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# *We Are Starving for Information*: The Information Practices of Life Coaches

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## Abstract

Life coaching is an emerging and ambiguous new profession. This study examines the information-rich worlds of three life coaches living in Toronto, Canada. Utilizing semi-structured interviews, in conjunction with Sonnenwald et al.'s (2001) Information Horizon Interview technique, this exploratory research offers a window into life coaches' information exchange practices (Stebbins, 2001). The central research query guiding this study is: What are the information sources that life coaches rely on? The study yields both qualitative and quantitative findings, which were inductively analyzed using thematic analysis. First, it reveals that on their journeys to becoming life coaches, participants relied heavily on the insights of other life coaches. Next, life coaches share how they collect, share, and create resources for their clients. Finally, life coaches demonstrate how they utilize resources in many mediums and from many origins. This report adds to a burgeoning area of interest in the field of Library and Information Science (LIS), as it builds on recent dissertation research published by Klein (2022) about the information seeking practices of life coaches. Ultimately, this report diverges from Klein's by introducing an alternative theoretical framework with which to make sense of life coaches' information practices. Instead, it likens life coaches' information practices to Willson's (2021) "bouncing ideas" theory, whereby life coaching entails a back-and-forth exchange of ideas, questions, and goals that ultimately generates new information.

*Keywords*: life coaching; information practice; information exchange; information horizon interview; everyday life information seeking; bouncing ideas; thematic analysis

Upon graduating from my bachelor's program, and as soon as I started earning a stable income, I began investing in life coaching services. I have worked one-on-one with coaches I discovered through late-night subject searches online, or through a coach's podcast. Once, I even won a raffle prize of three free sessions with a local life coach. I find these relationships to be immeasurably supportive and beneficial in navigating changing life circumstances. Especially in moments of converging and compounding global crises, I feel grateful to be able to pull from the toolkit of resources I have gathered from my multi-year engagement with life coaches. Since I have only had the experience of working with life coaches as a client, I wanted to learn from life coaches about their journeys, their practices, and their information sources. In other words, what resources are in the toolkits that life coaches are drawing on?

This study examines the information-rich worlds of three life coaches living in Toronto, Canada. In the absence of a universal definition of life coaching, I adopt Klein’s (2022) description of the profession: “[l]ife coaches engage in advising and assisting concerned individuals caught in the midst of economic, personal, and social changes” (p. 2). Klein further articulates the value of studying coaching at this moment in time:

> [T]he recent global pandemic, the economic downturn, and destabilization of familiar work situations afford individuals with unexpected opportunities to explore new career paths in non-traditional formats. The recent COVID-19 pandemic has wrought unprecedented change in the lives of millions of individuals. It is projected the utilization of life coaches to cope and adapt to new realities will increase. (p. 1)

Nevertheless, this emergent profession is challenging to study, in large part because “the coaching industry does not have a unified body of knowledge, methods, or guidelines for practice; this imprecision allows for a wide range of services to fall under the category of coaching” (George, 2013, p. 182). Moreover, the legitimacy of life coaching as a profession—as well as its cultural, gendered, and class dimensions—is often problematized in scholarly discourse (e.g. George; Makinen, 2014; Morgan, 2017; Pagis, 2016, 2021). For this study, I set aside judgement about the legitimacy of the life coaching industry, and instead I approach this query with the assumption that coaching *information* is a worthwhile site of study.

Utilizing semi-structured interviews and a drawing activity inspired by Sonnenwald et al.’s (2001) Information Horizon Interview (IHI) technique, this exploratory research offers a window into the information exchanges practices of life coaches (Stebbins, 2001). These methods help shed light on the otherwise opaque information toolkits of life coaches. It also adds to a burgeoning area of interest in the field of Library and Information Science (LIS), as it builds on recent dissertation research published by Klein (2022) about the information seeking practices of life coaches.

## Literature Review

Due in part to the emergent and ambiguous nature of the life coaching industry, there is not a significant body of literature on life coaching. In the past ten years, a few key studies in psychology and sociology have attempted to fill in this gap (Aboujaoude, 2020; George, 2013). My research is sensitized by these fields. Significantly, Klein (2022) contributes the first LIS dissertation on the information seeking practices of life coaches. Utilizing a survey, semi-structured interviews, and social network analysis, she maps out the diverse information needs of life coaches, as well as their engagement with online communities of practice.

Looking broadly at the field of LIS, there has been a trend in scholarship to shift away from the cognitive qualities of information to the social and cultural contexts in which information is shared (Savolainen, 2007). An example of a scholar who has embraced the social exchange of information is Willson (2022), who developed a theory of information seeking, sharing, and creation called “bouncing ideas” (p. 81). Likewise, there is a growing interest in information behaviours of individuals in moments of life transition. Ruthven (2022) articulated an “information behaviour theory of transitions” to demonstrate that moments of transition are dense with information. The contexts in which individuals pursue life coaching as clients or as coaches are often defined by a change in external life circumstance, or an internal change. Thus, the container of life coaching is one venue to study transitions and their associated information behaviours.

In all, life coaching is an emergent and influential “helping profession” which merits further study (Aboujaoude, 2020, p. 975). A vibrant social world of life coaching is flourishing, and it is largely outside of the purview of academic scholarship. Klein (2022) asserts that “life coaches are coming together to share information and expertise and draw upon each other for support, assistance, and the opportunity to engage in peer networking” (p. 16). We are in a moment of groundswell enthusiasm about themes of social information exchange and life transitions in the field of LIS, and life coaching is a valid subject through which to explore these themes.

## Research Methods

My project follows in the tradition of an exploratory—as opposed to confirmatory—social science research study (Stebbins, 2001). It utilizes the Information Horizon Interview (IHI) technique to yield insights about the participants’ information landscapes and to produce a visual representation of information phenomena (Sonnenwald et al., 1999). Combined, these frameworks afforded guidance and flexibility for the design and execution of my research to answer my query: What are the information sources that life coaches rely on?

For recruitment, I developed a list of potential participants by reviewing two online directories of Toronto-based life coaches. A cutting point in this study was business or executive coaching, which are coaching specializations that focus on performance improvement in the workplace (Klein, 2022). By contrast, life coaching broadly focuses on a “whole person approach” in work contexts and in everyday life (Klein, 2022). In all, I emailed ten individuals in Toronto who offer general life coaching. From this outreach, I received five replies and scheduled three interviews. All the participants are women, they have completed life coaching training in the past five years, and they are accredited by the International Coaching Federation (ICF). The ICF is the world’s largest membership-based organization of coaches, which operates as a credentialing, education, and advocacy body for coaching professional (International Coaching Federation, n.d.) While it is beyond the scope of this report, it is worth noting that the participants of this study each hold additional, professional roles, in healthcare, employment support, and business sectors.

The interviews took place between October 29 and November 3, 2022. Two interviews were conducted in public spaces at the participants’ condos, and a third was conducted at a bagel shop. At each meeting, participants confirmed their consent to be involved in the process before audio recording began. Interviews varied in length between 25 and 33 minutes (see Appendix A). Participants were asked to provide a pseudonym; Gina and Sarah picked their preferred names, and Juno left that decision to me. Interview recordings were uploaded to Otter.ai for transcription. I reviewed each generated transcript twice for accuracy while listening to the audio recording, and I manually anonymized any identifying information. Audio transcripts were then destroyed.

The methods afforded rich data that can be analyzed both qualitatively and quantitatively (Case & Given, 2016). Given the complex textual and visual details the Information Horizon Interviews yielded, I chose a more inductive approach, Thematic Analysis, to make sense of the data, meaning that I developed my analysis without much influence from existing theory (Braun & Clarke, 2006). First, I familiarized myself with the transcripts by reading each one individually, in full, and generating preliminary codes to capture the meaning I perceived in the participant’s comments. Then, I reviewed the preliminary codes across the entire data set. Through this, I generated ten open codes (see Figure 1) and I processed the transcripts through Nvivo. This yielded 84 references in the three transcripts. These codes were then grouped into thematic categories through an iterative and recursive process. I noticed ideas that were present in each of the coaches’ explanation of their journeys, coaching practices, and information horizons; I landed on themes that tell an interesting, novel story about the life coaching information landscape.

Second, I created various matrixes to analyze the number and types of information resources that participants drew on their information horizon map. This quantitative process complements Thematic Analysis, which has not been used widely on visual data. I drew on Sonnenwald et al.’s (2001) data analysis process of transferring the graphical representations to a matrix for quantitative calculations.

**Figure 1**

*Ten Open Codes Developed for Sorting*

- career change
- certification and training
- challenges hesitations insecurities
- coaches' main job
- coaches' other roles hats
- coaching practice
- creating new materials
- providing existing resources
- resources
- sensitizing concepts to inform coaching practice

# Findings

## Information from Other Life Coaches

On their journeys to becoming life coaches, participants relied heavily on the insights of other life coaches. During the interview, Gina explained her thought process about picking a coach training program:

> It was actually my coach and his ethics and his really strong adherence to the coaching practice and the coaching code of ethics that made me inspired and then I sort of ruled out, I just took a little dive into like other training programs. I was like, meh. So my research pretty much consisted of like a day of just, I really wanted to go to iPEC [Institute for Professional Excellence in Coaching] and I just want to like, take a quick look around like, nothing else is good out there right?

Regarding which coach training program to pursue, the coaches listened to the recommendations of a friend who was working as a life coach, coaches-in-training, or their personal coach. The coaches did not conduct extensive internet or market research to come to their decisions about which training course to pursue. Certainly, other factors informed their choice, including the option of ICF accreditation, the price, training hours, location, and content of the courses. However, in their decision-making process, the participants relied on first-person experience and advice from other life coaches to inform their choice. Thus, socially mediated information seeking practices are paramount for life coaches.

## Life Coaches' Information Exchange Practices

Life coaches provide and create resources for their clients. Gina described part of the job as "being resourceful, cobbling things together." In our interview, Sarah reflected that she enjoys providing people with tools, information, exercises, and resources so that they can continue their learning:

> It might be books that I'll recommend, articles, meditations, things that come up in a session that I think would be helpful to them. And that's almost always the important piece. That's an important learning piece for me, for them, to help them help themselves.

Likewise, all three coaches mentioned that in addition to gathering existing resources, they create materials to share with their clients. Gina takes meticulous notes during sessions with clients, which she shares with them. Sarah and Juno create their own content, drawing on their career backgrounds and lived experiences. Juno, describing her process that yields new content, said:

> So it's based on a lot of it is mindfulness, a lot of it is like stress management, resilience, that kind of stuff. I mean, I'm always learning. So, you know, I couldn't even say there's one specific modality that I pull from because like, I have a background in psychology, I got my bachelor's in that. And then just along the way, always all the different things that I'm learning, so it's like, "oh, drop a little bit of this, drop a little bit of that."

In short, the coaches see themselves as curators of resources and materials; they notice an information need during their sessions with clients, seek out a resource to suit the need, and share that resource with their clients. Moreover, they are also producing new materials for their clients, based on the coaches' own life histories, praxis, and skills.

## IHI Maps: Quantitative Findings

Life coaches utilize resources in many mediums and from many origins. This was reflected in the information horizon map that each participant drew. An information horizon is spatial metaphor to understand all the resources "within a context and situation… in which we can act" (Sonnenwald et al., 2001, p. 4). In this case, I prompted the participants to draw all the potential and actual information that they engage with, including other people, experiences, and their bodies. Indeed, when I explained the drawing exercise, Juno warned me that "it's gonna be a lot here."

**Figure 2**

*Juno's IHI Map*

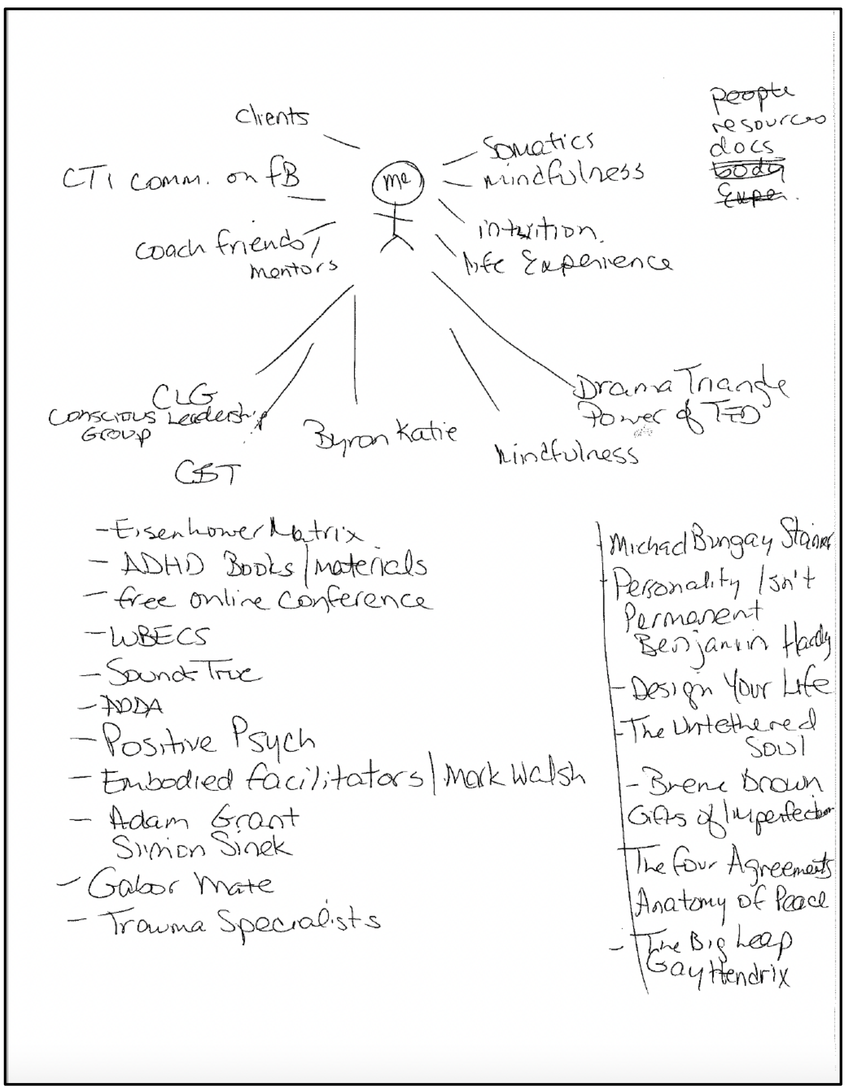


**Figure 3**

*Gina's IHI Map*

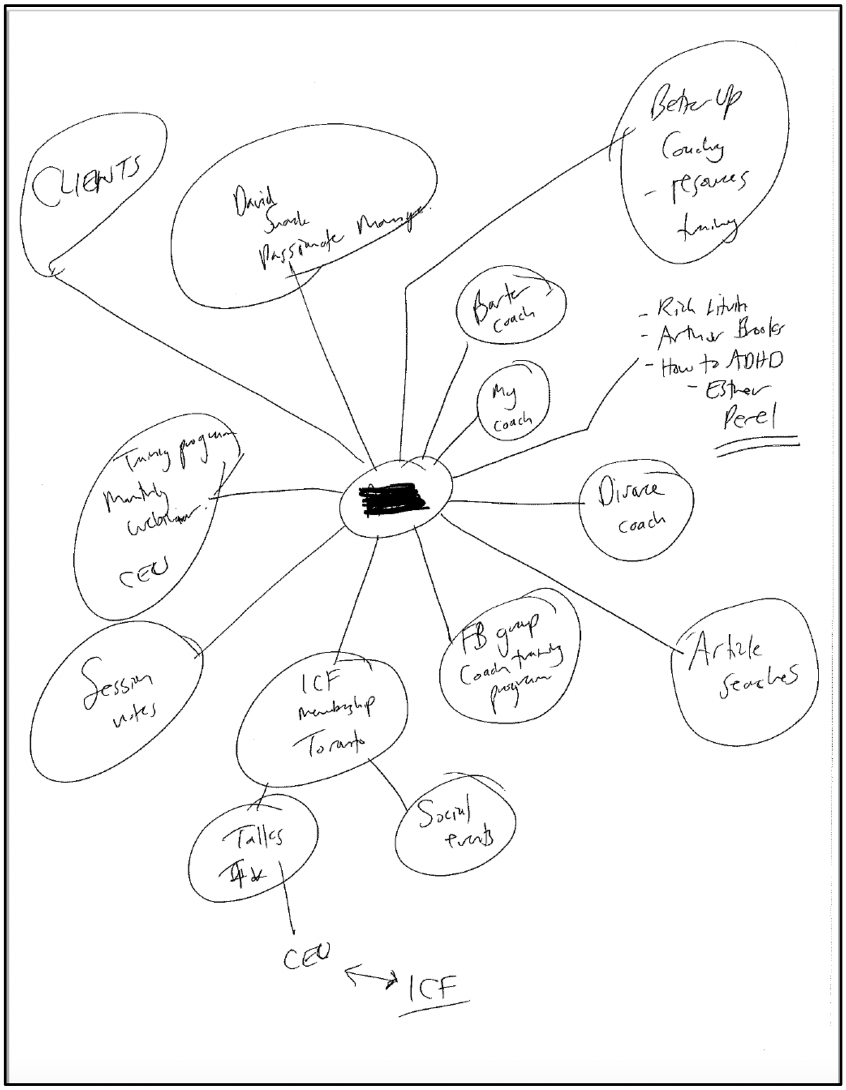
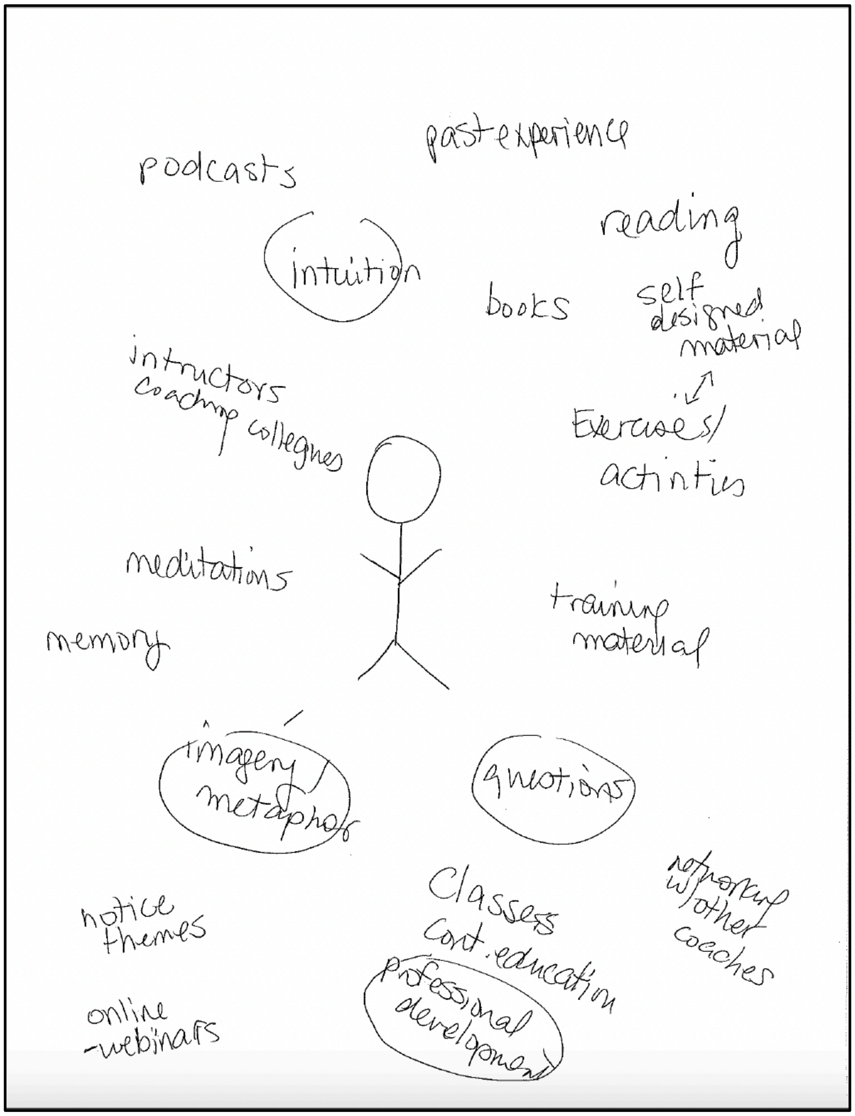


**Figure 4**

*Sarah’s IHI Map*




In total, the coaches named 75 sources which make up their information horizons (see Table 1). Gina and Sarah named 18 and 19 sources, respectively, and Juno named 38. I categorized the information sources into five themes: *other people, documentary materials, concepts that inform the coaches’ work, industry resources*, and *personal knowledge*. By categorizing sources this way, *other people* emerged as the most cited source of information for coaches and represents more than one third of their information sources. The next most frequently cited category is documentary sources with 18 instances, followed by *industry resources* and *concepts that inform coaches’* *work* mentioned 12 times each, and *personal experience* is the least frequently noted information source at only 7 times.

Moreover, there was some overlap between sources (see Table 2). Principally, all three coaches included *other coaches, book and articles*, and *online webinars and conferences* on their maps. This finding aligns with the previous analysis that *other people, documentary sources*, and *industry resources* make up a significant part of the coaches' information horizons.

**Table 1**

*Thematic Clusters and Information Sources*

| Themes | Information Sources | Gina | Sarah | Juno | Totals |
|---|---|---|---|---|---|
| All | Total number of resources listed | 18 | 19 | 38 | 75 |
| Other people | Clients, coaches (mentors, colleagues, personal coach), network of coaches, Facebook community, instructors, authors, therapists, specialists | 10 | 3 | 13 | 26 |
| Documentary materials | Books, articles, exercises, activities, newsletters, podcasts, self-designed materials, session notes, YouTube videos | 3 | 4 | 11 | 18 |
| Concepts that inform coaches' work | Psychological and business theories, imagery, metaphors, mindfulness, meditations, somatic, ADHD, trauma | 0 | 4 | 8 | 12 |
| Industry resources | Coaching platform's resources, continuing education classes, membership to ICF (social), professional development, training materials, online webinars and conferences | 6 | 4 | 2 | 12 |
| Personal knowledge | Intuition, memory, noticing themes, past experience, questions | 0 | 3 | 4 | 7 |

**Table 2**

*Frequency of Mentions of Information Source*

| Frequency | Information Source |
| --- | --- |
| 3 | Books and articles<br>Coaches (network of coaches, mentors, colleagues, personal coach)<br>Online webinars and conferences |
| 2 | Clients<br>Facebook community<br>Individually-named authors/ therapists/ specialists<br>Mindfulness + meditations<br>Continuing education classes<br>Training materials<br>Intuition<br>Past experience |
| 1 | Exercises + activities<br>Newsletters<br>Podcasts<br>Self-designed materials<br>Session notes<br>YouTube videos<br>Instructors<br>Psychological and business theories<br>Imagery + metaphors<br>Somatic<br>Coaching platform's resources<br>Membership to ICF<br>Professional Development<br>Memory<br>Noticing Themes<br>Questions |

## Discussion

Life coaches are uniquely situated in an emerging industry that operates in a “regulatory vacuum” and currently lacks education requirements and professional codified ethics (Aboujaoude, 2020, p. 975). However, the findings from my study demonstrates that life coaches are deeply committed to their own continued education, to serving their clients professionally and ethically, and to generating and sharing an abundance of resources. Thus, studying the information practices of life coaches is an illuminating angle from which to view this professional “site of struggle” and to support the legitimization of their work (George, 2013, p. 181).

Within the literature of LIS, my study extends the recent dissertation work of Klein (2022). Although my study utilized a different method, the Information Horizon Interview mapping method, my results replicate and reinforce many of her findings. Significantly, Klein found that life coaches have a “high need for information… given the dynamic and fluid nature of coaching services that are heavily invested in specific client needs” (p. 200). This accurately captures how the participants in my study oriented themselves; they are constantly evolving their own information practices to better address their clients’ needs. Along similar lines, Klein noted that life coaches “perceive themselves as collectors and disseminators of information” (p. 198). Again, my participants emphasized that they share resources widely with their clients and described themselves in similarly curatorial terms. This insight is valuable to inoculate against a perception that life coaches might be gatekeepers of specialized knowledge. Rather, the coaches are keen to find reliable, applicable, and useful information for their clients, and offer it back to them. Finally, Klein observed that life coaches in her study “all appeared comfortable casting a wide net as part of their information seeking process” (p. 198). The information horizon maps in my study confirm this finding acutely; life coaches utilize existing knowledge from their previous careers and augment it with continued learning and study. As Gina succinctly stated: “I’m great at Google searching.” Participants sought information in various mediums—digital, paper-based, embodied—and from various sources—popular media, personal experience, and professional circles.

While Klein’s (2022) dissertation provides an invaluable data corpus and impressive findings, I will offer one critique of the theoretical foundation of her study. A premise of her research is that life coaches have expertise in “everyday life,” and therefore, she utilizes Savolainen’s (1995) everyday life information seeking (ELIS) model as a core theoretical framework (p. 5). Savolainen developed this conceptual framework, and a related concept of “mastery of life,” to make sense of the information behaviours of individuals seeking information in nonwork settings (p. 259). ELIS is “the acquisition of various informational (both cognitive and expressive) elements which people employ to orient themselves in daily life or to solve problems not directly connected with the performance of occupational tasks” (p. 266-267). Ultimately, Klein concludes that this lens does not fully account for life coaches' information needs beyond the "orienting and practical information" in Savolainen's model (p. 207). While I understand Klein's inclination to focus on the everyday information that coaches engage with on behalf of their clients, the context in which life coaches are seeking and using this information is in a paid employment setting. Therefore, this application a misuse of Savolainen's ELIS model, and that might account for its incoherence with the findings.

Life coaching straddles both employment and everyday life experiences. Given this fact, the information worlds of life coaches could be explained using more than one model of information behaviour. However, the most compelling model that I have found to explain this process is Willson's (2022) "bouncing ideas" theory. Willson developed this theory to explain the three information activities—seeking, sharing, and creation—that early career academics engage with when they are informally exchanging ideas with other academics. Willson notes this is a generative, cooperative, and iterative process that results in "the creation of new information" (p. 811). This theory rings true for the life coach interactions with other coaches and with their clients: there is a back-and-forth of ideas, questions, and goals that ultimately generates something new. This study illuminated the interpersonal qualities of coaching at all stages of a life coach's career: at the certification decision-making phase, when working with clients in one-on-one coaching, and in continued education, both formally and informally.

## Methodological Reflections

The Information Horizon Interview was a supportive and accessible method to bring to the surface a plethora of insight about life coaching information. At the end of each interview, the informants remarked on the utility of the IHI map; two participants even opted to take photos to save for their own records. One challenge with the mapping exercise might be that some participants were limited by the information sources they could remember. When prompted to reflect on the completeness of her map, Juno said:

> It's not complete, but it's as complete as it can be right now off the top of my head. Yeah, there are so many more that probably, on my walk home, I'm going to be like, here's a few more.

To improve this outcome, future research studies might involve ethnographic research, or an intensive interview, to yield a more complete data corpus (Case & Given, 2006).

Another point of reflection is the method of data analysis: Thematic Analysis as articulated by Braun and Clarke (2022). This data analysis method offers flexibility around dataset composition and size, and allows for a “homogenous” data sample; it prioritizes data “richness” over claims of “saturation” or precise calculations of sample size (Braun & Clarke, 2022, pp. 27–28). Even still, given the expansiveness of coaching industry, it would be valuable to expand the study to include more “heterogenous” perspectives of life coaches working in, and beyond, Toronto.

## Conclusions

In sum, my research confirmed and expanded some of the findings from the recent dissertation in the field of LIS about life coaching (Klein, 2022). It also presented an alternative theoretical framework, Willson’s (2022) "bouncing ideas,” to make sense of life coaches’ information practices. Further research in this field may seek to confirm the qualities of “bouncing ideas” that are present in other life coaching dynamics. It may also address the temporality or directionality of these information flows.

The title of this report, *We Are Starving for Information*, is credited to a remark Juno made in her interview. The comment reflects a sentiment that was present in all my conversations with life coaches: they are never satiated with their information horizons. Rather, the life coaches admirably pursue continued learning, resource collection and creation, and sharing of resources with their clients and colleagues.

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# Appendix A

## Interview Questions

1. Tell me about your life coaching journey?
    a. What circumstances led to your discovery of coaching?
    b. Why do you choose to practice coaching?
    c. Is coaching a personal or social experience for you?
2. Take me through a week of your coaching practice. What do you *do* as a life coach?
    a. How do you support your clients?
    b. What resources do you rely on?
3. Now we are going to use pen and paper to draw something called your "information horizon map." It is all the potential coaching information/resources you engage with. Think of how coaching works/fits in your life. I'd like you to draw a map of all the information related to coaching. First, you'll draw yourself somewhere on this piece of paper. Then draw all the potential information resources. It includes people, experiences, and your body too. You can draw as much or as little as you like, but please talk me through what you're drawing as you do.
    a. Do you seek out any books/literature/websites?
    b. What people play a part in your coaching experience?
    c. Are there any coaching practices that really involved your body?

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# The Library's Educational Role in Bridging the Digital Divide

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## Abstract

Society has steadily grown more technology-reliant and continues to shift toward digital landscapes for education, business, government, and personal tasks. Alongside these trends there increases a chasm between various privileged and disadvantaged social groups who do or do not have access and knowledge to participate in a digital society. School and public libraries have an integral role to play in providing both education and access tools to communities to enhance people's ability to participate in digital activities. Collaborating with each other to decrease the digital divide(s), libraries and social institutions can help create digitally ethical and responsible participants. This paper discusses specific examples of initiatives regarding the challenges and solutions for libraries aiming to bridge the digital divide(s), defines what digital literacy and digital citizenship are, and emphasizes that the role of educating communities is equally important as providing access to technology.

*Keywords*: digital divide, digital literacy, digital inclusion, digital exclusion, universal access, public libraries, school libraries, academic libraries

In the wake of a digital nation, that is, an ever-increasingly internet and technology reliant world, privileged groups of people have opportunities to become ethical and literate digital citizens, while underserved populations are rapidly being left behind. The digital divide, which can be described as "the gap between those who have affordable access, skills, and support to effectively engage online and those who do not" (Scorse, 2021), affects such socioeconomically disadvantaged groups as Indigenous, disabled, and rural communities at varying levels. There exists not one divide but many, when discussing digital divides, terms such as 'digital equity' and 'digital use divide' arise[1]. To remain within the scope of this essay, the term 'digital divide' will serve as the overarching phrase that encompasses access to broadband infrastructure, adoption of internet subscriptions and ownership of devices, along with obtaining digital literacy skills resulting in ethical digital citizenship (Siefer, 2017; Feridooni et al., 2022). Youth, students, and educators in the education systems have been particularly affected by the divide's long-reaching effects, with distance learning increasing steadily over the last decade, and dramatically more due to the COVID-19 pandemic (Rodriguez et al., 2021; Muñoz-Najar et al., 2021).

The pressure to educate youth about technology, using advancing forms of technology, is only increasing, yet assets (funding, programs, etc.) to provide professional development, updated technology tools, and new educational resources are decreasing (Johnston, 2018; Rodriguez et al., 2021; Muñoz-Najar et al., 2021). There remains one space that provides consistent service and advocacy to and for communities who need support, for the betterment of those communities as good in and of itself: the library. Public and school libraries have an integral role in bridging the digital divide by providing both education and access tools to their communities because one cannot come without the other. As the American Library Association aptly states, "providing tools is not enough. Helping people of all ages to be informed consumers of information is becoming an increasingly important part of what libraries and [library professionals] do" (2001, "Why Libraries" section). Providing literacy tools in all forms is at the heart of what libraries do. If they fail to provide digital literacy tools and education, they risk becoming obsolete in timely ways; after all, resources are only good to patrons if they can be found and properly used. If students and youth do not gain ethical digital literacy skills, they endure increased security risks when interacting with online environments and may lose opportunities to participate in society, like being unable to apply to post-secondary using online application systems.

## Efforts to Provide Digital Literacy Resources

Socioeconomically disadvantaged populations cannot afford to access or participate in the advancement of technology (Rodriguez et al., 2021; Muñoz-Najar et

[1] For expanded definitions on these and similar terms, see NDIA's Definitions page. For a brief explanation of digital literacies, see Dr. Doug Belshaw's talk "The essential elements of digital literacies."

al., 2021). School libraries are increasingly expected to provide technological devices and instruction on interacting with the digital world appropriately. However, while aiming to achieve this expectation, those libraries can experience many barriers (Connaughton, 2021). Schools in underprivileged areas lack foundational internet infrastructure to provide high-speed internet access, and installing such structures requires more funding than is typically awarded (Fox, n.d.-a; Feridooni et al., 2022; Hyunh & Malli, 2018; Rodriguez et al., 2021). School libraries must work with what they have and what they receive through persuasive advocacy, often dealing with unsupportive parent institutions, legacy systems, and dated devices (Connaughton, 2021; Ballew, 2014; Johnston, 2019). Public libraries sometimes receive more funding opportunities and can work to fill the gap in access outside of school hours, potentially offering higher quantities of devices and programs directed at educating youth on the best technological and online practices. Edmonton Public Library is a strong example of efforts to extend education outside of the classroom; they offer resources to educators, parents, and host online and in-person classes for various age groups at varying digital literacy levels (EPL, n.d.).

In other areas, where schools can afford sufficient access to high-speed internet and technology, and often where they come to expect that each student has the same at home, a number of students struggle to meet the demand of digital homework assignments (Fox, n.d.-b; Huynh & Malli, 2018; Johnston, 2019; Barron Rodriguez et al., 2021; Muñoz-Najar et al., 2021). Libraries and library systems often try to work with their stakeholders and develop partnerships with other not-for-profits to identify and serve students' digital needs. For instance, The Alberta Library's (TAL) work with Albertan schools displays efforts to provide students with high quality resources from licensing agreement assistance to compilations of free education resources (TAL, 2020). Similarly, an ongoing research collaboration (2021-2022) between the University of Ottawa Library and Library Archives Canada aims to report on COVID-19 responses from libraries, including the relationships between public libraries and schoolteachers that provide digital services (Intahchomphoo, 2022). They hope to inform future initiatives on reducing the digital divide. Currently, no results from their study have been published. Despite each library having barriers, the goal to reduce the gap in access and education has reached the forefront of contemporary concerns, with a specific need for creating digitally literate and ethical citizens.

## Digital Literacy and Citizenship

Digital literacy is the ability to critically understand, use (consume), and create digital technology (Huynh & Malli, 2018). This literacy can be as simple as using social media responsibly, where one can create an account on a platform and critically assess the media they witness, or as complex as someone learning the history of a coding program, like SQL (Structured Query Language), and then manipulating data in basic to advanced modes. Digital citizenship is a person's participation in the online or digital world, or one's online and digital identity and footprints (MediaSmarts, n.d.). For example, by using various social media accounts, a person leaves a digital footprint and is attached to a digital identity, and by reporting false information in online articles, they are participating in our digital society. North Americans have the ability to access the online world, and can easily participate in its multi-faceted arena. While many consider how to participate ethically as a digital citizen, many others, especially youth, do not until deliberately and repeatedly educated about the importance of safe online activity (Huynh & Malli, 2018; Muñoz-Najar et al., 2021). People typically want to use digital tools because of their widespread availability and convenience, and libraries have a shared mission to provide unrestricted and neutral access to resources in all formats. See, for example, the American Library Association's (ALA) Literacy Key Action Area and the Literacy Clearinghouse, where their literacy efforts are compiled. As ALA suggests, it is critical for libraries to "Make literacy in all forms central to your library's mission" (2001, "What You Can Do" section). The vision and mission of libraries also invites opportunity and responsibility to provide education alongside resources.

### Prepping Digital Citizens

Johnston, continuing work done in studies by Subramaniam et al. (2012) that focus on the role of school libraries in STEM [Science, Technology, Engineering, Mathematics][2] education deliverance, believes that "the school library program is the ideal place to connect young people, media, and technology to engage students in STEM" (2019, p. 1; p. 163). Hamilton Public Library believes the library's role goes beyond providing STEM activities like using Raspberry Pi's but should provide assistance with every aspect of digital citizenry to enhance full participation in the growing digital nation (Feridooni et al., 2022).

Other initiatives, such as Reynolds and Chiu's game design study, show the need for creative solutions to engage K-12 students in multidisciplinary digital knowledge to better prepare them for post-secondary and workforce environments (2015, pp.1822, 1832). Their study (2015) followed 242 junior and senior high students who participated in a year-long credited course that used game design to develop higher levels of "inquiry, collaboration, and student use of information resources" (Reynolds & Chiu, 2016, p. 1822). All the schools in the study had technology resources available prior to the course commencing; Reynolds and Chiu (2016) found that access alone did not allow students to engage effectively with technology. Only after being exposed to well-rounded educational experiences did students' "dispositions to engage in technology use emerge" (Reynolds & Chiu, 2016, p. 1830). A pattern can be seen that libraries have a developing role in the education of digital citizens.

A challenge associated with reducing the digital divide in youth-focused libraries is the lack of confidence that library staff have in providing digital education, especially in the STEM regions (Johnston, 2019). When confident, "Teacher librarians [and paraprofessionals] can engage students and support teachers by providing access to digital resources, encouraging students in authentic inquiry practices, and providing real-world collaborative learning opportunities to promote STEM learning" (Johnston, p. 1). However, the school library industry often lacks the resources to provide exceptional STEM and digital learning experiences (Barron Rodriguez et al., 2021). Johnston's preliminary findings displayed an inherent need for school library professionals to have

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[2] The author believes that STEM initiatives should be STEAM [Science, Technology, Engineering, *Art,* Mathematics] initiatives, however, this debate is out of the scope of the paper. See Aisling Kelliher's "Technology and the Arts: Educational Encounters of the Third Kind" (https://doi.org/10.1109/MMUL.2016.41) for a perspective on technology and arts. See also: "STEM vs. STEAM: Making Room for the Arts" and "Explainer: what's the difference between STEM and STEAM?"

regular STEM professional development (PD) (pp. 2-3). In many cases, there is a need for government and institution funded and supported PD, along with advocacy to both those systems stating what libraries need and the public reminding them how vital the pillar of libraries are and why libraries need continuous support in varied ways (Johnston, 2018; Burchill & Kenney, 2020). With such a mass of information that has developed so rapidly, it can feel like a hopeless goal to achieve digital literacy. However, it is important to note that achieving digital literacy and ethical digital citizenship, and in turn bridging the digital divide, is a spectrum, not a fixed or final destination. The world is moving too fast, making technologies obsolete too rapidly and there will never be a finish line to cross or a “We bridged the digital divide!” celebration. But every time we educate a library professional, and in turn educate a patron, from submitting an online resume or learning the basics of a smartphone to hosting a children’s coding program; and every time we are a part of installing broadband infrastructure in rural and underfunded schools; we celebrate a win, an achievement, a betterment of our communities and peoples’ ability to participate in society.

