des livres audios synthétiques (générés par l'ordinateur)
 - c. Je préfère écouter des livres audios narrés par une voix humaine, mais aussi des voix synthétiques
 - d. Je préfère écouter des livres audios de voix synthétique, mais aussi écouter des récits lus par des humains
 - e. Les voix humaines et synthétiques sont également préférables
 - f. Je ne sais pas
23. Qu'est-ce qui améliorerait votre expérience d'utilisation d'un livre électronique ou d'un livre audio sur votre appareil ? Cochez toutes les coches qui s'appliquent.
- a. Faciliter la recherche de livre sur les sites Internet de bibliothèque ou sur les plateformes commerciales telles que Kindle ou Kobo
 - b. Faciliter le téléchargement et l'ouverture de livres
 - c. Rendre le livre entièrement accessible, y compris la navigation dans les chapitres, la description d'images, les polices, marges et couleurs ajustables, etc.
 - d. Autre (veuillez préciser)
 - e. Ne s'applique pas.
24. Si vous lisez le braille sur papier, lisez-vous également avec un afficheur braille dynamique?
- a. Oui, souvent
 - b. Oui, parfois
 - c. Très rarement ou pas du tout
 - d. Ne s'applique pas
25. Lisez-vous des livres imprimés en gros caractères ou des livres ordinaires ?
- Oui
 - Non

26. Si oui, quels outils utilisez-vous pour vous aider à lire ? Cochez toutes les cases qui s'appliquent.

- a. J'utilise une loupe ou un autre appareil grossissant
- b. J'utilise une règle
- c. J'utilise un scanneur optique ou un appareil photo avec des capacités de lecture à haute voix
- d. Autre (veuillez préciser)
- e. Aucun (je n'en utilise aucun)
- f. Ne s'applique pas

27. Achetez-vous actuellement des livres (dans n'importe quel format ?)

- Oui
- Non

Si oui, dans quels formats achetez-vous ces livres ? Cochez toutes les cases qui s'appliquent.

- a. Livres électroniques achetés sur un appareil (par exemple : Amazon, Apple Books, etc.)
- b. Livres audios téléchargés sur un appareil (par exemple : Audible, Kobo, etc.)
- c. Livres audios en format CD
- d. Copie papier en braille
- e. Livres imprimés en gros caractères
- f. Livres imprimés de façon ordinaire (achetés en librairie, etc.)
- g. En braille numérique
- h. Autre format (veuillez préciser)

Si oui, quels genres ou types de livres ?

- a. Fiction (par exemple : Science-fiction, histoires sentimentales, romans, etc.)
- b. Poésie et littérature dramatique (pièces de théâtre)
- c. Ouvrages généraux (par exemple : biographies, livres de voyage, livres histoire, etc.)
- d. Manuels et livres pédagogiques
- e. Les livres pour enfants
- f. Livres décodables (pour certains lecteurs et lectrices dyslexiques)
- g. Autre (veuillez préciser)

Si oui, combien dépensez-vous en moyenne ?

- a. 1 \$ à 5 \$ dollars par mois
- b. 6 \$ à 15 \$ par mois
- c. 16 \$ à 40 \$ par mois
- d. Plus de 40 \$ par mois
- e. Je ne sais pas
- f. Je préfère ne pas le dire

28. Si vous achetez des livres en ligne, comment évalueriez-vous les plateformes commerciales telles que Kobo et Kindle en ce qui concerne l'accessibilité et la facilité d'utilisation ?

Sur une échelle de 1 à 5 :

- 1 = Pas accessible du tout
- 5 = Très accessible
- Ne s'applique pas

29. Qu'est-ce qui vous ferait acheter plus de livres ? Cochez toutes les cases qui s'appliquent :

- a. Avoir accès à une bonne sélection de livres qui m'intéressent
- b. Boutiques en ligne qui sont faciles à utiliser
- c. Avoir accès à des livres dans des formats qui répondent à mes besoins d'accessibilité
- d. Connaître les fonctionnalités d'accessibilité du livre (telles que la description de l'image, les polices et les couleurs ajustables) avant d'acheter
- e. Le livre est abordable
- f. Autre (veuillez préciser)

SECTION B: INFORMATIONS SUR VOS DIFFICULTÉS DE LECTURE

1. Qu'est-ce qui vous empêche ou rend difficile pour vous de lire un livre imprimé sur papier ? Cochez toutes les cases qui s'appliquent.

- a. Une déficience visuelle
- b. Un handicap physique (par exemple : mouvements limités)
- c. Trouble d'apprentissage
- d. Autre (veuillez préciser)

2. Avec vos lunettes ou verres de contact (si applicable), lequel des énoncés suivants décrit le mieux votre capacité de voir ?

- a. Je n'ai aucune difficulté à voir une page imprimée
- b. J'ai du mal à voir une page imprimée
- c. J'ai beaucoup de difficulté à voir une page imprimée, mais je ne suis pas aveugle ou légalement aveugle
- d. Je suis aveugle ou légalement aveugle

3. Avez-vous un handicap physique qui vous empêche de lire un livre papier, par exemple, mouvements limités ou dextérité des bras ou des mains?

- Oui
- Non

4. Avez-vous une condition qui vous empêche de lire ou d'apprendre ? Cela peut inclure des troubles d'apprentissage tels que la dyslexie, l'hyperactivité, des problèmes de l'attention ou d'autres conditions.
- Oui
 - Non
5. Une personne enseignante, un médecin ou un autre professionnel de la santé vous a-t-elle ou vous a-t-il déjà dit que vous aviez un trouble d'apprentissage ?
- Oui
 - Non
6. Qu'est ce qui rend la lecture difficile pour vous ? Cochez toutes les cases qui s'appliquent.
- a. Dyslexie
 - b. Difficultés de lecture non diagnostiquées
 - c. Trouble déficitaire de l'attention ou trouble déficitaire de l'attention avec hyperactivité
 - d. Autre (veuillez préciser)
7. Sans utiliser d'aides (outils) quelle difficulté éprouvez-vous à lire un livre imprimé sur papier à cause de cette condition ?
- a. Aucune difficulté
 - b. Quelques difficultés
 - c. Beaucoup de difficultés
 - d. Je ne peux pas du tout lire un livre imprimé
8. Sans utiliser d'aides, à quelle fréquence cette condition limite-t-elle votre capacité à lire un livre imprimé sur papier ?
- a. Jamais
 - b. Rarement
 - c. Parfois
 - d. Souvent
 - e. Toujours
9. Quelle est la nature de votre(vos) condition(s) ?
- a. Permanente
 - b. Temporaire
 - c. Épisodique
 - d. Inconnue
10. Depuis combien de temps avez-vous une (des) condition(s) qui rendent la lecture difficile ?

- a. J'ai cette condition depuis la naissance
- b. 10 ans et plus (pas à partir de ma naissance)
- c. 2 à 9 ans (pas à partir de ma naissance)
- d. 1 an ou moins
- e. Pas certain

SECTION C: AUTRES INFORMATIONS VOUS CONCERNANT

Nous posons les questions suivantes pour nous assurer que notre sondage comprend un large échantillon représentatif de la société canadienne. Vos informations seront tenues secrètes. Seuls les chercheurs et les chercheuses impliqués dans ce sondage y auront accès.

1. Dans quelle région du Canada vivez-vous ? Veuillez sélectionner la région où vous avez votre adresse personnelle. Si vous n'avez pas d'adresse personnelle, sélectionnez la région où vous passez la majorité de votre temps.
 - a. Yukon
 - b. Colombie-Britannique
 - c. Alberta, Saskatchewan ou Manitoba
 - d. Ontario
 - e. Québec
 - f. Provinces maritimes
 - g. Autre (veuillez préciser)
2. Où est votre résidence principale ?
 - a. Dans une grande région métropolitaine : urbaine ou suburbaine
 - b. En dehors d'une grande région métropolitaine : dans une ville ou une zone rurale
 - c. Pas certaine ou cela ne s'applique pas
3. Quel est votre sexe ?
 - Féminin
 - Masculin
 - Autre (veuillez préciser)
 - Je préfère ne pas répondre à cette question
4. Quel est votre âge (ou l'âge de l'enfant pour qui vous décrivez les habitudes de lecture) ?
 - 6 à 14 ans
 - 15 à 24 ans
 - 25 à 44 ans
 - 45 à 64 ans
 - 65 à 74 ans
 - 75 ans ou plus
5. Avez-vous immigré au Canada au cours des cinq dernières années ?