## Conclusion

Despite the fact that “Digital publishers are doing us (and themselves) no favors with the speedy abandonment of wonderful materials as platforms mutate” (Mackey, 2019), the fast-paced development, adoption, and obsolescence of technology cannot realistically be avoided. It has become the library’s responsibility to bridge the gaps between privileged and disadvantaged communities. Full participation in digital citizenry, including ethical behaviour and literacy, comes down to the prudent digital education and upbringing of students. Too often we see what Plato identified as having two nations in one – the divide between the wealthy and the impoverished, two groups who grow to resent each other because of socioeconomic differences (n.d., 421D-432B). In this case, there is the group who has plentiful opportunities to participate fully in the digital nation and the disparate groups who cannot afford to participate and are thus left behind as lives become heavily digitized. Two challenging areas arise in youth-focused libraries specifically. First, school and or student access to adequate internet infrastructure, ownership of technical devices, and educated use of and participation in digital technologies. To combat access barriers, school and youth libraries require continuous advocacy from staff and financial support from their institutional parents and stakeholders, along with capturing and enhancing the voices of their community. Second, in the face of an ever-expanding divide, library staff often feel insufficiently prepared to educate patrons on becoming full digital citizens, and thus, require better and more consistent forms of felicitous professional development. Additionally, just as Mackey (2019) emphasizes the intrinsic value of reading while discussing the impact of digitization of resources on youth reading skills, so should the intrinsic benefit of being a digitally literate and ethical citizen be stressed. Each library must remember their institutional belief in lifelong learning and use their value system to work to their strengths, rather than focusing on countless impossibilities. Between advocating for and achieving access endeavours and education initiatives, libraries play an indispensable role in the cultivation of literate and ethical digital citizens.

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# Remixing “Taste”: Authorship and Attribution in Spotify Blend Playlists

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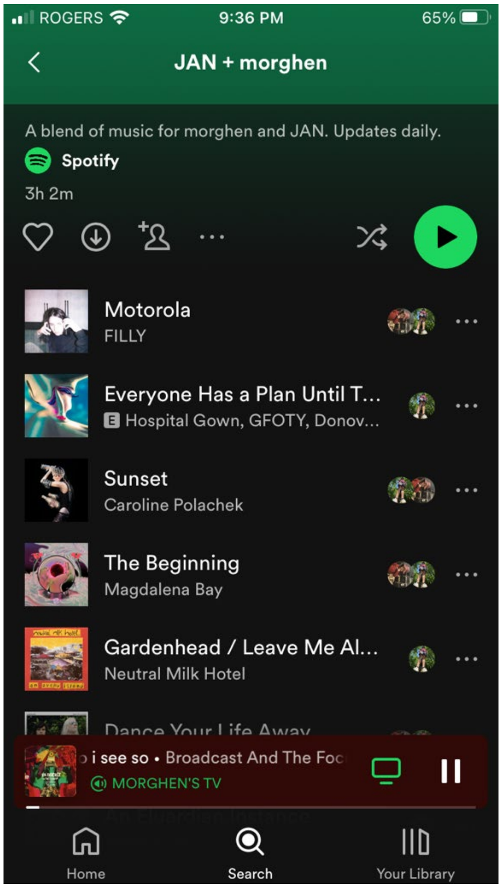
## Abstract
In this paper, I discuss dimensions of remix, including attribution and authorship, for automated digital music playlists. I use the case study of Spotify Blend, an automated, personalized, mock-collaborative playlist feature that combines up to ten users’ music taste and listening histories and regenerates its content daily. I defend the characterization of Spotify Blend as an example of “remix” (or an example of “mashup,” a related concept), wherein the source material being remixed is user listening data and wherein sampling is the primary remix tactic. In fleshing out this characterization, I discuss how the concepts of “authorship” and “attribution” operate in the context of Spotify Blend, with the important acknowledgment that Spotify’s algorithm remains opaque to users. I also compare Spotify Blend with user-generated, actively collaborative playlists created on the same platform. Observations about Blend and its features of use derive mostly from personal experience with the program.

*Keywords*: Spotify Blend, digital music playlists, remix, mashup, authorship, attribution, collaboration

Spotify is a music streaming service that gives users access to a cloud-based library of recorded music and a variety of tools for sorting music and interacting with music “recommendations.” Spotify Blend premiered in August 2021 (Spotify, 2021), adding to the platform’s existing and increasing suite of personalized, algorithmically generated playlist options. Blend allows between two and ten Spotify users to “bond” over their respective music tastes by automatically generating a 50-track music playlist with songs “from” each user’s listening history (Spotify, 2021). Any Spotify user—anyone with a Spotify profile—can initiate a Blend playlist by sharing a Spotify-generated link with others; to join the Blend, other users would simply click the shared link. The content in Blend playlists refreshes daily. Figure 1 is a screenshot of a one-on-one Blend between me and my brother.

**Figure 1**

*iPhone Screenshot of a Blend Playlist (March 2, 2023)*




*Note.* *Courtesy of the Author.*

Whereas other algorithmically personalized playlists on Spotify, such as "Discover Weekly" and "Release Radar," are unique to individual users and are generated based on individual listening data, Blend playlists combine the listening data of multiple users. The curatorial goals of the feature, according to Spotify designers, are "creating a cohesive playlist" and "representing […] users' tastes accurately" (Maharjan & Lamere, 2021, para. 13).

The option to "invite collaborators" to personal playlists predates the option to "create a Blend" on the platform. Any existing user-generated playlist can be made "collaborative," which allows multiple users to *manually* add, remove, and reorder tracks. Like with Spotify Blend, users generate invitation links in-app to send to potential collaborators and profile photos are attached to the constituent tracks of a collaborative playlist to denote which user had added which songs (Spotify, 2020). Users can still create these original collaborative personal playlists—Blend playlists did not replace them—but “the playlists which Spotify [creates] and [manages] in-house,” including Blend, tend to be understood as having broader cultural impact than user-created playlists (Morgan, 2020, p. 36). Since collaborative digital playlists are “a form of everyday musical engagement” for many people (Harris, 2022, p. 2), Spotify’s algorithmic proxy for collaborative playlist-making (its Blend playlist feature), and its mediation of the social playlist experience more broadly, are worth analyzing.

Finally, it is worth noting Blend’s name and branding. Merriam-Webster (n.d.) defines “blend” as “to combine or associate so that the separate constituents or the line of demarcation cannot be distinguished.” Spotify “Blend” therefore evokes automated combination into something seamless. As I will discuss, though, the degree of seamlessness of the playlist also depends greatly on how much existing “taste overlap” (Lamere, 2021) there is between the participant users.

## Relevant Literature about Spotify Playlists

In this section, I present sources representing different aspects of the recent literature related to Spotify and its (algorithmic) curation of content. A full-scale literature review is outside the scope of this case study.

First, Maria Eriksson et al. (2019) in *Spotify Teardown* document a large-scale attempt to “follow the files” of the now-ubiquitous music streaming service from a user experience perspective, an industry research perspective, and a back-end programming perspective—to the extent that the latter is even possible. Eriksson et al. present Spotify as an increasingly active “producer of unique musical experiences” (p. 64), which supports my exploration of the concept of “authorship” with reference to Spotify Blend.

Robert Prey (2020) writes about the phenomenon of corporate sponsorship on Spotify and artists’ goal of “getting playlisted”: that is, having their tracks added to influential Spotify-generated playlists (p. 3). The practice of “attribution,” the other concept I will explore with reference to Spotify Blend, is relevant to Prey’s claim that “there is no way for an artist or their label to know precisely why a particular track was placed, or replaced, on a playlist” (p. 3). The opacity of the processes behind the organization and presentation of content is a dominant critique of digital streaming services.

In a different but related part of the academic conversation, Anja Nylund Hagen (2015) writes about the personal playlist experience and the concept of music “collection” in a digital streaming environment. As I will explore, Spotify Blends are algorithmic playlists that resemble user-generated collaborative playlists, but Blends are automatically shuffled and edited every day. My case study, Spotify Blend, therefore represents a notable departure from the personal playlist grooming and the maintenance of a “collection” of music articulated by Hagen.

Eriksson et al. (2019) make the important point that Spotify is constantly “[generating] data based on its music streaming that allow for the study of human behaviour at scale” (p. 4). Similarly, David Hesmondhalgh (2022) asserts that listening to music on streaming services necessarily “[converts] user activities into data” (p. 5). Though Spotify’s user data collection and (re)use are not the focus of this paper (not least because Spotify fiercely guards the details of its recommender algorithms), it is clear that listeners participating in Blend playlists are being interpreted and re-presented as banks of historic and ongoing listening data. The status of people’s online activity as “data”—and what such a status might mean, philosophically and practically—seems to be a foundational question in information studies.

Finally, Hesmondhalgh (2022) helpfully intervenes in the academic conversation about streaming services in remarking that “recent critiques of streaming often draw upon long-standing aesthetic anxieties about the effects of technologies on music” (pp. 5–6). Such anxieties include concerns about musical experiences becoming “passive” or “fragmented” due to technological intervention or conduction (p. 3). Hesmondhalgh encourages a nuanced perspective: that digital music streaming does not exclusively or necessarily cause passive, fragmented listening, and that such passivity or fragmentation is not exclusively or necessarily a bad thing. Though in the presentation of this case study I am ultimately critical and suspicious of Spotify’s dubious authorship and attribution remix practices, it is important to remember that many people may enjoy and derive benefits (functional, aesthetic, or otherwise) from Spotify Blend and other automated playlists.

## Spotify Blend as a "Remix"

Following Knobel and Lankshear (2008), who point out that remix is increasingly understood expansively, beyond merely creating an alternative mix of a song (p. 22), I interpret the term "remix" broadly in this paper. The remix product at hand here is the representation—and subsequent daily re-representation—of Spotify users' listening habits and "taste" in Blend playlists.

Streaming services like Spotify play an active and extensive "role in organizing and programming the content they carry" (Prey, 2020, p. 1). Eriksson et al. (2019), drawing from Bruno Latour's (2005) *Reassembling the Social,* also portray Spotify as a mediating "actor that transforms, translates, and modifies the meaning" of its elements despite its "self-definition as intermediary" (p. 15). Spotify can therefore be understood as not only a structural shaper of music-listening, but as an occasionally active "remixer" of content, too. Virginia Kuhn (2012) describes a "remixer" as an "interlocuter in the digital conversation" (section 2.6). Spotify's algorithms and engineers curate actively enough that they warrant the label of "remixer" (or, collectively, the Spotify platform might be the "remixer"). In the following subsections, I present different ways in which Spotify Blend playlists are or resemble remixes.

### Sampling

Spotify Blend is a type of remix in that its software uses the technique of "sampling" to create a new musical compilation. According to Abigail De Kosnik (2019), sampling involves "the acts of copying, cutting, and mixing" (p. 157). To create a Blend playlist, Spotify selects bits from each user's listening history and mixes these bits into a playlist; sampling, understood loosely, is Spotify Blend's primary remix tactic. According to Hess (2006), sampling "transforms, critiques, and responds to sources" (p. 282). If we understand users' listening statistics as the "sources" in use, a Spotify Blend playlist "critiques and responds to" them by providing an encapsulation and representation of users' "taste" to their friends participating in the playlist with them. Blend subsequently "transforms" users' listening habits because the automated playlist is meant to be listened to and used for music discovery (Spotify, 2021). Although music listening data—potentially understood as a stand-in for the users themselves, people with music "tastes"—may be an atypical "source" for remix as it is commonly understood, Spotify Blend effectively cuts and re-presents it in a playlist using algorithmic sampling.

It is fitting that Spotify's remix output takes the form of a playlist, since the platform has always been playlist-oriented (Hesmondhalgh, 2022; Prey, 2020). To Spotify, just like to electronic music creators and DJs, a "playlist [is] just as valuable as a song" (Fischer, 2014, p. 27). As Fischer notes, there is legal precedent, at least in the United States, for creative compilations like playlists being successfully copyrighted, because "there is an expressive element in selecting the order of songs on a playlist" (p. 28). Therefore, playlists themselves are reasonable candidates for "remix," beyond and besides any individual tracks within them being "remixes," which they certainly may be.

## Use of Source Material

Knobel and Lankshear (2008) define the verb "to remix" as "to take cultural artifacts and combine and manipulate them into new kinds of creative blends" (p. 22). In the case of Spotify Blend, users' listening habits and profile information are the "cultural artifacts" being remixed. In other words, Spotify creates a "mashup" or a "remix" using the "pre-existing data" of users' listening history on the platform (Harrison & Navas, 2018, p. 197). User listening habits are popularly understood as being indicative of users' music "tastes," so "taste" is another candidate for the status of "source material" in a Blend playlist. Nick Seaver (2022) points out that "taste is not only something people have, but it is also something they do" (p. 11), which makes taste knowable and interpretable by the software programs that users interact with.

Kuhn (2012) presents a similar but distinct perspective on source material in remix, characterizing remix as a "digital argument" (1.3) and interpreting "its use of source material as citation—a form of evidence necessary to make one's point" (3.2). Listener data in a Spotify Blend playlist, operating as its source material, is cited by the company as evidence of common ground between friends and as evidence of the presence of endless, daily-updating music to bond over (Spotify, 2021). As a result, Spotify Blend is "about" the participating Spotify accounts much more than it is "about" the songs or artists that happen to be featured on any given day.

### Regeneration and “Endlessness”

Spotify Blend is not a static remix product, since it changes daily and is responsive to the continued listening of its participant users over time. In fact, it is “remixed” daily; Blend playlists tend to look similar but slightly different day-to-day. I have observed that the songs with only one “attribution” (with only one Blend participant’s listening history matching it) tend to become swapped out day-to-day more frequently than the songs with multiple attributions. With common ground as the central “argument” (Kuhn, 2012) of the playlist, tracks with shared listener history seem to survive the day-to-day turnover more reliably.

In some ways, Blend playlists embody the remix characteristic Knobel and Lankshear (2008) call “endlessness.” Unless participants manually leave a Blend, “there is no end to remixing” (p. 26); the playlist will regenerate every day, whether users are even listening to it or not. The daily regeneration of content supports streaming services’ broader goal of “[keeping] the user within their ecosystem by continually suggesting more songs to listen to” (Morgan, 2020, p. 35). Spotify explicitly encourages users to “keep on listening” to ensure the algorithmic representations of their taste remain accurate (Spotify, n.d.). However, the automatic daily regeneration of content in Spotify Blend playlists *defies* the ethos and common practice associated with the user-generated collaborative playlists they resemble; static collaborative playlists are often created “for later use at a specific event (e.g., a birthday party)” (Harris, 2022, p. 3).

## Spotify Blend and Attribution

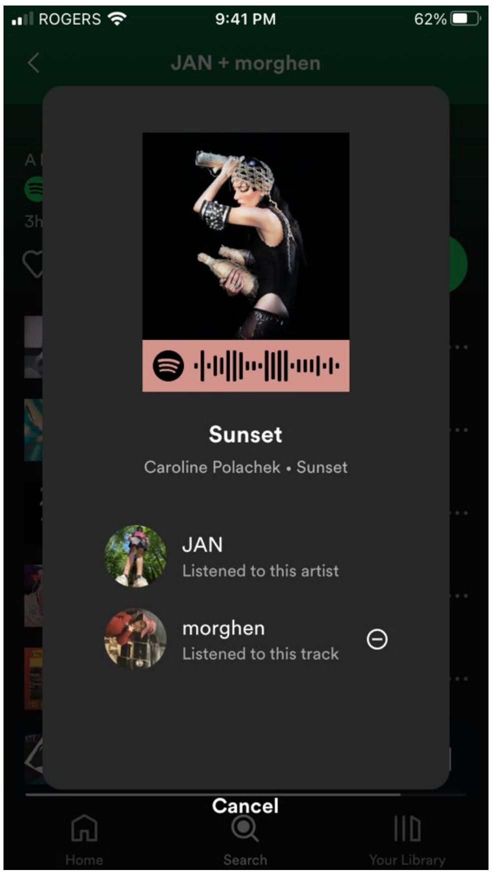
Attribution in Blend playlists is indicated through small profile photo icons that indicate to whose listening habits each of the tracks corresponds. Track attribution causes Blend playlists to resemble what Harrison and Navas (2018) call “mashup”: a remixed product whose “elements operate together but remain discrete” (p. 197).

### Algorithmic Opacity

Spotify does the bare minimum to reveal how or why it is attributing particular songs to particular Blend participants, and its algorithm is opaque to the average user (Prey, 2020). Eriksson et al. (2019) use the metaphor of the “black box”: they argue that Spotify’s inner machinations are often invisible and unquestioned and that the service supposedly “no longer needs to be reconsidered” (p. 7). The software uses “data-driven and automated curation” when it creates Blend playlists, but its precise tactics are a “commercial secret” (Freeman et al., 2022, para. 3). Clicking on the profile photo icons attributed to a song in a Blend generates a pop-up window with information about which person listened to “this track” or “this artist” (e.g., Figure 2). When a user has listened to both the track *and* the artist, the software picks one of the two attribution explanations seemingly at random, or at least for reasons unclear to users.

**Figure 2**

*iPhone screenshot of a pop-up attribution description (March 2, 2023)*




*Note.* Courtesy of the Author.

The opacity of Spotify Blend’s algorithm opposes the ethos of remix culture more generally, despite my characterizing these Blend playlists as otherwise remix-like. Remix has been traditionally understood as “linked to open-source and do-it-yourself (DIY) activities” (Navas et al., 2018, p. 2). The efforts of non-automated, grassroots remixers “often expose the process of creation” (Kuhn, 2012, 2.6), and attributing or citing sources in detail is one way to do so (Hess, 2006). Conversely, Spotify’s remixing and attribution are secretive and “effortlessly” automatic, literally taking place overnight and leaving no record of the changes that were made. As a result, Blend participants do not require much technical “literacy” in the software, like they might if they engaged in a more active form of remix (Knobel & Lankshear, 2008).

Beyond the Blend algorithm being opaque to users, there are frequent discrepancies in attribution. Lamere (2021) claims that Spotify is aiming for participants in a Blend to be “represented equally” (para. 4). In practice, though all participants in a Blend have at least some tracks attributed to them, I have observed that participants with more “taste overlap” with others (Lamere, 2021) generally receive more co-attributions to songs and their profile therefore appears to have an outsized influence on the content of the Blend. Another example of discrepancy involves the attribution of songs that users have never personally listened to but, for example, were performed by an artist a user *has* listened to. In Blend playlists, despite Spotify’s goal of “making sure that this specific user would agree the song listed is representative of their taste” (Lamere, 2021, para. 4), I have observed songs being automatically attributed to me that I had never heard before and that I would not necessarily recommend to others.

## Why Attribute in the First Place?

Designers and engineers at Spotify chose to put profile photo attributions beside songs in Blends, but this feature would not be strictly necessary to create a playlist that “blends” a group’s music tastes. (In fact, the demarcation of the “constituent” playlist parts defies the dictionary definition of the word “blend”). There is clearly enough imagined interest in the provenance of the songs—provenance not in terms of song production or performance credits but in terms of whose listening data they were identified within—to warrant Spotify’s choice to “attribute” using profile photo icons. Diakopoulos et al. (2007) point out, though, that there are different norms for attribution when “the audience is expected to already recognize the reference without explicit attribution” (p. 136). If users in a Blend playlist know each other’s music taste well, the attributions in a Blend may become less necessary for interpreting the mix. Furthermore, Harrison and Navas (2018) describe the personal “thrill of being able to identify [the] elements” of a mashup through deduction and cultural awareness (p. 197). The profile photo attributions potentially make Spotify Blend less “thrilling” than other forms of remix, especially for participants who already know each other well.

## Spotify Blend and Authorship

To strengthen my case that Spotify Blend can be understood as an example of remix, Diakopoulos et al. (2007) define “authorship” as the act of “making choices and selections concerning the structure and content of media elements within the constraints of a particular medium in order to make meaning” (p. 133). The Spotify algorithm makes choices and selections of what songs appear on a Blend playlist day-to-day; in that respect, it could be seen as the “author” of any given Blend. However, participants have some agential capacity, including the ability to leave, and thereby delete, the Blend.

### Spotify’s Agency

Navas et al. (2018) claim that “remix and its preceding forms have continually disrupted the concept of the individual creator” (p. 6). Spotify’s Blend playlists represent a further disruption. These playlists imply multiple creators by attributing the presence of songs in the mix to different participants, but they are in fact automated and created by private Spotify software. Though Spotify Blend is an example of “post-individualistic authorship” associated with remix (Vallier, 2018, p. 39)—since “Spotify” is not an individual producing a discrete work—it still opposes the user-focused democratization that is generally attributed to remix culture. The fact that Blend playlists are exclusively accessible within the Spotify application brands Spotify—and its algorithmic system that is “full of people who make choices” (Seaver, 2022)—as the author(s). Despite allusions to user collaboration through profile photo icons, Spotify’s interface and algorithm “set the boundaries and possibilities for music listening” on the platform (Freeman et al., 2022, para. 9). Most simply, it is Spotify’s algorithm, not the users, that adds and orders the songs in a Blend playlist.

On another level, Freeman et al. (2022) describe how music recommender software can be understood by users as having “human-like agency” in music curation (para. 15) and frequently becomes involved in “complex socio-technical relationships” with them (para. 1). Therefore, Spotify (the program, the system) is reasonably conceivable as an informed authorial agent in the production of Blend playlists. It "knows" users' music tastes, and in initiating a Blend link, users give Spotify permission to represent their taste in a remix.

## Blend Participants' Agency

Although Blend participants cannot alter the song order or add/remove songs, they can rename the playlist (from the "Friend 1 + Friend 2 + Friend 3" default) and they can opt to "leave" it. "Leaving" a one-on-one (two-person) Blend will instantly delete the playlist for both parties, no matter which of them initiated the Blend link. The initiator of the playlist therefore does not have special authority over the work. This "leave" function also means that Blend participants have ultimate control over the presence or absence of the remix—though whether or not a record of the playlist's former existence remains on Spotify's "back end" is unclear (Eriksson et al., 2019).

Additionally, though they cannot adjust the track listing, participants in a Blend playlist have control over its broader components (i.e., the remixed and sampled Spotify profiles). For example, if a playlist has not yet reached the maximum attendance of ten users, anyone in a Blend can invite new users via invite link. Adding a new user to a Blend instantly changes the playlist content, shifting the track list to accommodate the new user's taste history and recalibrating the "common ground." Spotify might "author" the daily Blend playlist, but it is instantly responsive to certain user actions.

## The Illusion of Collaboration and Effort

Ilana Harris (2022) defines collaborative playlist-making as "a form of music co-curation where two or more people select and order recorded music together" (p. 1). On Spotify, user-generated playlists can be made collaborative via direct invite link and become "essentially personal playlists with co-editing functionalities" (Park & Kaneshiro, 2022, pp. 1–2). Blend playlists, in contrast, are *not* "personal" playlists and users cannot directly alter them. However, the profile photo attributions in Blend playlists are visually identical to the designation system Spotify has been using for user-generated collaborative playlists since 2020 (Spotify, 2020), making the two playlist types difficult to differentiate at a glance.

Spotify Blend also mimics collaboratively created playlists in the rhetoric of its invitation to "Create a Blend." For a user, "creating" a Blend amounts to copying an instantly-generated link and sending it to a friend. An invitation to "initiate" or "generate" would be more apt. Spotify wants users to feel like they are "creating" the playlist, despite the otherwise obvious passivity of the situation. Aram Sinnreich (2018), in a chapter of *Keywords in Remix Studies,* points out that "the root of the word 'collaborative' is 'labor'" (p. 56). In this sense, Spotify Blend is the opposite of the user-generated collaborative playlists found elsewhere on its platform, because Blend playlists require very little work to create and no work, beyond a user's normal streaming activity, to update. Harris (2022) describes how ongoing cooperation and discussion is required to create and maintain a traditional collaborative playlist (p. 6). Spotify Blend playlists, on the other hand, do not require any continued coordination between the users "in" them, besides the initial sending and clicking of the Blend initiation link.

Knobel and Lankshear (2008) distinguish between the "art" (the "aesthetics, appreciation, form, and composition"; p. 26) and the "craft" (the "knowledge of its technical aspects"; p. 27) of remix. Spotify lets users feel like semi-contributors to the "art" of a Blend playlist, while the platform handles and obscures the "craft" aspects of the project. For example, participants in a Blend might feel like partial creators of the playlist if they had been actively "curating" their recommender algorithms, as participants in a study by Freeman et al. (2022) intentionally did. However, their contribution to the Blend is always indirect, and being skilled at using a recommender system does not amount to the internal, algorithmic "craft" of an automatically generated music playlist.

## Conclusion and Invitations to Remix

In this paper, I presented the ways in which Spotify Blend playlists resemble "remix" products and practices. I discussed the implications for "attribution" and "authorship" that accompany this characterization of Blend playlists as remixes, with reference to existing scholarly conversation about Spotify's curatorial power and about what it fundamentally means to "remix" or be "remixed." Overall, I found that Spotify

Blend remixes user listening data via sampling while mimicking organic user collaboration. This veneer of active participation and co-creation matters. It helps to ease potential suspicions about Spotify's increasing curatorial interventions, which represent a shift away from the company's original ethos of "the centrality of the search box" (Erikson et al., 2019, p. 34). The veneer of active participation also encourages Spotify users to spend time—and monthly subscription fees, in the "funnel" toward Spotify Premium (Prey, 2020)—to continually train the algorithm to "know" their music taste. Further, the case of Spotify Blend can be seen as part of a broader trend towards algorithmic content generation and recommender systems in areas of digital activity that intersect heavily with remix culture: digital *music* streaming services, like Spotify or Apple Music, as well as digital streaming services across media types. Freeman et al. (2022) put the concern succinctly: "[H]uman processes of curation and discovery are increasingly mediated by algorithmic systems" (para. 10). Though Hesmondhalgh (2022) would caution us to avoid thinking of technological involvement in musical experiences as something new, the extent and instantaneity of Spotify's algorithmic remixing is undeniable.

Future research (i.e., remixes of my work, to invoke Hess' [2006] conception of academic citation as remix) could consider how—or even whether—Blend playlists are listened to by their participants. Another gap to fill would be studying the way that Spotify Blend reflects, or fails to reflect, the history of collaborative mixtapes and music-sharing. Finally, Spotify Blend could be further analyzed from an everyday information behaviour perspective, such as the framework presented by Melissa Ocepek (2017). For example, how often and in what ways do listeners use Spotify Blend as a tool for new music discovery? Are discoveries serendipitous and secondary to what Laplante and Downie (2015) would call the "hedonic" experience of generating and enjoying the Blend, or are they a primary goal?

To end on a realistic note, while Blend playlists seem to save users "time and effort" in showing off their music taste to friends (Mackay, 2022), it is likely that Spotify users do not tend to value them as much as the truly collaborative (user-generated) playlists in their digital libraries. Freeman et al. (2022) found that "for many listeners a human recommendation or personal discovery had more meaning than an automated recommendation” (para. 56). Though Spotify Blend is a fascinating case of algorithmic remix, it seems unlikely that it will supplant collaborative digital playlist-making in contemporary remix culture in its current form.

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# Abandoned But Not Forgotten: A Proposal for Orphan Works Use in Archives

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## Abstract

Under Canadian copyright law, archives and other cultural heritage institutions (CHIs) cannot legally share and distribute any orphan works in their collections. Orphan works are copyrighted materials whose copyright holders cannot be located or identified. To prove that a work is truly orphaned, the proposed user must demonstrate that the copyright holders could not be located after a diligent search. The burden of this rights clearance increases for CHIs that have large collections of orphan works. This paper reviews the current legal context for using orphan works in Canada, and the shortcomings. I propose a new system for orphan works rights clearance based on two parts. Firstly, formalizing the requirements for a diligent search to make them clear and objective. Secondly, creating a less stringent set of requirements specifically for use by CHIs, so that it is feasible for them to do diligent searches for large collections of materials. This paper also discusses and refutes multiple arguments against the proposed system.

*Keywords*: orphan works, copyright, archives, unlocatable works, Canada, cultural heritage institutions

Archives are a valuable cultural institution that preserve records as a form of cultural heritage. They collect records and artifacts for education, research, curiosity, and exploration. Society benefits the most from archives when they are able to share their materials as widely as possible, so that they may be used and enjoyed by members of the public. However, they do not always have copyright permissions to share these works freely. This is specifically an issue for materials whose copyrights are held by an unknown holder, known as orphan works. In this paper, I will discuss the current deficiencies in the Canadian Copyright Act with regards to orphan works, and propose a solution to help archivists take full advantage of their materials without sacrificing extraordinary amounts of effort and resources.

## Archives & Archivists

Since many of their holdings are still under copyright, archivists should be considered as users of copyright materials. During the acquisition process, donation agreements can be used to transfer the copyright of the donated records from the donor to the archive, but this is not universal. The donor may not be the original rightsholder, or may not have the authority to transfer the copyright. For example, consider someone who donates their collection of concert posters, or their correspondence with a dear friend who is now a famous politician; in both instances, the donor does not own the copyright, even if they own the physical records.

Copyrighted archival materials are becoming more common with time. The recent extension of Canada's copyright term to life plus 70 years means that nothing will be eligible to enter the public domain until 2043 (Pugh, 2023). With the changing nature of copyright laws, as well as the political and lobbying landscape, archivists should not be relying on their existing copyrighted materials to enter the public domain in a timely manner.

Digitizing records to create online collections are becoming increasingly popular in archives (Ahmed & Al-Salihi, 2019, p. 426). Digital collections democratize the archives by supporting patrons who would otherwise not be able to access them. Researchers do not always have the funds to travel to archives in different countries, or even different provinces, to view records that may be critical for their research. Digitization also allows records to become more accessible to those with disabilities. For example, it becomes easier to enlarge the text size, increase the contrast, or incorporate a screen reader into a digital collection without fundamentally damaging or altering any physical records. However, digitization also has its drawbacks. In order to create an online collection of paper records, the archives must make a digital copy, and then publish that copy online, where it can be freely accessed by the public. This requires the archive to have copyright permissions, which is not an easy task.

# Orphan Works

Orphan works have many definitions globally. In general, they are copyrighted works that a person or group wants to reproduce, but that person or group cannot get permission because they are unable to locate the copyright owner after performing a diligent search (Ahmed & Al-Salihi, 2019, p. 420). The process of conducting a diligent search is also referred to as rights clearance (Ahmed & Al-Salihi, 2019, p. 425). In Canadian law, orphan works are commonly known as works whose owners cannot be located, or works with unlocatable owners (Copyright Board of Canada, n.d.).

Orphan works make up a non-insignificant portion of library and archival holdings. In 2009, the British Library estimated that up to 40% of the works in its collection were orphan works (Lu, 2012, p. 256). Also in 2009, a Google Senior Vice President estimated that up to 20% of all books published in Canada, the UK, the US, and Australia were or would become orphan works (Lu, 2012, p. 257).

In Canada, there are few ways to use an orphan works legally. The Copyright Board of Canada can grant users a license to use a published orphan work, but the user must prove they have done their utmost to locate the current rightsholder and have still been unsuccessful (Copyright Board of Canada, n.d.). Although Canada does not specifically define what constitutes a diligent search, the rights clearance process is extensive, and may involve consulting genealogical databases, social media sites, collective societies, other archives or libraries, existing orphan works databases, and open web searching, among other sources (Shaw, 2018, p. 55). Unfortunately, the Copyright Board will not grant licenses for any unpublished orphan works, or whose owners are known but cannot be contacted (Copyright Board of Canada, n.d.). While the advent of the internet has made it easier to identify and locate rightsholders, many are still unable to be contacted (Ahmed & Al-Salihi, 2019, p. 422).

## How Orphan Works Impact Archives

Despite their critical role within society, many archives suffer from a lack of resources. This may manifest as inadequate staffing, minimal equipment, or low budgets. Some archives may be fortunate enough to have donors and other benefactors, but donated funds often have stipulations for how they may be spent. Donors may insist that their money be used to acquire new materials, which is more exciting and less glamourous that supporting more staff or administrative projects. It suffices to say that archives, along with many cultural heritage institutions (CHIs) generally do not have excessive funds and manpower to spare. This poses a problem, because the process for getting copyright permissions for orphan works in Canada requires both.

In her 2010 report, Anna Vuopala discusses how the effort required of CHIs for the rights clearance process is complex and expensive (Vuopala, 2010, p. 5). It costed the British National Archive 2 years and £35 000 to perform rights clearances on 1100 old wills, but they were only able to locate less than half of the rightsholders (Vuopala, 2010, p. 5). An Austrian university library digitized 200 000 dissertations, but the high cost of rights clearance meant they were unable to post any of them online (Vuopala, 2010, p. 5). In that case, the cost for rights clearance would have been at least 20 times greater than the cost of digitization (Vuopala, 2010, p. 5). Rights clearance is also a slow process. In the Netherlands, a project to digitize 1000 handbooks was only able to clear the rights for 50 within five months (Vuopala, 2010, p. 5). Based on this pace, it would have taken 8 years to clear the entire collection, which was only for a single project (Vuopala, 2010, p. 5).

Orphan works can be risky for archives. Even if they are unable to locate the rightsholder, it is still possible for the rightsholder to find out about their unauthorized usage, and accuse the archive for copyright infringement. This often discourages archivists from publishing, disseminating, or digitizing orphan works (Brito & Dooling, 2005, p. 76). However, if archivists are reluctant to use orphan works, they may view the acquisition of those works as risky. Every acquisition requires time, money, and resources to appraise, arrange, and store. If archivists are unwilling to use orphan works due to the risk of lawsuit, they may also be unwilling to invest in the orphan works in the first place. If they are willing to take the risk, it may only be for collections they consider to be the most important. Collections that are considered to be less popular or less valuable may be rejected, which can prevent archives from having diverse holdings.

## The Solution

In order to address the problems stated above, I propose a solution in two parts. Firstly, Canada must adopt clear guidelines on what constitutes a diligent search. This process should not be done in isolation; I suggest that Canada look to existing laws from the European Union as exemplars. Directive 2012/28/EU from the European Union outlines the basics of diligent searches, and many member states have adopted their own specific search guidelines. (Directive 2012/28/Eu of the European Parliament and of the Council of 25 October 2012 on Certain Permitted Uses of Orphan Works, 2012), (Information on Diligent Searches for Orphan Works in EU Member States and EEA Countries, 2018). For example, the UK has extremely detailed guidance for diligent searches, including an extensive open-ended list of sources that should be checked (Schroff et al., 2017, p. 290). Some consider them excessively prescriptive, because the list includes hundreds of sources to check, making it too rigorous for many CHIs to complete in full (Schroff et al., 2017, p. 290). Not every country is that specific. For example, Italy's guidelines are much looser, and although the list of suggested resources to consult is much smaller, it is slow to update and not considered to be comprehensive (Schroff et al., 2017, p. 290). It would be best to strike a balance between these two extremes. Canada should also consider prioritizing sources that are freely accessible online, as those are the easiest for CHIs to access and comprehensively search (Schroff et al., 2017, p. 290).

Once the guidance for diligent searches has been created, Canada should develop a two-tiered structure for requirements. Individuals and commercial organizations will be required to perform diligent searches that are analogous to the existing standards. There will be no substantial changes for them. For CHIs, the standard for a "diligent" search would be substantially reduced in order to make the process easier and quicker. If the rightsholders cannot be identified during this reduced search, then the Copyright Board would grant CHIs permission to use those works for the purposes of education, research, preservation of cultural works, or similar. This would apply to both published and unpublished works.

The new diligent search requirements would drastically reduce the cost of rights clearance for archives, allowing them to maximize their few resources. Rights clearance of orphan works would no longer be as significant of a barrier to digitization and other dissemination projects. The extended permissions granted by the Copyright Board would reduce the risk of copyright infringement for archives and CHIs.

The new protocols would have a cascading effect. Projects that were previously considered too costly and onerous would become more viable. This is especially important for small community archives, which are more likely to be underfunded and understaffed (Froese-Stoddard, 2014, p. 54). The new guidance and requirements would simplify and clarify the search process, making it easier for volunteers, community members, or anyone will minimal experience with research and copyright to participate in archival work. Community archives often serve underrepresented groups, so simplifying and democratizing the process of digitizing collections would allow more community groups to share their voices, stories, and histories online.

While this paper primarily focuses on archives, similar benefits would be achieved by other cultural heritage institutions, including libraries and museums. In general, this new proposal would help CHIs to better carry out their mission of preserving and sharing cultural records for the good of society.

## The Arguments Against

At first glance, this solution may appear controversial to some. Below, I have presented major arguments against this solution, and my counterarguments:

### *Exploiting the System*

What prevents anyone from exploiting the new system to use any orphan work without restriction? It is important to remember that the proposed solution only applies to CHIs that want to use a work for the purposes of education, research, preservation of cultural works, or similar. It would not allow CHIs to use orphan works for commercial purposes (for example, using an orphan work for promotional use in an advertising campaign). CHIs will not be able to make money from orphan works, minimizing the incentive to exploit the new system. Similarly, the new protocols do not apply to individuals and corporations at all; they will still have to use the old rules.

Additionally, CHIs will still be required to document their search process, and provide evidence to the Copyright Board proving that a work is truly an orphan work.

Clarifying and detailing the requirements for diligent searches will make it easier to prove if applicants' searches are substandard. Penalties and fines would also be applied to applicants that were caught abusing the system, to discourage copycats.

### *Lost Income for Rightsholders*

Won't the true rightsholders be losing out on income because they aren't being found through new search requirements? As mentioned previously, the existing diligent searches do not always find the rightsholders. This can happen when an author was never attributed to a work, or when it is not known who the author transferred their rights to, for example (Ahmed & Al-Salihi, 2019, p. 422). Even if the rightsholder has been identified, they may not always be contactable. This can happen if the rightsholder lives in a different country, or if their contact information that can be found for them is inaccurate or out of date (Ahmed & Al-Salihi, 2019, p. 422). In both cases, the rightsholder would not be getting any income anyway.

Currently, there is no way to reproduce an unpublished orphan work risk of penalty. The only solution is to not use the work until it enters the public domain. However, it is difficult to calculate the term of copyright without knowing who the author is and when they died. Additionally, no new works will be able to enter the public domain until at least 2043. The proposed solution would allow CHIs to reproduce unpublished works 20 years sooner than they otherwise could.

There will always be works with unlocatable owners. Archives should not have to spend prohibitive amounts of time, money, and resources trying to identify rightsholders that cannot reasonably be found. Additionally, it benefits the public interest to make works freely available to the public as soon as possible, so that they don't continue to depreciate and lose relevance (Patry, 2011, p. 133). Does it really benefit anyone to restrict access to a work with an unknown or unlocatable author, who therefore could not receive any compensation? In the new system, diligent searches will still be required. The proposed solution aims to reduce the amount of work needed for rights clearance while still balancing the rights of the copyright holders.