- Oui
 - Non
 - Je préfère ne pas répondre
6. Vous identifiez-vous en tant qu'autochtone (y compris les Premières nations, les Métis ou les Inuits) ?
- Oui
 - Non
 - Je préfère ne pas répondre
7. Vous identifiez-vous en tant que personne de couleur ?
- Oui
 - Non
 - Je préfère ne pas répondre
8. Vous identifiez-vous comme membre de la communauté LGBTQ+ ?
- Oui
 - Non
 - Je préfère ne pas répondre
9. Quel est votre revenu net du ménage ou de la famille au cours de la dernière année d'imposition ?
- Moins de 20 000 \$
 - 20 000 \$ - 40 000 \$
 - 40 001 \$ - 70 000 \$
 - 70 001 \$ ou plus
 - Je préfère ne pas répondre

Vous avez presque fini !

30. Si vous pouviez choisir une chose qui vous rendrait la lecture plus facile et plus satisfaisante, quelle serait-elle ? Veuillez répondre brièvement.
31. Veuillez-nous en dire davantage au sujet de vos expériences de lecture, vos défis ou vos idées. N'hésitez pas à partager longuement; jusqu'à mille caractères, soit environ deux paragraphes.

Merci, vous avez terminé le sondage ! Après avoir appuyé sur le bouton « Soumettre », vous aurez la possibilité de fournir vos coordonnées.

Merci d'avoir participé au sondage « Comment lisez-vous ? »

Cliquez ici si vous souhaitez :

- Participer au tirage au sort

- > Vous renseigner sur les groupes de discussion
- > Recevoir une copie du rapport final

Cela vous mènera à un court sondage où nous recueillerons vos coordonnées. Ces informations resteront distinctes des informations que vous avez fournies dans le sondage que vous venez de compléter.

Si vous voulez :

- > Participer au tirage au sort pour gagner une tablette Android
- > Vous renseigner sur les groupes de discussion
- > Recevoir une copie du rapport final
- > Vous êtes au bon endroit!

1. Consentez-vous à inscrire votre nom au tirage au sort ?

- > Oui, je consens
- > Non, je ne veux pas entrer mon nom dans le tirage

2. Souhaitez-vous participer à un groupe de discussion sur les besoins et les habitudes de lecture des personnes ayant des difficultés de lecture des imprimés ? De la mi-février au début de mars 2020, nous organiserons des groupes de discussion en ligne, ainsi que des groupes de discussion en personne à Vancouver, Edmonton, Toronto et Montréal.

- > Oui, veuillez me contacter dès que possible avec plus d'informations
- > Non, merci

3. Souhaitez-vous recevoir une copie numérique de notre rapport final ?

- > Oui
- > Non

Veillez fournir votre nom et vos coordonnées. Votre nom et vos coordonnées ne seront communiqués à aucune entité.

- > Quel est votre nom complet
- > Quelle est votre adresse de courriel
- > Contacts alternatifs (facultatif)

Merci d'avoir rempli ce sondage! Si vous avez des questions, veuillez nous contacter à :

support@nnels.ca.

Appendix D: Disability Language Tips Provided by NNELS

Below we provide some tips regarding terminology and language to use in writing about people with disabilities.

- Use person-first language (i.e., people with print disabilities, person who is blind, a person with a learning disability).
- Do not use euphemistic terms such as “special needs.” They are vague and do not describe the specific disability.
- Do not use words that try to avoid the disability due to it sounding patronizing or language that implies suffering. Please avoid words like “handycapable,” “visually challenged,” “print challenged,” “differently-abled,” etc. There is no need to avoid using the word disability, it is one more characteristic of a person.
- Avoid using “disability community” or “print-disabled community,” as this is such a diverse group of people with different needs, even among people with the same disability.

Appendix E: List of Organizations Interviewed for Landscape Review: Publishers and Market Perspective & National Standards and Certification Recommendations

Amazon.ca	il Mulino
Apple Canada	Inclusive Publishing
Audible	Inhabit Media
Australian Publishers Association	Invisible Publishing
Benetech	Kobo
BISG	LIA
BookNet	Macmillan Learning
CELA	McGill-Queen's University Press
CNIB	NNELS
Coach House Books	Orca Book Publishers
ECW	OverDrive
Firebrand	Owlkids Books
Goose Lane Editions	Provincial Resource Centre for the Visually Impaired, of British Columbia
Greystone Books	Second Story Press
Haliburton County Library	The University of Michigan Press
Highwater Press	University of Toronto Press
House of Anansi Press and Groundwood Books	

Appendix F: Overview of Benetech

Organization: Benetech

Mission: To empower communities with software for social good.⁷⁶

Organizational Structure: Beneficent Technology Inc. (doing business as Benetech) was incorporated as a non-profit organization to develop technology projects, products and services to benefit humanity worldwide.