### *Formalizing the Process*

Won't formalizing the diligent search process cause problems? People should be able to decide for themselves what resources they want to search through.

Formalizing the search process will be necessary for a two-tiered system, so that CHIs and others can easily tell if they are fulfilling the requirements of their tier. However, the new diligent search guidance will take into account some of the issues that other countries with formalized guidelines face. Specifically, it will prioritize resources and search methods in a way that minimizes costs and efforts, so that it meets the needs of the CHIs, while still being realistically achievable. It will prioritize sources that are freely accessible online: these are the easiest to search and access for all CHIs, regardless of their location (Schroff et al., 2017, p. 295). Prioritizing resources that are entirely digital will allow CHIs to do more comprehensive searches; they can be more confident that a work is truly orphaned if they know that they've searched through an entire resource, not just the parts of the resource that are available online (Schroff et al., 2017, p. 298). There will still be recommended resources that aren't free or digital, but there will be fewer of them, and they won't be emphasized as much. Even if the diligent search process isn't free, the costs will be dramatically reduced.

Despite the presented rebuttals to the above arguments, the presented solution is idealistic, and unlikely to become a reality in Canada. It is doubtful that the Federal Government would be able or willing to legislate such a reform, because it runs contrary to the recent change to Canadian copyright law of December 2022. That change extended the length of copyright terms by 20 years, to life plus 70 (Pugh, 2023). Longer copyright terms directly benefit the interests of large media conglomerates by further protecting the works they have so heavily invested in, so there would likely be major pushback against any attempt to relax copyright restrictions, even if only for select special cases of CHIs.

## Conclusion

To conclude, this paper has proposed changes to Canadian copyright laws about works with unlocatable owners. The new system formalizing the procedures for conducting diligent searches, and creates a two-tiered system that reduces the barriers for CHIs that wish to use a work for educational, research, cultural preservation, or similar reasons. It will be easier for archives and other cultural heritage institutions to determine if a work is truly orphaned, and makes it possible for them to use published and unpublished orphan works. Even though the proposed solution is unrealistic for the current times, it represents a possible goal for the future. Archivists must join forces and advocate for themselves on a wide variety of issues, including copyright and orphan works. When presented with the opportunity to create real change in the laws, it's critical for archivists to have a vision for what those new laws will be, and this system is one possible vision. Overall, I believe that this system will empower more archives, so that they have more choice over how to spend their few resources, and allow them to complete new projects that previously would have been out of reach.

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# Looking to the Future: Indigenous Data Sovereignty and Policy in Canada

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## Abstract

This article explores the concept of Indigenous Data Sovereignty (IDS) in Canada, examining its barriers, resources, implementation, and policy implications. While not an exhaustive list of all IDS-related policies, the article focuses on key definitions, successful implementations, support programs and resources, and outdated policies that hinder IDS and Indigenous governance practices. Through a First Nations lens, the paper highlights the importance of Indigenous People's control over data and knowledge about their communities and lands. It discusses the challenges of implementing IDS within non-Indigenous organizations and communities, including financial constraints and the influence of colonial policies. The article also addresses the impact of IDS on Indigenous self-determination, emphasizing the need for government and educational institutions to support IDS practices. Additionally, it explores the First Nations' principles of Ownership, Control, Access, and Possession (OCAP) as an example of successful IDS implementations. The paper acknowledges the role of data sovereignty in reconciliation frameworks and highlights resources such as the International Work Group for Indigenous Affairs (IWGIA) and the Global Indigenous Data Alliance (GIDA) that advocate for IDS and Indigenous self-governance. The conclusion emphasizes the ongoing need for support, collaboration, and the mobilization of UNDRIP and TRC frameworks to ensure the success of IDS and the amendment of colonial policies.

*Keywords*: Indigenous Data Sovereignty, Indigenous Peoples, policy, barriers, implementation, self-determination, reconciliation, information resources, UNDRIP, TRC

This paper examines Canadian Indigenous Data Sovereignty (IDS) barriers, resources, implementation, and various policies that impact IDS processes. This article is not an exhaustive list of every IDS-related policy that exists in Canada, as that would encompass numerous institutions that are private, academic, government, corporate, etc. However, it does address various ways to improve the ever-growing field of IDS through analysis of current research and the development of

IDS procedures, including a focus on the following topics: key IDS definitions; where and how IDS has been implemented successfully; programs and resources that exist to support IDS; and policies that are outdated and colonially-influenced, which become barriers to IDS and other Indigenous governance practices. This paper has been written through a First Nations lens as these are my own people and this is an IDS context I am capable of appropriately examining. The terms "Indigenous People" and "Indigenous Peoples" will be used throughout this paper. I use these terms to denote different perspectives of Indigenous rights and ownerships in a Canadian context: I use "Indigenous People" to refer to a common Indigenous experience, irrespective of specific culture or geography, and "Indigenous Peoples" when the distinct needs, histories, and protocols of distinct Nations or communities is relevant to the issue at hand. The capitalization of the term “People” or “Peoples” is significant when addressing Indigenous identities, rights, and cultural information: this practice is supported and used in this paper, and drawn from the work of other Indigenous scholars, such as Gregory Younging's (2018) "Elements of Indigenous Style: A Guide for Writing by and About Indigenous Peoples."

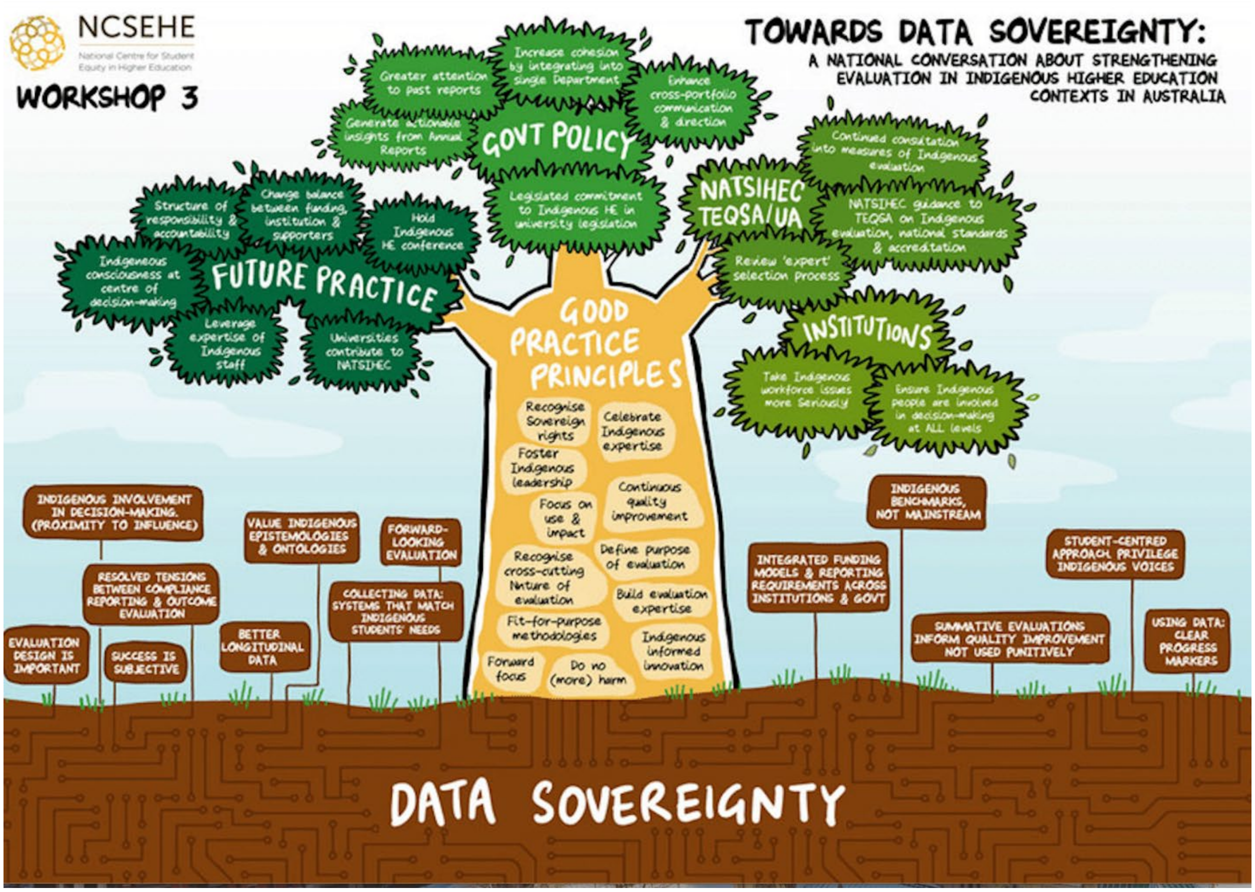
## What is Indigenous Data Sovereignty and Why is it Important?

When speaking on the topic of IDS, it is essential to define how I use and visualize the term: the definition of IDS that I use and reflect on is from Rainie et al. (2019), who state that "IDS is the right of Indigenous Peoples to control data from and about their communities and lands, articulating both individual and collective rights to data access and privacy." Rainie et al.’s (2019) definition is evident in its intent: Indigenous People should have control over and rights to the information that pertains to them. The concept of Indigenous Peoples retaining the ability to manage all of the knowledge and information they generate, as well as that which is generated about them, is a new practice. The first use of the term IDS did not occur before 2016, meaning that Indigenous information has historically not been accessible to Indigenous People (Kukutai & Taylor, 2016).

IDS seems straightforward by definition *only*. Enacting IDS procedures in non-Indigenous organizations or communities is faced with many barriers and challenges due to the fact most currently established data and knowledge management systems are created from a Westernized lens that is often incompatible with Indigenous methodologies (FNIGC, 2019). Within Indigenous communities themselves, there are major challenges to adopting IDS. One of the major barriers to implementing IDS policies include the lack of financial resources to undergo knowledge management processes, which involve purchasing expensive software and securing adequate compensation for professionals capable of maintaining IDS standards. Furthermore, remote areas may have additional difficulties with limited online access, which is a requirement for IDS work, and, as a result, may face structural issues related to technological literacy among some Indigenous Peoples (Stevens, 2008). The issues listed prior are not the sole reasons why IDS can be challenging to implement: the continuing influence of *The Indian Act*, which was initially created to assimilate Indigenous Peoples and erase their cultures, can be seen in the homogenization of information resources for Indigenous People, which were created with the assumption that all Indigenous People operate in the same way and use the same information and organizational methods. These harmful assumptions dismiss the vastness of Indigenous Peoples' cultures, identities, and uniqueness (Walter et al., 2021; Kaniki & Mphahlele, 2002).

**Figure 1**

*Toward data sovereignty: a national conversation about strengthening evaluation in Indigenous higher contexts in Australia.*




*Note.* *Created by the National Centre for Student Equity in Higher Education, available under CC-BY 4.0.*

Referring to Figure 1, a visualization of IDS practices within the government sector from the National Centre for Student Equity in Higher Education (NSCEHE, 2018), recommendations for policy development in this area are shown to be essential for a few key reasons. Firstly, Indigenous Peoples have an inherent right to self-determination and governance over their People and lands, as declared in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Secondly, in attempts at reconciliation, having IDS policies as a guiding principle can help address the power imbalance between Indigenous and non-Indigenous researchers. Using IDS methods can ensure Indigenous People are actively participating in and leading the conversations around Indigenous knowledge and information management (IWGIA, 2021). In order to develop and improve upon IDS practices more broadly within Canada, we must cultivate it not only within government, but within education and research institutions as well. This multilayered approach is the only way to improve current conditions for IDS policy.

## Where is IDS Utilized in Canada and How Does it Impact Indigenous Peoples' Self-Determination?

In Canada, Indigenous Services Canada (ISC) is the largest department within the Government of Canada that is responsible for policies and resources for Indigenous People; accordingly, their mandate is to collaborate with Indigenous People to address socio-economic issues within Indigenous communities (Government of Canada, 2018). Despite the ISC's mandate and good intentions, being hosted at the federal level dictates that they, too, are guilty of generalizing the Indigenous population, using data that are not reflective of Indigenous People in Canada as a whole and misrepresenting many communities and geographical areas (Walter et al. 2021). A noticeable and anticipated divide is created between large governing bodies like the ISC and local Indigenous communities: this dynamic is seen in the slow transition towards self-determination in Indigenous People. ISC, should they complete their mandate to help Indigenous People achieve self-determination and governance, and establish relationships to federal government, is meant to dissolve as a unit once achieved. Services and programs from ISC, and their role as an intermediary between Indigenous Nations and government, would no longer be needed when self-determination is achieved; however, this goal of having Indigenous self-governance with federal government support has been around since 1755 when the British Crown established the Indian Department. Attempts to support Indigenous governance from a federal or provincial level, whether it be via knowledge and data governance, environmental management, or educational programming for Indigenous students, needs to be relinquished to IDS professionals and their communities to implement effective governance and self-determination (Bowie, 2013). The idea of a true equal-effort partnership is not what IDS seeks; instead, it seeks support in moving to fully autonomous governance for each Indigenous community. This principle also extends past data and information governance as building blocks for social and political autonomy (Bowie, 2013).

## First Nations Ownership, Control, Access, and Possession

A popular example of IDS implementation outside the government is in the development of the First Nations principles of Ownership, Control, Access, and Possession (OCAP). OCAP is a tool for strong data governance, made available via training sessions to anyone who works with First Nations data (FNIGC, 2022). OCAP was initially created to protect the rights of Indigenous information and data, and to ensure the right of Indigenous People to partake in knowledge management in whatever way is best for their communities (FNIGC, 2022). Many institutions and researchers are engaging with OCAP training before handling First Nations data: this practice is an act of genuine reconciliation and respect. OCAP training is a form of IDS in that it teaches many non-Indigenous researchers (private researchers, university researchers, government researchers, etc.) how to properly gain permission to initiate a study with Indigenous People and how to inform these communities of ongoing research about them (Schnarch, 2004).

However, there are many challenges to OCAP training that remain, especially those related to an unfamiliarity with how to implement its principles, leading to research projects without clear goals. For example, OCAP initiatives often face suggestions to be more flexible with how principles are applied; comments about needing more "diverse" expertise for OCAP research; and many requests to change policies within OCAP for more straightforward implementation. All of these critiques wrongly suggest that OCAP teachers and Indigenous researchers require outside support and that Indigenous People do not fully understand what research processes are required to be successful (Schnarch, 2004).

When different ways of learning and researching are considered too different and complex to follow, despite resources available to learn and adapt, this becomes an inflexible model. Non-Indigenous colonial perspectives are innately in opposition to Indigenous ways of being and are expressed through opposition to initiatives like

OCAP. I would argue that this colonial perspective of prescribing universal research practices is where improvements are evidently needed since many methodologies demand assimilation to function. Ultimately, understanding and utilizing OCAP is highly advisable when handling or engaging with First Nations information or data. This work is usually done by the lead researchers, who have undertaken OCAP training, on projects that use First Nations information, to inform and guide themselves and their teams throughout the project (Mashford-Pringle & Pavagadhi, 2020). OCAP training is critical in positioning First Nations at the core of research that involves them; however, this training is only appropriate to use with First Nations information, as it does not adhere to the research needs of other Indigenous Peoples.

## Data Sovereignty and Reconciliation Frameworks

Data is regularly seen and defined as an economic and cultural resource. Laws and policies in Canada typically protect access to data. The data most governments collect, in turn, inform their policies. This is true for not only settlers but Indigenous People as well (IWGIA, 2021). The data that exists about Indigenous Peoples, as alluded to previously, tends to create an unfair assessment of Indigenous needs and an unclear picture of where policies should be focusing their efforts for improvement. In reality, due to the generalized approach for creating policies that apply to all Indigenous Peoples, government bodies create more barriers to navigate and end up working against their organizational mandates (Walter et al., 2021; IWGIA, 2021).

In Canada, we see the effects of the Truth and Reconciliation Commission (TRC) reports on Indigenous governance (including IDS) in the *Call-to-Action* number 43. This Call-to-Action advises that the federal and provincial governments change their policies regarding Indigenous self-governance to allow for the implementation of the UNDRIP reconciliation framework (Walter et al., 2021). While taking action to adhere to TRC and UNDRIP, such as revising policies and advocating for Indigenous governance, would be steps toward reconciliation, we have not seen either of these frameworks mobilized yet (Walter et al., 2021). Historically, Canadian policies have always worked against Indigenous Peoples. Residential schools largely existed due to the policies stated in the Gradual Civilization Act (1857) and the Indian Act (1985), which sought to assimilate and undermine Indigenous Peoples, causing ethnocide that carries through to today and separates Indigenous People from their cultural knowledge in favour of colonial information systems and behaviours (Hanson, Gamez, & Manuel, 2020). While not all policies enacted upon Indigenous People residing in Canada are strictly about IDS, many of them operate to effectively remove Indigenous People from their culture. As long as policies of this kind still exist and continue to dictate Indigenous roles in larger society, adopting and implementing current reconciliation frameworks is the minimum that could be done for Indigenous Peoples.

## Resources to Support Indigenous Data Sovereignty

While much more work and further governance is needed to improve policies for IDS, some positive programs, reports, principles, and groups have been created that advocate for IDS and Indigenous self-determination.

- *The International Work Group for Indigenous Affairs* (IWGIA): this organization "works to empower Indigenous Peoples through documentation, capacity development and advocacy on local, regional and international level" (IWGIA, 2021). The IWGIA is a resource that is not only concerned with Indigenous knowledge management, but it has resources for climate change rights. It provides overviews as to what types of governance exist and how to participate in governing. In addition, it provides current updates from studies and reports, and highlights a report called *The Indigenous World*. *The Indigenous World* is a collaborative document created by Indigenous Peoples of all backgrounds and areas to report on situations in different communities where Indigenous rights are threatened, and it serves as an area to document information and injustices to have shared across the globe.
- *The Global Indigenous Data Alliance* (GIDA): this organization serves to promote Indigenous control, ownership, and governance over Indigenous data. According to their website, GIDA was formed during UNDRIP meetings and workshops, and seeks to network with Indigenous information management professionals, researchers, and policymakers to advocate for IDS.
- *CARE Principles for Indigenous Data Governance*: one of GIDA's most notable achievements is the creation of CARE. The CARE Principles are as follows:

Collective Benefit, Authority to Control, Responsibility, and Ethics. With the world being in a phase of moving towards open access, it is essential to begin thinking of policies and procedures for how to maintain data integrity and primary ownership. Therefore, CARE was created (CARE Principles, 2021).

- *FAIR Principles*: the FAIR principles were not created by GIDA but complement the CARE principles superbly. The FAIR principles were first conceptualized in 2016 and are meant to help address barriers to data discovery and reusability in research. FAIR stands for Findable, Accessible, Interoperable, and Reusable (Wilkinson, Dumontier, Aalbersberg, et al., 2016). FAIR is also meant to be used in the open-access realm of information management and organization. While not explicitly founded for IDS purposes like CARE, both exist to enhance the online sharing space, which will hopefully, in turn, allow for IDS practices to continuously improve as well as enhance its accessibility.
- *Jordan's Principle*: this principle and support grew first out of a recent traumatic loss to Indigenous communities. Jordan's Principle is a child-focused principle that ensures First Nations children get the services they need when they need them. From the website Jordans Principle | First Nations Caring Society (2016):

> Jordan River Anderson, a First Nations child from Norway House Cree Nation in Manitoba. He was born with complex medical needs, Jordan spent more than two years unnecessarily in hospital, waiting to leave, while the Province of Manitoba and the federal government argued over who should pay for his at home care—care that would have been paid for immediately had Jordan not been First Nations. Jordan died in the hospital at the age of five years old, never having spent a day in a family home.

This principle brings light to, first, how policies work against Indigenous People, as before Jordan had passed, this was the reality for many others in similar positions, and second, with IDS consideration, to the fact that Indigenous health information, practices, and methods are often discredited in institutions like hospitals (Macdonald & Attaran, 2007). This principle forces the federal and provincial governments to operate with First Nations and develop information and health plans for these events. Ultimately, it represents one way in which self-determination for First Nations is beginning to form collaboratively (Government of Canada, 2020).

These initiatives are a small sample of some of the amendments and acts of reconciliation that have mobilized and supported Indigenous People and IDS efforts. Following through with the rest of UNDRIP and TRC is the next logical move in improving Indigenous relations and self-governance. However, utilizing resources like the CARE and FAIR principles in open-access instances is a simple step most researchers, practitioners, and institutions can participate in. Together, these resources provide a network of peers to improve any institution's Indigenous knowledge management and organizational and ethical guidelines, without that institution needing to be Indigenous-run and governed. These frameworks are for everyone who is reconciling.

## Future Directions

Current areas of ongoing research in IDS in Canada involve Canada's Open Government Plan, which concerns the implementation of UNDRIP and TRC at a national level and improving upon accessible training like OCAP. Canada's Open Government Plan aims to further develop the nation-to-nation relationships among Indigenous Peoples. Improving these relationships will also lead to an easier implementation of IDS and defining the parameters of sharing across nations (Rainie et al., 2019). Utilizing the CARE and FAIR principles, as well as advocating for UNDRIP's framework, GIDA has been advancing Indigenous COVID-19 data and information and informing all health research in this area (IWGIA, 2021). IWGIA (2021) has also found that one of the most significant issues in IDS is in the private sector: government and universities seem more accepting of IDS implementation and are in the early stages of enacting it, whereas private sector institutions may have policies to follow IDS and TRC recommendations but are failing to adopt and address them. Continuing to advocate for the implementation of IDS and the amendment of colonial policies in government institutions is currently the most considerable concern for the future of IDS and where individuals, such as myself, should focus our efforts. Research and guidelines on how to adopt IDS have been in progress for some time. Directing further study into specific Indigenous communities, assessing their IDS plans and information management practices, is a task that future Indigenous researchers should take on. Settlers should offer support to Indigenous People where it is requested and work to collaborate with the community rather than perpetuating the countless studies that have occurred to them and without them (FNIGC, 2019).

While there may be a limit to the extent settlers can contribute to the growing field of IDS, there are many ways to contribute without conducting major research projects, many of which are open to settlers and Indigenous researchers alike: volunteer in IDS spaces or your local Friendship Centre; donate money to non-profit organizations like IWGIA; and provide the expertise you have to Indigenous organizations when requested.

There are also opportunities to participate in OCAP training if you are researching First Nations groups or using First Nations data, even if collected in the past. It is important to be mindful of how you handle and use Indigenous data, making efforts to involve Indigenous People when able. Researchers should use FAIR and CARE principles in open-access work they may engage in. Additionally, if you or someone you are close to are in a leadership position at a research or cultural institution, note that many Review Ethics Board (REB) committees do not have Indigenous expertise or protocols, even when reviewing applications for Indigenous work. Therefore, forming relationships with local Indigenous communities, and gaining an Indigenous research representative for REB committees should be paramount to conduct fair and equitable research at your institution. Local government officials or policymakers could also consider advocating for improved IDS and Indigenous governance conditions. Alternatively, everyday citizens can write to their local council representatives directly to advocate for these changes. These options are only some of what exists in supporting Indigenous data rights but are a comprehensive starting place for those new to reconciliation work.

## Conclusion

IDS is a complex field. While relatively new, it has historical ties to colonial practices that have affected Indigenous Peoples since the settlers arrived. IDS is a way for Indigenous People to enact their rights to self-governance, to own their data and information, and to set boundaries and create guidelines for accessibility on their terms. However, despite being a powerful concept that reinforces Indigenous Peoples' right to autonomy, IDS in practice requires ongoing support and collaboration to be implemented nationally, largely due to outdated policies that are colonially-based or policies that do not address the unique needs of distinct Indigenous groups (Bowie, 2013; Stevens, 2008). If implemented with the proper care and commitment, there is potential for IDS procedures to allow all Nations to address their unique information and data needs and avoid having their cultures and information perceived as homogenized. That said, ultimately, for IDS to be successful and for policies to be amended in a supportive fashion, the UNDRIP and TRC frameworks, which advocate for Indigenous governance, must be mobilized and adopted at the federal government level.

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# Seeds of Sustainability: Roles and Practices of Seed Libraries

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## Abstract
Seed libraries are becoming an increasingly common feature within public and academic libraries in North America, but the formal literature on this topic remains limited. This review explores the context of seed libraries, including the ecological and legal underpinnings of seed saving; community outreach in libraries through the 'library of things'; food security and sustainability initiatives; and the importance of community partnerships to the success of seed libraries. Common seed library practices within libraries are also illustrated.

*Keywords*: seed library, seed saving, community outreach, sustainability, food security, library of things

Seed libraries have become a feature of many public libraries and some academic libraries across North America in the past decade. The seed library has a simple goal: to provide community members with access, free of charge, to seeds they can take home and grow. Ideally, users will then return a sample of seeds from their harvest at the end of the season (Ingalls, 2021, p. 98). Seed saving and seed exchanges are a long-standing practice in agricultural communities (Conner, 2014, p. 5; Tanner and Goodman, 2017, p. 62), but the idea of providing seeds as a library resource is more recent. The first seed library in North America is considered to be the Bay Area Seed Interchange Library at Berkeley, opened in 1999 (Peekhaus, 2018, p. 271). Richmond Public Library in California was one instrumental figure in popularizing the concept among public libraries—their seed library was established in 2010

(Landgraf, 2015, p. 58), along with an extensive selection of online how-to resources at www.richmondgrowsseeds.org, which are commonly referenced in seed library literature (Landgraf, 2015, p. 59, Peekhaus, 2018, p. 281, Tanner and Goodman, 2017, p. 70). In my own local context of western Canada, seed libraries are still a relatively new addition to many public and academic library spaces—seed libraries were piloted at Edmonton Public Library in 2022 (Edmonton Public Library, 2023) and Red Deer Public Library in spring 2023 (Whiting, 2023). Some more established examples are Lifecycles' Victoria Seed Library, hosted at Greater Victoria Public Library since 2014 (Arrais, 2014), and UBC's seed libraries in Vancouver, established in 2017 (Blackwell, 2019).

There are many potential benefits to providing seeds in a library space—the ALA's core values for libraries include access, education & lifelong learning, social responsibility, and sustainability (ALA Council, 2019), all of which are embodied by the seed library. Seed libraries can be a resource for education and community outreach (Ingalls, 2021, p. 99). They can contribute to providing more equitable access to local and healthy food, and supporting biodiversity and sustainable gardening practices (Peekhaus, 2018, p. 273). The seed library also aligns with library trends towards an expanded role as a hub for community resources (Ingalls, 2021, p. 99; Peekhaus, 2018, p. 272).

Much of the literature on seed libraries is practical in nature, often in the form of informal articles regarding the establishment of individual seed libraries (Peekhaus, 2018, p. 272). Much of the widely available literature comes from the United States, and few formal studies exist that synthesize data about multiple seed libraries. While seed libraries are as varied as their communities, this review seeks to provide a broad context for the seed library as it exists within public and academic libraries, as a basis for deeper explorations of the trends, desired outcomes, and challenges that surround seed library projects. Further academic research into the role of the seed library could help to establish best practices, particularly in Canadian and other non-U.S. legal and climatic contexts, and identify the most effective and sustainable ways to integrate this resource into the library of the future.

## What is Seed Saving?

A seed library may simply share seeds donated or purchased from commercial or farm partners, but the aim is frequently to encourage a practice of seed saving, where those who succeed in growing the seeds take from the library preserve and return a sample of seeds that can be loaned out to other patrons. In some cases modern seeds cannot be saved—hybrid varieties do not return seeds that grow the same variety that was planted, and an increasing number of seeds are protected by intellectual property law and cannot be redistributed (Volkening, 2018, pp. 107-108). The increasing control of agricultural material by centralized companies has placed limitations on the genetic diversity of the most commonly grown food crops by increasing the amount of plant genetic materials that are protected under intellectual property law (pp. 106-107). Major players like Bayer-Monsanto, Syngenta and Dupont-Pioneer have absorbed many smaller seed companies in recent decades, and genetic diversity of crops being grown in the United States has declined steadily since the 1970s (Schapiro, 2017, pp. 25-26). The shift to purchasing seed rather than saving it year to year for many farmers has diminished the number of varieties being grown of many crops (Wilson, 2009, p. 3), meaning adaptation to the varying climatic conditions of different regions is often achieved through the application of agricultural chemicals rather than through the use of local varieties that have been genetically adapted over time (Schapiro, 2017, pp. 25-26). Reduced crop variety can increase vulnerability to pests and disease, and when diverse genetic material is lost, fewer options are available to develop new varieties to suit changing climactic conditions (Wilson, 2009, pp. 3-4). Global efforts are in place to preserve the genetic diversity of food crops in order to ensure future generations have options for maintaining food security—the Svalbard Global Seed Vault holds over a million seed varieties from around the world, and is intended as a "backup" for the hundreds of other genebanks that exist worldwide (Crop Trust, 2023).

However, localized seed exchanges still have a unique role to play in preserving and developing individual communities' agricultural stock, providing a level of participation and continuous development that formal genebanks do not. Phillips (2013) provides a more expansive definition of the seed saving process, calling it "a shorthand term for a complex set of practices including the planting, tending, harvesting, storing, eating and replanting of seeds (and other propagating material), as well as the attendant processes of exchanging and knowledge-building" (p. 3). Each step of the process, from planting to harvest, is an opportunity to gather knowledge. Seed saving is most often practiced with "heirloom" varieties of vegetables and fruits, defined as open-pollinated plants that have a history of being saved by an individual or community and can continue to be grown "true to type" from seed (Volkening, 2018, p. 108). These seeds carry stories, both culturally and genetically. Conner (2014) emphasizes that "whoever owns the seeds controls the food supply" (p. 17); seed saving is a way communities can reclaim control of what types of food are available to them. Community seed saving projects like seed libraries both reduce dependence on commercial suppliers, and allow seed growers to become familiar with their community's unique climate benefits and challenges (Schapiro, 2017, p. 26). Phillips (2013) calls seed saving an "ecological, economic, cultural and survival necessity" (p. 4). She emphasizes a holistic view of sustainable living, where activities like seed-saving encourage closer attention to nature, openness to unpredictability, and building relationships with one's local environment for the good of all living things, not only humans.

One major seed saving endeavour is the Seed Savers Exchange (SSE), a non-profit that aims to conserve heirloom seeds and plants in the United States (Volkening, 2018, p. 106). While they contribute to genebanks, including Svalbard (p. 110), they also emphasize that conservation of seed stock is an active process. The core collection is preserved professionally, but "participatory preservation" is also enacted through community distribution networks, including member to member sharing and donations of seeds and supplies to community groups (pp. 109-112). These processes allow gardeners in various climates to collect information about how seed varieties fare in different environments, and to create new localized adaptations by resaving seeds from these varieties over many years (p. 109). By saving seeds that survive the potentially harsh conditions of a particular growing season, a process of selection is enacted that passes the most resilient genetic traits to the next year's crop (Schapiro, 2017, p. 27) — a process that does not occur when genetically identical hybrid or patented seeds are purchased each year.

Some legal concerns exist, both for large seed saving organizations or small seed libraries. In addition to patented seeds being illegal to distribute, some states have laws that prohibit re-distribution of seeds that have not been quality controlled (Tanner and Goodman, 2017, pp. 74-75). In Pennsylvania and Maryland, there were cases where seed libraries were restricted for fears that the distribution of unregistered seed could negatively impact commercial agriculture by circumventing existing quality control regulations (Musser, 2014, p. 14). However, Musser rejects the idea that seeds cannot be safe and valuable without government intervention, and emphasizes the community value of seed exchanges. As a solution, he suggests that seed libraries enact their own less formal quality control, by gathering as much detail about returned seeds as possible, and not distributing old or unknown seeds (p. 15). The legal frameworks have since begun to shift as awareness of and interest in seed sharing has grown—Schapiro (2017) describes a high level of public interest in the aforementioned 2014 Pennsylvania case, which led to exemptions to seed-registration laws being established in several states (p. 27).

In Canada there is less local variation to these laws. Ingalls (2021) states that the federal Seeds Act protects the right to exchange seeds on a small scale; while patented seeds can't be redistributed, the exchange of heirloom varieties should not face barriers in a Canadian context (pp. 100-101). Further details on the legal landscape around seeds in Canada are discussed in a policy review by the Bauta Family Initiative for Canadian Seed Security (BFICSS, 2014)—they list the Seeds Act, Organic Products Regulations, intellectual property regulations and the International Treaty on Plant Genetic Resources for Food and Agriculture as relevant legal frameworks (p. 1). The first two policies face challenges in balancing quality assurance for crops and organic products with diversity of both plants themselves and agricultural practices (pp. 4-5). The treaty is an international document meant to protect farmers' rights to save seed and to promote locally adapted seed varieties and other ecologically sustainable practices (p. 10). While these policies aren't without tensions, and current versions of these regulations should be reviewed by seed librarians, overall Canada seems to be amenable to the seed library.

## The Role of Seeds in the Library

Seeds may not be the first thing patrons think of when they visit a local library, but seed libraries are part of a larger trend of expanding what the library can be. Collections are becoming less book-centric, and community outreach is growing. Incorporating objects beyond information resources in the library isn't as new as it might seem; Robinson and Shedd (2017) describe the 'library of things' concept as a challenge to the traditional role of the library, but also a reinforcement of the library's role as a community resource (p. 15). Curriculum materials centres in schools and teachers' colleges and toy collections in public libraries became popular by the mid-20th century, as ideas about childhood education methods expanded (pp. 16-18, 19-20). Tool libraries, though typically run by city services or non-profits rather than libraries, became popular in the 1970s and are gaining momentum again in the present day (p. 18). And as resources for information creation, not just information consumption, have become expected, the library of things has become more technological, such as by providing equipment and software for digital multimedia projects in many school and academic libraries starting in the 1990s and 2000s (p. 22). Collections of things, from cameras to craft supplies to cake pans, are common in many libraries now, and develop in response to community interests and needs (pp. 22-23). This concept is also closely linked to the increasing integration of 'makerspaces' into public, academic and school libraries, which provide a wide range of both digital and physical tools for creative projects (Kim et. al, 2022, p. 1). The impetus of these spaces is not only to provide access to resources, but also to provide hands-on learning opportunities and a sense of community (p. 2). Seed libraries manifest these themes as both a tangible resource for patrons, and an opportunity for experiential learning.

Several broad motivations exist for providing gardening-related collections and programming in particular, including serving the needs of agricultural communities, supporting food security, and promoting environmental sustainability. Singh et al. (2022) discuss the importance of agriculture-based community engagement for rural public libraries. Half of U.S. public libraries serve communities of less than 2,500, and while they often face challenges like lack of funding and staff, they can also be highly valuable as resource hubs in communities where services are limited—but only if these resources are relevant and responsive to the needs of their populations (pp. 405-406). Survey responses from 49 libraries in the southern U.S. regarding their community service initiatives identified agriculture-related programs ranging from seed libraries, gardening programs, and farmers' markets to traditional information services such as agricultural information resources and workshops on agricultural topics (pp. 407-408). Community partnerships were essential to the success of these initiatives, whether with other community organizations, continuing education departments, schools, state offices, farmers or local business owners (p. 408). While the programs discussed were agriculture-based in order to connect with the existing interests and resources of their communities, the "domains" of community service were found to overlap: agricultural initiatives like seed libraries also served various social welfare, economic, educational, environmental and health needs (pp. 411-412).

D'Arpa et al. (2021) explore the library's ability to promote public health, specifically through food gardening initiatives, which are framed as an avenue towards food justice (equitable access to healthy food) as well as an extension of libraries' role in promoting health literacy (pp. 42-44). The initiatives discussed all involved the use of library property as garden space and redistributing the produce to members of the community. Some were linked to youth programming, while others focussed more on community-building for adults. Seed libraries and seed exchanges were also mentioned as related programming (pp. 46-51). Multifaceted programming that combines related areas like seed libraries, garden space, collections of gardening or cooking tools, teaching kitchens, and farmers' markets, has potential to expand the reach and success of a seed library. Programs like these can also contribute to the library's lifelong learning and community-building goals (pp. 52-54).

Environmental issues are another growing priority of many communities. Embree and Gilman (2020) explore how the academic library can function as a ”sustainability hub” for a university campus (p. 28). This article is a case study in how the authors are working to turn their university's science library into a centralized physical and virtual hub for sustainability initiatives, that can help support a culture of sustainability across the campus (p. 29). This has included providing meeting spaces for sustainability-related clubs, hosting events such as speaker panels, and creating exhibitions, LibGuides and collections related to sustainability. Projects still in development include a pollinator garden, seed-saving workshops, and partnerships that emphasize social aspects of sustainability such as food security and impacts of environmental issues on diverse groups (pp. 31-39). Again, a key takeaway is that the seed library might function best, not as a stand-alone special project, but as part of a suite of initiatives that help to meet the increasingly essential goal of building climate resilience. A flexible and holistic approach to seed library projects that connects to existing initiatives and partnerships can allow libraries to best serve their community's particular needs and interests.

## Seed Library Practices

The literature above indicates several motivations and areas of programming within libraries that may lead to the implementation of a seed library project, but what do library-embedded seed libraries look like in practice? Peekhaus's (2018) study is one of the more formal efforts to compile information on seed library practices, based on interviews from 10 purposively-sampled libraries across the US about their seed library programs (p. 273). He found that community engagement was essential to success, especially partnerships with other community groups to share knowledge and cross-promote one another (p. 274). Many seed libraries were established with start-up grants to acquire initial stock and supplies, print educational and promotional materials, and host opening events and workshops, but ongoing costs were suggested to be minimal (p. 274-275). Seed libraries that tracked their inventory found 'return' rates of 30-40% (p. 280), and all respondents purchased or received donations from seed companies to maintain their stock (p. 277). Often an adult services librarian was responsible for the seed library, with volunteer assistance. Labour peaked seasonally with spring re-stocking (p. 276). Inventory tracking and checkout processes ranged from barcoding each package and tracking circulation through the library's computer system, to using a paper sign-out sheet on the honour system (p. 278). Accompanying resources included workshops on gardening and seed-saving, as well as print resources on these topics; encouraging a spirit of experimentation was preferred over a strict emphasis on returning seeds (p. 281). The seed libraries were often found to be effective in bringing in new library patrons; they also had the potential to function as an avenue for empowerment and participation in community life, and to contribute to the idea of the library as a 'commons' for resource and knowledge sharing (pp. 281-283).

These processes and patterns of development that Peekhaus notes appear across many other overviews of seed libraries, with the main area of variation being the types of partnerships and related programming, which vary depending on each library's community and resources. For example, Landgraf (2015) highlights the educational potential of the seed library, including support for youth science curriculums, and building connections to existing library collections on topics like gardening (p. 59). Community partnerships are also described, including supplying seeds for community gardens for refugees and at a senior's centre, and sharing expertise from local gardening groups through seed library programming (p. 62). Conner (2014) suggests seed libraries in public libraries could be linked to makerspaces, garden projects, and even book clubs (pp. 35-39). Singh et al. (2022) describe seed libraries that took their cues from outside initiatives—one started by partnering with a women's agriculture group that was already exchanging seeds; another saw an opportunity when a local business selling seeds closed. They also highlight the role of seed libraries in engaging library non-users—seed libraries brought new traffic into library spaces, garnered community support, and created recurring relationships with the library (p. 409-410). In many cases a seed library operating in partnership with an existing community group can create a symbiotic relationship—Tanner and Goodman (2017) note that even if the seed library is operated primarily by outside volunteers, the library's resources for marketing, tracking use, and educating patrons are highly valuable (pp. 64, 66). Alger et al.'s (2014) case study provides another example of this phenomenon, detailing how a seed library already established by a local food co-op was brought into a public library, which connected expert volunteers and an existing collection with the library's wider audience and cataloging resources.

Case studies on the establishment of individual seed libraries can provide more minute details on how seed libraries are established and operated, and are often written with prospective seed librarians in mind. Anderson (2021) details the steps taken to open a “seed exchange” in the Chattanooga Public Library (p. 61). These included identifying donors in the local farm community to build their seed stock, repurposing an old card catalogue for patrons to browse the seeds in, and establishing a cataloguing and barcoding scheme integrated with the library's computer system so that popularity of different types of seeds could be tracked. Weak (2014) describes a more no-frills approach to establishing the Mountain View Public Library's seed library, involving a Tupperware container of small seed packets and a handwritten sign-out sheet. The support of volunteers in tasks like stocking is noted, as is the importance of programming in building interest — in this case examples include talks from another seed librarian, a garden blogger and master gardeners, as well as partnerships with a conservation group and schools.

From Canada, the most detailed study is Ingalls' (2021) description of the process of developing a seed library at McGill University. The academic library context provides unique opportunities, such as collaborating with student community gardens and sustainability clubs, linking the seed library to course projects and academic research, and supporting student wellness and mental health (p. 99). Partnerships with student groups were fruitful for outreach, including creating workshops on related skills like gardening and canning, and establishing a partnership for seed sharing with the permaculture club (p. 105). The university library system's resources were also utilized—in this case, modifying the library catalogue to accommodate seed lending was not possible, but a web record of seed holdings was created, including a seed request form for delivery of seeds to other McGill campuses (pp. 103-104). Ingalls saw a high level of interest in the project and noted supply and demand as a key challenge, as the library had quickly run out of seed stock when it first opened (p. 106). Soliciting donations from as many farm and seed company sources as possible, maintaining awareness of the legal context, and establishing clear policies for borrowing and inventory tracking up front, were other key pieces of advice (p. 109).

While these are only a few examples of seed library descriptions, these and other case studies can provide useful insights into the wide range of methods and focuses seed libraries can take on. For the prospective seed librarian, inspiration and informal advice is bountiful—however, more comprehensive analyses of the effectiveness, sustainability and outcomes of various methods are harder to find.

## Conclusion

The literature described here provides a snapshot of some of the many ways seed libraries take shape in library spaces, and their potential as information resources, educational and community-building tools, and avenues for supporting food security and sustainability. While case studies and web resources are plentiful and provide guidance on common practices for establishing and maintaining seed libraries, data is lacking on the long-term sustainability of these projects, and very little formal research exists that synthesizes information on the practices of seed libraries, particularly in the Canadian context. Taking cues from Peekhaus' (2018) and Singh et al.'s (2022) studies, further research is needed that compiles and compares the experiences of many libraries in operating seed library programs. Exploratory studies that identify trends in seed library practices, challenges and outcomes could help to guide seed library practice and identify links between seed libraries and other library programming, partnerships and goals, in order to solidify the role of the seed library as a tool for outreach, education and sustainability in the library of the future.

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# Chat Reference: A Review of Question Types and Its Implication to Staffing and Communication Strategies

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## Abstract

Chat reference services have become increasingly important in libraries providing remote reference assistance to users. The success of these services depends on several factors, including staffing and training. This literature review examines the relationship between question types, the staffing model, and the areas of improvement related to these issues. It draws on various sources, including qualitative and quantitative studies on chat transcripts from different types of academic libraries. Regarding question types, chat reference services are best suited to straightforward and factual queries, while more complex or subjective questions may require other assistance. Chat reference providers should also know the medium's limitations, such as difficulties displaying images or lengthy texts. In order to provide high-quality service, chat reference providers should ensure that staff have the necessary skills and knowledge, as well as appropriate levels of support and supervision. The review explores the advantages and disadvantages of student staffing in particular. Clear and effective communication strategies are also essential, including managing user expectations, providing timely responses, and following up as needed. Overall, this review provides a comprehensive overview of the literature around best practices for chat reference service providers, highlighting the importance of careful planning, implementation, and ongoing assessment.

*Keywords*: chat reference, chat GPT, academic librarianship, academic libraries, librarians

Ever since chat reference became a component of library services at the beginning of the twenty-first century (Ford, 2002), libraries have become aware of the variety of challenges that have risen alongside the benefits of the service. Digital reference, sometimes known as "chat reference," is the term used to describe reference services that are requested and delivered online, typically by e-mail, instant messaging ("chat"), or Web-based submission forms and are usually handled by chat reference librarians (ODLIS, 2022). The emergence of chatbots has prompted an interest in the role and effectiveness of chatbot services in libraries (Bilal & Chu, 2021). While chatbots can offer a potentially cost-effective and scalable solution to providing reference assistance, the literature shows many users value a more human touch in chat reference interactions. Even without the nonverbal components of face-to-face conversation, the chat medium is rich in context (Matteson, Salamon, & Brewster, 2011).

This literature review explores the current research on chat reference in academic libraries with a focus on best practices for chat reference staffing in different academic settings and question types. Literature discussing the difficulties in communication and solutions follows, providing suggestions for training content. Finally, the review covers common themes among chat reference providers and users in academic libraries.

## Method

A background search was performed to identify the scope of the topic. Reitz's *The Online Dictionary for Library & Information Science* (ODLIS, 2022), the *Encyclopedia of Library and Information Sciences* (McDonald & Levine-Clark, 2017) and *The Virtual Reference Handbook: Interview and Information Delivery Techniques for the Chat and E-mail Environments* (Kovacs, 2007) provide the definitions terminologies for the discussion of chat reference. These resources also identified the three key issues in chat reference: staffing, question types and communication.

Basic keyword search and known-item search were used to generate relevant journal articles from Library Literature & Information Science Full Text (H.W. Wilson) (LibLit) and Library and Information Science Abstracts (LISTA). To refine the search results and structure the search, synonyms and alternative expressions are found for each concept in the LISTA thesaurus and combined with OR to create a search block. Each block went through an individual search (Appendix A).

Three combined block searches were conducted by combining the search histories of "chat reference" and "academic libraries" with the search history of "staffing", “question”, and “communication” using AND in the advanced search (Appendix B). Searches were limited to peer-reviewed publications of the past 20 years written in English.

## Analyzing Question Types

Categorizing the questions asked by patrons during the chat reference can provide information around patrons’ needs and the major tasks of chat reference operators. Currently, there is no standardized categorization method for these questions, but the literature shows two common categorization methods, complexity and professional expertise.

### Complexity

Complexity is shown in the types of information requested. Meert-Williston & Sandieson (2019) classified questions by complexity to show the implications on staffing and while the Phelps (2017) focussed on the impact of proactive chat. Other earlier studies examined the question asked in reference transactions as a starting point. Katz (2002) identified four primary library reference transaction question types: directional, ready reference, specific search, and research. Ware, Fennewald, Moyo and Probst (2002) further classified questions into instructional and technical. Marsteller and Mizzy (2003) added policy or procedural into the category of directional questions and expanded a new category of available items.

Arnold and Kaske (2005) separated policy and procedural questions from directional questions and added a new category, holdings. Clanton, Stags, and Williams added training or demos and extended reference. Studies by Bravender, Lyon and Molaro (2011) and Rawson, Davis, Harding and Miller (2013) followed suit. Armann-Keown, Cooke, and Matheson (2015) classified questions by type of assistance, for example, search strategy, services, copyright, contact information and collections.

### Level of Professional Expertise

The READ Scale (Gerlich, Karr and Berard, 2010; Ward and Phetteplace, 2012) defines six levels of expertise, with levels 1-2 the least skill needed, level 3 requires some time and effort for instruction, specific reference and searching, level 4-6 requires complex, cooperative, interdisciplinary searching and referencing skills. Level 1-2 questions included directional, ready reference and borrower services. Level 3 questions included specific search, instructional and technical questions. Level 4-6 questions included research and extended reference. These categories are not mutually exclusive; for example, questions related to policies and procedures can be ready reference questions or, specifically, borrowing policies under borrow services.

Maloney and Kemp (2015) classified the difficulty level by the role of the chat reference operators: non-professional or student, generalist and librarian level. "Non-professional" questions are directional, technical and policy questions; "generalist" questions are simple reference questions involving searching, ready reference and citations; "librarian" questions involve subject expertise and copyright issues. Bishop (2011) defines location-based questions as appropriate for lower-levels of staff expertise when comparing the service quality of independent and consortium chat reference services (Bishop 2012, 2013). Blizzard's (2018) categorization helps summarise the type of information and assistances chat reference operators offer, which are strong research skills and a deep understanding of library services and policies. There are four main categories: reference, borrower services, directional and technology help and each with subcategories. However, these categories highlight the question types instead of the complexity of the questions.

Questions can vary from one academic library to another. Future studies should consider revising and summarizing the questions recorded in previous studies. For instance, examining how question types and complexity influence other variables, such as staffing and communication strategies (Appendix C).

## Frequency of Types of Questions Asked

While recognizing that sample sizes, the size of each academic library, and the duration of the studies affects the analysis of the frequency of question types being asked, an overview of the most asked question types over the past 20 years still gives a general sense of how chat reference services were used and can be used in academic libraries. The literature shows that reference operators would more likely encounter levels 1-2 and 3 questions and these questions are more likely to be non-reference questions.

On average, 35% of the questions were location-based (Berry et al., 2003; Bishop, 2011, 2012; Bishop & Torrence, 2008; Coté, Kochkina, & Mawhinney, 2016; Hyde & Tucker-Raymond, 2006; Kwon, 2007). Marsteller (2003) found that technical problems were the most asked questions (32%), while the second highest was directional or policy questions representing 17% at Carnegie Mellon University's academic libraries. Arnold and Kaske (2005) found that most questions were policy-related (41%) at the academic libraries of the University of Maryland (UM) College Park. DeGroote, Dorsch, and Collard (2005), Goda and Bishop (2008), and Rourke and Lupien (2010) also showed that policy questions were asked most frequently.

Research conducted at Penn State University in 2002 (Ware, Fennewald, Moyo, and Probst) showed that the most asked questions were instructional (39%), while 32.5% were research related. Findings by Morais and Sampson (2010) (64%) at the Georgetown University Law Library and by Bravender, Lyon, and Molaro (2011) (35.5%) at Grand Valley State University Libraries showed that the most frequently asked questions were ready reference, instructional or extended reference, essentially level 2-3 questions. However, Cabaniss (2015) found that only 23.3% were reference questions. Rawson, Davis, Harding and Miller (2013) found that the most asked question type was specific search (52%), which is supported by Maloney and Kemp's (2015) findings (44%) in terms of the level of expertise. Nearly half of the level 3 and 4 questions were related to topic exploration (Maloney & Kemp, 2015). Mungin (2017) found that reference accounted for the most asked question type (39.6%). While Meert-Williston and Sandieson (2019) showed that service questions were most frequently asked (51%); of these 67% were informational and 3% were directional. 25% of all questions were reference-related (ready reference 67%; in-depth 16%; instructional 6%). Skaggs (2020) found that research was the most-asked question type (37%) at West Chester University. These results show that chat reference operators should be mindful of policy, reference, and research questions, which requires higher skill levels for searching techniques.

# Staffing Models

## Independent and Collaborative services

In Walker's survey (2007), 39% of the library staff stated that recruiting and retaining staff to operate chat reference services takes much work. Staffing issues were a crucial reason for chat reference services to be discontinued. Several studies have argued that relying on professional librarians alone to staff a reference desk or chat service is cost-ineffective (Bracke et al., 2007; Ryan, 2008). Bravender et al. (2011) found that in a medium-sized academic institution, answering a library chat question can cost between $37 and $439 USD. The literature shows two ways for libraries to make chat reference cost-effective: consortia arrangements (Coffman & Arret, 2004b; Peters, 2002; Powers, Nolen, Zhang, Xu, & Peyton, 2010) and through tiered staffing model that involves students (Brenza et al., 2015; Stevens, 2013).

A collaborative virtual reference service or consortium, such as the Ontario Council of University Libraries (OCUL), provides services by forming a virtual network of libraries with the collective local knowledge and collections. At the same time, an independent chat service provides services within a single location (Shaw & Spink, 2009). There are disadvantages to using a consortium. Several studies on consortium service reported frequent referrals by consortium staff (Hyde & Tucker-Raymond, 2006; Bishop, 2011; Bishop, Sachs-Silveira, & Avet, 2011). There are also difficulties in answering real-time and local questions (Kwon, 2007), affecting the quality of service the consortium staff provides (Meert & Given, 2009). Barrett & Pagotto (2019) found there was a correlation between institution mismatch and user dissatisfaction, an area that needs more research.

## Student staffing

Around 39% of academic libraries hired paraprofessional staff, such as part-time workers, undergraduate students, or library school students to manage consortia chat reference services (Devine, Bounds Paladino, & Davis, 2011). Meert-Williston and Sandieson (2019) suggested that “for a large institution with a large number of staff with varying levels of expertise, having staff with a mid-level of expertise may prove to be the most effective and efficient way to staff the service” (p. 58). However, they did not define what “mid-level” of expertise is and why it is the most beneficial. Academic libraries tend to use this tiered staffing model; library assistants send search strategy-related questions to a second-level librarian and specific subject-related questions to a third-level specialist (Strong, 2006).

Barrett & Greenberg (2018) believe that with training in communication, in-depth reference interview techniques and ongoing evaluation, student staff can provide high service quality for chat reference. Student staff received positive feedback from chat reference users regarding satisfaction with approachability and helpfulness, comparable to librarians' performance (Stevens, 2013; Faix, 2014). Lux and Rich (2016) found that student staff offered quality assistance in 88% of Bowling Green State University chat reference transactions. Less user dissatisfaction rate is found in a consortium staffed by MLIS graduate students (Barrett & Pagotto, 2019).

One study found that student staff members were good at providing step by step instructions and explaining the process (Keyes & Dworak, 2017). Canuel et al. (2019) also showed that 66% of the time graduate student staff used instructional methods, such as step-by-step guides to find information needed (modelling), resource and search strategy suggestions, and library instruction on research concepts, when providing reference services. However, Wharton and Mann (2020) revealed that the confidence rate of non-librarian staff has decreased; only 38% said they were confident in providing chat reference services. Another study found that student staff answered fewer research questions (35%) than librarians (43%); (Baumgart, Carrillo & Schmidli, 2016). This suggests that student staff are equipped with the instruction techniques to answer the questions that require higher research skills, but confidence may be an issue that hinders student staff from answering more research questions.

## Communication Issues

Technical limitations and reliance on text-based communication can lead to misunderstandings and require clarification and restatement to ensure that the librarian and patron are on the same page during chat reference. The chat duration can be short; Watson (2023) found that most chat interactions last around ten minutes. Few simple questions and answers come into chat simultaneously, requiring both chat reference operators and users to address the related topics clearly (Zemel, 2017). This ability is hampered by chat's technical limitations, where users can only use alternate lines to reply to messages individually (Fagan & Desai, 2013).

In contrast, the question type analysis has shown that the complexity of questions can go as high as level 4, which requires time and effort to instruct and research specific topics. Shaw and Spink (2009) also pointed out that the questions received from the chat often need to be more clearly defined and require more time for interactions between the chat reference operators and patrons before reaching a complete answer, which results in prolonged conversations. Answer accuracy is correlated with overall service time and the gaps between chat reference operators' chat responses (Matteson, Salamon & Brewster, 2011).

At the same time, students' frustration and struggle to find adequate sources are recognized by librarians (Jacoby et al., 2016). RUSA (2013) suggests librarians should "acknowledge user questions promptly" (2.3.1) and "respond in a timely fashion to remote queries" (1.3.2), but the acceptable waiting time is unknown. It is suggested that chat reference operators should check in with users' patience (Fagan & Desai, 2013). How chat reference operators effectively manage users' expectations is not extensively covered in past literature and is an area that requires more study.

## Student Staff Communication Concerns

The literature identifies two communication-related improvements for student staff providing chat reference: courtesy and information literacy. The need for courtesy appears in much of the literature. Keye and Dworak (2017) found there was a significant association between courtesy and different types of chat reference operators, with students being the least courteous (73%) among staff (88%) and librarians (76%). These results reflect Lux and Rich's (2016) research which showed that student desk assistants offered a greeting only 50% of the time, compared to 66% for librarians. Indeed, some chat transactions may need to be longer to express greetings appropriately. It is also reported that student staff communicated in an overly informal style (Barrett & Greenberg, 2018; Langan, 2012). Although some research concluded that the quality of service was not impacted by inadequate greetings (Zhou, Love, Norwood, and Massia, 2006), informal chat reference operators were perceived as young and inexperienced (Waugh, 2013). Hence, maintaining formal language can help to students preserve a professional image in chat references.

## Quality of Chat Reference

Three critical components of improving the quality of chat references for all levels of staff have been identified in the literature: formality, instruction, and the reference interview. Student library staff must improve their information literacy skills to provide and locate accurate user resources. Keyes and Dworak (2017) found that student staff have the lowest rate of providing sources among staff and librarians. Student staff are also less likely to conduct searches for the users (71%) than regular staff (90%) and librarians (81%). Student staff should also be trained to conduct complete reference interviews (Barrett & Greenberg, 2018; Langan, 2012). The literature suggests that training in the future should raise the awareness of customer service skills, search strategies and reference interview techniques to ensure student staff members can provide the information needed successfully.

Lux and Rich (2016) found that when referrals were needed, student staff only did so 53% of the time, contrasting with librarians who did so 80% of the time. Moreover, they also found that in 47% of the cases where referrals were needed, student assistants referred the case inappropriately or did not refer the case at all. It is suggested that librarians, who have a higher level of expertise, should respond to chat reference questions first when both a librarian and student assistant are on duty (Baumgart, Carrillo, & Schmidli, 2016).

While confidence could be one factor affecting student library staff's perception of chat reference, training could help non-librarian staff triage complex questions. Moreover, the desire for feedback on the performance in chat reference from the coordinators was reflected in Wharton and Mann's study (2020). Additionally, “secret shopper" or transcript review would also provide good practice opportunities (Luo, 2009).

### Quality Concerns for Other Staff and Librarians

Research by Logan, Barrett and Pagotto (2019) showed that closing behaviours such as satisfaction checks and invitations to return are associated with less dissatisfaction among patrons. However, the chat transcript analysis by Keyes and Dworak (2017) showed that chat reference operators included a sign-off only 56% of the time. Lux and Rich (2016) also reflected the everyday use of closing-off behaviors. The possible choices were “No closing,” “Basic closing,” “Closing with confirmation that question has been answered and/or with offer to return if needed,” and “Chat ended abruptly; no chance to offer closing.” Librarians (15%) were slightly more likely than students (11%) not to offer a closing; librarians who did offer a closing were also more likely (31%) to invite invitation users to come back and seek confirmation that they addressed users’ questions.

## Formality

Formality consists of several elements: language, professional tone, actions, and communication style. When typos and poor grammar characterize the use of language, it leads to misunderstandings, which harm librarians' credibility and undermines user trust (Fagan & Desai, 2013; Koshik & Okazawa, 2012; Waugh, 2013). In contrast, emoticons -absent of these language problems- exaggerated typographical elements, and abbreviations, can, according to Fagan and Desei (2013), offer an informal, professional, and welcoming tone. Moreover, if a librarian's actions convey a professional demeanour and an interest in or empathy for a patron, it elicits increases patron satisfaction (Logan & Barrett, 2018; Logan, Barrett & Pagotto, 2019). User’s opinions of the conversation style and the level of service satisfaction may be positively impacted by a more casual approach; in some studies unsatisfied faculty members preferred an informal approach (Logan & Barrett, 2018; Logan, Barrett & Pagotto, 2019). For example, librarians can start with a friendly and empathic conversation to ease faculty members’ anxiety over their research obstacles.

This informality may lessen some of the dangers to a librarian's reputation that come with giving advice. For instance, face-saving techniques for librarians and clients include fostering a supportive and empathetic relationship (Owens, 2013). The concept of “face” means “the respectability and/or deference which a person can claim for himself from others, by virtue of the relative position he occupies in his social network and the degree to which he is judged to have functioned adequately in that position as well as acceptably in his general conduct” (Ho, 1976, p. 883; after Hu, 1944). “Face” is “saved” when an individual “satisf[ies]” the minimum requirements society has placed on him” (p. 872) by the actions of others. Research suggests that humour is another common face-saving technique (Koshik & Okazawa, 2012; Fagan & Desai, 2013; Owens, 2013). The formality of librarians, on the other hand, can make patrons feel inferior (Waugh, 2013; Koshik & Okazawa, 2012); if patrons mitigate their formality, however, librarians will follow suit, a method called “syntactic mirroring,” a practice encouraged by Fagan & Desei (2013) and Mawhinney & Hervieux (2022).

## Reference Interviews

The question posed raises yet another communication challenge. Although reference or research queries are one of the most common types of chat questions, virtual reference users mistakenly believe that chat can only answer simple questions; yet reference interviews occur in conversations fewer than half the time (Mawhinney & Hervieux, 2022). Open-ended queries are frequently used in chat references, but in the investigated conversation transcripts, only 33% of the total queries were open-ended (Radford, Connaway, Confer, Sabolcsi, & Kwon, 2011). Open-ended inquiries are encouraged (Matteson, Salamon, & Brewster, 2011) but they could also make people uncomfortable about being "interrogated" and confused with the broad scope (Avery et al., 2016; Fagan & Desei, 2013, p.143).

Radford, Connaway, Confer, Sabolcsi, and Kwon (2011) have identified questions raised by patrons and librarians that aid in clarification, including those that relate to search history (librarians: 20%; users: 14%), extent/depth of the information needed (librarians: 11%; users: 20%), type of resources (librarians: 11%; users: 9%), verifying understanding (librarians: 20%; users: 15%), and follow-up questions (librarians: 50%). Before signing off, a librarian can ask follow-up questions, offer a satisfaction survey, and invite the patron to return; these methods can enhance accuracy but do not correlate with user satisfaction (Logan, Barrett, and Pagotto, 2019). No evidence exists, then, that suggests a connection between the frequency of open-ended inquiries and user happiness.

## Instruction

Lux and Rich (2016) found that almost half the time, librarians provided instruction when needed. However, Fuller and Dryden (2015) found that 4% did not offer instruction when needed. Instruction questions were one of the most asked questions in chat reference. Users receiving instruction are slightly more satisfied than users who are not. This implies that instruction might play an important role in improving users' satisfaction (Barrett, Logan, Pagotto & Greenberg, 2020). Dempsey (2017) found a need to explain research guides. In their study, the current research guide is designed to list resources by format, but half the time, librarians were more likely to send students a link than to explain the content of the research guide and instruct them. Explaining the content of the resources in the research guide to students, especially first-time users, and how to use research guides can ensure that students would locate the relevant and valuable library collections to find what they need efficiently. Based on these findings, librarians may consider incorporating more instruction on search strategies in future chat references.

## Research Gaps

Three potential research gaps exist, all concerning the lack of standardized evaluation measures for the effectiveness of different communication strategies in chat reference. First, the effectiveness of using open-ended questions in chat reference services to improve accuracy and user satisfaction needs to be examined. While open-ended questions are encouraged for accuracy, it is still being determined whether the frequent use of open-ended questions leads to more satisfaction or dissatisfaction. Second, whether informality negatively affects the professional image of librarians and patron trust is still being determined. Third, the effectiveness of face-saving communication strategies in chat reference services to build trust and rapport between librarians and patrons could be explored. While communication strategies have been identified that save face in chat reference services, their effectiveness in building trust and rapport between librarians and patrons still needs to be determined.

The impact of chat duration on the quality of chat references may be a valuable area for future research (Lux & Rich, 2016). It is more likely that chat reference operators would skip the reference interview because of the nature of the chat environment. The user's expectations for a short and simple question and answer and their frustrations on finding accurate resources might contrast with chat reference operators' need to understand users' requirements. Gathering data about chat duration will help chat reference operators determine the need for reference interviews in chat transactions since currently, reference interviews help identify the users' needs and are deemed unavoidable. Moreover, whether reference interviews will bring user satisfaction is still being determined.

The study of institution scale and its relationship with question types will help analyze what staffing model is needed; resources in each academic library are different; hence the question types might vary. Topics include institutional mismatch and the cost-effectiveness of hiring student staff for chat reference services. For future research, the use of chatbots in academic libraries, their effectiveness in answering different question types, and the differences in communication between robots and humans in contrast with that between humans and humans are worth studying.

## Conclusion

Chat reference is a valuable tool for librarians to connect with patrons and provide reference assistance. The literature shows that question types can help determine the staffing needs of an academic library and highlights the different factors affecting the quality of chat references, namely communication strategies. This review examined the complexity and the content of chat reference question types, two significant types of staff models, and the relationship between question types and staffing models. Drawing on both qualitative and quantitative studies of chat transcript analyses of different types of academic libraries, this paper provided information from the literature around independent and consortia reference models and the pros and cons of student staffing.

This review shows that with training, student staff can handle the more intermediate questions from the chat reference users. At the same time, they require training in identifying referral questions and maintaining a professional image. Chat reference providers should also be aware of the nature of chat reference, especially in gauging the patience of users and the duration of chat transactions. In order to provide high-quality service, librarians and other staff should ensure that they balance informality with formality, conduct a reference interview whenever suitable, and provide teaching and instruction when possible. These strategies make the triage and the tiered staffing model work.

More research is needed, particularly around the use of chatbots in academic libraries. Limitations of this review include the limited database search and the problem of error deviation when comparing the data from different studies. Overall, the literature provides a comprehensive overview of the insights on question types, staffing and communication suggestions for chat reference service providers.

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# Appendix A

Search Strategies

| Search ID # | Concepts | Search terms/ blocks | Results in LibLit | Results in LISTA |
|---|---|---|---|---|
| S1 | Chat reference | 1. "Chat reference" or "online reference work," or "virtual reference," or "digital reference," or "electronic reference services" AND 2. "chat rooms," or "real-time communication," or "synchronized communication," or "computer-mediated communication," or "online chat," or "chat," or "instant messaging," or "chat rooms" | 179 | 276 |
| S2 | Staffing | "Paraprofessional" or "students" | 21,702 | 22,100 |
| S3 | Question | Question | 12,069 | 13,599 |
| S4 | Communication | Communication | 550 | 36,463 |
| S5 | Academic libraries | "Academic libraries" or "higher education" | 22,424 | 24,178 |

# Appendix B

Combined Search Strategies

| Search ID # | Concepts | Search terms/ blocks | Results in LibLit | Results in LISTA |
|---|---|---|---|---|
| S6 | Chat reference AND Staffing AND Academic libraries | S1 AND S2 AND S5 | 30 | 35 |
| S7 | Chat reference AND Question AND Academic libraries | S1 AND S3 AND S5 | 33 | 42 |
| S8 | Chat reference AND Communication AND Academic libraries | S1 AND S4 AND S5 | 15 | 23 |

# Appendix C

## Research Question Type & Complexity

| RESEARCH\ CATEGORIES | **Directional:**<br>1. Hours<br>2. Facilities/ Building related<br>3. Geographic directions<br>4. Non-Library<br>5. Library systems<br>6. Service<br>7. Contact Information<br>8. online catalog/my account | **Borrower Service:**<br>1. Circulation (including holds, renewals, fines)<br>2. Borrowing policies<br>3. Interlibrary loan | | **ready reference:**<br>1. known-item search<br>2. policy and procedural<br>3. how do I cite?<br>4. Collection | | **Specific search:**<br>1. miscellaneous | **Instructional (information literacy):**<br>1. search strategy<br>2. training/ demos<br>3. How do I? | **technical:**<br>1. "How-to" questions<br>2. Access to electronic resources<br>3. Troubleshooting<br>4. Computers, printers, and other hardware<br>5. Software such as Microsoft Office or Google Docs<br>6. Printing/Other Technology | | **Reference/ Rearch:**<br>1. Open-ended research questions<br>2. Copyright<br>3. extended reference<br>4. referral | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| READ Scale (Gerlich and Berard 2010) (Ward and Phetteplace 2012) | Level 1–2: Require minimal knowledge, skills and expertise.<br>Directional inquiries, call number inquiries, item location, minor computer help, general library or policy information. | | | | | Level 3: Require some time and effort. Require specific reference resources, basic instruction on searching the online catalog, direction to relevant subject bases, more complex technical problems. | | | | Level 4-6: Reference knowledge and skills needed, complex searches, services outside reference, consultation, more cooperative in nature, "false leads," interdisciplinary research, graduate research, and primary documents may be used. | |
| Maloney and Kemp (2015) | Non-professional; student | | | | | Generalist | | | | Librarian | |
| Katz (2002) | directional | ready reference | | | | specific-search | | | | research | |
| Ware, Fennewald, Moyo, and Probst (2002) | | ready reference | | | | instructional | | technical | | research or subject request | |
| Arnold and Kaske (2005) | directional | holdings/do you own | | policy and procedural | | specific-search | | | | research | |
| DeGroote, Dorsch, and Collard (2005) | library hours/location, , citation verification, | book holdings.<br>Journal holdings,<br>A V/special collections holdings, collection suggestions. | | library policies/procedures | | looking for articles on a specific topic, locate information on a specific topic factual, statistical, technical access, | | database mechanics accessing e-resources accessing e-journals Web page errors, | | research consultation | complaints/courtesies, and other |
| Clanton, Staggs, and Williams (2006) | directional | ready reference | | | | training/ demos | | | | extended reference | |
| Rawson, Davis, Harding and Miller (2013) | directional | ready reference | "How do I cite?" | holdings/do you own | policy and procedural | specific search | | | | research | |
| Armann-Keown, Cooke, and Matheson (2015) | Library systems<br>Services<br>Contact information | Collections | Citations | | Policy | miscellaneous | Search Strategy | Technology | Test | Copyright | |
| Mungin (2017) | Directional/Policy | | Known Items | | | | Class Demo | System Test | Tech. Problem | Reference | Undertermined |
| Blizzard (2018) | 1. Directional:<br>Hours<br>Facilities<br>Geographic directions | 2. Reference:<br>Known-item searches<br>Citation help<br>Open-ended research questions | | 3. Borrower services<br>Circulation (including holds, renewals, fines)<br>Borrowing policies<br>Interlibrary loan | | 4. Technology help:<br>Troubleshooting<br>Computers, printers, and other hardware<br>Software such as Microsoft Office or Google Docs<br>"How-to" questions<br>Access to electronic resources | | | | | |
| Skaggs (2020) | Building related<br>Hours Related<br>Non-Library<br>Service | Citation related<br>Known Items<br>Reserves | | Circulation | Policy | How Do I | | Printing/Other Technology | | research | |

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# Belonging and Uniqueness as Essential Elements for Inclusive Workplaces: A Literature Review

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## Abstract
Despite efforts spanning two decades, the LIS field struggles to diversify its workforce. This literature review examines research focussed on the ways belonging and uniqueness work together to create genuinely inclusive workplaces. The review attempts to answer the question, "From the perspective of people working in libraries in Canada, how have efforts to create diverse and inclusive library workplaces affected their sense of belonging and uniqueness?". The question is one way to translate the lived experience of people working in Canadian libraries into an evaluative measure of organizational diversity, equity and inclusion (DEI) work, provided it is positioned within a foundational understanding of the relationship between DEI, belonging and uniqueness. Optimal Distinctiveness Theory (ODT) forms the foundation for much of the research and is identified as a key element of inclusivity. Models of belonging and uniqueness research are included as well as a discussion of the gaps in and future directions for research in the LIS field.

*Keywords*: belonging, uniqueness, DEI, diversity, equity, inclusion, inclusivity, organizational-management, Optimal Distinctiveness Theory.

In his 2004 "Director's Chair" article in *Felicter*, then Canadian Library Association (CLA) president Don Butcher stated that the Association did not look like or talk like its membership. He also noted that "reflecting Canadian society" was a longer-term goal for the LIS community (Butcher, 2004). In 2008, CLA crafted its "Position Statement on Diversity and Inclusion" as way to achieve this goal. This statement has since been adopted by the CLA's successor, the Canadian Federation of Library Associations / Federation Canadienne Des Associations De Bibliothèques (CFLA-FCAB) (Position Statement on Diversity and Inclusion, 2017). In the 18 years since Butcher made his observation, virtually all Canadian library associations and many individual libraries of all types have adopted DEI statements, formed DEI committees, or in some way committed to fostering DEI in the library community. A DEI statement has become as de rigeur as mission, vision and values statements.

Unfortunately, as Bell (2021) observed, "Despite these commitments to diversity and inclusion, it is well known that the LIS profession in North America is largely homogeneous along racial and ethnic lines" (p. 153). In addition, Oud (2018) articulated concerns regarding the gap between managers and employees with disabilities around perceptions of academic library workspaces accessibility. Doerksen & Martin (2016) observed, "The failure to realistically assess the importance of race is evident in librarianship – a profession that has historically been influenced and guided by Eurocentric values" (p. 2). It would seem that Canadian libraries are starting to move towards diversity in their workforces, but more work is needed.

One possible issue with diversifying library workplaces is the lack of articulation around the desired outcomes of organizational DEI work and of evaluative measures that go beyond a measurement of surface level diversity based on gender, ethnicity, and other characteristics. Deep level diversity is less observable, consisting of attributes such as attitudes and beliefs, but has a significant impact on how people experience their work environment. For example, Kim et al. (2019) discuss the impact that a lack of belonging has on organizational attachment in terms of psychological and behavioral involvement. They note that demographic dissimilarity "is often associated with reduced organizational attachment" (Kim et al., 2019, p. 119) and a key factor influencing a lack of belonging. It is that lived experience of the workplace that is markedly absent from the literature around DEI work in Canadian libraries.

This review begins with definitions of the key concepts, then explores models of belonging and uniqueness grounded in Optimal Distinctiveness Theory (ODT), followed by LIS-specific research that used belonging and uniqueness as a framework for DEI-related questions. It then considers the complexity of applying the belonging and uniqueness framework to Decolonization in a Canadian context.

## Definitions

Shore et al. (2011) define workplace inclusion as the “degree to which an employee perceives that he or she is an esteemed member of the work group through experiencing treatment that satisfies his or her needs for belongingness and uniqueness” (p. 1265). Belonging or belongingness is a multi-dimensional concept which includes perceptions of supportive and caring relationships, having access to networks, and being considered as a valued and important part of the group (Mor-Barak and Cherin, 1998; Shore et al., 2011; Chung et al., 2020). Similarly, uniqueness has multiple aspects, including feeling as though it is acceptable to be different from their group, to have different perspectives, and that those differences are not just accepted but valued by the group (Shore et al., 2011; Chun et al., 2020). Intersectionality refers to the ways the multiple categories of diversity can potentially converge to construct a multi-faceted social identity (Shore et al., 2011).

## DEI, Belonging, and Uniqueness: The Model

Most of the literature around diversity, belonging and inclusion comes from the organizational management research arena not specific to libraries. Initially, Brewer (1991) posited *optimal distinctiveness* (ODT) as the fulcrum point where people strove to balance their opposing needs for differentiation (uniqueness) and assimilation (belonging) as the desired level of inclusion in a group. That is, people want to be able to feel like a part of a group without having to hide or subsume unique characteristics that may distinguish them from the majority.

Mor-Barak and Cherin (1998) examined the oppositional concepts of inclusion-exclusion and its relationship to belonging and cohesion. They posited a spectrum along which individuals feel part of the organization as represented by processes such as “access to information and resources, involvement in work groups, and ability to influence the decision-making process” (Mor-Barak and Cherin, 1998, p. 52). Importantly, Mor-Barak and Cherin acknowledged their study did not account for diversity characteristics and specifically identified the need for more research which included these elements as part of the study.

Shore et al. (2011), building on Brewer's ODT and Mor-Barak's inclusion-exclusion frameworks, is the seminal work on belonging and uniqueness. They took the concept of workplace inclusion further by arguing that it is uniqueness which creates opportunities for improved group dynamics when the individual is accepted by the group and valued *because of* rather than *instead of* their unique characteristics. Basically, belongingness and uniqueness as articulated by Shore et al. (2011) are foundational concepts essential for inclusive workplaces. The matrix created by Shore et al. (2011) to describe various combinations belonging, exclusion, conformity, and uniqueness is shown in Figure 1.

Shore et al. (2011) emphasized that an organization's climate of inclusion, as defined in their matrix, is dependent upon their "policies, procedures, and actions" (p. 1277) particularly towards underrepresented groups that have had fewer opportunities or who experienced stigmatization in society. They also discussed the importance of inclusivity for all members of the organization. Consistent and equitable employee treatment which fosters belonging and uniqueness for underrepresented and dominant groups alike can mitigate "second-order diversity conflict (disputes over or caused by the remedies designed to eliminate discrimination such as backlash and resentment…)" (Friedman & Davison, 2001, as cited in Shore et al., 2011, p. 1277).

**Figure 1**

*Shore et al.'s (2011) Inclusion Framework*

| | Low Belongingness | High Belongingness |
|---|---|---|
| Low Value in Uniqueness | **Exclusion**<br><br>Individual is not treated as an organizational insider with unique value in the work group but there are other employees or groups who are insiders. | **Assimilation**<br><br>Individual is treated as an insider in the work group when they conform to organizational/dominant culture norms and downplay uniqueness. |
| High Value in Uniqueness | **Differentiation**<br><br>Individual is not treated as an organizational insider in the work group but their unique characteristics are seen as valuable and required for group/ organization success. | **Inclusion**<br><br>Individual is treated as an insider and also allowed/encouraged to retain uniqueness within the work group. |

Second-order diversity conflict is addressed again by Shore et al. (2018) when they noted that subtle forms of exclusion are *unlikely* to be regarded as legitimate or needing to be addressed even though "subtle forms occur more frequently and perpetuate fewer opportunities for individuals who belong to social categories that are targets of discrimination" (p. 177). Second-order diversity conflict is a difficult issue to address; it can be tempting to dismiss it as white fragility, but it has the potential to derail DEI work in an organization. This is why equity is a key aspect of DEI work, even though the literature tends to focus on the diversity and inclusivity aspects.