Beneficent Technology, Inc. has a for-profit subsidiary, Bengineering, Inc., which has been involved in providing engineering consulting services. Both Beneficent Technology, Inc. and its for-profit subsidiary Bengineering, Inc. operate under the Benetech brand name.

The Organization acts as innovator and operator of technology-oriented nonprofit projects.⁷⁷

History: Benetech was founded by technology entrepreneur Jim Fruchterman in Palo Alto, California, under the name of Arkenstone in 1989. It was initially created to provide reading machines for blind people. During the period 1989–2000, over 35,000 reading machines were sold in sixty countries, reading twelve different languages. In 2000, the Arkenstone reading machine product line was sold to Freedom Scientific, and the non-profit's name was changed to Benetech. The funding from the asset sale was used to start the Bookshare initiative.⁷⁸

Leadership

CEO/President: Betsy Beaumon has served in executive leadership roles for both for-profit and non-profit technology organizations, most recently as Benetech's President, driving the development and growth of all Benetech initiatives including inclusive education, poverty alleviation and human rights. She is a social entrepreneur and engineer and has co-founded two software companies, including the first web-based Information and Referral service for human services. She defined the concept of "born accessible," a vision where all digital content is made accessible to everyone when created. Betsy has developed products across the software, semiconductor and information sectors and previously held senior positions with BEA Systems, TradeBeam, Social Online Service and Cisco Systems. She holds a degree in electrical engineering from Northwestern University.

Founder: Jim Fruchterman is a leading social entrepreneur, a MacArthur Fellow, a recipient of the Skoll Award for Social Entrepreneurship and a Distinguished Alumnus of Caltech. Jim's dream is to bring Silicon Valley's technology innovations to all of humanity, not just the richest 5%. He is a former rocket engineer who also founded two

76 <https://benetech.org/about/>

77 <https://benetech.org/wp-content/uploads/2019/05/BENETEC-2018-Final-FS.pdf>

78 <https://en.wikipedia.org/wiki/Benetech>

successful for-profit high technology companies. Under Jim's leadership, Benetech has created and scaled multiple software for good enterprises.⁷⁹

Relevant Programs

Global Literacy

Benetech's Global Literacy Program strives to make literacy available to everyone. This is done through three initiatives:

- Bookshare, the world's largest accessible online library;
- The DIAGRAM Center, addressing challenges beyond text; and
- Born Accessible, driving systemic change in the publishing industry and education procurement process.

Bookshare

Bookshare is the world's largest online library of books and newspapers accessible to people who read and learn differently: they have a "print disability," including blindness, low vision, a mobility impairment or a learning disability that affects their ability to read printed material.

Operating under an exemption in U.S. copyright law and with the permission of over 850 publishers, Bookshare has delivered over 14,000,000 copies of books around the world. Millions of people that meet the stringent copyright law exemption qualification requirements have access to freely distributable material and copyrighted books for which Bookshare has distribution permission.

The books and publications can be read within a variety of formats, including braille, synthetic speech or human-narrated audio, text synchronized with audio, Microsoft Word, and ebook. Bookshare materials are available on iOS and Android phones and tablets, Mac OS and Windows computers, Chromebooks, MP3 players, and on specialty reading devices. Bookshare was launched in February 2002 and had over 638,000 eligible members as of March 31, 2019 in the U.S. and over 80 other countries. Through the active participation of hundreds of volunteers, partners, universities and over 850 publishers around the world, Bookshare provides people with print disabilities instant access to more than 600,000 books spanning 33 languages, and 150 daily newspapers, in ways that work for them.

DIAGRAM Center

A complementary initiative to Bookshare, the Digital Image and Graphic Resources for Accessible Materials (DIAGRAM) Center is dedicated to revolutionizing how students with disabilities access educational content, especially science, technology, engineering and math (STEM) materials.