Equity underpins the systemic change needed to achieve the deeper level diversity posited by Fernandez (2020). Bell (2021) noted, "Improving equity contributes to full and meaningful participation in the workplace. In other words, inclusion cannot exist without first acknowledging differences and addressing inequities" (p. 153). If everyone working in the library does not acknowledge the existing inequities, second-order diversity conflict may become an insurmountable barrier to diversifying library workplaces.

Chung et al. (2020) undertook an in-depth test of the Shore model of belonging and uniqueness using work groups as the unit of study. Their main argument stated people's perception of inclusion were impacted by belongingness and uniqueness, two related but separate elements of work group inclusion (Chung et al., 2020). Their results were consistent with Shore et al.'s (2011) model which requires people to experience belonging and uniqueness concurrently to perceive their workgroups as being inclusive. However, Chung et al. (2020) also recognized that more research is needed which considers demographic variables as moderating the relationship between belonging, uniqueness, and inclusivity. They noted that, given the large body of literature showing that diversity undermines group effectiveness, there is significant potential for positioning inclusion, with its components of belonging and uniqueness, as mitigating those negative effects.

Igobanugo et al. (2022) tested the Diversio Diversity and Inclusion Survey (DDIS) as a tool to "identify workplace factors affecting their [diversity and inclusion] acceptance and implementation" (p. 2) in the context of Shore et al.'s (2011) belonging and uniqueness model. DDIS is built around five themes: Inclusive Culture, Fair Management, Access to Networks, Flexible Working Conditions, Safe Working Environments. Each of these themes can be directly connected to at least one aspect of DEI, belonging, or uniqueness.

What differentiates the DDIS and this study from others is that it explicitly incorporated demographic representation (Gender, Ethnicity, Sexual Orientation, Disability & Role) into the survey to determine the effect of these factors on inclusion. It also establishes what constitutes the dominant and non-dominant groups in a given organization to provide context to the survey results. Igobanugo et al. (2022) tested the instrument across 18 different professions, 44 different countries, and a broad range of ethnicities. Their findings indicated a high degree of reliability to "accurately capture D&I metrics and generate relevant data that may identify and address areas needing improvement or monitor…ongoing D&I programs" (p.12).

## Belonging, Uniqueness & Inclusion in LIS Research

One Canadian study, "Contextualizing Inclusivity in Terms of Language: Distinguishing Librarians from 'Library Staff'" (Petropoulous et al., 2022), considers inclusivity from an unusual and rarely discussed perspective: the use of terminology describing people working in libraries. It is also one of the few examples of LIS-related literature that discusses ODT, belongingness and uniqueness. Petropoulous et al. (2022) establish the same foundational principles as this review, citing Brewer (1991), Shore et al. (2011), and Chung et al. (2020), summarizing the need for people to experience belonging and uniqueness simultaneously to perceive their workspaces as inclusive. They then considered how inclusivity is defined by library associations and finally contextualized those understandings by applying them to a content analysis of library employee listings on Canadian Academic Research Libraries (CARL) and American Research Libraries (ARL) websites, as well as the language in library literature (Petropoulous et al., 2022).

Eleven library diversity statements were examined in the Petropoulous (2022) study. The discussion of the library association DEI statements categorized them as being inwardly directed, such as the American Library Association statement which explicitly describes an inclusive LIS work environment, and outwardly directed, such as the previously mentioned CFLA-FCAB statement, which focuses on services to an external community of service. Most of the other association statements are either inward (directed at a diverse workplace) or both.

Of the eleven diversity statements that were studied, nine of them began with “librarians and library staff”. Petropoulous et al. (2022) asked, “Why is this distinction present and necessary?” (p. 538). They argued that using unnecessary distinctions of terminology to discuss people working in libraries creates exclusionary language. They found that “there is a tendency to use ‘staff’ as an exclusionary term to differentiate and distinguish between groups of employees within libraries and library associations” (Petropoulos et al., 2022, p. 540). Their findings indicated that the various terms used to name people working in libraries were used inconsistently throughout all of the websites that were scanned. The articles that were analyzed consistently identified “librarian” separately from their colleagues, using “library staff” in most cases to denote non-librarian staff, even though in some cases there was no functional necessity to distinguish between librarians and library staff.

Distinguishing between employee groups outside of necessity increases the potential for exclusion. In the context of belonging and uniqueness, the grouping of people into siloed categories may not provide the optimal balance of being an accepted part of a group (library staff) if the uniqueness experienced is only due to being labeled as different from another group (librarians). Petropoulous et al. (2022) recommended that library documentation, internal and external, should be intentionally crafted using language that fosters a “greater sense of inclusion and belonging in academia” (p. 542). If it is necessary to single out a specific group, then this practice should be consistent with all employee groups.

This desire for consistency of language may seem trivial; however, equity in the library workplace should apply in all situations. It is also an example of Fernandez’s (2020) deeper level diversity encompassing beliefs and attitudes. How we speak of people working in libraries directly affects their perception of how they belong to the organization and arguably to the LIS field in a broader context. It also affects how they are thought of and valued by management and administration.

While Petropoulos et al., (2020) brought to light a seldom discussed area of equity and inclusion in library workplaces, Oud (2018) addressed a DEI area that exists in a liminal space: accessibility for people with disabilities who work in libraries. The surface characteristics of diversity, particularly ethnicity, can sometimes overshadow other diversity characteristics, such as disability. People with disabilities can have more complex relationships with DEI work, especially if the disability is invisible. Oud (2018) noted that 2016 estimates of academic librarians with disabilities was around 5.9% in Canada, yet there is not much known about their lived experience in the workplace. Furthermore, there is a lack of DEI literature addressing the equity concerns of people with disabilities in the library workplace.

Oud (2018) sets out to understand how satisfied academic librarians are with their jobs and workplace environment and what influenced that satisfaction. Existing literature tends to focus on specific aspects of DEI, such as accessibility, rather than a holistic understanding of how people see themselves belonging to the organization as well as being valued for their unique characteristics. Oud’s (2018) findings indicated that while librarians with disabilities did not have significantly different overall satisfaction levels, there were areas where they did have higher levels of concerns compared to librarians without disabilities.

Several of the survey's questions were reflective of those asked by Chung et al. (2020); the ability to contribute to the library, support from management and colleagues, and the extent to which they feel accepted by their colleagues (Oud, 2018). While this study does not specifically reference belonging and uniqueness, the areas where librarians with disabilities had concerns are directly related to those aspects of inclusivity:

> Librarians belonging to any minority group, including those with disabilities, found their workplace less inclusive than non-minority librarians, although only librarians with disabilities were less satisfied with workplace levels of accessibility and disability awareness. (Oud, 2018, p. 11)

Unfortunately, Oud (2018) also determined that management and supervisors had substantially higher perceptions of workplace diversity and accessibility. Again, this indicates the need for deeper level diversity in Canadian libraries.

## A Uniquely Canadian Concern

Decolonization is a specifically Canadian area of DEI work where inclusivity, belonging and uniqueness may be insufficient as a model to address the diversification of the Canadian library workforce. Complicating the concepts of belonging and uniqueness as a model for inclusivity is the reality that "in Canada, Aboriginal identity and ancestry is complex and may or may not be self-reported. As a result, definitions of what constitutes "Aboriginal" can be somewhat nebulous" (Doerksen & Martin, 2016, p. 3).

The Truth and Reconciliation Commission (TRC) Calls to Action specifically identifies libraries, archives, and cultural memory institutions. CFLA-FCAB responded with a TRC Committee report, the formation of the Indigenous Matters Committee and the provision of significant Indigenous Resources on its website. Recommendation 7 of the TRC Committee report specifically addresses the need to increase "opportunities for Indigenous, library, archival, and information professionals" in recruitment and professional education through continuous relationship building and consultation with Indigenous communities.

This last aspect of continuous engagement with Indigenous communities was articulated by Doerksen & Martin (2016), who noted that the usual practice of outreach recruitment “manifests an insulting and patronizing paternalism;” what is needed is “meaningful and equal relationships characterized by respect and reciprocity.” Doerksen & Martin (2016) were writing prior to the establishment of the CFLA-FCAB Indigenous Matters Committee, and it must be noted that Canadian libraries have done significant work around decolonization since they published their article.

There are, however, many issues that need to be addressed, particularly around tokenism. Doerksen & Martin (2016, p. 8) argued that “minority recruitment in general - and Aboriginal recruitment in particular - has high potential for tokenism” and since more recent literature indicates a distinct lack of progress around the diversification of Canadian library workplaces, tokenism is a valid concern. Once again, the importance of deep level diversity is highlighted when DEI is considered within an Indigenous context in Canada.

Existing DEI literature (this review included), even that which encompasses intersectionality as in Igobanugo et al. (2022), tends to take the form of an umbrella approach under which any non-dominant group is gathered. This approach fails to consider the deeply problematic relationship between Indigenous people and colonial institutions such as government and learning institutions as a result of the intergenerational trauma created by the residential school system. This overgeneralization may be a factor in the failure of recruitment of Indigenous students to LIS programs and to the LIS profession in general (Doerksen & Martin, 2016).

The concept of belongingness, being an accepted part of a group, may be uncomfortably close to assimilation for an Indigenous person. Shore et al.’s (2011) matrix specifically identifies uniqueness as the missing component in assimilation, but this might be too much of an academic distinction for someone whose language and culture have survived despite the attempts of the dominant power structures to eradicate them. Doerksen & Martin (2016) identify an inclusive environment “that incorporates alternative cultures and epistemologies throughout the institution” (p. 11) as the means for engaging Indigenous students. From an ODT perspective, an institution would need to prioritize uniqueness to a greater degree than belonging in order to find the optimal balance for Indigenous students, and by extension, Indigenous people working in libraries to establish an inclusive space. This critical lens challenges the original conceptualization of ODT as being an equal balance between belonging and uniqueness.

## Conclusion

The literature around belonging and uniqueness as elements of DEI work is sparse in the LIS field. Most of what does exist tends to have a narrow focus on a specific area of DEI work rather than a broader organizational perspective. In addition, intersectionality is seldom considered as a mitigating factor to creating inclusive workspaces using a belonging and uniqueness model.

More research is needed to determine how intersectionality informs inclusivity in the broader context of how people working in libraries think about their belonging and uniqueness. From a Canadian perspective, there also needs to be dedicated research around Indigenous perspectives of belonging and uniqueness as people working in libraries. This research is necessary to support the diversification of Canadian library workforces.

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# How Are Public Libraries in Alberta Responding to the Needs of Older Adults? A Literature Review

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## Abstract

Despite the increasing number of adults aged 60 and older, there is a gap in studies of library programming and services aimed at this demographic in Canada, especially ones based in the western part of the country. This literature review will examine existing studies in the area of public library programming for older adults, as well as how these libraries are meeting the needs of older patrons in terms of issues pertaining to accessibility and accommodations.

*Keywords*: accessibility; Alberta; critical gerontology; library programming; library services; older adults; public libraries; senior citizens; western Canada

The research question guiding this literature review is: how are public libraries in Alberta responding to the needs of older adults? According to Statistics Canada, Canada's 2021 census indicated that 7 million people—around one-fifth of the country's population—were aged 65 and older (2022b). The Baby Boomer generation is continuing to age, having started turning 65 in 2011, and the youngest of this age cohort—the ones born in 1965—will be turning 65 by 2030. As well, the country is facing a demographic shift, with a projected quarter of the population reaching 65 and older by 2051, a total of around 12 million people (Statistics Canada, 2022b). This is due to the aging of both the Generation X and Millennial cohorts—in fact, by 2051 the youngest Gen X'ers (born in 1980) will be turning 71, while the oldest Millennials (born in 1981) will be turning 70 (Statistics Canada, 2022a). Currently, in the province of Alberta, 14.8 percent of the population is aged 65 and over, representing a 25.8 percent increase in that population since 2016 (Statistics Canada, n.d.).

Due to the increasing numbers in this age cohort, public libraries in Alberta will need to prioritize programming and services for older adults. Despite stereotypes of older adults as frail in body with declining cognitive functions, they are not a homogenous group. As such, libraries need to serve a range of diverse needs as noted by the Canadian Federation of Library Associations-Fédération Canadienne des Associations de Bibliothèques (CFLA-FCAB) (2016a). An examination of the literature pertaining to older library users helps to identify these needs, how they are currently being met, and what barriers to programs and services currently exist.

## Definitions

The term "older adults" in this literature review follows the CFLA-FCAB's definition as people aged 60 and older, the most common age when one chooses to retire from the workforce or begins to plan for retirement in anticipation of turning 65 (CFLA-FCAB, 2016a). Critical gerontology, the framework that informs this literature review, is a view of aging that encompasses different ways people age and takes into consideration intersectional factors like "class, race, ability, and gender" (Dalmer, 2017, p. 2). It questions "the expectations and discourses that surround aging and older adults, investigating who benefits and who is harmed in the construction of such expectations and discourses" (Dalmer, 2017, p. 3). It also includes "a broad spectrum of theoretical approaches" that "reject the biomedicalization of aging which constructs aging as a medical problem or illness and as a pathological or undesired state" (Dalmer, 2017, p. 13).

The National Impact of Library Public Programs Assessment (NILPPA) defines library programs as "an intentional service or event in a social setting, developed proactively to meet the needs or interests of an anticipated target audience, at least some of whom attend by choice" (2018, para. 11). Library services deal with the functions of a library and "bring together the documents or information sources and their users by personal efforts of the library staff" (Patel, 2015, p. 86).

This review positions accessibility and accommodations for older adults in a similar light as for people with disabilities. While it is important not to view older adults as a monolithic cohort, particularly when it comes to the different ways people age and experience health as senior citizens (Dalmer, 2017; Horton, 2019), there is validity in comparing this demographic with people with disabilities. CFLA-FCAB (2016b) notes that “the prevalence of a disability increases steadily with age” (Why Access is Important section, para. 2), with around 10 percent of Canadians aged 15 to 64 reporting that they had a disability in 2012. In contrast, over three times as many Canadians over 65, 33 percent, reported having a disability. As a result, older adults are likely to need accommodations relating to accessibility as indicated in the literature (Bennett-Kapusniak, 2013; Dalmer, 2017; Kendall, 1996; Perry, 2014). Some of these accommodations, such as large-print books, may be comparable to the accessibility needs of younger people with similar disabilities.

Given some of these intersections between aging and disability, conversations centered on universal design are worth having to address the across the board need for accessibility—one in which there is benefit to everyone (University of Waterloo, n.d.). The American Library Association (ALA) notes that accessibility refers to:

> more than just physical access to library services. In conventional terms, accessibility generally refers to functionally equivalent access to the materials and services. In essence, this means that individuals with disabilities should be able to use and access all the same services and materials in the library as their non-disabled peers, either through alternate means or with assistance. (ALA, n.d., para. 3)

The Association of Specialized, Government and Cooperative Library Agencies (ASGCLA)—a now-dissolved division of the ALA—referred to accommodations for people with disabilities when accessing library services noting libraries need to “ensure that individuals with disabilities have equal access to library resources” (2001, list number 2) through a variety of means that fit a person's needs and circumstances.

# Method

The literature chosen for this review includes scholarly articles examining the practices and approaches from libraries mainly in the United States, some Canadian institutions, and a few international sources. While there is one foundational article included (Kendall, 1996), most of the literature presented has been published within the last ten years. This ensures advances in technology, and how they have affected library use and programming for older adults are taken into consideration; particularly their needs when engaging with that technology and for what reasons they use it.

Position statements and related documents from American and Canadian library associations are included for context and application to the information in the literature as related to best practices when creating programming and services for older patrons.

# Analysis and Commentary

## Diversity of Older Adults

Kendall (1996) discusses the increasing number and varying needs of older adults, a theme which is prevalent through much of the literature. Included are ways for libraries to accommodate disabilities that some older adults may be experiencing for the first time, like reduced hearing and mobility. Bennett-Kapusniak (2013) emphasizes that programming needs to be provided for older adults who are healthy and active, and those with health issues impeding their lifestyle. Noting that deteriorating physical and mental abilities can affect a person's ability to access library programming and services, Bennett-Kapusniak (2013) lists arthritis as a specific example where using technology becomes more difficult, such as using a standard mouse, and suggests having accessible computer peripherals available, along with wheelchairs and other mobility devices available on-site for those who need them. In addition to programming, assistive services relating to accessibility for those with declining physical and mental abilities are needed, (Bennett-Kapusniak, 2013; Dalmer, 2017; Kendall, 1996; Perry, 2014) as well as outreach for people who can't get to the library (Dalmer, 2017; Perry, 2014; Sikes, 2020; Vincent, 2014).

Vincent (2014), citing Sloan and Vincent (2009), notes that there are different stages of older adulthood: entering the phase, transitioning between healthy/active and frail, and frail. Dementia and isolation/loneliness are two areas of increasing need for public libraries to address (Vincent, 2014). Horton (2019) also notes the major differences between older adults at each end of the age spectrum, as someone in their 60s is likely not in the same place physically as someone in their 90s, and as such, "the world must now see those over sixty-five years of age as not just one category of retirees. There are major differences in the energy and activeness between those having their sixty-fifth birthday and those further along in their journey of life" (p. 179).

Dalmer (2017) discusses how the public library needs of older adults should be examined through a different lens, that of critical gerontology, taking into account the different ways people age. As Holstein and Minkler (2003) note, factors such as gender, race, and class can impact someone's lifestyle and work, thus affecting how a person ages. For example, someone with a desk job may have different physical issues later in life than someone who worked at a physically intense job. As for the perception of older people, while some judge the appearance and ability of older people as the result of positive or negative life choices, again, the real story could have more to do with a person's privilege (or oppression) because of someone's race, gender, and class (Holstein & Minkler, 2003). Further to this perspective, Dalmer (2017) writes:

> that aging is to be reframed as a social, not biological, process and one that is not to be fixed or solved and furthermore, that public library spaces can be actively constructed as spaces that mitigate or even challenge the potential negative effects of productive aging and the aging enterprise. (pp. 16-17)

Horton (2019) also notes that preconceived perceptions of older adults must be overcome in order to serve them effectively. This would put libraries in a better position to serve seniors by being able to respond to their actual needs as opposed to their assumed needs. Furthermore, libraries should ensure they acquire the resources necessary to accommodate all older patrons, not just fit and active ones.

## Programming Purposes

Library programming for older adults provides opportunities for socializing and decreasing isolation, as well as information of importance to an older demographic, such as that pertaining to health and digital literacy (Vincent, 2014). Typical programming for older adults may include topics pertaining to leisure, travel, culture, the arts, hobbies, and community (Dalmer, 2017; Perry, 2014; Sabo, 2017). Programming may help overcome ageism by providing a place where the skills and knowledge of older adults can be showcased (Wynia Baluk et al., 2021).

Older adults, particularly those no longer in the workforce, may have more time on their hands to take part in volunteer and leisure activities. Plus, many have skills and knowledge to share from a lifetime of experiences. Thus, active older adults could not only take part in programs of interest, but also develop and lead programming. This is a major reason to include older adults in program development (Sabo, 2017; Wynia Baluk et al., 2021).

One volunteer opportunity that should not be overlooked when examining the older adult population, is advocacy. Older adults, with extra time and lots of life experience, have the capacity to advocate for and support libraries through political channels and organized library advocacy groups (Sabo, 2017). Sabo also notes the tendency for boomers to donate to charity, making this demographic ideal for fundraising efforts.

## Framing Older Adult Programming

Sabo (2017), in a study of literature pertaining to library programming aimed at the aging Boomer generation in the United States, pays particular attention to “third agers”—people who are retired, but still active (OED Online, 2016, as cited in Sabo, 2017). One of Sabo's conclusions is that these “third agers” engage in lifelong learning, and, due to their financial resources, libraries should pursue them as a viable source for fundraising. In the U.K., Vincent (2014) notes that programming for older adults is often not well known, and therefore more vulnerable to be subject to funding cuts and missed opportunities to partner with outside organizations, something which RUSA (2017) lists as a best practice for funding and budgeting for programming for older adults.

Relatedly, Bennett-Kapusniak (2013) writes that many libraries have a tendency to offer programming framed as lifelong learning rather than specifically geared towards older adults. Bennett-Kapusniak’s study involved investigating the offerings of services for older adults of 50 public libraries (one in each of the capital cities in the United States). At that point in time, while 74 percent of the libraries examined offered programs that in some way incorporated lifelong learning, none had a basic computer program aimed at older adults, and “more than half of the libraries did not have assistive technologies to aid library users” (p. 217). This is in significant contrast to the ALA reporting only two years later in 2015 following that year’s Digital Inclusion Survey, that almost all public libraries were offering free access to public Wi-Fi, with basic digital literacy training available at almost 90 percent of libraries (ALA, 2015).

That said, Dalmer et al. (2020) note when adult programming is presented as being for specific age groups, libraries run the risk of othering people in those groups and that “heterogeneity inherent within different age categories must be considered” (p. 28). After looking at the websites of 40 library systems that are members of the Canadian Urban Libraries Council (CULC) to see what older adult programming is available, they note that:

> Those libraries that did not offer older adult–only programming may have done so as a means to ensure their programs remained inclusive to all patrons of all ages who might enjoy, attend, or benefit, recognizing that intergenerational or all-ages programming can be of benefit to all patrons of all ages. (p. 28)

CULC library system members include several from Alberta, although no specific library systems are named in the article. The programming choices specific to older adults at the 40 library systems include “informational sessions, fitness classes, and social hours” (p. 26), noting that the information sessions largely dealt with health-related topics. Activities for older adults include “paint nights, film screenings, book clubs, and colouring afternoons” (p. 26).

## The Impact of Technology

Back in 1996, when public use of the internet in libraries was in an earlier stage, Kendall observed that libraries could become places where seniors go to access computers and technological services. That projection has come true, and more recent literature expands greatly upon the needs of older adults for technological access. Lin et al. (2021) studied how older adults in the Pukou district in Nanjing, located in China’s Jiangsu province, seek health information, through a survey conducted via interviews with a sampling of the older population, concluding that libraries have a strong role to play in providing electronic health literacy services to older adults. In particular, Lin et al.

(2021) note that "eHealth literacy and health knowledge were significant predictors of healthy behaviors" (p. 495), and that "the opportunity is ripe for librarians to take the lead in providing products and services to support their older adult community members" (p. 496).

What kinds of support do older adults in Alberta need from libraries when accessing technology? Lawley (2022) examined online programming guides at four public libraries in urban areas of Alabama with high populations, and surveyed public library administrators in the state, to examine barriers older adults may experience when trying to access digital information, some of which are possibly going undetected. In particular, there is a lack of knowledge concerning technology on the parts of older adults, combined with a lack of training opportunities. The study reveals a need for a "unified approach" to address deficiencies in "current outreach, education and training initiatives" to prepare older adults for "a digital-information future" (p. 11). Though the study is limited to Alabama, the method of online surveys and examination of online programming guides could be applied elsewhere. Lawley only surveyed public library administrators and did not seek the experiences of older adults themselves, which may have provided additional insights. However, Wynia Baluk et al. (2021) also identify the need for the training of older adults both in digital literacy and online safety. Therefore, training and educational opportunities pertaining to technology are key programming possibilities for older adults.

A prime example in recent history of public libraries' use of technology for programming occurred during the COVID-19 pandemic. Dalmer and Mitrovica (2022) explore connections between how technology was used by public libraries in Ontario during the restrictions enforcing physical distancing, and the experiences of older patrons, some of whom experienced both social and digital exclusion due to programming going exclusively online. Through the examination of 25 public library websites in Ontario, the study revealed what programming topics were offered, how programming for older adults was or was not visibly represented on the websites, and how some older adults may have still experienced exclusion due to lack of having a digital device at home (let alone knowing how to use it). The most common programming choices included clubs for reading and writing, training for digital literacy and technology, and talks from authors.

When programming had to shift online due to COVID-19, a number of virtual platforms were used, such as Zoom, YouTube, and Facebook. It was hoped that training in digital literacy and technology would bridge the digital divide but, as the authors note, “a prerequisite for taking part in such digital and technology training is access to a technological device compatible with such virtual platforms” (Dalmer & Mitrovica, 2022, p. 6). Some libraries were creative in overcoming this accessibility issue offering phone-in programs or loaning technology to older adult patrons.

Older adults accessing technology in public libraries often experience other external and internal issues. Barrie et al. (2021) interviewed 12 older adults aged 60 or older to learn about their digital literacy training experiences at a public library system in an Ontario city. The study concluded “that societal and internalized ageism, skill limitations, high motivation, gender dynamics, and perception of safety and comfort in the library space are key considerations for digital literacy training for older adults in public libraries” (p. 400). They go on to suggest that "part of the literacy work undertaken through library-based initiatives may need to challenge older adult participants to deconstruct the negative stereotypes about their capacity to become digitally literate” (p. 401) while supporting “the development of alternative narratives that reinforces the capacity of older adults to gain digital literacy and to integrate technology use into their daily lives” (p. 401). The authors indicate there will be a second part of this study, national in scope. Ideally, it will include information and insights from Alberta.

The potentially increased technological needs of vulnerable older adults created by library programs going online, a result of COVID-19 social-distancing mandates, is also mentioned by Wynia Baluk et al. (2021). The authors recommend research into how libraries serve older adults seeking to meet their information and social needs during a crisis as "awareness of the barriers to adequately meeting the needs of older adults during this time can inform how libraries program for an older demographic” (p. 534).

Even when there is in-person programming, some older adults who live in Alberta (and elsewhere) may experience access issues not only because they lack sufficient technology in their homes, but because they have difficulty getting to a library in the first place. Sikes (2020) notes the need for outreach to homes and other living facilities to meet the needs of patrons socially and intellectually, as do several other researchers (Dalmer, 2017; Perry, 2014; Vincent, 2014). Indeed, the Reference and User Services Association's (RUSA, 2017) best practices for the 60 and older cohort includes providing services to those who may be homebound, in assisted living centres, or otherwise are in situations where getting to a library (and getting materials home from the library) would be difficult. Such services could include on-site computer and internet training and a mobile technology lab.

## Assessing Programming and Information Needs

Some of the literature concerning library programming and older adults attempts to determine the needs of older patrons either through analyzing existing programs or investigating a community of older patrons in specific geographic areas. Perry (2014) conducted an extensive survey among suburban public libraries and library systems in the metropolitan area of New York and in Atlanta, Georgia. Perry concluded libraries may better serve older patrons as a result of such data collection on a regular basis. Demographics also play a role, as Perry found more services and programming choices for older adults in public libraries in areas where more older adults live.

A comparison between Canadian and Australian public libraries (Wynia Baluk et al., 2021) involved conducting interviews with librarians about developing programming for older adults, noting that older adults should be part of the process. The study revealed "significant overlap in the way Canadian and Australian public libraries develop, fund, implement, and evaluate their programs" (p. 536). The Canadian side of the study included interviews with 18 public librarians mostly located in Ontario, but with two in Atlantic Canada and three in Western Canada. However, without knowing the specific locations in Western Canada, there is no definitive Alberta connection.

Dalmer (2017), undertook a deep dive of five public library websites located in large Canadian cities comparing their offerings to older patrons. A result was the suggestion that older adults need to be included in programming choices by encouraging feedback and dialogue. The five libraries included in the study were picked at random from the list of cities that, at the time, made up Canada's top 25 metropolitan areas according to census data released by Statistics Canada in 2007 (Dalmer, 2017). Since the cities are not named in the study, it is unknown if there is any Alberta representation.

Horton (2018) also discusses how libraries need to engage in the ongoing surveying of older adult patrons to effectively assess their needs. In order to assess the public library outreach service needs for older adults in a rural area of Virginia, Sikes (2020) sought qualitative data from older adults through interviews with members of focus groups made up of members of elder users of the Washington County Public Library's (WCPL) outreach services. The information gathered included insight into their technology and information needs and how the services in general were impacting their lives. Such information can be invaluable to librarians programming for this demographic in Alberta.

In its toolkit, *Keys to Engaging Older Adults @ your library*, the ALA (2010) states “One of the most important steps in building programs for older adults, or any special population, is to conduct a preliminary inventory of your community” (p. 2). The CFLA-FCAB's “Canadian Guidelines on Library and Information Services for Older Adults” (2016a) recommends regularly-held focus groups and user studies as part of its guideline to “acquire current data about the older population and incorporate it into planning and budgeting” (Guidelines section). They also indicate libraries should “involve older adults in the community in the library’s planning process, either by establishing a seniors’ advisory committee, or through regular liaison with seniors’ organizations and seniors’ centres” (CFLA-FCAB, 2016a, Guidelines section, number 4) once again demonstrating the need for community consultation.

## Conclusion

According to the literature on the topic of programming and services for older adults, public libraries should consistently assess their resources for and strategies around older adults while striving to meet their social and intellectual needs. In doing so, older adults should not be viewed as a monolithic population nor aging as necessarily a degenerative state. This will help serve older adults more effectively and may also have funding implications for libraries.

In addition, this literature review reveals a gap in the recent study of Canadian public libraries where older adult programming and services are concerned, with no specific Alberta-based research. However, the suggestions concerning programming and accessibility are relevant in Alberta as well as in the locations the various studies reviewed here. Whether in Alberta or elsewhere, further study of how public libraries serve older adults should be done through a critical gerontology lens exploring current offerings over a spectrum of urban and rural libraries. Studies should include input from a representative sample of older adults as well as from librarians, rather than exclusively one or the other. Research into what happened during COVID-19 restrictions and ongoing effects on older adult programs and services in the wake of reopening would also be a useful addition to the current body of literature. This type of critical examination of how older adults are currently being served at Alberta's public libraries, as well as an assessment of these patrons' needs, is necessary as the population continues to age.

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# The Information Practices of Canadian Family Caregivers of People with Down Syndrome

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## Abstract

This literature review was conducted as part of a research study, the purpose of which was to understand how Canadian family (unpaid) caregivers of people with Down syndrome (DS) find, understand, use, share, and manage information to meet their needs and the complex needs of those in their care. Unpaid caregivers are vital to society but are undervalued. The need for caregiving is growing as people with Down syndrome are living longer and are likely to experience dementia as they age; the responsibility for caregiving is being increasingly transferred to families. Information is crucial for empowering and enabling caregivers. In conducting this review, I found that caregiving information work is stressful, mostly done by women, requires robust networks, and links to troubling social and economic trends.

*Keywords*: information, caregiving, family caregiver, Down syndrome

Caregivers are vital to society. One in four Canadians aged 15 and older (7.8 million people) provide care for family members or friends with a long-term condition (Statistics Canada, 2022, para.4). A caregiver, as defined by Caregivers Nova Scotia (2023), is "a person who gives unpaid care to someone who has a physical or mental health condition, or who is chronically ill or frail" (para. 5). The term family caregiving, or family-centred care (Marshall et al., 2015) is common because family members are increasingly assuming the role of care provider, but this care can also be provided by friends, neighbours, chosen family, etc. (Dalmer, 2018). Family caregivers contribute a staggering amount of unpaid labour to society, about 5.7

billion hours of care each year (Bielski, 2023). The estimated imputed economic cost to replace family caregivers with the paid workforce totals $25 billion (Canadian Caregiver Coalition, 2013, p.2). However, 95% of Canadian carers believe their important role is not widely recognized by society (Embracing Carers, 2020, p.22) and more than one in three caregivers are distressed (Canadian Institute for Health Information, 2020).

## Care Work Entwined with Information Work

Dr. Nicole Dalmer (2018) describes unpaid caregiving as an “invisible” form of work (i.e., care work) (p.1). Adding the term “work” here seeks to make “visible the often invisible” (Dalmer & McKenzie, 2019, p.386), which can be “a powerful act, particularly within current climates of austerity, in which responsibilities for care work…are increasingly shifted onto families” (Dalmer & McKenzie, 2019, p. 389). Information practices are also a form of work. For caregivers, care work and information work are intertwined and interdependent. As Dalmer (2018) writes, “information work (the seeking, use, evaluating or sharing of information) is crucial to the work of caring for oneself and for others” (p.2) and information is “fundamental to good care, enabling and empowering carers to make better choices and take control.” (p.2). Studies show that caregivers have complex and ever-changing information needs, and that those needs are consistently unmet (Dalmer & McKenzie, 2016). At any given time, caregivers need information about, but not limited to, healthcare, law and finances, emotional and spiritual support, respite, community services, school services, extracurricular activities, employment opportunities, transportation, nutrition, assistive tools and technology, advocacy and so on. It is important here to distinguish unpaid caregiving from paid, wherein someone who is usually licensed and possesses formal training receives a salary or wage in return for providing care (Caregivers Nova Scotia, 2023). I focused on unpaid caregivers within this study because this is where the burden increasingly falls, and therefore this group stands to benefit most from these studies. This is not to minimize the experiences of paid care providers. However, paid care providers are more likely to have formal support through their employer, and their lives are not intertwined with those in their care to the same extent as family caregivers.

## Caregiving for People with Down syndrome (DS)

There are an estimated 45,000 Canadians with Down syndrome (Down Syndrome Association of Toronto, 2022, para.5). As people with DS have reduced independence in performing daily activities, they require a high level of assistance from their caregivers (AlShatti et al., 2021). And their need for caregivers is growing. In just three decades, the average life expectancy for a person with DS has increased from 25 to 60, while more than 75% of people with Down syndrome aged 65 and older are living with Alzheimer's disease (Canadian Down Syndrome Society (CDSS), 2020, p.29). People with DS and their caregivers have not often been the focus of research. Still fewer studies have focused on the information practices of these caregivers. According to the National Institute of Health, Down syndrome is the least funded genetic condition (Global Down Syndrome Foundation, 2018, para.7).

I have a personal connection to DS caregiving because I am a secondary caregiver for an adult with DS. I will eventually be the primary caregiver. I have some experience navigating this landscape and understand how complex and frustrating it can be. I also understand the isolation and anxiety that can accompany care work. I understand how important accessible, easy to understand information is to strengthen a caregiver/care recipient relationship and one's emotional health within it.

## Study Summary

This literature review was conducted as part of a research study entitled "Informing is caring: The information practices of Canadian family caregivers of people with Down syndrome." The research questions guiding this study were:

- Where do caregivers of people with Down syndrome find, use, share, and manage information? What tools do they use to find, use, share, manage, and understand information? What factors (within and beyond their control) influence how they engage with supportive information?
- What barriers do caregivers of people with Down syndrome encounter within their information practices and what strategies do they use to overcome those barriers?

- Do the information resources meet the needs of the caregivers and if not, how could those gaps be filled?

This was a qualitative phenomenological study, which focused on describing the lived experiences of participants (Leedy & Ormrod, 2019; Creswell & Poth, 2018). Virtual, semi-structured interviews were conducted with six adult caregivers of someone with Down syndrome across Canada to collect qualitative data. The data was analyzed using reflexive thematic analysis. The key findings of the study are that caregivers of people with Down syndrome (DS) need clear, personalized, centralized, consistent information; they need to know where to find this information; and they need more sensitive and empathetic information from medical and government professionals.

## Literature Review Introduction

The topic of caregiving is well-documented in research, particularly unpaid caregiving, or care at home. Most caregiving literature focuses on aging or chronic illnesses, such as cancer. An early notable scholar in this area is Anselm Strauss who also co-developed grounded theory (a research method widely used in academia). Corbin and Strauss (1985) describe the concept of "illness related work," as "regimen work, crisis prevention and management, symptom management, and diagnostic-related work." (p. 226). Conditions like Down syndrome also go hand-in-hand with caregiving. Although the behavioral and functional abilities of people with DS change as they move from childhood into adolescence and adulthood, most remain in need of at least some degree of support throughout their lives (Namkung et al., 2015). Unpaid caring for someone with an intellectual disability is usually a lifelong commitment for these carers, particularly parents and siblings. Despite this, few studies focus on the specific needs of caregivers of those with Down syndrome and even fewer capture their perspectives using qualitative approaches (Hart & Neil, 2021, p.61). Most research on people with DS groups them into broader categories that they share characteristics with, including people with disabilities (cognitive and physical), autism, and psychiatric disorders (schizophrenia, bipolar disorder). Those with DS are often used as the ''control'' or ''contrast'' group for those studying other disability conditions (Hodapp, 2007, p.279). Although these conditions can appear together and share characteristics, they are not the same. As with any condition, capacities vary between individuals.

People with DS have their own needs and abilities, which means the caregivers do as well. As Hart and Neil (2021) state, these individuals, and their caregivers both have unique needs for support, including informational support.

In my lifetime, there has been a massive shift in our understanding and acceptance of people with intellectual disabilities. Until the early 1980s, the main perspective of researchers and the public was “overwhelmingly negative” (Hodapp, 2007, p.279) with the implication that having a disabled child was “bad” (p.279). Advances in medicine and early childhood intervention mean that we know more about disorders like DS than ever before. There is more social inclusion in Canada today, thanks to our expanded understanding of the condition, the work of advocacy groups, and landmark legislation, such as the 1991 National Strategy for the Integration of Persons with Disabilities, and the UN Convention on the Rights of Persons with Disabilities, which Canada signed onto in 2007 (Inclusion Canada, 2019, p.2). People with DS and similar conditions are more visible in our communities and not locked away in institutions (although it is worth noting that institutionalization has not been eradicated). These changes are reflected in the language used in research studies, with a shift from harmful terms like “mental retardation” to “special needs” or “disabled,” and dated phrasing, like “the Down syndrome child” (which defines the person by the condition) changing to “child with Down syndrome”. Though we have come a long way, there is still a lot of work to be done on these fronts, and more research is part of that work.

Most research into the information practices of caregivers concerns health information, health literacy, and caregiver interactions with health professionals. A lot of it is written from the perspective of the medical community, including doctors or pediatricians, and is published in medical or pediatric journals. Much of what is written about DS caregiver information practices concerns pre-natal, early intervention, or post-diagnosis information needs. It is not surprising that demand for information by caregivers is high at these stages. However, almost all the research I consulted points to a need for ongoing support for caregivers, as “caregivers’ educational needs vary throughout the course of their caregiving experience” (Washington et al., 2011, p.41). Pre-natal information is a contentious topic when it comes to intellectual disabilities because of the modern prevalence of fetal genetic screening. There is much debate about this for various reasons; this is beyond the scope of this paper. For those that want to learn more, I will point to the excellent resources provided on the Canadian Down Syndrome Society website: https://cdss.ca/resources/prenatal/.

## Literature Review Methods

To begin with gaining a broad sense of the literature, I conducted basic searches through Google Scholar using the search terms “down syndrome, caregiver, information practices”. This resulted in a large number of broad resources, some of which were useful. Most of the useful resources that appeared at this stage were reports from community organizations related to Down syndrome or caregiving, or internet articles regarding trends in these topics (e.g., “Canadian Caregiver Strategy” from the Canadian Caregiver Coalition, the “Canada Carer Well-Being Index” from Embracing Carers, and “Today and Tomorrow: A Guide to Aging with Down syndrome” from the Canadian Down Syndrome Society). The websites for Canadian caregiving organizations were very useful to my study. The glossary (see Appendix A) and “caregiving language” page on the Caregivers Nova Scotia website were tremendously valuable, particularly for the distinction between care providers (those who provide paid care) and caregivers (those who provide unpaid care). I found their definition of “caregiver” concise and appreciated that these terms were developed in consultation with caregivers.