79 <https://benetech.org/about/leadership/>

Since 2016, DIAGRAM has expanded its work by growing its community of cross-sector experts in assistive technology, education for students with disabilities and publishing of educational content. Its work includes developing and implementing technical standards, providing research and training on best practices (like the development of guidelines for writing and exposing of long descriptions of images in books), and building tools (such as a repository of accessible, multi-modal image content).

DIAGRAM continues its strong emphasis on STEM, including developing tools for improving the interaction of students and teachers with mathematical expressions, and hosting an event for developers to spend a day coding software together to address math challenges. DIAGRAM also continues to provide critical support for a born accessible ecosystem.

*Born Accessible:*⁸⁰

The born accessible initiative is driving systemic change in the publishing industry by helping publishers create accessible books from the start. This is where the next equilibrium change will be seen—when companies begin to publish books in an accessible fashion, anyone with a disability will be able to access them in the same way as their peers, without having to look for a remediated copy.

To achieve that goal, Benetech has implemented the industry’s first third party global certification program for accessible books. This program will enable publishers to produce and promote certified accessible books and will allow purchasers of educational books to quickly identify and purchase accessible titles.

The born accessible team works with publishers to evaluate their titles and provide recommendations on how to modify each title, and the production process, to produce appropriately formatted content. Benetech works with educational institutions to help them understand what to look for in the procurement process, and with teachers to help them produce accessible content in the classroom. Finally, in conjunction with Benetech’s partners, reading systems are evaluated to ensure that accessible content can be displayed properly. When content is created in an accessible format, reliance on retrofitting books for people to read can be reduced, and there is assurance that publishers around the world are creating content that is born accessible.

Financial Statements: Benetech’s financial statements are published on its website and, for those who are interested, provide additional insights into the organization’s operations⁸¹.

80 <https://onlinelibrary.wiley.com/doi/full/10.1002/leap.1141> The term “born accessible” was coined by Benetech CEO/President Betsy Beaumon.

81 <https://benetech.org/about/financials/>

Appendix G: Overview of LIA

NB: Much of the information has been translated using Google so may not be entirely faithful to the original Italian.

Organization: LIA (Fondazione LIA—Italian Accessible Books)

Mission: LIA's mission is to promote books and reading in all forms, traditional and digital, through activities of education, information, sensitization and research, guaranteeing its fundamental principles: accessibility, integration and sociability.⁸²

It also publishes a 'manifest' as follows:

Everyone's books

- *Accessibility, freedom and equality: same possibilities to do the same things for everyone.*
- *Everyone has the right to read, without distinction.*
- *Everyone has the right to choose what to read from all that the market offers.*
- *Everyone has the right to read well, enjoying the quality of the content.*
- *Everyone has the right to read to know, to grow, to evolve.*
- *Everyone has the right to read for the pleasure of doing it and share it with others.*
- *Reading improves mood, health and life.*⁸³

Organizational Structure: The LIA Foundation is a non-profit organization, established in 2014 by the Italian Publishers Association (AIE).⁸⁴

Headquartered in Milan, it is described as a "participation foundation," open to the involvement of other organizations interested in collaborating to achieve its mission. The organization invites paid memberships at a variety of levels from individual to corporate.⁸⁵ All the major Italian publishing groups and some of the small or medium ones are members.

In 2018 the corporate members were Il Mulino Publisher, Erickson Study Centre Editions, Il Frangente Editions, Nocturnal Editions, Sonda Editions, Effatà Editrice, Feltrinelli Editore, Arnoldo and Alberto Mondadori Foundation, Franco Angeli Editore, Giunti Editore, Graphicservice—Laterza Publishers Group, DeAgostini Group, Mondadori Publishing Group, RCS Publishing Group, Harper Collins Italy, Horizons Unlimited, Hyperborea and Messaging.⁸⁶

LIA's revenue sources include membership fees, service fees, sponsorships, donations and substantial government support.⁸⁷

82 <https://www.internationalpublishers.org/news/304-fondazione-lia-building-accessibility-into-the-book-chain>

83 <https://www.fondazioneia.org/chi-siamo/manifesto>

84 <https://www.fondazioneia.org/fondazione>

85 <https://www.fondazioneia.org/sostienici/membership>

86 <https://www.fondazioneia.org/chi-siamo/membership>

87 <https://www.fondazioneia.org/sostienici/aziende>

History: LIA began its work as a project in January 2011 as a joint project between Associazione Italiana Editori (AIE), its service company Ediser srl, mEDRA srl (a joint venture between AIE and the university consortium CINECA) and with the support of the Italian Ministry of Cultural Heritage and Activities and Tourism (MiBAC). Since its inception, it has also worked in collaboration with the Italian Union of the Blind and Partially Sighted (UICI).⁸⁸ In June 2013 the LIA book service went online and in May 2014 the LIA Foundation was set up, taking over the project's activities and guaranteeing their continuity over time.⁸⁹

They received international recognition for their work this spring by winning the International Excellence Award for Accessible Publishing from the Accessible Books Consortium.⁹⁰

Leadership: The Foundation is governed by a five-member Board of Directors. Directors are elected by the broad membership base. In addition, there are two members appointed to the Control Body (similar to an Audit Committee).⁹¹ The Control Body is made up of two auditors, the Single Auditor and the Substitute. No compensation is provided for any of the directors or auditors.⁹²

The current President is Mario Barbuto, the National President of the Italian Union of the Blind and Partially Sighted.⁹³

Relevant Programs

The LIA Catalogue (www.libriitalianiaccessibili.it)

A catalogue of over 20,000 titles certified as accessible by LIA.

Services

LIA offers services to companies, entities and institutions that publish digital publishing products including verification of the accessibility level of their websites, applications, ebooks, digital books and file conversion and certification in line with the standards defined at the international level for accessibility.

LIA also provides assistance and training on the production of accessible versions of publications for people with print disabilities in keeping with the most innovative international trends and advises and updates on the evolution of standards and on

88 <https://www.fondazioneia.org/fondazione>

89 <https://www.internationalpublishers.org/news/304-fondazione-lia-building-accessibility-into-the-book-chain>

90 https://www.accessiblebooksconsortium.org/news/en/2020/news_0002.html

91 <https://www.fondazioneia.org/chi-siamo/amministrazione-trasparente>

92 <https://www.fondazioneia.org/sites/fondazioneia.it/files/modulo-trasparenza-2018.pdf>

93 <https://www.fondazioneia.org/chi-siamo/governance>

the specifications of the accessibility of digital content in PDF/EPUB/HTML 5 or video formats and websites (WCAG 2.0 guidelines).⁹⁴

LIA published **Ebooks For All: Towards an Accessible Publishing Ecosystem** in September 2019. The goal of the manual is to provide an overview of the different aspects involved in accessible publishing, for all the players in the publishing ecosystem.⁹⁵

Financial Statements: LIA's financial statements are published on its website. The most current available are for year-end 2018.⁹⁶

94 <https://www.fondazionelia.org/sites/fondazionelia.it/files/modulo-trasparenza-2018.pdf>

95 <https://www.fondazionelia.org/en/e-books-all-towards-accessible-publishing-ecosystem>

96 <https://www.fondazionelia.org/sites/fondazionelia.it/files/bilancio-2018.pdf>

Appendix H: Accessibility Training Services

Trainer	Type of training offered	Audience targeted	Links	Notes
4 Syllables	Accessibility for Web	Web developers, businesses	Link	
Access Forward	Free online courses related to AODA		Link	
Add (Accessible Digital Documents) UK	Editing, conversion, testing, training. A number of online courses.	Ebook producers	Link	
Accessibility Services Canada	AODA, train-the-trainer, making accessible Word and InDesign documents, assessing website accessibility	Organizations	Link	Many free online courses on creating accessible documents in PDF or InDesign, etc. Likely not intended for book-length documents.
AccessibilityOz	Customizable	Content creators	Link	
BookNet Canada/ Tech Forum	Two full days covering accessibility at Tech Forum including a full day of workshops at eBookcraft	Publishers	Link	Presentations are recorded and made available on the BookNet website after the conference.
Centennial	Ebook production (EPUB 3) is taught as part of the publishing certificate program, but no mention of accessibility and necessary metadata not included.		Link	Looking into including metadata in the course (particularly if it would give their grads better employment prospects).
Deque Systems	Online and in-person programs for developing accessible websites and apps	Various	Link	Discounts available for groups. Can provide face-to-face or online custom training.
Carlton University	Research and Education in Accessibility, Design, and Innovation (READi)	Add-on to programs of various disciplines, including design	Link	
David Berman Communications	Various courses (full or half day) offered on different aspects of accessibility including Accessible Documents by Design: WCAG 2. Produces customized training for organizations and could design something for this project.	Editors, writers, organizations	Link	This group has also helped to develop RFPs for organizations looking for accessibility training. They have a process for avoiding conflict of interest if they also plan to submit a proposal.
eBOUND Canada	Customized training, either in person or online, primarily dealing with ebook production	Usually production staff	Link	Prepared to develop online training as needed for publishers. Also prepared to do QA follow-up and perhaps metadata maintenance.
Editors Canada	Online and in-person programs	Editors	Link	Offered a four-session webinar on accessibility in 2018. Plan to incorporate accessibility training into their existing offerings, as well as developing new webinars to fill any gaps, once standards have been determined.