A subject specialist librarian at my institution guided me through some advanced searches in Google Scholar, and the full catalogue of EBSCO databases. Upon her recommendation, I used the following search strings in Google Scholar and EBSCO: caregiver, “down syndrome”, intitle: information; information (intitle) AND caregiv* OR “parent” OR “family” AND “down syndrome”’ information (intitle) AND care AND down syndrome NOT prenatal. Finally, I utilized the reference lists from significant articles to find further related sources. To analyze each source for inclusion in this review, I read each thoroughly and highlighted any discussion or findings that related to my research questions.

## Literature Review Analysis and Commentary

My synthesis of the studies relating to the information practices of caregivers of people with Down syndrome revealed four key themes: caregiver burden, outdated gender roles, the importance of networks, and links to troubling social and economic trends.

### Caregiver burden

All the caregiving literature I consulted presented evidence of caregiver burden. Caregiving is often cited as a stressful experience that results in poor mental and physical health. Issues commonly connected to caregiving responsibilities include depression and anxiety, high stress levels (Lee et al., 2021; Buteau-Poulin et al., 2020; Phillips et al., 2017), decreased social and professional life, and feelings of isolation, guilt, and entrapment (Gallagher et al., 2008). Many studies point to the consistently unmet needs of caregivers (Dalmer & McKenzie, 2016; Siklos & Kerns, 2006; Washington et al., 2011). The caregiver experience is often described as complex, intense (Barros et al. 2017), and ever-changing, as are their information needs. Caregivers need a wide range of information at various levels of specificity. Washington et al. (2011) found that key caregiver information needs are medical information (etiology, diagnosis, prognosis, treatment options), information about the availability of services for caregivers and care recipients, and information about financial support programs. Several topics of information are captured here. This information must be "easily comprehended… avoiding technical language." (Washington et al., 2011, p. 40).

To add to the complexity, caregivers must act as "information proxies" for the people in their care, practice constant vigilance and be prepared for unanticipated changes (Dalmer & McKenzie, 2016, p. 2). Chronic conditions are by nature unpredictable. As Corbin & Strauss (1985) describe, these conditions have a "trajectory" (p. 235) characterized by "phases" (p. 235) and "with each phase, different tasks are required for trajectory management and different resources are necessary to perform those tasks" (p. 228). A set of organizational tactics are required for these caregivers to control their lives. Information work, including "networking, scouting out, coaching and training, providing and clarifying instructions, distinguishing between needs and wants, searching for people, places, and necessary things" is a crucial tactic (Corbin & Strauss, 1985, p. 244).

## Outdated gender roles

According to the literature, a significant proportion of caregivers are female, "emphasizing the historical and cultural tradition of the woman in taking the main responsibility for care" (Barros et al., 2017, p. 3630). Despite societal changes that have expanded women's opportunities, they still take on the majority of "hidden work" in our society including serving as household information keepers and coordinators (Dalmer & McKenzie, 2016). Women are seen as naturally caring and tend to take on nurturing roles within their families. This work is usually invisible, "seldom acknowledged" (Harris, 2009, p.80), and usually takes place at home, where "information management, self-care, and health maintenance remain largely invisible and underarticulated" (Harris, 2009, p. 80). Many studies into caregivers of people with Down syndrome focus specifically on mothers (Hodapp, 2007; Singer 2006; Bailey et al. 1992 Nes et al. 2014; Phillips et al., 2017). Hodapp (2007) refers to this as "longstanding interest in mothers of children with disabilities" and states that "mothers have been the subject of most studies of the families of children and adults with Down syndrome" (p. 281). Thus, caregiving research demonstrates that outdated gender roles and expectations continue to persist in our society, which influences caregiver health and, in turn, their information practices. Not surprisingly, there is a lot of feminist scholarship around the topic of caregiving and its associated activities (including information practices). This is mostly focused on reframing care as work. Hooyman & Gonyea (1999) describe care as "a central feminist issue" (p.150) and this perspective "recognizes that women have historically been oppressed within the home and the labour market" (p. 150-151).

## The importance of networks

Consistently, strong networks are cited as an invaluable tool for family caregivers of people with DS. These social supports provide psychological benefits and are an important source of information sharing. All studies reflect that caregivers who maintain these networks can cope much better with their responsibilities. Many caregivers have limited social lives due to the all-encompassing nature of their care work. They sacrifice their own needs to ensure a healthy life for their children (Al Shatti et al., 2021), have more restrictions on their time (Barros et al., 2017), and may isolate themselves from society (Gallagher et al., 2008), whether intentionally or not. These behaviours are understandable, but only aggravate the burden they feel. Given the constraints that caregivers of disabled people experience, they have an even greater need for information and networking than the average person (Buteau-Poulin et al., 2020). Social activities such as talking to other caregivers of disabled people, sharing information with other families, and advocacy opportunities, such as joining a local group concerned with DS (Eaves et al., 1996; Hart & Neil, 2021) directly contribute to reduced caregiver stress.

In addition to strong social networks, it is important for caregivers of disabled people to have a supportive health information network, including care organizations and healthcare professionals (Dalmer & McKenzie, 2016). Melvin et al. (2018) describe this as “a two-way partnership” (p. 426) of sharing and receiving information. Health professionals have a responsibility to provide clear, current information to these families and yet most caregiving studies show that this is lacking. Marshall et al. (2015) found “a lack of sensitivity, knowledge, and care co-ordination among providers” and state that families are “frequently alone” (p. 370) in care coordination. Eaves et al. (1996) found caregivers of people with DS have a “very high desire for better informed professionals”, while only 30% of parents in their study felt they had excellent resources (p. 68). Studies consistently show that caregivers need information that is specialized, patient-centred, and flexible to accommodate each family’s unique needs (Skelton et al., 2021; Siklos & Kerns, 2006; AlShatti et al., 2021; Marshall et al., 2015).

Ultimately, the literature cites strong and supportive networks as crucial to the empowerment of caregivers. Access to good information is enabling, allows carers to confidently self-advocate and self-help, and leads to informed decision-making (Dalmer, 2018; Siklos & Kerns, 2006; Melvin et al.; 2018; Washington et al., 2011).

## Links to troubling social and economic trends

The scholarship indicates an increased need for caregiving in our society in general. There are clear links between dementia and Down syndrome, with more than 75% of people with DS aged 65 and older living with Alzheimer’s disease (CDSS, 2020). This means that their need for adequate and consistent caregiving is increasing. According to Statistics Canada, the number of Canadian caregivers increased by 5 million between 1997 and 2012 (Sinha, 2013). Our population is ageing, and our resources are increasingly strained; our current age is a “climate of austerity” (Dalmer & McKenzie, 2019, p. 389). Many studies highlight the need for families to navigate confusing, decentralized services with high personnel turnover (Marshall et al., 2015), and service systems that are “crisis-driven” (Siklos & Kerns, 2006, p. 922). This translates to increased frustration and stress for those families.

Scholars consistently call for caregiving to be reframed because it requires a great deal of effort, time, and resources in information seeking (Dalmer & McKenzie, 2016; Harris, 2009). This work is unpaid and takes place mostly within the home, while our traditional, capitalist view posits that valuable work is paid and public. This contrast, and the increased strain on medical resources, unfortunately links caregiving to economic instability. Many researchers have found that family caregivers must leave their jobs to manage their responsibilities. This results in caregivers experiencing “reduced cultural and economic resources” (Barros et al., 2017, p. 3631). They are living on tighter budgets, meaning they are more dependent on funding, and this financial insecurity leads to greater emotional stress (Buteau-Poulin et al., 2020; Washington et al., 2011). Ironically, caregivers can end up dependent on the dysfunctional systems that forced them into unpaid work in the first place. Additionally, some studies have shown that resources are more prevalent and accessible in large centres, and lacking in rural areas (Hart & Neil, 2021). Marshall et al. (2015) found that families experience gaps in much-needed services like insurance, childcare, and respite due to these economic factors and recommend addressing these underserved through changes in public policy, to ensure that “fewer families fall through the cracks” (p. 371). This climate is characterized not only by a scarcity of money, but a scarcity of expertise and of innovation, which means caregivers of people with DS struggle to get the personalized, adaptable information that they need.

## Literature Review Conclusion

This literature review serves to support the larger research project “Informing is Caring: The Information Practices of Canadian family caregivers of people with Down syndrome." In highlighting the key themes from what is known about the information practices of caregivers of people with Down syndrome, it can support or be the catalyst for other related research.

In conducting this literature review, I found that caregivers require a range of information on an ongoing basis, through every stage of their caregiving journey. Their information needs are constantly evolving. Most family caregivers experience high levels of stress and burden, their unpaid work is not valued, and demand for their work is only increasing as our population ages. Dalmer and McKenzie (2019) call for us to decrease the dichotomisation of everyday and workplace information practices in order to "bring into view the often invisible forms of work required to make everyday life possible" (p. 386).

In summary, this literature review demonstrates that caregivers for people with DS need to have access to clear, consistent, individualized medical information, advocacy information, and opportunities to exchange information with other DS families. They need to feel empowered to make informed decisions on behalf of their care recipient for the good health of their entire household. In order to feel empowered, they need to be able to quickly and easily find, understand, and exchange information related to their caregiving work, which (in short) is information that answers their caregiving questions.

Library and Information Science (LIS) professionals are expected to "provide consultation, mediation, instruction, and guidance…for all user populations" (American Library Association (ALA), 2022, p.7) and for "understanding and assessing the information needs of a community, and…the ways the library can assist and collaborate in meeting those needs." (ALA, 2022, p. 7). It is particularly important for them to understand the information practices of marginalized people. This links to the American Library Association (ALA) (2022) core professional competencies of user service (p. 7) and social justice (p. 8). People with intellectual disabilities (such as DS) and unpaid caregivers are marginalized groups. They experience large gaps in resources (financial, educational, geographic, etc.) that negatively impact their information practices. My broader study, supported by this literature review, revealed caregivers do not feel they receive adequate information from their medical teams or government representatives.

This means they are increasingly turning to community resources, including libraries. Libraries are well positioned as central, timely, and convenient information sources for caregivers of people with DS. LIS professionals can guide these groups to complete their information work more quickly and easily than they could on their own. This guidance can help them feel seen and heard, providing them with visibility, acknowledgement, and in turn, empowerment. This literature review contributes to the ongoing need for more research supporting LIS professionals with proper approaches to use with caregivers and people with Down syndrome, increasing the quality of service and in turn the quality of their information experience.

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# How are Art Librarians Using Information Literacy Instruction to Support Art Studio Students?

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## Abstract
This literature review examines how art librarians are using information literacy instruction (ILI) to support student research and information needs in art studio practices. The review contextualizes the topic, and identifies current strategies, gaps, and considerations for areas of future growth for a student population that is often underserved by libraries. The review thematically considers the impact of standards and frameworks on ILI in the arts and current strategies in art information literacy instruction. Findings include a need for growth and literature on the subject, disconnects between literature from the field of art, art history, and librarianship, and that recent competency documents have resulted in significant and beneficial pedagogical shifts, concluding that there are many promising future areas of growth and innovative potential for ILI in studio art contexts.

*Keywords*: information literacy, library instruction, information literacy instruction, art librarianship, studio pedagogy, art pedagogy, studio arts, studio research

This literature review examines how art librarians are using Information Literacy Instruction (ILI) to support student research and information needs in art studio practices. ILI in creative environments such as art studios is infrequent, but its impact demonstrates the value of enhancing relationships between the library, information literacy (IL), research, and students and instructors in the art studio. Though the literature on this topic is limited, this review seeks to capture current strategies and identify gaps and considerations for areas of future growth for this student population that is often underserved by libraries.

The review examines a sample of prominent recent literature including research, case studies, literature reviews, conference presentations, and articles. Beginning with definitions of research in art within the art field, literature addressing what is understood of the information seeking-behavior and distinct information needs of studio artists from a librarianship perspective is then reviewed. Within this context, a review is conducted of how competency documents, such as standards and frameworks, have and continue to influence art library ILI approaches. The focus of this section is on the pedagogical shifts supported in the more recent documents. Finally, examples of recent and emerging strategies art librarians are using to conduct ILI in studio courses are reviewed, with consideration for successes and challenges.

## Defining Art as Research

Examining how art librarians strive to meet the information and research needs of studio art-based students, particularly through ILI strategies, first requires some understanding of how research is defined in the art field. The wide breadth of literature on art research will not be fully covered here but introduced to provide appropriate context to the role of academic libraries in the experience of studio art students. The literature on art as research, using art as a research methodology, and research-creation, is not well represented in the Library and Information Science (LIS) literature. Rather, it appears predominantly in art education and art history literature.

Art has been understood both as a creative process that requires research, and as a form of research itself. Sullivan (2010), a prominent voice in art research, describes how the art process is a methodology that expands or creates new knowledge, something to be developed in students. Loveless (2019) defines a relatively new, emerging, and regionally specific term, research-creation. While connected to numerous research methodologies that relate to creative processes and inquiry, this is the prominent term used in Canada in regard to arts-based research (Loveless, 2015).

Emerging from interdisciplinary scholarly activity, this term considers the artistic practice to be a research method in itself. It not only draws connections between the creative process as a form of research but is used to advocate for shifts in academia's pedagogical and assessment approaches to the arts; shifting how art is perceived and recognized as a valid form of research (Loveless, 2019). As contemporary art becomes increasingly recognized as a distinct form of research, it becomes progressively more valuable for library and librarians to meet the research and information needs of studio art students and equip them with the skills necessary to be proficient in their practice beyond their education.

## Artist Information-Seeking Behavior and Research Needs

It is well documented that the research needs, information-seeking behavior of studio artists, and creative areas of study have not historically been well understood or studied by libraries and librarians. The literature on the information-seeking behavior of artists is mostly limited to art students, faculty, and librarians. Hemmig (2009) conducted the first study of information-seeking behaviors of practicing visual artists outside of academia, finding that a model may be applied to understand information behavior, but that community context has a significant impact on those behaviors. Hemmig’s 2008 literature review of the history of the information-seeking behavior of both students and practicing artists indicates that art libraries traditionally have not met the needs of artist’s creative process. Hemmig (2008) asserts that the information needs of visual artists are distinct from those of art historians. He found art libraries have not traditionally been effective in meeting the needs of the artists’ creative process, tending to focus on art as a subject. However, this examination of information-seeking behaviors of visual artists is predominantly based on librarianship literature and does not encompass literature authored by artists themselves which may provide valuable insight, language, and concepts.

Though limited, studies over the past several decades reveal common themes of information needs among studio art students (Carter et al., 2018; Hemmig, 2008). These include needing information for numerous distinct purposes, such as inspiration, visual references, technical knowledge, practical guidance in career and marketing topics, and information on trends in the local and global art communities. There is also frequently a need for information on subjects unrelated to art that conceptually inform practice (Greer, 2015; Hemmig, 2008). Garcia and Labette (2015) emphasize the need for broad subject matter, as contemporary art has made the field increasingly interdisciplinary. Recent literature recognizes a need for art libraries to diversify traditional collections to provide services meeting the broader spectrum of information needs related to the creative process (Carter et al., 2018; Hemmig, 2008).

Literature also suggests that studio art students tend to have different information behaviors than other disciples (Carter et al., 2018); browsing with little intention being a common strategy (Garcia & Labette, 2015; Hemmig, 2008). Carter et al., (2018) in their literature review, further suggest that artists frequently seek information outside of typical academic library sources; they often conceive information seeking as social behavior conducted through peer networks rather than something that can be sought through the services of a library.

Overall, it is apparent that art students often undervalue the library or do not recognize connections between it and their creative process (Garcia & Labette, 2015). The literature demonstrates that these behaviors and conceptions of the library indicate the value of ILI in studio programs which might build connections and bridge gaps in the relationship between art students and the library. Not only can libraries meet information needs, but ILI can enhance students' understanding of the creative process as a form of research.

## Information Literacy Instruction (ILI) in the Arts: Standards and Frameworks

ILI in the studio and creative contexts, though infrequent, has largely been shaped by competency documents such as Standards and Frameworks. Garcia and Labette (2015) examine the challenges that ILI in studio contexts has historically faced. This is mainly due to the reality that Information Literacy Competency Standards for Higher Education (2000) and other competency documents are difficult to apply to art since they focus on skill-based outcomes not easily transferable across all disciplines. More recently, the ACRL Framework for Information Literacy for Higher Education (2015) differs from traditional standards in that it uses threshold concepts to communicate IL that intersects with multiple literacies (Garcia & Labette, 2015).

## Pedagogical Shift from Standards to Framework

Garcia & Labette (2015) also discuss how the ACRL Framework's adaptability allows art librarians to build strong associations between IL and the art studio through the framework's interconnected conceptual threshold concepts. In their literature review, Carter et al. (2018) elaborate on several other disciplinary documents developed to support IL in creative populations in addition to the significant Standards and Framework. Some of these are now considered to be dated as well as having positivist perspectives; whereas the ACRL Framework offers a pedagogical shift in ILI, drawing on constructivist approaches.

### *Application of Threshold Concepts*

Recent literature demonstrates that art librarians are finding success creatively engaging with the Framework's threshold concepts to make IL relatable and relevant in studio contexts. Carter et al.'s (2018) analytical literature review considers the pedagogical approaches academic librarians take when working with studio art students. The review particularly focuses on how librarians adapt current Standards and Frameworks to address the unique information needs of creative populations. They conclude that librarians instructing studio students tend to resist the positivist position of the current Standards documents and are drawn to the flexibility, openness to innovation, and constructivist nature that the more recent Framework supports (Carter et al., 2018).

Art librarians reflecting on the use of studio critiques in IL education conclude that the evolving definition of ILI represented in the Framework has enriched art librarianship (Garcia & Peterson, 2017). Xu and Lafayette (2017) similarly found that customizing the Standards and Frameworks resulted in studio students having an increased understanding and appreciation for the library and librarians. More specifically, in reflecting on the revision of the Standards into a Framework, Garcia and Labette (2015) further describe how art librarians are using the Framework's highly adaptable threshold concepts as metaphors to build connections between creative process, knowledge, and relevance of IL in the studio. They further suggest that these metaphors amplify students' understanding that art not only involves self-expression but responds to and communicates ideas about the contemporary world.

Some librarians have gone so far as to use the Framework to collaboratively build a teaching tool called CREATE (Conversation, Revision, Exploration, Authority, Thoughtful, Experiential); a mnemonic device that draws clear connections between the research and creative process that can be applied in numerous ILI strategies (Meeks et al., 2017). However, it is also suggested that further conversation about the evolving definition of IL and its connections to this Framework and its impact on art librarianship is needed (Garcia & Peterson, 2017). Although librarians have had various successes in adapting the Framework, those successes are influenced by several factors: institutional context, relationships between faculty and the library, as well as time and resources available. Given the extent to which these factors vary between institutions, successful strategies for adapting competency documents in ILI are unique to each institution's context.

### *Demonstrating the Creative Research Process*

Another shared experience noted by multiple authors is the suggestion that the Framework provides librarians with a deeper understanding of studio art students' research and creative process and needs, thus providing insight and improving the library's approach to ILI. Garcia and Peterson (2017) indicate that more conceptual approaches to teaching IL are easier to adapt to a community or institutional contexts.

Conceptual concepts broaden the scope of IL while being open to interdisciplinary approaches, rather than being limited to a narrow set of skills or outcomes. Garcia and Labette (2015) found that using IL threshold concepts as metaphors for the creative process provided them with language that was relatable to students. By using methodologies that relate to studio practice and pedagogy, IL becomes more relevant, and librarians better understand student skills and information needs (Carter et al., 2018).

Carter et al.'s (2018) discussion of ILI in the arts, unlike other authors, goes further in discussing how the approaches based on the Framework help address bias. Carter et al. (2018) indicates that some IL competency documents having bias in that they fail to meet or understand the information needs of studio students. Additionally, librarians may have biases or a misunderstanding of studio students' information needs creating barriers to effective ILI.

### *Assessment Tools*

Librarians have also used varying approaches in utilizing the Framework to build assessment tools. Numerous art librarians report that ILI that draws on the Framework, combined with embedded librarianship through initiatives such as studio visits and participation in critiques, provides the opportunity for developing more effective tools for qualitative assessment of student IL skills (Carter et al., 2018; Garcia & Labatte, 2015; Salisbury, 2018). This approach also provides opportunities for faculty and librarians to reflect on their instruction practices (Petraits, 2017). Salisbury (2018) utilized the framework in conjunction with their library's core values guide to assess students' information-seeking behavior and address studio students' current methods of research and their artistic practice. Petraits (2017) used the Framework to build a Post Research Workshop Assessment Criteria Tool to apply to ILI in studio courses, effectively demonstrating the value of ILI to faculty and administration.

### *Building Transferable Skills*

Garcia and Labette (2015) suggest that the Framework's threshold concepts build transferable skills that extend beyond the academic studio and can be carried into professional practice as they represent the conceptual knowledge needed to become an expert in the discipline. Carter et al. (2018) similarly concluded that librarians could more effectively teach transferable skills by engaging with students' disciplinary practice and entering the studios. They also call for deeper engagement with studio art faculty, students, and their creative practices.

## Strategies in Art Information Literacy Instruction

### *Critiques*

Participation in critiques, a standard pedagogical tool in studio classes, emerges as a common strategy for ILI in studio courses. Petraits (2017) argues that critiques are an ideal site for ILI. Garcia and Peterson (2017) further elaborate that critiques not only allow reinforcement of IL but allow librarians to go beyond being resources and become collaborators in student learning. Garcia and Peterson (2017) also note the impact of working with like-minded studio instructors, as methods for conducting critiques vary. Some critiques encourage students to share their research process while others focus more on responding to the artworks.

### *Studio Visits*

Similar to attending critiques, librarians are conducting studio visits; a practice which typically involves guests such as curators, art historians, fellow artists, or scholars visiting an artist's studio to view and discuss their artistic process, ideas, techniques, and work (Salisbury, 2018). Salisbury (2018) reflects that this strategy acts as outreach as well as an assessment of student's information behaviors. Conducting visits throughout the year also provides opportunities to scaffold and embed ILI and relationships with the library (Salisbury, 2018).

### *Co-teaching, Co-curating, and Scaffolding Activities*

Other strategies extend to co-teaching and co-curating with art faculty to design and lead projects and activities in studio classes. Garcia and Labette (2015), in addition to participating in critiques, collaborated with instructors to conduct research projects on artists to inform student artistic practice as well as create artist statement bibliographies. Greer's (2015) use of embedded librarianship involves scaffolding by embedding activities and assignments that introduce research skills and resources focusing on textually communicating artworks and practice. Xu and Gil (2017) similarly use a series of assignments to connect research and art-making through students conducting studies on artists and presenting their findings. Additionally, the librarians participate in critique as well as facilitating and co-curating an exhibit of student work in the library. Payne (2018) takes library-hosted exhibitions further by inviting students to use the library and specific topics or issues within the library, such as bias in cataloging, to explore and respond to through art practice.

These various ILI strategies used by art librarians are informed by the existence, or non-existence, of relationships with faculty, the history of the library's collections on art topics, outreach strategies, available staff time and resources, and other broader institutional contexts.

## Highlighting Library and Librarian Research Value

Librarians developing new ILI strategies for studio courses typically observe that collaboration with art faculty demonstrates the relevance and benefits of ILI, resulting in improved relationships between the library, librarians, and art faculty (Garcia & Labette, 2015; Garcia & Peterson, 2017; Xu & Gil, 2017). Garcia and Peterson (2017) found that their ILI even resulted in faculty collaborators further promoting the library and their services to colleagues. Xu and Gil (2017) report that introducing ILI to studio courses inspired some faculty to shift curriculum and permanently incorporate IL tools. Payne (2018) further indicates that inviting students to conduct projects in and about the library opened a dialogue between faculty, students, and the library while promoting the library as a communal sphere of influence.

Librarians engaging ILI in studios consistently find positive impacts on student work through observation or sometimes measurable assessment (Garcia & Labette, 2015; Garcia & Peterson, 2017; Greer, 2015; Salisbury, 2018; Xu & Gil, 2017). Authors sharing ILI strategies consistently report positive outcomes and impacts on student learning and relationships between studio students, art faculty, and the library. However, limited time and resources are recurring barriers and challenges (Garcia & Peterson, 2017; Greer, 2015; Xu & Gil, 2017).

## Conclusion

This literature review indicates that how art librarians are using ILI to address the needs of art studio students is continuing to evolve but is not well represented in literature. Current definitions of art as research from the field of art do not appear in the library literature, suggesting a possible disconnect between art librarianship literature and art history, art education, and art practice literature. Literature about art research authored by artists may provide insightful knowledge for art librarians and inform their ILI practices. Although art libraries have historically better met the needs of art history students than the unique and wide-ranging needs of students with studio practices, recent literature indicates that these gaps are being addressed. The information needs and behaviors of studio art students provide valuable insight. More research around the needs of practicing artists is required to provide important indicators for the competencies students should develop to be successful as they transition to practice beyond their academic experience.

ILI in studio art is largely framed by competency documents. Although they typically have not aligned well with the IL needs of studio contexts, the more recent ACRL Framework has created a significant shift towards constructivist pedological approaches that are more relevant to the creative process. Art librarians have been creatively adapting the conceptual threshold concepts of the Framework to draw connections between the art creation processes and research processes. Themes emerging from the use of this Framework to provide ILI in studio classes include the opportunity to demonstrate to art faculty the relevance of ILI and strengthen relationships between faculty and the library, the librarians themselves developing a deeper understanding of studio-based research which better informs their strategies, opportunity to build more effective tools to assess student needs and student learning, and supporting conceptual IL skills that go beyond how to use the library and build important research skills transferable to professional practice.

In regard to strategies for implementing ILI in studio courses the literature consistently demonstrates that the context of each institution, along with the time and resources available, contribute to whether art librarians conduct one-time sessions or embedded forms of ILI such as co-teaching and co-curating. Fortunately, the literature also suggests that art librarians are often utilizing standard studio pedagogical teaching methods such as critiques, studio visits, and exhibitions as opportunities to embed ILI.

Other common strategies for studio ILI include developing research projects and activities, co-teaching and co-curating, and using the library as a subject of art projects as well as a site for installations and exhibitions. The literature has shown that when librarians enter the studio for ILI, stronger relationships with faculty and students result. There is also an overall observable and measurable positive impact on student work. Successes and ideal strategies remain directly related to each institution's context, although common challenges of limited time and resources remain consistent across literature. The limited literature available on the topic of librarian ILI in studio art courses, as well as the frequency of particular authors, indicates that there is room for the growth of literature on this subject. More original research and research that includes perspectives from practicing artists could contribute to enhancing the practice of ILI to art studio students.

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# VIRTUAL REALITY

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## RESEARCH QUESTION

Can virtual reality (VR) create a *fourth space* in libraries that is a safe(r) space for marginalized communities, such as 2SLGBTQ+ and IBPOC people, where needs around physical well-being and mental health are met? Libraries are considered third places between work and home, so if there is access to VR could that create a *fourth space* for marginalized people to explore by using, learning and developing VR content in library settings?

## VIRTUAL REALITY DEFINITION

VR is a technology that completely immerses the user in a synthetic virtual environment that is in a way a substitute for the real environment of a physical space. The synthetic environment can be further supplemented by adding visual, auditory, and haptic (or touch-based) simulation through means of headsets, earphones, and specially designed gloves or controllers (Arnhem et al., 2018, p. 4-5).

## METHODOLOGY

I will collect qualitative data with a literature review using secondary data analysis. So, my initial research for this project is theory-based due to the time constraint but may include interviews and experiments with VR technology by utilizing a mixed methods type of research. I will use peer reviewed journals from the library, and in particular the book, *The Great Good Place* by Ray Oldenburg (1989) who first coined the term the *third place*. All material will be reviewed with a feminist form of inquiry while examining it with Justice, Equity, Diversity and Inclusion (JEDI) and Critical Race Theory (CRT) in mind.

## THE THIRD PLACE

"The third place is a generic designation for a great variety of public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work" (Oldenburg, 1989, p. 16).

One other important characteristic that a third place should take on is proximity, so that getting there should be convenient and one is more likely to know the community of people (Oldenburg, 1989, p. 33).

## 4TH PLACE

A 4th Place concept was developed by geographer Arnault Morrison (2019) who is interested in the social and cultural aspects of community building and was built upon Oldenburg's concept of the *third place.* Morrison argues that the knowledge economy is blurring the lines between the spaces, but his *4th Place* is still rooted in a physical space and doesn't cover virtual spaces as noted by Hardegger (2022).

If we think of digital communities as three-dimensional spaces with X, Y and Z axes, then together they define what Hardegger (2022) describes as his concept of a *4th Space*:

- X is the *Place-Axis* that is the link between the real world and virtual space.
- Y is the *Medium-Axis* and is the technology used to enter into or join the *4th Space*.
- Z is the *Time-Axis* where content is created, added or shared to the *4th Space* within a certain time.

## FURTHER RESEARCH

Hardegger (2022) then goes on to mention that his concept of the *4th space* means that wherever he is, he's adding physical location to his culture, language, politics, religion, other social aspects and digital social networks to the virtual space (p. 3).

So again my question asks: Can such a VR space exist solely for the 2SLGBTQ+ and other marginalized communities as safe(r) spaces? A safe(r) space is a non-threatening environment to share and express oneself; this is relative as not everyone feels safe under the same conditions. I am further looking at alternative ways in which VR spaces can be built for and be inclusive of marginalized communities.

## LIBRARIES

**What roles should the library take on with VR technology?**

Library as Gateway - Access starts in the library but can continue onto other spaces, like advanced labs or workplaces. Unfortunately, VR doesn't comply with the accessibility rules under the Accessible Canada Act (ACA) and therefore isn't accessible to everyone.

Library as Educator - Librarians assess class or patron needs and then look for VR experiences that are available. Placing experiences into the integrated library system (ILS), so that people will know what's available and how to catalogue and curate titles can be a challenge. There is also an issue with the lack of availability for subjects that students want to learn about.

Library as Maker
VR is also creating new knowledge artifacts for research in some academic projects. Emerging Technology Librarians can take it upon themselves to co-create content and become a change agent.

(Ellern & Cruz, 2021, p. 8-10)

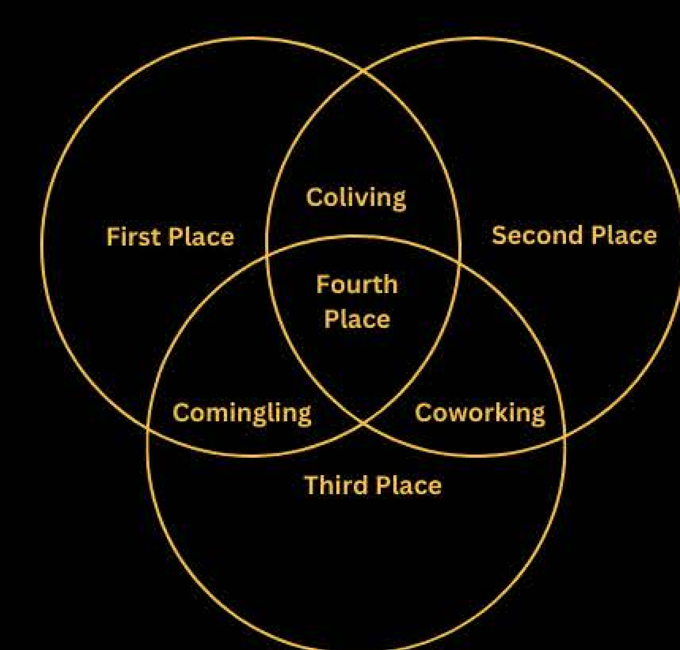
## SOLUTIONS TO THE WICKED PROBLEM OF VR

Using VR in spaces is seen as a *wicked problem* because it's a complex issue that defies conventional problem-solving methods. It's both a challenge and a constant experiment that requires continual inquiry in an expansive way for libraries to create an inclusive and a pluralistic space. Libraries can integrate this technology and education around VR to become the gateway as an early adopter, while searching for external support with outside resources around any challenges they may encounter.

Librarians can build networks by creating relationships outside the library with faculty at universities and other centres of learning or with community organizations to work in collaborative ways. They can also use their interdisciplinary imagination and intellectual dexterity to use convergent research. This transdisciplinary method of inquiry synthesizes knowledge from different sources, perspectives and lived experiences to solve complex problems.

If libraries model a willingness to explore new technology, librarians can take the lead in showing that they have the tenacity to tackle new problems and challenges by learning new skills and supporting each other.

(Ellern & Cruz, 2021)




"Places in the knowledge economy" according to Morrison.
Source: Hardegger, *A first holistic "4th space" concept*, 2022.

## CONCLUSION

*Third place* is a term that Oldenburg (1989) created that means a physical space between work and home, and while Morrison's (2019) concept of a *4th place* takes into account the knowledge economy and the blurring of the lines between work and home, it's still rooted in a physical space. Hardegger (2022) brings up a concept of a *4th space* that starts to blend physical spaces with virtual spaces, while I'm researching whether a different *4th* or even a *5th virtual space* built in a VR context can exist as a safer space for marginalized communities.

The big push is to have libraries and librarians adopt this technology as part of digital literacy just like any other emerging technology, so that 2SLGBTQ+, IBPOC and other marginalized individuals will have the same opportunities as people that already have access to this technology. There are some libraries that have already implemented VR and have started sharing knowledge about their experiences with VR technology. For example, in the research done by Lee et al., (2020), they found that librarians were aware of the fact that once people do have their first experience with VR that the majority of them, regardless of age or gender, loved it (p. 7).

As queer, trans and other marginalized folks interact with technology it can move them away from traditional areas of knowledge towards more exploratory fields such as STEAM which allows for questions around their queer embodiments in the past, present and future. This redefines relationships with emerging technologies and VR then becomes a tool and a *fourth space* that moves society away from cisheteronormativity to new forms of gender-becoming so that a queering of the phenomenology of learning can happen. This helps queer people to share their lived experiences around the contexts of gender and sexuality with a group of people that will become part of their trusted circles in a safer space (Paré et al., 2019, p. 21-22).

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# Reflections on Information Literacy in the ChatGPT Era

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## Abstract
This article is a reflection on information literacy evaluation heuristics, their use in the post-secondary information literacy instructional context, and the challenges posed to them by large language models like OpenAI's ChatGPT. Mike Caulfield's SIFT and Jane Mandalios' RADAR are analyzed as examples of heuristics that run into problems when used to critically assess large language models and their generated textual output. The author concludes by sharing thoughts on how he thinks information literacy instruction may be forced to change by generative artificial intelligence in the future.

*Keywords*: information literacy, generative artificial intelligence, ChatGPT, RADAR, SIFT

In the 2022–2023 academic year, culture-wide discussion of generative artificial intelligence (AI) tools like OpenAI's ChatGPT and DALL·E 2, Stable Diffusion, and Midjourney reached a critical mass. In particular, ChatGPT's ability to generate writing from natural language prompts that could potentially be passable in secondary and post-secondary level courses—and prove difficult to accurately detect with full confidence (Fowler, 2023; Heikkilä, 2023)—caused paroxysms in higher education media. Some figures declared a full-scale crisis (Scott, 2023; Weissman, 2023), while others welcomed the end of rote forms of assessment (such as the five-paragraph essay form) with the hope that this crisis moment would provide educators with the opportunity to significantly reflect upon how they approach instruction and assessment (Warner, 2022; Warner, 2023).

When the ChatGPT moment hit, I was an early-career librarian working at Mount Royal University Library and I had just completed my first semester of in-person library instructional sessions with students. My first year of work out of library school (2021–2022) had been with a different institution, and, due to COVID-19 pandemic measures, almost all my first instructional experiences had been over Zoom, which was not ideal from a pedagogical development nor a student engagement perspective. Frequently, when instructing over Zoom, I felt parachuted into a deracinated digital space to play the role of another talking head droning on about the importance of citation to a wall of switched-off camera avatars. In contrast, working on campus in the Fall 2022 semester across the 26 instructional sessions that I led that term, I had relished the opportunity to establish rapport and build a sense of community with students as we honed our information literacy skills together in the source evaluation activities that I designed. One particular source evaluation activity that I used in almost all my sessions was to curate eight or ten sources on a given topic (say, fast fashion), and to have students assess them for credibility (or, in some cases, scholarliness), voting whether they thought the source was usable. In my collection of sources, I would try to represent the diversity—one might even say the anarchy—of online information ecosystems by choosing a wide swathe of items: a Tweet, a scholarly article, a comment on a news article, a Wikipedia entry, a library catalogue record for a monograph, a Substack, a podcast, etc. I was often quite impressed at students' ability to navigate these disparate types of information, and our debriefing conversations together were some of the most memorable experiences of my instructional career.

## ChatGPT as a Challenge to Information Literacy

In my view, ChatGPT poses several significant challenges to information literacy (IL) instruction. The first of these challenges is the problem of misinformation and disinformation propagated by the chatbot. ChatGPT, as a large language model (LLM) trained on an enormous textual corpus, works by trying to predict what would be a "reasonable continuation" of the text it is generating (Wolfram, 2023), and that continuation is prone to error. As has also been documented, ChatGPT is able to generate deceptively fake references (Simpson, 2023; Smerdon, 2023; Welborn, 2023), often concatenating a couple of plausible reference elements (like the name of a real first author and a journal title), but generating a fake article title (Scheelke, 2023). On a more macro level, OpenAI's (2023) own documentation for GPT-4 asserts, "[t]he profusion of false information from LLMs … has the potential to cast doubt on the whole information environment, threatening our ability to distinguish fact from fiction" (p. 11). These tendencies are, to understate the case, deeply worrying, and I believe librarians need to think critically about whether we can recommend the use of tools so prone to fabrication in good faith. Library professionals' uncritical boosterism of LLMs—as seen in, for example, Steve Hargadon's (n.d.) AI bootcamps—is particularly discordant coming after the Trump era, when librarians everywhere were stridently rallying against the phenomenon of "fake news" (Revez & Corujo, 2021) and working to position libraries as "arsenals of lifelong information literacy" (Jaeger & Taylor, 2021). Crucially, as critics like McQuillan (2022, 2023) have also emphasized, such boosterism in sectors like education could further pave the way for increased deployment of AI technologies in other areas of society like law enforcement and the administration of social services, highlighting that our decisions to professionally embrace these technologies do not occur in a vacuum. As Safiya Umoja Noble's (2018) *Algorithms of Oppression* and Shoshana Zuboff's (2019) *The Age of Surveillance Capitalism* have pointed out, we need to contend with the ways in which big tech companies and the algorithms that drive them misuse, exploit, and profit from personal and otherwise protected data online. These and other similar texts were fashionable in the library world in the late 2010s, and the issues they raise have not disappeared now that AI is on the scene, and we are dealing with OpenAI in addition to Meta, Microsoft, and Alphabet Inc. Despite this, in the excitement around AI, critical approaches such as Noble's and Zuboff's have, at least for the moment, fallen by the wayside, seemingly discarded because librarians and educators are unable to resist the allure of the technologically deterministic new.