Trainer	Type of training offered	Audience targeted	Links	Notes
LIA	Tailored training	Publishers	Link	Also offer consultancy and certification services for broader audiences.
George Brown College	Creating Accessible Documents course	Freelance technical writers, web editors, small business and NGOs	Link	One-day workshop Accessible Documents and Communication; two-day workshop Accessible Web Design and Development
Humber College	Currently offering one and two-day workshops.	Content creators, HR staff, digital staff	Link	Free online module—great resource and very high level. Also looking to incorporate accessibility into ebook production training.
Humber College	Can customize accessibility training for groups and offer “train-the-trainer.” Customized courses could include accessible ebook development.	Various		Current programs offered through the Faculty of Media and Creative Arts, directed by Susan Roberton. Susan is consulting with colleagues in the Publishing program about customized training for the publishing industry.
Mohawk College	Creating Accessible Documents and Alternate Formats	Students	Link	Full-time program or single classes.
Mohawk College	Accessible Media Production	Working professionals looking to enhance their accessible media skills or move into the accessible media industry.	Link	
Mohawk College Enterprise	Can develop customized training for different audiences, writing accessible content, intrapreneurship and entrepreneurship	Various		
Online ADA	Training & Checklists for Accessible Websites	Web developers, businesses	Link	
The Chang School of Continuing Ed. at Ryerson University	Two pre-requisite courses required. Both production and editorial training offered, though no mention of accessibility.	Students in the publishing certificate program.	Link	Course taught by Monique Mongeon of BookNet.
Seneca	No current programs on accessibility			In process of developing programs—to be confirmed.
WebAIM	Accessible Documents: Word, PowerPoint and Acrobat.	Adult learners with experience creating Word and PowerPoint Documents	Link	Online course (maybe of use for authors?)

Appendix I: Contacts for Accessibility Training Report

Contacted	Organization	Training, Awareness or Both
Heidi Waechtler	ABPBC	both
Michelle Peters	ABPM	both
Roanie Levy	Access Copyright	awareness
Laura Brady	House of Anansi Press/Brady Type	training
Brendan Ouellette	Annick Press	training
Kieran Leblanc	BPAA	both
Lisa Harrison	APMA	both
Shannon Culver	Apple	training
Michael Johnson	Benetech	both
Noah Genner	BookNet Canada	both
Monique Mongeon	BookNet Canada	training
Rebecca Rose	Breakwater Books	both
Glenn Rollans	Brush Education	both
Rina Hadziev	CELA	both
Michael Cooper	David Berman Communications	training
David Berman	David Berman Communications	both
Greg Ioannou	Editors Canada	both
Sabrina Taylor	eBOUND	training
Deborah Nelson	eBOUND	both
David Caron	ECW Press	both
Jessica Sharpe	ECW Press	training
Barbara Howson	Howson Consulting	both
Susan Robertson	Humber	training
Linda Leith	Linda Leith Publishing	both
Laura Rock Gaughan	LPG	both
Leyla Top	LPG	both
Jennifer Jahnke	Mohawk College	training
Terrilee Bulger	Nimbus Publishing	both
Daniella Levy-Pinto	NNELS	awareness
Laurie Davidson	NNELS	both
Ruth Linka	Orca Books	both
Holly Kent	OBPO	both
Lara Mainville	University of Ottawa Press	both
John Maxwell	Simon Fraser University	training
John Degen	The Writers' Union of Canada	both
John Yates	University of Toronto Press	both