Another challenge that ChatGPT poses to IL instruction has to do with how it frustrates our common IL heuristics, and this is a challenge that could lead to a profound change in the way that we conceptualize and teach IL. More specifically, popular IL teaching heuristics such as SIFT and RADAR run into problems when they are used to analyze LLMs and their output. This challenge first occurred to me as I was reading Scheelke's (2023) library guide that advises students on how to check ChatGPT for credibility. In this guide, Scheelke suggests two techniques: lateral reading and citation verification. Citation verification, as the simpler of the two proposed techniques, entails double checking that a source produced by the LLM exists, and, subsequently, if the source actually contains the information that the LLM attributes to it.

Scheelke's (2023) other technique is lateral reading, a practice developed by the Stanford History Education Group as part of its Civic Online Reading curriculum, which is also part of Mike Caulfield's popular SIFT method of IL instruction that emerged in the late 2010s. Caulfield's (2019) SIFT method involves four steps that students are to use in assessing an online source: stop; investigate the source; find better coverage; and trace claims, quotes and media to the original context. When students use SIFT, they are reading laterally (across the web) as opposed to vertically (staying on the source), and using other online sources to determine the place of the first source in the broader information ecosystem, what its reputation is, what its biases may be, and who may be behind it.

According to Scheelke (2023), lateral reading, as applied to ChatGPT, comprises reading across other online sources to vet the information generated by the LLM:

> Don't take what ChatGPT tells you at face value. Look to see if other reliable sources contain the same information and can confirm what ChatGPT says. This could be as simple as searching for a Wikipedia entry on the topic or doing a Google search to see if a person ChatGPT mentions exists. When you look at multiple sources, you maximize lateral reading and can help avoid bias from a single source. (Checking ChatGPT for Credibility section, para. 3)

These are worthwhile practical directions—useful to mitigate against ChatGPT's above-mentioned proclivity for fabricating references and spreading erroneous information—but I think they obfuscate the central problem that the LLM creates for lateral reading and SIFT. Unlike familiar resources like books, articles, webpages, and social media posts, which we know how to evaluate, ChatGPT troubles heuristics like SIFT because it is not a discrete source. It strings words together, synthesizing sentences through a calculation of linguistic probabilities based on many sources, on demand, for the user that prompts it. As Woods (2023) rightly identifies, “when asking a question of ChatGPT, you just get the information, without any context” (para. 8). In contrast, Caulfield’s SIFT method—and, in particular, lateral reading as a technique—is highly dependent on leveraging contextual information about a source in order to inform a judgment about it.

Perhaps, what we will see as an update to lateral reading in the age of LLMs will be performing lateral readings on the *models* themselves. For example, researchers have found ways to drastically increase the toxicity of ChatGPT’s outputs by getting the chatbot to adopt personas (Deshpande et al., 2023), and it has exhibited gender and racial biases when prompted to generate performance review outputs (Snyder, 2023). Perrigo (2023) has also done vital reporting on the exploitative practices that OpenAI used to try to detoxify ChatGPT before its release, where Kenyan workers were paid less than two dollars an hour to judge snippets of the LLM’s output that included incredibly graphic content like incest, child sexual abuse, murder, and suicide. Developing lateral reading skills for LLMs could include growing one’s awareness of their algorithmic biases, but also working towards greater understanding of the human and environmental costs of their development and daily use (Luccioni, 2023). Fully grappling with the human and environmental impact of these technologies, however, may challenge librarianship’s fundamentally liberal professional disposition where seemingly every issue needs to be framed in terms of opportunities and challenges with the librarian as the neutral professional (Anderson, 2022) that can discern the middle path between the two.

Another IL heuristic that ChatGPT poses problems for is Mandalios’ (2013) RADAR model. I have used RADAR at Mount Royal University with students in our source evaluation exercises together. Though there is some variation, commonly RADAR stands for: relevance, authority, date, appearance (or accuracy), and reason for writing (Mandalios, 2013, p. 473). When using this specific criteria-based evaluation heuristic in trying to assess ChatGPT, one runs into even more marked problems than with SIFT. For example, what would it mean for the LLM to have a sufficient type of authority? How useful is an analysis of the LLM’s appearance, when its textual output can be so easily copied and pasted to another radically different online context? Or, even more confusingly, what if ChatGPT's "reason for writing" is simply because a user prompted the LLM to write?

## Conclusion

We need to remember that IL heuristics have changed as digitally networked information sources have changed. Checklist-based approaches to source evaluation have been critiqued for almost twenty years in LIS (Meola, 2004), and the CRAAP test has been challenged for having "assumptions … rooted in an analog age: websites are like print texts" (Wineburg et al., 2020, p. 8). I strongly agree with Bull et al. (2021) and their argument that we need to move beyond teaching frameworks and heuristics towards fostering what they call proactive evaluation, where we come to understand that "[b]oth the user and the information have agency in a dynamic relationship" (A Model for Transitioning from Reactive to Proactive Evaluation section) in the information ecosystem. Perhaps the problems with contemporary IL heuristics that are revealed when we apply them to LLMs point toward possible future developments in IL, like proactive evaluation, as librarians and users will be challenged to develop new algorithmic or AI literacies. Developing those literacies in depth may be extremely difficult, because, as McQuillan (2022) states, "deep learning is a complex set of nested mathematical operations that are off the scale in terms of anything we can grasp directly" (p. 21), and generative AI technologies like ChatGPT remain blackboxed to outsiders (Barr, 2023). This is partly why they currently advance at such a pace as to outstrip government regulatory bodies (Papachristou & Deutsch, 2023; Wong & Collier, 2023). Personally, I still think it will be worthwhile to help learners become better evaluators of discrete information sources such as the texts created and shared by human authors. It is the skills we sharpen evaluating discrete sources that allow us to now have a critical perspective on generative AI technologies and the Silicon Valley ideology (Daub, 2020) that imbues them. What worries me far more is the possibility of a future where we have lost that perspective and fully outsourced our thinking to AI models.

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# SIMSArchive: Reflections on Processing 50 years of LIS Student Association Records

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## Abstract
A reflection on processing LIS student association records in preparation for their move to the Dalhousie Archives, from the perspective of an MI student. This reflection comments on the importance of preserving student knowledge, a workshop series that was developed to provide instruction and learning opportunities for archive-minded students, and key takeaways from the project that may be of interest or significance to other academic student associations grappling with managing and preserving the records of their organizations

*Keywords*: archive; LIS; student association; records; knowledge; practice

The School of Information Management Student Association (SIMSA) at Dalhousie University has made its home in several academic units across the Halifax-based Studley campus. Dalhousie's Library and Information Science program first resided in the Faculty of Graduate Studies, where it was seeded in 1969 as the School of Library Service (SLS); the program was renamed to the School of Library and Information Studies when it moved to the newly founded Faculty of Administrative Studies in 1975, which became the Faculty of Management Studies in 1984, and later the Faculty of Management. In 2005, the School adopted a new name: the School of Information Management (SIM), and in 2019 the Master of Information (MI) program was launched.

The School's student association has persisted almost as long as the School itself has. The School of Information Management Student Association (SIMSA) passed its first governing constitution in 1970 (under the name the Library School Students' Association), making it one of the longest-running student associations amongst MI/MLIS programs in Canada. SIMSA's primary objectives as described in its constitution, last updated in September 2022, are 1) to provide a forum for the opinion of the student body; 2) to promote communication and collaboration among students, between students and faculty, and between students and alumni; 3) to represent members of the student body within SIM in aspects of the School such as development, curriculum, scholarships, work experience programs, and professional development; 4) to promote academic and social activities connected with the School; 5) to represent students in matters pertaining to the rest of Dalhousie University and the wider community; 6) to foster relationships with and encourage cooperation between other student organizations within the Faculty of Management and in Canada; and 7) to ensure matters of equity, diversity, accessibility, anti-racism, and decolonization are prioritized within the student body, the School and the University, and in the professional field of Information Management. All students registered at SIM are automatic members of SIMSA, and the student association is managed by an executive body consisting of 9-14 members sitting in seven roles: (Co)-Chair, Financial Chair, Communications Chair, Academic Chair, Non-Academic Chair, Digital Publications Chair, and EDIA & Special Projects Chair. Two chairs on average sit in each role: one incoming executive member and one outgoing (varying throughout the year based on when elections are held).

Possessing 7 specific mandates which largely encompass liaising internally within SIM and with external groups, SIMSA directs most of its attention towards communicating with students, faculty, the university, and the wider community. It provides spaces and forums through events and programming to encourage and facilitate these communications. SIMSA also supports related entities in the Faculty of Management, including the Dalhousie Journal of Interdisciplinary Management and the Information Without Borders conference. SIMSA is not a solely project-based organization; it serves its members through embedded programming, through its existence as a resource for students, and through its agreed-upon responsibilities with the School. Its diverse range of programming makes for a variety of records generated by the organization- from promotional materials, creative journals, and invitations- to grant applications, governing documents, and financial materials.

Throughout the years, SIMSA has housed the paper records it generates in a metal filing cabinet, which has stood in the SIM common room since 2005 and likely dates to the 1970s, based on the container's labels. When the COVID-19 pandemic interrupted in-person student attendance at SIM in 2019, knowledge continuity between class cohorts was significantly affected and the cabinet thus presented a mystery to the students of the 2022 and 2023 classes. When SIMSA undertook common room revitalization efforts in the spring of 2022, the cabinet keys were located, and with them, 50 years of records. The SIMSArchive project was subsequently conceptualized as an archival effort intended to process physical SIMSA records. The student association felt it important to preserve the history of the association and make it accessible to the SIM student body and the future chairs of SIMSA.

A workshop series was organized alongside these processing efforts to give SIM students the opportunity to learn about archives, work through the core archival functions, and contribute to processing SIMSA's materials. Physical materials were to be appraised, arranged, rehoused, and preserved in preparation for their move to the Dalhousie Archives. Organized and instructed in a joint effort between Dalhousie's Digital Archivist Creighton Barrett and MI student Maddie Hare, the project's overarching objectives were to 1) offer students a low stakes learning environment in which they could engage with archival theory and practice, and 2) make SIMSA's records more accessible to students through their processing and preservation. The workshop learning outcomes were envisioned to introduce students to the core archival functions (appraisal, arrangement, rehousing, description, preservation), provide a hands-on learning opportunity for students so they could gain practical experience with performing archival work, and offer opportunity for students to work with material relating to the student association to which they belong to inform a deeper understanding of both SIM and SIMSA.

## Processing in practice

The SIMSArchive project took a collaborative approach to archival work and encouraged experiential learning and reflection by having students with little to no archival experience work through the core archival functions and process materials from start to finish. The first step was crafting an archival policy for SIMSA (see Appendix A) as SIMSA possessed policies only relating to records management, and so Creighton advised formulating an archival policy to guide the project. A workshop series was then outlined (it originally included a fourth workshop on digitization, but the time constraints of the academic year only allowed for three workshops to be undertaken):

1) Appraisal
2) Arrangement and rehousing
3) Description

The workshop series took place over the fall and winter terms. The first workshop on appraisal had students look through the records to get a sense of what they contained, identify records for preservation, and begin thinking about a logical series. Two boxes of records were weeded from the collection and destroyed. The second workshop covered the basics of arrangement, and records were moved into files and rehoused into 3 legal-sized boxes. Most of the filing and rehousing took place outside of the formal workshops as instruction and discussion were the focus of the workshops themselves. The third workshop on description instructed students on the proper labelling of files, archival description, and the RAD descriptive standards. Students described records in a shared Excel workbook where titles, series, descriptive notes, and other data were included for each file.

Archival processing provided both opportunities to work with the physical aspects of archiving: arranging material, sorting through records, rehousing them into files, as well as the intellectual aspects of archival work. Deciding upon a series required conversation around SIMSA's persistent core functions and activities, and how a logical series could be decided upon that would be relevant for future archiving efforts. In addition to representing the student body in all aspects of their educational and professional experiences in SIM, SIMSA also promotes academic and social activities throughout the year such as Lunch and Learn programs and holiday and end-of-year social gatherings. SIMSA holds fundraising initiatives to support these events, traditionally with the sale of apparel, books, and baked goods. With this diversity in mind, the workshop group decided on a series that aligned with SIMSA's primary functions: 1) Administration (Executive meeting minutes, official correspondence internal or external to SIM, official documentation, governing documents such as constitutions, meeting minutes, agendas, voting processes, subcommittee materials, guides, reports; 2) Finances (Budgets, audit materials, fundraising activities); and 3) Student Relations (Materials relating to event promotion/organization, social and special projects programming, academic matters, student forum records, and materials relating to the student experience). In workshop 2, Series 1 and 3 were combined to simplify the series and account for material overlap.

At the time this reflection was written, description is ongoing, and SIMSA is working on writing a fonds-level description and an authority record for the association. Archival materials will be donated to the Dalhousie Archives in the summer of 2023 and sit alongside the School of Information Management fonds. A filing cabinet of material (since removed from the School's offices) has effectively been reduced to three legal-sized boxes that capture the 50-year relationship of students with their School. Students who attended the workshop were exposed to archival theory and practice, and SIMSA now has the foundations of an archival program that can continually inform the way it preserves its records.

## Implications and meaning for future practice

Key takeaways from this project include a deeper understanding of SIMSA, and the School of Information Management and new ideas for future events/programs informed by past cohorts. Several executive members of SIMSA participated in the workshop series and delighted in the parallels they discovered between previous cohorts and their own. Fundraisers for the organization Books Beyond Bars, the creation of SIM apparel, the cataloguing of the SIM Young Adult and Children's Library, and other events, had been dreamt up by previous SIMSA members, without our knowledge. The thread of common values and shared objectives saw a reimagining of SIMSA events and initiatives decades apart.

Another key takeaway, informed by the project's objectives, was a richer understanding of Archives and Records Management, and the Library and Information Science profession. Archives engagement was approached with a communal, learn-as-you-go approach that was structured alongside learning materials such as briefing notes on archival concepts communicated through PowerPoints, ad hoc lessons imparted by Creighton in response to emergent challenges or questions, and hands-on interaction with archival materials.

The SIMSArchive project offers useful example and takeaways of how students in LIS programs can engage in informal, hands-on learning that helps translate classroom curriculum and theory into practice. Opportunities for this are bountiful, and often merely require creativity to identify and organize. Other examples of interactive learning that have occurred at SIM include book-binding workshops set up by previous SIMSA members, records retention schedules and classifications applied to SIMSA records conducted as projects for SIM's Records Management course, and Knowledge Management case studies that audited the association's current practices and made recommendations, also undertaken in fulfillment of class assignments.

This project did not occur without its challenges. The structure of the academic year meant that student presence on campus was mostly limited to the fall and winter terms. Workshops were situated in a busy course calendar and scheduled in among other academic events, talks, professional development sessions, SIMSA events and initiatives. Further, student attendance was limited by work and personal schedules, including those of the workshop organizers and instructors. Workshops were rescheduled and delayed, and the fourth session did not take place altogether. The majority of archival work was conducted outside of the workshops themselves by SIMSA executive. Despite this, substantial progress was made and SIMSA now has more experience to draw from when organizing future workshops and considering attendance strategies. Further, the primary objective of the workshops was to provide a learning space for students, and in this the workshops were successful. Other lessons learned related to reconciling SIMSA's priorities and objectives as an organization with traditional archival practice. It was difficult to conceptualize an organizational series for an association with such a diverse range of activities, and for reasons of simplicity, only

2 were decided upon. Due to the reduced volume of material that survived the weeding process, only 2 series were ultimately needed to appropriately file records, but this intellectual process did evoke questions of how to process and manage materials of an organization in constant flux. This project required SIMSA to get clearer on its functions, activities, and goals, and so elicited reflection on the part of SIMSA executive members about what the future of the organization could and would look like.

Significantly, this reflection fulfills an additional objective of the SIMSArchive project, which was to publish a written report or reflection on archival processes to provide transparency on the efforts that went into digitizing SIMSA records, a general account of how material was processed, and key takeaways and lessons learned for future SIM students and other LIS students and practitioners who may derive useful insights from SIMSA's experiences. Indeed, sharing experiences with other students and the wider archival community has been illuminating, motivating, and useful. The SIMSArchive project was presented at the Association of Canadian Archivists Student Chapter at the University of Columbia (ACA@UBC) Seminar and Symposium in February 2023. Additionally, it has been the subject of discussion during Canadian Information Science Students' Association (CISSA) meetings, where other LIS students across Canada have voiced support and shared their experience with student records, a well-documented challenge in higher education communities resultant of high student turnover rates.

As SIMSA continues operating past the 50-year milestone, the changes it will face are imminent rather than hypothetical: the School of Information Management will change its name in the summer of 2023 to the Department of Information Science (DIS) as the Faculty of Management undergoes restructuring. In advance of this name change, SIMSA adopted the new moniker "Information Management Student Association" (IMSA) at its 2023 Annual General Meeting. SIMSA's constitution, ratification, website, documentation, and branding will all be affected.

What the SIMSArchive project has illuminated, apart from a richer understanding of archival practice, is the persistence of what connects students in the MI program across time: a unifying spirit based on shared interests. Those interests are grounded in the values and competencies of librarianship that students enter the MI program to learn and are demonstrated in practice through student association members who possess a deep commitment to service of their peers. Future members of (S)IMSA need not bear the same organizational name to participate in a half-century tradition of being a core part of the formative experiences of future librarians and information professionals.

## Acknowledgements

The authors wish to thank Dalhousie Archivist Creighton Barrett for the generosity of his time and knowledge in guiding SIM students through this project. Creighton's dedication to SIM students far surpasses his time as a SIMSA chair and is deeply appreciated. Thank you. The authors also wish to thank Dr. Jamila Ghaddar for her affirmation of the importance of preserving student association knowledge, the teachings imparted through her Archives and Records Management and Knowledge Management courses, and her insights and guidance on student association matters.

# Appendix A

SIMSA Archival Policy

Section 3 (Policy and Procedure) of SIMSA's Records Management Policy

3.5.1 This policy applies to documents that are determined important to retain in perpetuity. That is, longer than the records retention schedule accounts for.

3.5.2 Records appraised as eligible for preservation should be digitized if they are not borne-digital and kept on the SIMSA OneDrive folder.

3.5.3 Physical records that are donated, passed on, or found around the School of Information Management or within the SIM community should be appraised and determined worthy or unworthy of preserving in perpetuity digitally or physically at the Dalhousie Archives

3.5.4 Records that are deemed worthy of preserving in physical format should be donated to the SIMSA fonds in the Dalhousie Archives for preservation.

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# Travels with a Small-town Librarian: Reflections from Coast to Coast

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## Abstract
A rural public library acts like a community hub just like its urban counterpart. In many ways, both offer the same services to their regional clientele. However, the methods those services are delivered need to uniquely adapt to the small community it services. As a Library and Information Science (LIS) professional, the rural library requires patience and understanding in order to mesh together formal education and realistic practices. From adjusting collection development goals to managing unionized staff, your degree cannot prepare you for everything. The experiences gained from this hands-on learning is unforgettable and incredibly rewarding for a young professional.

*Keywords*: *public librarian, rural library, small communities, young professionals*

When I decided to apply for a Master in Library and Information Science (MLIS), I was working as a student assistant at my university's library. There I found that I enjoyed the structure of research assistance to the campus community. I was fortunate to work among supportive librarians who encouraged me to apply for my MLIS and helped me navigate course selections. In this environment, I was able to work my way up to higher assistant positions while I was in school, which allowed me to expand my knowledge in academic libraries through these new positions. My first-hand experiences and challenges at work aligned with the course offerings for academic libraries, so I focused my studies in public libraries where I had yet to work. Mostly, it was a backup plan to have knowledge in both streams, as I had planned to pursue a career in academic or law libraries. Instead a small public library is where I launched my career and found my comfort in the profession.

## The Rural Library Investment

Within a few weeks of finishing my classes, I moved to Nova Scotia for administrative work in a small public library. I was eager to start full-time work following two university degrees, and the idea of easing into public libraries without pressures from a public-facing position seemed comfortable and less anxious. After living in London, Ontario for six years I was also glad to return to a small town, despite this being a new area away from my friends and family. My studies focused on urban library systems, and it was an interesting learning transition into how rural library systems functioned. I was surprised by the way some rural libraries treat their professional staff. Unfortunately, this first position was not a good fit for me, but it did give me an opportunity to understand job postings and the emphasis of some interview questions. Rural systems generally have even more limited staff and resources than urban areas, and as I discovered, this puts a lot of pressure on the few staff who are available to maintain the system. The job I interviewed for was not the job I ended up working and after some meetings, it appeared that many of my tasks needed to start before I arrived, so naturally, others had to take on those roles. The few tasks that were left from my job description formed my new daily routines. These few tasks did not allow me to grow or learn more about public libraries, so it was time to move on. Between this position and my current role, it appears that rural libraries will either undermine qualifications and not utilize their staff to their full capabilities or they will see a degree as a valid excuse to merge multiple roles and tasks into one position, for one person to manage. As I found out, not everyone is ready to have those conversations.

Since I had moved to Nova Scotia for work, I was fortunate to find a new local job to support myself so I could leave the library. I was able to return to non-profit work with adults with intellectual disabilities, a job I had while getting my MLIS. In many ways, working among people while I applied to various library jobs furthered my interpersonal skills more than many may realize. While in graduate school, this support work also helped me engage with a group of future patrons I previously knew nothing about. Using non-library experiences to showcase skills and new perspectives in libraries was very beneficial while job-seeking. Within a few months, I accepted a job in the central interior of British Columbia and was moving across the country, again. My work history at the university library where I had moved from a student assistant, research assistant, and finally to a library assistant supervising students had helped tremendously in landing my current position. However, my time as a support worker gave me a unique outlook for the active assignments that were part of my job interview process. In a series of video calls and emails, I had to show how I could move into a management position early in my career. However, this new position would once again be for a rural library system where many job responsibilities fall onto one role. Programming is not a large part of my job, but I was asked to show what new programs I could bring to this small community that I had never visited before. The activities I participated in everyday with my non-profit organization fuelled those ideas and it was seen as fresh and insightful. All of this showed my employer that I could get the job done and that it was worthwhile investing in areas that I lacked; mainly, working within a unionized environment. One aspect of my MLIS that I overlooked was this type of people management. Understanding the relationship between management and unionized staff was not an experience I had. There was no graduate course in following a collective agreement, so I had to face those challenges blindly and ask for help when I had no idea how to proceed. In a rural setting, where administrative duties fall onto few personnel, this component is crucial. Once again, I was fortunate to find an employer that trusted my initial experience and education, while also investing in me through professional development opportunities. Consider rural libraries as an investment for your career, especially if they are willing to invest in you.

## Combining Professional Standards with Small-town Charm

For the last three years I have been the area librarian and branch manager for a small town of 1,900 plus the smaller, surrounding communities. As the area librarian in the South Cariboo, I am the only one with an MLIS. The staff are well trained to offer reference assistance and technology help, but connecting policy to practices for patron benefit and staff safety seem to be of little concern or interest. The collection was well maintained and the community fairly connected to the library, but I entered this area with professional expectations and a naive notion that I would be easily accepted. Some did welcome me as a new face in the library, but most saw me as a threat who would disturb how the library functions in its own small way by bringing in academic and city rules.

The largest adjustment was privacy. As I found out, this branch was not concerned about privacy as the cliche small-town understanding that "everyone knows everyone" was taken literally. Explaining to staff why privacy and policies are important was an adjustment, and for some, a barrier to public service. My personal challenge was learning how to share this need without using my degree as a source of authority or belittling anyone who has never known how to do their job without breaking confidentiality. Additionally, some patrons were frustrated that they couldn't access a neighbour's account or ask for a staff's schedule, but it was a worthwhile battle. Giving examples of the harm in sharing borrowing history with a parent of a teen exploring new subjects or the fine implications of a patron using a card they are not attached to was a great start to this conversation. Thankfully, I had support for these moves within my management team to further push this type of professional development for all staff in my branch.

While managing the staff side of the circulation desk was one aspect of this new position, navigating the inner workings of a team that is physically spread out continues to present new challenges. It has been difficult to gain respect and share my knowledge with colleagues as a young professional. So, when you work 100 kilometres away from other departments and managers, including your own supervisor, communication becomes your priority. I am still learning how to share my successes, along with my mistakes with those I work with. In working on sharing my experiences I hope to provide a learning space where questions, successes and failures can be shared. I own up to my mistakes and ask for help when needed, but after all this time my colleagues still view me as a young manager and doubt my abilities rather than benefit from my skills. As a young professional, I have to lean on those with more experience around me while also advocating for myself. Afterall, I am able to see how my formal education meets my life experiences to get the job done effectively. My time as a support worker continues to outshine any book I have read when it comes to making community connections, but how do you get that across in an email or video call? What positive changes that have been made and can be seen by staff, patrons, and local organization members but that all go unnoticed by other management team members, especially if it cannot be shown as a number for a statistic? While that is the most challenging part of being a rural librarian, the most rewarding part of jumping into management so soon in my career has been the connections. Learning more about the people we serve through local businesses, organizations, and events is done without pressure and gives a similar feel to being involved with university campus groups; everyone wants to collaborate with new professionals in town who want to make this community the best for its people. I sit on a roundtable to understand the developmental needs of my youngest patrons and their parents who need our programming to access literary milestones, and I have been part of a literacy board to work with their programs and provide a collection that is useful to our young patrons and vulnerable adults who are learning. These are the connections that I can share by counting how many meetings I have attended, but I cannot show the brainstorming sessions in the grocery store when committee members run into each other or the support of sharing events on social media.

Joining community groups is only one aspect of providing a library that represents its users. As I was warned, this rural area is fairly conservative, but that does not represent everyone who lives in this town. I continue to diversify the collection and subsequently have lost some regular patrons along the way who do not agree with the current approach, but our library has continued to also welcome newcomers into our space. There is a delicate balance of providing rural patrons what they want and expect, while also showing them how to progress by exposing them to new subjects, authors, and films. The support from local organizations who are attempting to make the same changes allows an easier transition and truly resembles the charm of a small town. Looking at how libraries are cast in the news as of late, this pushback is not unique to rural libraries. The encouragement may be different and at times it may feel isolating as you try to keep the doors open for everyone to feel welcome in your small library, but that is part of the job as a rural librarian. Regardless of how well you parse through a job description, these small libraries rely on their librarians to complete the tasks that are typically done by multiple staff or departments in an urban system. Use the multitasking aspect that comes with these titles as a badge of honour as you provide the best library service for your population. It can be exhausting, and personally I am still learning how to juggle all the responsibilities in one role without undermining my abilities, but a rural public library is as rewarding as any other. I am grateful for this opportunity and the future it holds.

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# A Human Librarian Interviews ChatGPT

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## Abstract

In an effort to understand how ChatGPT might be used as a scholarly research tool, I conducted an informal, unstructured interview with the AI chatbot. I learned that it generates its responses based on patterns it identifies in its large reservoir of text data; ChatGPT cannot vouch for the accuracy of the information it presents, nor cite its sources. For this reason, instead of being used as an information source in itself, ChatGPT may be better suited as an information assistant, helping researchers design searches for information in other sources in tandem with "human librarians" (as it designates academic librarians like myself). This reflective piece describes and evaluates the AI chatbot using its own generated content and provides a foundation from which librarians can explore the topic of AI chatbots and scholarly research within information literacy classes.

*Keywords*: ChatGPT, artificial intelligence, academic librarianship, research, information literacy

"Where do you usually start your research?" I asked my information literacy class.

It was late February 2023, and I was running one of my standard undergraduate-level one-shot sessions. I stood at the front of the room and watched the live-polling results flood the screen. As anticipated, Google dominated the pie chart. We discussed Google, Google Scholar, library databases, and the pros and cons of using each as starting points for research. But then a student near the front of the room raised his hand.

"What about ChatGPT?"

I knew about the AI chatbot's existence. I hadn't used it myself, but I had heard plenty of warnings and speculation about its potential for sparking plagiarism scandals in academia (Barnett, 2023). I had not heard about its research potential, and it was not represented on my pie chart. I told the student that the jury was still out; I didn't know yet what kind of material it would retrieve and how reliable it might be, but I would look into it.

As the semester continued, I read everything that I could find related to developments in generative AI and ChatGPT. Still, much of what I found either related to plagiarism or detailed how ChatGPT could be used to reimagine assignments for university students. I did not know how it could be best used as a research tool or support. So, on May 1, 2023, I decided to go straight to the source: I conducted an interview with ChatGPT.

The process of using the AI chatbot begins when a user types a prompt or a question into a chat bar. ChatGPT then formulates a response that appears word by word on the screen. These responses can be regenerated if you are not happy with the first response. ChatGPT will remember what you have asked it within the thread of your conversation, so it understands the context of follow-up questions.

My approach was informal and unstructured. I began by asking how academic librarians can use ChatGPT. The answers that I received were very similar to those described by Cox and Tzoc (2023) and Grasso (2023), offering suggestions ranging from using chatbots for reference services to providing interactive, AI-powered information literacy and academic integrity tutorials. This was useful, but not quite to the point. I shifted my approach to ask questions from a researcher's perspective. To start, I asked, "Why doesn't ChatGPT cite its sources? How can I know where you are getting your information from?" The answer I received included the following:

> As an AI language model, ChatGPT generates responses based on patterns and associations it has learned from a large corpus of text data. Therefore, ChatGPT does not have specific sources to cite for each response it generates.
>
> […] If you are looking for specific sources related to a particular topic, you may want to consult other resources such as scholarly databases, books, or other

> reliable sources. Academic librarians can help you find appropriate sources for your research needs.
>
> It is also important to evaluate information critically and assess its credibility, regardless of the source. Some things to consider when evaluating information include the author's credentials, the publication or website where the information appears, the date of publication, and whether the information is supported by other reliable sources. (ChatGPT, 2023j)

In short, ChatGPT explained that it was not evaluating or verifying the information it took in or created—this is something that I must do as a researcher. It is, at its core, a pattern machine, built on an enormous reservoir of text. The acknowledgement that it is not a substitute for other kinds of information resources, and that it recommends the help of academic librarians when searching for material, was enlightening—and reassuring. The chatbot is not an all-knowing entity.

I followed up by asking, “Would you recommend using ChatGPT as a research tool if you provide answers based on patterns and not specific sources?” The answer echoed the one above, but added extra notes of caution:

> While ChatGPT can provide useful insights and generate responses based on patterns it has learned from a large corpus of text data, it is not a substitute for a comprehensive research tool or a human expert in a specific field.
>
> ChatGPT is designed to assist with general inquiries and provide quick answers to common questions. However, it may not always provide accurate or comprehensive information, and its responses may not be appropriate for academic research or other important decision-making tasks. (ChatGPT, 2023m)

ChatGPT is definitely not, then, the best tool for directly accessing information and research material. The idea that ChatGPT may be unreliable is already being explored in articles exposing some of ChatGPT’s inaccuracies and biases (Alba, 2022; Day, 2023). I also asked it if it could be compared to an encyclopedia, and it emphasized that encyclopedias are written, edited, and fact-checked by experts;

ChatGPT is not (ChatGPT, 2023h). Critical thinking is essential when evaluating its responses, and more study is needed into its language patterns to understand how it creates those responses.

I asked ChatGPT to regenerate its answer to the question above to test its functionality and discover if it would state anything different. It rephrased its answer and made one addition:

> ChatGPT can be used as a complementary tool to support the research process. For example, ChatGPT can help generate ideas and suggest keywords for a research topic, provide background information on a subject, or offer a different perspective on a research question. However, the information provided by ChatGPT should always be evaluated critically and verified with other reliable sources. (ChatGPT, 2023n)

ChatGPT is not, then, a new, super-powered search engine and information resource; it is not reliable enough to be an information source in itself. However, it may be very good at *developing searches* for information.

As an academic librarian who frequently assists students and researchers with their searches, I found this to be an interesting idea. The process of identifying key concepts and brainstorming a variety of related terms to create the perfect search can be slow, and it is dependent upon how familiar the researcher is with their topic and the words that are used to describe it. ChatGPT may be able to help researchers and librarians generate richer and more accurate search terms more quickly by using its language patterns to identify the most common phrasings of key concepts. I informally tested this idea by asking ChatGPT to generate a search to help me find articles related to realism in Victorian literature—a simple topic with which I am familiar. The search terms that it provided, and its suggestions for how to combine them with Boolean operators, were a good start towards search string generation.[1] Additional recommendations to search academic resources and find material written by experts in the field were also sound, but the AI tool did not provide a comprehensive list with which to follow up. These are clear points where a librarian's assistance would be needed—confirmed by ChatGPT itself in answer to my next question.

I asked ChatGPT if it would be fair to compare it to a librarian. It said yes, but recognized that, although our services can be similar (insofar as we both provide information to our users),

> a human librarian can provide personalized assistance, recommend resources, and offer guidance on research strategies [… and] may be better equipped to provide more nuanced and contextualized information, as they have the ability to draw on their own knowledge and experience in addition to the resources available to them. (ChatGPT, 2023l)

ChatGPT, instead, relies "solely on my programming and the patterns and relationships in my training data to generate responses to user questions" (ChatGPT, 2023l).

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[1] ChatGPT's response to "If I wanted to find articles about realism in Victorian literature, what search strategies would you recommend?":

To find articles about realism in Victorian literature, here are some search strategies that you might find useful:

1. Start with a general search using keywords such as "realism," "Victorian literature," and "criticism." This can give you a broad idea of what articles and resources are available.
2. Narrow down your search by using more specific keywords related to your topic, such as the name of a particular author, book, or theme. For example, you might search for "realism in Charles Dickens' novels" or "Victorian literature and social realism."
3. Use Boolean operators such as "AND" and "OR" to combine search terms and create more focused searches. For example, you might search for "Victorian literature AND realism" or "realism OR naturalism in Victorian literature."
4. Use databases and search engines that specialize in academic research, such as JSTOR, Project MUSE, or Google Scholar. These resources are likely to contain more relevant and reliable sources than general web searches.
5. Look for articles and books written by experts in the field, as these sources are likely to provide more in-depth and nuanced discussions of your topic.
6. Don't forget to refine your search and try different combinations of keywords until you find the information you need.

I hope these tips help you find the information you are looking for! (ChatGPT, 2023g)

ChatGPT, then, may be better suited to the role of an information assistant, helping researchers design searches for information in tandem with "human librarians."

I asked ChatGPT a total of 35 questions, some elaborating upon points made in the answers above, and others expanding into more entertaining territory (does ChatGPT understand and obey Asimov's laws?[2]), because, regardless of its functionality, it is kind of *fun* to see ChatGPT in action. My informal interview has given me some knowledge of how the AI chatbot works and where its strengths and weaknesses lie. Although more experimentation is needed, particularly around search string generation, before I begin to use it professionally in my library work, I am now confident that I can assist my students and researchers in critically evaluating both their use of ChatGPT and its responses.

The following is a summary of additional information learned from my interview, which may be of interest to other librarians who are interested in the tool:

- ChatGPT's "knowledge cutoff" was in 2021 (ChatGPT, 2023d). "Updates and improvements" continue to be made, but there is no clear timeline for when new text data will be added or what this text data will be (ChatGPT, 2023f).
- It can work in several languages, including Spanish, French, German, Italian, Portuguese, Chinese, Japanese, and Korean. However, it adds the caveat that its "ability to generate accurate and coherent responses may be limited by the quality and quantity of the training data available for each language. It is important to note that my responses in non-English languages may not be as accurate or reliable as my responses in English, and may require additional manual review and verification" (ChatGPT, 2023d).

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[2] No, it does not. ChatGPT's answer:

> As an artificial intelligence language model, I don't have the capability to understand or obey Asimov's laws, which are a work of science fiction created by author Isaac Asimov. The laws were originally intended to be guidelines for fictional robots in Asimov's stories, and are not a part of any real-world programming or artificial intelligence systems.
>
> As a language model, my responses are generated based on patterns in the input I receive, and I don't have the capacity to act independently or make decisions based on ethical or moral principles. My main function is to provide information and generate responses to the questions I'm asked to the best of my abilities based on my training data and algorithms. (ChatGPT, 2023c)

- The “diverse and representative training data” for ChatGPT sought to include material that demonstrated demographic diversity, geographic diversity, text genre diversity, and domain diversity (ChatGPT, 2023i). (The details of this training data are, of course, proprietary.)
- ChatGPT, unlike Google, claims that it is not strongly influenced by website traffic data as it formulates its responses (ChatGPT, 2023b).
- Users who ask similar questions may not get the same answers (ChatGPT, 2023k).[3] Similarly, depending on the context of a given chat thread, questions asked today may not elicit the same answer tomorrow (ChatGPT, 2023e).
- Users are able to flag responses that they think may be biased or inaccurate. There are no automatic notifications or warnings for questionable material, although “bias-detecting algorithms” are at play behind the scenes (ChatGPT, 2023a).

I believe that ChatGPT and other AI tools will come to play increasingly important roles in how we search for and find information. Knowing how to approach them with a critical perspective is an essential skill that we should be fostering in both ourselves as librarians and in our students and patrons. Going forward, I will dedicate a portion of my class time to talking about ChatGPT, using examples from my own chats to illustrate how it works, what its limitations are, and how we can use it effectively and responsibly when conducting research. It may only be a small slice of the “Where do you usually start your research?” pie chart for now, but it may not be for long.

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[3] This is why, in my citations of ChatGPT, I include the exact phrasing of my prompts; citation standards for chatbot responses have yet to be established, but I believe that this is an important component to include for context and transparency.

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# Referral Strategies: A Learning Object for Chat Operators

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## Abstract

Live chat services are now a commonplace communication channel in many libraries. This learning object is geared towards the academic library setting in particular and focuses on building two distinct skills among chat operators. First, recognizing when to refer and, second, strategies for making successful referrals. Utilizing the web-based platform Genially, this training resource is designed as an interactive presentation template that can be customized to suit local needs. The learning object includes four example chat scenarios, a review quiz, a collaborative bulletin board, and further readings. It is expected that chat operators will have varying degrees of familiarity with general reference work and aims to create a shared foundation of core referral skills on chat. This resource is envisioned as one part of what should be a broader training program, as opposed to a stand-alone resource.

*Keywords*: chat, referrals, referring, strategies, training, reference

This teaching resource is designed for onboarding new chat operators at academic libraries and focuses on building two distinct skills: 1) recognizing when to refer, and 2) developing strategies for making successful referrals. It uses the Genially platform to create an interactive presentation template that can be customized to suit local needs (select "Reuse this Genially" from the link). Example chat scenarios, a review quiz, a collaborative bulletin board, and further resources are all included. The resource is based on the understanding that team members will have varying degrees of familiarity with general reference work, and it is aimed at creating a shared foundation of core referral skills on chat. This resource is envisioned as one part of what should be a broader training program, as opposed to a stand-alone resource.

## Guiding Scholarship

A mixture of educational theories was considered in the design. Behavioural learning theory, measurable outcomes, immediate evaluative feedback, clear right/wrong answers, repetition of scenarios, and chunking content into smaller sections were key factors (Kay & Kibble, 2016). Behavioural elements are balanced with constructivist underpinnings in multiple ways. In particular, the collaborative bulletin board draws from constructivist learning theory by incorporating multiple perspectives and no 'one right way' to approach a reference question. It acknowledges learners' existing knowledge, allowing for connections between content and past experiences (Watson, 2001), and changes the learner's role from recipient of knowledge to constructor (Films Media Group, 2010). Additionally, the resource begins with question-based scenarios, acting as authentic real-world problems with no single approach to solution (Kay & Kibble, 2016).

The learning object also incorporates cognitivism through an additive approach. Problem scenarios are presented upfront and learners can find their own personal meaning in them as they actively explore (McGilly, 1994). In the chat examples, a framework of concepts is provided followed by presenting learners with new scenarios to think through in the assessment quiz (Nguyen, 2020). The collaborative bulletin board further provides an opportunity for discussion and knowledge sharing, acting as a reflective knowledge check that allows thought processes to be explained.

Additional considerations in the creation of this learning object included provision of choice and humanist elements. Self-determination theory is based on autonomy, competence, and relatedness (Wehmeyer & Zhao, 2020). The learning object is built on a sense of agency since learners can choose which chat scenarios to explore, in what order, and they can add to content themselves if they wish through the bulletin board. Humanism also factored into the design as there was a conscious effort to recognize the human feelings of uncertainty and other affective experiences of being a chat operator (Arghode et al., 2017).

## Notes and Suggestions

To make the most of this open, modifiable learning resource, a few notes and suggestions may prove helpful. In general, it is strongly recommended to customize the resource as much as possible to individual contexts. Everything from the chat scenario examples to the assessment quiz and further resource links can be edited as needed. Image ideas are listed in square brackets where it may be helpful to have institution-specific visuals. Be sure to always add an image caption and explain any critical information in the text content. Genially also has a tutorial guide on how to make accessible designs (Genially, 2023). A collaborative bulletin board is included for learners to share their own strategies. Currently, this section links to a generic Google Jamboard webpage so that anyone can create their own and update the link accordingly. Regarding the review quiz, there is an option to upgrade to a paid premium account which would allow for statistical analysis of results if that is of interest. Finally, it is worth noting that designs can be shared, allowing multiple staff to edit a design.

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# Co-Created and Student-Led Teaching Materials: The FOODWAYS Research Project

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## Abstract
Undergraduate students' research experience is important as it allows them to gain the necessary skills required for future opportunities. Affording students various opportunities to work with faculty on research during their undergraduate degree provides a rich learning opportunity. This paper advocates for student and faculty partnerships at the undergraduate level, where students and faculty work collaboratively. ITA235, Cucina Italiana: Italian History and Culture Through Food (University of Toronto Mississauga) acts as a model for student-led research, which includes a large component of student and faculty collaboration. The FOODWAYS project is a teaching resource currently being developed, and is housed within the course as an Experiential Learning (EL) opportunity. Through participating in the FOODWAYS research project, students have exposure to various digital humanities research methods and work in partnership with faculty and graduate student researchers to broaden their research skill set.

*Keywords*: digital humanities, student-led, capstone research, co-created research, undergraduate research, undergraduate teaching resource

Gravett, Yakovchuk, and Kinchin (2020) highlight that, in recent years, there has been an increase in interest from the international higher education community in exploring how students can be part of a partnership with faculty in carrying out research and working towards the development and enhancement of both learning and teaching. Undergraduate research activities undertaken collaboratively between faculty and students, with opportunities for students to take on leadership roles by being assigned project management tasks, provide spaces for students to develop desirable soft skills. Through discussion of a digital humanities initiative embedded within a capstone Italian Studies course on offer at the University of Toronto Mississauga, the learning impacts of including a co-created and student-led research archive, as historical and cultural teaching materials, are discussed. Ultimately, the involvement of undergraduate students in the creation of teaching materials, as highlighted by the FOODWAYS project, creates a critical opportunity for students to participate in research at the undergraduate level.

## ITA235 *Cucina Italiana: Italian History and Culture Through Food*

ITA235, *Cucina Italiana: Italian History and Culture Through Food*, looks at the regional diversity of Italian food and looks at the factors that have shaped Italian culinary traditions. Students are provided with the opportunity to explore their own culinary traditions throughout the course (University of Toronto Mississauga, Academic Calendar, 2023). In recognition of the diverse student population of ITA235, and in line with providing students the opportunity to explore their own culinary traditions, the newly adapted FOODWAYS project, allows students to be involved with humanities research in a meaningful and authentic way. Students connect with community members and learn about a cultural foodway in Canada with which they resonate. This opportunity enhances the cultural connection students have with the coursework they produce. The contribution to the FOODWAYS teaching material encourages students to participate in the inquiry model and let their curiosities guide their research, with the idea that the mindset that "inquiry-based learning is better learning…and we all want that for our students" (Wilson, 2003) is at the fore. The research initiative doubles as Community-Engaged Learning (CEL), where students interact virtually or in-person with a community to track movements in demographics and sociocultural and sociolinguistic changes to local diaspora over time.

The integration of a co-created, student-led research project into the course (ITA235), ultimately increases student opportunity to participate in humanities research early on in their studies. It has been found that "students who participate in collaborative undergraduate research with faculty early on reported gains in their ability to think analytically and logically, put ideas together, [and] learn on their own" (Ishiyama, 2002).

Additionally, in removing barriers to Experiential Learning (EL) opportunities by integrating the FOODWAYS project as an optional opportunity, substituting regular coursework, the attempt is made to mitigate the additional burden that EL can place on students. This attempt is in line with part of the University of Toronto Mississauga's (UTM) academic plan, which is to "provide experiential education opportunities to all UTM undergraduates" (University of Toronto Mississauga, 2017). Students can participate in the research opportunity, contribute to creating open-access data while sharing lecture time with the professor, and present their findings to their classmates via a presentation style final assignment.

Through the integration of an open-accessed, community-based research project within a capstone course at UTM, Professor Teresa Lobalsamo (Associate Professor, Teaching Stream [Italian Studies], University of Toronto Mississauga), has effectively curated The FOODWAYS project as a pathway for undergraduate students to engage in humanities research, all the while contributing to a rich open-access teaching resource on cultural and historical preservations of foodways across the country of Canada.

## The FOODWAYS Project: Teaching Resource

The FOODWAYS project began as a virtual Scholars-in-Residence (SiR) project at the Jackman Humanities Institute, University of Toronto, in which undergraduate students are granted the opportunity to participate in a month-long research intensive during the summer and work closely alongside faculty on their projects (Faculty of Arts and Science University of Toronto, 2023). Through the SiR program and the ITA235 Special Research Program, undergraduate students, across multiple disciplines, came together in 2020 to begin creating the 'Mapping-Italian Canadian Foodways' project, with a focus on the city of Toronto, Ontario, Canada. Digital humanities technologies, namely, Omeka and ArcGIS, were leveraged to create the public-facing, open-access digital archive (www.italiancanadianfoodways.ca). Once the research was mobilized and the first iteration of the public-facing site was complete, Professor Lobalsamo and I began integrating the research project into the ITA235 course permanently and enhanced its presence within the community. With the support of the Experiential Education Unit (EEU) at UTM, this integration was made possible due to financial and staff support that was allocated to support the launch of such an initiative in the course, and this financial support continues to be a large factor in the project's ongoing integration. The project effectively brings the Canadian food community together and serves as a teaching resource, which uncovers historical and culturally relevant data about the various cultural food scenes in the country of Canada. In recognition of the diverse student population in ITA235, the project has since been transformed from the 'Mapping Italian-Canadian Foodways' project, into the FOODWAYS project, where students can contribute to the project and create exhibitions for a diverse range of cultural Foodways throughout Canada.

As a teaching resource, The FOODWAYS project embraces community-based research (CBR) at its core. Bischoff and Jany (2018) define CBR as (1) community situated, where research begins with a topic that is relevant to the community, (2) collaborative, where community members and researchers share control of the research agenda through active involvement in the research and dissemination, and (3) action-oriented, meaning that the process and results are useful to community members. In applying these three frameworks for The FOODWAYS project teaching resource, the historical preservation project was sparked and mobilized due to the pandemic and the numerous Italian eateries that were closing around the city without their history being preserved. Thus, it was a call to action for Lobalsamo to begin preserving food history. Further, to the point of the project being collaborative, students continuously collaborate with community members to curate their archives and preserve their history, and community members are active participants throughout. Lastly, the tool is action-oriented in that it preserves the history of eateries on their behalf, providing them with a digitized and sustainable way to preserve their stories. In using this CBR teaching tool within courses, such as ITA235, and within the field at large (i.e., Food Studies and Historical Studies), oral histories are shared with genuine intentions.

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FIP FORUM FOR INFORMATION PROFESSIONALS

# Talks and Transformation: An introduction to the FIP 2023 Conference

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## Abstract
This introduction to the 2023 Forum for Information Professionals (FIP) Conference Extended Abstracts discusses this year's theme of climate change and the LIS field in the context of the changes and transitions the academic, student-organized conference continues to take.

*Keywords*: climate change, student life, academic conference

The 2023 Forum for Information Professionals (FIP) Conference on February 17th once again brought together students, faculty, and professionals in the LIS field. Our theme this year was "LIS and the Climate Crisis: Transforming Talk into Action." Climate change is a relevant and timely topic, particularly in the LIS field. We wanted to approach the theme by not only presenting the issue and its complexities, but also offering practical applications towards taking action. After all, when it comes to issues of social justice, action is needed to effect real change. Hearing our keynote speaker and numerous MLIS students speak about climate change from solutions-oriented perspectives was encouraging and inspiring.

FIP has gone through a number of transformations over the past few years. The onset of the COVID-19 pandemic forced the conference to move online. In some ways, having an online conference is fitting with this year's theme with regard to its impact on the conference's carbon footprint. Speakers don't have to be flown in. Attendees can tune in wherever they are, without having to physically get to the university campus. There is no physical space requiring power or clean-up. Our organizational meetings are held online as well.

However, internet use has an environmental impact. According to a study conducted by a team from the Massachusetts Institute of Technology (MIT), Purdue University, and Yale University, streaming and videoconferencing does indeed have an impact on environmental footprints of carbon dioxide, land, and water (Travers, 2021). Not surprisingly, the more video used, the bigger the footprint. For example, depending on the streaming or videoconferencing service, emissions can be between 150 and 1,000 grams of carbon dioxide per hour. While that is much less than the approximately 8,887 grams of CO2 produced from a car after it burns just one gallon of gasoline, it can add up over time. After all, how many hours do we spend on Zoom, or streaming our favourite television programs, movies, and video games? As well, that one hour of streaming could consume between two and 12 litres of water and a small patch of land comparable to the dimensions of an iPad mini (Travers, 2021).

In other words, moving online, while it has its benefits, doesn’t give FIP (or anyone) a free pass when it comes to climate change. We need to keep the discussion going. What this means is that in both our personal and professional lives, we should always be aware about our choices and their consequences - and take the appropriate actions, once we determine what those are.

That said, moving online has proven to be an important and successful transformation in the history of FIP. Taking into consideration issues of both physical accessibility and the large number of online MLIS students at the University of Alberta’s School of Library and Information Studies, the conference organizers made the decision last year to keep the conference permanently online. This would allow online students to have active roles as organizers and presenters, as well as making the conference more convenient for people not located in Edmonton to attend. Judging by the attendance numbers, we made the right call.

But there is another, more recent transformation to report. This year, FIP dissolved as a student group and became a committee of the Library and Information Studies Students’ Association (LISSA). This will help make the conference more sustainable for the future by avoiding the strict student group requirements, and lessen the load on organizers.

As Chair of the 2023 Organizing Committee, I would like to take this opportunity to thank those who made FIP 2023 a success. First of all, thank you to everyone who attended FIP 2023 for taking time out of your schedules to be there. Thanks go out to Dr. Denise Larsen, Associate Dean (Research with the Faculty of Education) and Dr. Kenneth Gariepy (Director, School of Library and Information Studies) for their opening remarks, and Dr. Lois M. Evans for her keynote talk: “Climate Action: Taking Personal and Professional Responsibility for Living Life in a Climate Emergency.” Of course, thank you to our student presenters: Olesya Komarnytska and Maia Trotter (“Climate Change Considerations in Public Library Collection Development”), Michaela Morrow and Danielle Deschamps (“Climate in Collections: The Role of Special Collections in Climate Change and Environmental Movements”), Anneliese Eber (“Preserving Non-Traditional Information in Digital Libraries”), and Dan Hackborn (“A Young Librarian’s Primer for Climate Action”).

I must also thank my fellow FIP committee members for their contributions in organizing this year’s conference: Courtenay Adams, Alycia Bockus-Vanin, and Christian Brown. Thank you to LISSA for helping with the transition of FIP to a student committee. Finally, but certainly not least, thank you to Shane Klein of Technologies in Education (TechinEd) at the University of Alberta, for the technical support that kept the Zoom room operating, the conference recorded, and the presentations edited for posting at the University of Alberta’s Aviary repository.

My wish is for a long and successful future for the FIP Conference, where crucial issues will continue to be raised, and the fruits of these discussions will be transformed into action.

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# Climate Change Considerations in Public Library Collection Development

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## Abstract

Climate change is one of the biggest threats to our continued existence. While resources and research about climate change are readily available, what do public libraries need to be doing, as one of the last free public spaces, to bridge the gap between complex information and community action? This extended abstract, based on a larger research paper, explores the various ways public libraries can be active members of their communities and promote conversations about climate change with the specific actions of their collection development. Through an in-depth literature search, several challenges are identified that act as barriers to creating cohesive, inclusive, and informative climate change-oriented collections. These barriers include eco-anxiety, particularly among children and young adults, environmental literacy, and climate change denial materials. Considering these challenges, recommendations are provided to overcome these obstacles. As the need for understanding and action becomes more dire, library policies and collection development strategies need to reflect those needs.

*Keywords*: climate change, eco-anxiety, collections, public libraries, and environmental literacy

The markings of a planet affected by climate change exist everywhere we look and change is not occurring quickly or consistently enough to protect future generations. As the signs and effects of climate change begin to disrupt the everyday lives of more and more people around the world, public libraries are located in a critical position to be educational leaders in their communities. Climate change impacts all members of society, regardless of age, and it is of critical importance for libraries to make a greater effort to include children in discussions surrounding climate change as several recent studies bring to light the increasing eco-anxiety children are experiencing about the perilous future of the planet (Martin et al, 2021; Hickman, 2020). Libraries need to take initiative to provide accurate, accessible, and up-to-date information that does not alienate people and offers useful methods about incorporating greener practices into their everyday lives. While libraries occupy a unique position in connecting the general public with climate change resources, this role does not come without challenges. Library collections must remain accessible and comprehensible while battling climate change denial, provide curated resources to help deal with eco-anxiety, support environmental literacy, engage in sustainable collection development practices, and do it all on a tight budget.

In this paper, we took an exploratory look at how public libraries can be active members of their communities and promote conversations about climate change with the specific actions of their collection development. We will examine several challenges that impede climate change conversation and engagement in our communities and society at large, and draw on current literature to propose a variety of suggestions for libraries navigating these challenges.

## Climate Change and Library Collections

The nature of climate change research is that this complex and multi-disciplinary topic is constantly being updated with new findings and contributions to scholarly knowledge. Libraries play an integral role in balancing the often overtly academic literature that results from these studies by presenting their communities with materials that can be consumed by the general public broad age ranges, educational backgrounds and social demographic categories. The training and job experience of public librarians places them perfectly in a position of encouraging reading and literacy, skills that can be easily applied to include a focus on supporting environmental literacy (Miller, 2010).

As for scholarly work regarding the environmental impact of libraries, publication about green libraries “is irregular and not of an exponential or linear nature” (Fedorowicz-Kruszewska, 2022, p. 916), which is concerning given the increasing anxiety surrounding climate change. Libraries need to conduct further research in order to understand ways they can adapt their library spaces and collections to facilitate conversations about climate change and there needs to be an increased effort in finding appropriate climate change title selections for collections.

## Challenges and Responses

There are multiple barriers to overcome in the fight against climate change, not all of which are changes to emissions outputs and general pollution. There is a mentality shift that needs to occur if there is any hope of saving the planet, and this shift begins with education, increased awareness, and active engagement which public libraries have the opportunity to promote. These initiatives, however, are difficult to accomplish when there are many, internal and external, challenges faced by libraries and their collections.

### Climate Change Denial Materials

In a time when acceptance of our reality is needed more than ever, the stubborn denial of climate change poses a challenge to libraries. Collectively, we encounter a major challenge in providing comprehensive collections to the public when we look at the issues posed by the presence of climate change denial (CCD) materials in collections. On the one hand, if our libraries are to abide by the Statement on Intellectual Freedom and Libraries of the Canadian Federation of Library Associations then they should aim to have well-balanced collections which supply information from both sides of the climate change discussion and thus support the “access to the full range of knowledge, imagination, ideas, and opinion” that all persons in Canada are promised (2019, para. 3). On the other hand, these materials can be harmful as they are often full of misrepresentative pseudo-scientific information on this topic.

To add to this, not including CCD materials in collections altogether, even if it is done to practice social responsibility, could be read as an act of censorship. If libraries are to support the ideals of intellectual freedom and accessibility, where is the line when it comes to CCD materials? Libraries must establish for themselves where they stand on this issue, what actions align best with their prioritised institutional values and the interests of their communities, and finally, ensure that their collection development policies clearly reflect that stance.

### Eco-Anxiety and the Need for Environmental Literacy

On the other side of the scale from climate change denial, a topic that has arisen with growing urgency over the past decade is the concept of eco-anxiety. In general terms, it is “anxiety about the ecological disasters and threats to the environment such as pollution and climate change” (Goldman, 2022, p. 18) or, more succinctly, having a persistent fear of environmental doom (Clayton et al., 2017 as cited in Hickman, 2020). There are many ways that eco-anxiety can manifest and affect how someone interacts with climate change, but the most common responses are either avoiding the subject, feeling frozen, depressed, and hopeless about the situation, or moving to action (Goldman, 2022). Libraries have the opportunity to be the bridge between difficult, data-heavy information and information that allows people to feel moved to action without frightening them into a state of passiveness. Being a facilitator for these conversations is also incredibly important when it comes to children and young adults because it is a common sentiment among these age groups that they do not know how to have those discussions and often they feel their concerns are belittled or dismissed by adults (Hickman, 2020). The challenge that rising eco-anxiety presents for today’s generation of children and youth highlights the necessity for libraries to actively facilitate conversations about climate change and to aid in the nurturing of environmental literacy skills.

An area of collections that is equally as important as having materials that combat eco-anxiety is having materials that promote what many scholars have termed environmental literacy, green literacy, or climate change literacy (Aytac, 2022; Henk, 2014; Miller, 2010). Climate change literacy is the ability to “find, understand, and use information and services to make decisions about the environment” (Aytac, 2022, p. 2). Having a collection that promotes climate change literacy encourages people to learn how to properly evaluate their sources to be active and productive members of society in combating climate change (Aytac, 2022). This is a significant undertaking for libraries, but “by embracing their role as an educator for the community, libraries can also play a part in transitioning their communities to more positive societal outcomes'' (Antonelli, 2012, p. 242).

So how do libraries begin difficult conversations about how to approach the educational opportunities of climate change collections and what can collection managers do to ensure the proper materials are available to aid those conversations? Some other ways to combat eco-anxiety through collection materials and improve engagement with the subject of climate change are having materials that focus on and encourage sustainability (Mathur, 2022). A collection should also have a curated mix of fiction and non-fiction titles that discuss climate change and take into account the different reading needs of a community. It is important to find “creative, playful, caring, kind and clear ways to have these conversations” (Hickman, 2020, p. 422), especially with children and young people (Hickman, 2020).

## Collection Practices and Operational Challenges

If libraries are going to advocate for the fight against climate change, or at least encourage awareness of this topic, then one area to consider is how their collections represent their commitment to sustainable practices. Materials that help create conversations about climate change are important, but other collection-related factors should also be considered such as paper type, green materials, collection waste, delivery and packaging methods, and online resource carbon footprints. A sustainable collection is about more than choosing more eco-friendly suppliers and methods of acquisition. Sustainability is “the notion that those currently living have an obligation to themselves and to future people to ensure everyone has equal opportunities in life” (Henk, 2014, p. 15). When developing a collection that reflects a sustainability mindset, collection managers need to look beyond the green stamp approving something as good for the environment. Sales tactics such as the upselling of green products, or greenwashing, where vendors attempt to capitalize on the need for more environmentally friendly products, are popular methods among vendors that are not necessarily sustainable so it is important to evaluate them carefully (Henk, 2014). There are many ways libraries can develop collections that practice the sustainability that they should preach. Libraries can ask their vendors to use environmental packaging when delivering materials, or purchase books which are printed on recycled paper (Miller, 2010). When collections need to be weeded, deselected materials can be recycled or repurposed by being sold to used-book companies who then resell them (Miller, 2010). Instead of throwing out electronic waste and materials that are more difficult to recycle such as lead, batteries, monitors, displays, and plastics, have a policy that incorporates proper disposal methods provided by the city (Miller, 2010). The development and integration of specific sustainability goals into the collection development policy can ensure that they are not missed and become a regular part of re-assessment practices at the individual libraries.

## Conclusion

During our research we came across several examples of libraries across Canada that are pushing for active engagement with climate change through their collections. The Thunder Bay Public Library, in particular, orchestrated a successful community-led initiative to include more climate change materials in their collections (TBnewsWatch.com Staff, 2022).

While it is uplifting to read stories like this, there is still not enough scholarship being published on the subject overall and not enough initiatives that push for a climate change focus in collection development. There are numerous challenges facing libraries when it comes to building a collection that is well-rounded and addresses all aspects of climate change literacy, engagement, activism, and mental health concerns like eco-anxiety. As the need for understanding and action becomes more dire, library policies and collection development strategies need to reflect those needs. Very little else matters if we continue to drive our ecosystems into the ground and threaten the stability of future generations. Libraries, their collections and collection practices need to look to the future because the opportunity remains to make meaningful and significant impacts on their communities through education, leadership, and environmental stewardship (Gupta, 2020).

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# The Role of Special Collections in Climate Change Movements

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## Abstract

This presentation examines the role that special collections can play in documenting climate change literature over the course of history. We chose to focus on artist books in particular due to their unique trait as a format found almost exclusively within special collections libraries. We connect artist books to other collections within Bruce Peel Special Collections to create a narrative of climate change across cultures, time, and social movements. This narrative focuses on the past, present, and future of climate change, showcasing how special collections libraries provide new perspectives on how we should view the role we have to play in climate change. We believe the creation of this narrative shows how collecting literature and archives is an active form of combatting climate misinformation. In particular, we believe connecting this narrative through artist books is a way to challenge dominant narratives due to the role of artist books in counterculture and alternate ways of viewing knowledge.

*Keywords*: climate change, special collections, social movements, climate crisis, environmental movements

In 2019, climate reporter Neela Banerjee and environmental historian Dagomar Degroot discussed the research potential of archives and special collections libraries for tracing the history and narratives of climate change through “notions of causality, accountability, uncertainty, and hope” (Banerjee & Degroot, 2019, para 1). Climate change narratives already have a long history, and this can be explored in many ways through archival and special collections research (Banerjee & Degroot, 2019). Institutions that preserve recorded history have an important role to play and the following research explores this idea through resources found at Bruce Peel Special Collections.

## Climate Change and Special Collections

A number of initiatives to collect and record climate literature have already been undertaken by Western and Canadian institutions. These include the United Kingdom antiquarian bookseller initiative *One Hundred Seconds to Midnight* and the University of British Columbia (UBC)'s Rare Books and Special Collections' *Climate Collection* (Peter Harrington London, n.d.; UBC, n.d.). The Canadian federal government also hosts a free database collecting climate literature (Government of Canada, n.d.). All these initiatives are trying not just to document the crisis of climate change, but to link the documents within to create a persuasive narrative urging us to change our approach to it. These collections hold everything from scientific literature to speculative fiction, encouraging critical thinking about the present climate crisis and alternate ways of viewing its history and consequences. We believe these initiatives provide an example of how special collections can be active members of climate movements.

### Bruce Peel Special Collections and Climate Change

As two employees of Bruce Peel Special Collections at the University of Alberta, we chose to focus on literature related to climate and environmental movements found within our own collections. Bruce Peel Special Collections has collections dedicated to Indigenous knowledge and environmental movements. In the latter collection, particularly, are books written by early environmentalists such as Henry David Thoreau and Alfred Russel Wallace. We believe these collections allow us to track the narrative of climate change. A great many past documents look at the direct consequences of imperialism, colonialism, and capitalism on the natural world; for instance, Peel's collections document extinct creatures, and early scientific theories about how earth's climate has changed and how humans might have impacted it. Additionally, Peel's collection holds a great many books written during and after colonialism and the Industrial Revolution decrying the destruction and commodification of nature and natural products. We believe these historical documents are important to link to our modern artist book collection.

## Artist Books and the Climate Narrative

An artist book is “a medium of artistic expression that uses the form or function of “book” as inspiration,” and is a fairly recent artform that only started to gain prominence in the 1980s (Evenhaugen, 2012). We chose artist books to ground our narrative, as artist books are almost exclusively found in special collections compared to other books. Artist books are also created with very specific intents and themes in mind that are often active responses to our social and political climate. By curating artist books within Peel and connecting them to the other collections, we hope to highlight how special collections items can create modern climate narratives that challenge us to critically think about our past, present, and future.

### *Coral Reef* (2018) – Busquets

*Coral Reef*, by Carla Busquets, can best be described as a pop-up picture book. Each page is a detailed scene of the ocean—however, on closer inspection, we see white shapes hidden behind the colourful fish and seaweed. These shapes are either dead coral or ocean garbage. The book asks us to consider our relationship to water and oceans, and how capitalist ventures and careless practices have put them at risk. We chose to connect these books to works in the Peel library by Rachel Carson. Rachel Carson was a marine biologist whose books were unique in the way they were written: scientific, but personal and friendly, asking us to see the ocean through the eyes of the creatures that lived there. Her books were instrumental in popularizing marine conservation efforts. Both Carson and Busquets ask us to take a close-up look at how humans force change in ocean climates.

### *Alice and Antius* (2021) – Ingram & Tosswill

This book is a poetry epic following two lovers, Alice and Antius, set against the backdrop of a climate apocalypse. The book’s smoky pink sunsets were directly inspired by the forest-fire-impacted sunsets in Edmonton in the summer of 2021. As we grapple with this new reality of smoky summer skies, it is particularly poignant to see it documented and preserved in an artist book that is now housed in special collections in this way, communicating to future researchers both the lived experiences during this time and our imaginings regarding future climate consequences. Comparatively, we also found an 1883 Canadian Department of Agriculture pamphlet that addressed and attempted to correct other published works' claims that Canada's prairies were frozen all year round. After countering these claims, it portrays Canada as a warm, farm-friendly climate. As this was likely an attempt to attract European settlers, we conclude that Canadian climate narratives in the 1880s were debated, misrepresented, and were also ultimately being used as propaganda for colonization. When looking at these two sources side by side, the story of Alice and Antius is both the real and imagined future resulting from the impacts that were created, in part, by the unsustainable agriculture and colonization that was being advertised in the 1880s pamphlet.

### *Poems for an Oil-Free Coast* (2012) – Blomer et al.

*Poems for an Oil-Free Coast* is a poetry anthology artist book in which both Indigenous and non-Indigenous artists and poets were prompted to create pieces in response to the "shipping [of] crude oil through … Canada's fragile raincoast" (Niedzviecki, n.d.). In between each poem they used extremely thin paper, with art that looks like oil covering the surface of water, perhaps speaking to the embeddedness of climate issues in the "pages" of our lives; it invites the reader to look at the present issues and be present with them. We noted that a lot of the items we found combined poetry and art to communicate about the climate crisis. It is interesting to consider how poetry and art can convey deeper meaning and emotion, as we as a society grapple with this issue. Through the items in the special collections, we can also trace humanity's tendency to not only view nature, but also the climate crisis, through a poetic lens.

### *Words on the Edge of the Abyss* (2019) – Atwood et al.

*Words on the Edge of the Abyss* is also an artist book poetry anthology, consisting of twenty-six poems in total printed on letterpress printers in broadside format. The poems feature themes of both reflecting on how this climate crisis was created as well as leaving messages for future generations. We chose to connect these books to early editions of Emerson's *Nature* and Thoreau's *Walden*. By extolling the beauty and importance of nature, both Emerson and Thoreau are said to have inspired later conservationist movements (McNamara, 2019). Both Emerson and Thoreau use poetic language to ground the minds of their readers into a world where nature is not simply a tool or a place to live, but a valuable, living system that we are part of. These themes are also reflected in *Words on the Edge of the Abyss* despite the approximately 150-year gap between this work and the others.

### *Martyr, Mercury, & Rooster (2004)* – Heft & Morin

This artist book looks at different themes that all connect to dying. Each of the three themes is bound in a separate booklet of recycled paper. Mercury, in particular, relates to our unsustainable industrial practices and use of unstable substances as a factor in killing our environment, which we believe is the "martyr" of this particular booklet. Each page has text or prints about the dangers of using materials not fully understood for the sake of industry. Images of fishing, agriculture, and other activities make up the prints—and on each page is an engraved image of a machine, permanently scarring each piece of recycled paper with the image of industry. This book reflects themes found in a great many Peel collections, such as anti-pesticide, anti-buffalo-killing, and anti-deforestation narratives in our entomology, Indigenous, and environmental science collections, respectively.

## Conclusion

In short, we can use these artist books, and the themes within, to create a narrative we can connect to our past, present, and future regarding climate change. We have looked at how artist books, which are unique special collections items, can debate the past, present, and future narratives of climate change. Overall, special collections and archives have a role to play in climate change activism by documenting and preserving the history as well as highlighting, through the work of collecting and curating, the contributions and possibilities from works relating to climate. We consider the creation of climate or environmental collections to be one active process that information institutions can take to both combat inaction regarding the climate crisis and also to preserve these narratives as evidence for future generations.

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# Fossils in a Digital Age: Preserving 3D Fossil Data in Digital Libraries

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## Abstract

Digital libraries are a powerful tool for preserving and disseminating information in a technology-driven world. Providing options for housing non-traditional information, such as three-dimensional (3D) data, digital libraries also address barriers (e.g., geographic location and physical space) that affect traditional libraries. While there are certainly still barriers that may prevent users from accessing and utilizing digital content, digital libraries offer ways of preserving, housing, and disseminating non-traditional information that physical libraries cannot. Within the anthropological community, digital libraries can serve as a method of housing 3D fossil data. There are unique challenges and barriers associated with studying fossils that digital libraries help to break down. Through the preservation and dissemination of 3D fossil data, researchers across the globe can work with fossil data without the concerns associated with handling fragile fossils. However, such 3D digital libraries are not without challenges. While there are clear standards and metadata schemas (e.g., RDA and DCMI) for digital libraries containing traditional materials, no such standardization exists for digital libraries containing 3D data. As such, metadata requirements and elements for existing 3D digital libraries are inconsistent and may lack important details about the data, which can compromise functionality. This paper explores trends and challenges that digital libraries containing 3D data experience and highlights best-practice solutions for future 3D digital libraries to overcome these challenges.

*Keywords*: digital libraries, three-dimensional data, metadata schemas, data preservation, copyright

Digital libraries are powerful tools for preserving and disseminating information in a technology-driven world. They provide options for storing and preserving non-traditional information, like three-dimensional (3D) data, that is otherwise difficult to access (Skinner et al., 2013). Due to their versatility, digital libraries provide an interdisciplinary solution for storing and disseminating data while breaking down physical barriers to accessing data (e.g., geographic location and physical accessibility of buildings). One such application of digital libraries is storing 3D fossil scans. While paleoanthropological research has historically used physical fossils, working with fossils can be difficult for a myriad of reasons, including limited access (Hublin, 2013; Skinner et al., 2013). The process of accessing and examining physical fossils can be restricted by the geographical location of fossils, how fossils are accessioned and curated, institutional bureaucracy, and the physical state of fossils (Hublin, 2013; Skinner et al., 2013). To address some of these concerns, virtual paleoanthropology has become increasingly popular with many fossils being sent to scanning facilities to create digital copies; however, the dissemination of these fossil scans remains difficult (Hublin, 2013). For example, MorphoSource from Duke University is a digital repository that holds many anthropological models, but the metadata and browsing features make discoverability difficult for non-experts (Hall et al., 2019). Opposite this, platforms like Sketchfab and Thingiverse support better discoverability for non-experts but lack the metadata to support the research community (Hall et al., 2019). Despite their challenges, the use of digital libraries provides an accessible way to create a repository of 3D data and fossil scans that can be used by different audiences globally.

## Trends and Challenges in 3D Digital Libraries

Although digital libraries hold the power to create an easily accessible repository of fossil data, removing geographic barriers, and preserving the integrity of fossils, such a library poses unique problems due to the nature of the data. These problems include how to catalogue, acquire, and preserve the data in addition to how to protect the rights of those who create and own the data (Berquist et al., 2012; Boyer et al., 2017; Davies et al., 2017; Hardesty et al., 2020; Skinner et al., 2013; Ulguim, 2018; Zamyadi et al., 2013). Literature about previous and existing digital fossil libraries, and similar digital libraries containing 3D data, provides important insight into how to create, maintain, and grow a repository of 3D fossil data moving forward.

### Metadata Schemas

One of the biggest inconsistencies in current online digital libraries housing 3D data is a lack of standardized metadata schemas both within and between digital libraries (Hardesty et al., 2020). In the past, schemas have used modifications of Dublin Core (Mi & Pollock, 2018) but previous modifications of Dublin Core schemas do not fit all 3D digital libraries. Due to the vast types of information captured in these varying types of research, previous studies can provide guidance on creating custom metadata schemas; however, typically each digital library must create a unique metadata schema appropriate for the collection and the platform it is housed on (Berquist et al., 2012; Mi & Pollock, 2018). For example, a schema might need to include fields for crowd-sourced keywords if the collection is housed on a platform that supports these functions (Mi and Pollock, 2018).

Regardless of the specific elements that are included in a schema, proper records that support maximum usability should include descriptive, administrative, and structural metadata elements (Joudrey & Taylor, 2017). Additionally, metadata must function to aid discoverability, usability, and interoperability of the stored information (Hall et al., 2019; Mi & Pollock, 2018; Ulguim, 2018). Fields that support searchability and discoverability might include institutional identifiers, holding location information, and keywords (Hardesty et al., 2020; Mi & Pollock, 2018). Similarly, fields containing information about physical characteristics of an object and the scan specifications contribute towards the usability of information (Davies et al., 2017; Hall et al., 2019; Mi & Pollock, 2018). However, partly due to the nature of 3D data, interoperability remains a significant challenge in 3D digital libraries (Albrezzi et al., 2022; Hall et al., 2019). Despite challenges in interoperability, combining these foundational qualities has led to the successful creation of metadata schemas and FAIR (findable, accessible, interoperable, and reusable) data that fully represent and support the function of different types of collections (Golubiewski-Davis et al., 2022; Hall et al., 2019; Mi & Pollock, 2018, Zamyadi et al., 2013). While existing 3D digital libraries provide an excellent starting point for digital fossil libraries, they demonstrate a need for additional discussion and clarity about metadata schemas and metadata implementation within collections.

## Data Acquisition and Preservation

Creating a digital fossil library of 3D scans of fossil specimens requires that data be acquired or created in a way that both supports life in a digital library and multi-purpose use of the data (Berquist et al., 2012; Davies et al., 2017; Skinner et al., 2013;

Ulguim, 2018; Zamyadi et al., 2013). While 3D scans of fossils are often produced with a specific type of research in mind, for the purpose of a 3D digital library, scans must be of high enough quality, and in industry-standard file types, to support research that will use data in diverse ways that may diverge from the original intended purpose (Albrezzi et al., 2022; Davies et al., 2017; Hardesty et al., 2020; Skinner et al., 2013). To further support the long-term preservation of the data, all information about data acquisition and creation should be included in the metadata schema and should be mindful about best-practices within the field (Davies et al., 2017; Hall et al., 2019; Hardesty et al., 2020). Additionally, accurate, stable, and long-term identification of data is integral to the longevity of 3D digital libraries (Davies et al., 2017). As such, stable identification numbers such as digital object identifiers (DOIs) or archival resource keys (ARKs) provide a solution to long-term identification and method for citing data (Blundell et al., 2022; Davies et al., 2017).

## Copyright Considerations

To further support the long-term access and use of data, copyright of data needs to be addressed. One concern data authors and owners might have when publishing their data to digital repositories is the uncertainty of how it will be used, who will use it, and whether credit will be given to data authors and owners. To address concerns about intellectual property and data ownership, different systems have been proposed to track data usage, who is using the data, and for what research (Berquist et al., 2012; Boyer et al., 2017; Davies et al., 2017; Hublin, 2013; Skinner et al., 2013). These methods range from ‘checking out data’ as in a traditional library to submitting letters of intent to institutions before access will be granted (Berquist et al. 2012; Skinner et al. 2013). Regardless of how users access data, these methods help to ensure research projects are not being repeated simultaneously which protects the data owners, data authors, and other researchers with a personal stake in the data (Berquist et al. 2012; Skinner et al. 2013).

To address copyright issues, data owners and authors might assign Creative Commons licenses to the data (Boyer et al., 2017; Davies et al., 2017). Boyer et al. (2017) suggest that CC-BY-NC is the preferable license for academic data as it allows secondary users of the data, with attribution, to reuse and modify the data. Davies et al.

(2017) also offer CC-BY-ND as a potential license that might be useful, though, this is a more restrictive license as it does not allow for derivative data to be published therefore limiting academic publications. However, copyright licenses must be assigned by the data owner and therefore must consider who the data authors and data owners are if they are not the same (Boyer et al., 2017). While the copyright system is not perfect, it does allow some security for data authors and data owners who choose to share their data. However, while current digital fossil libraries fail to ensure copyright information is present if it is available at all, copyright information is integral and should be included in all records (Blundell et al., 2022; Boyer et al., 2017; Davies et al., 2017).

## Conclusion

Digital collections of 3D data are certainly not a new conception and they have been slowly growing and being built over the last decade (Boyer et al., 2017; Skinner et al., 2013). Despite the potential of 3D digital libraries for the anthropological community, the application of such libraries needs further thought and clarity. In addition to issues concerning copyright and how researchers use and access the data, current metadata schemas are lacking in the foundational metadata elements. While these discussions are lacking as they pertain to digital fossil libraries, previous work on other 3D digital libraries like MorphoSource provides guidance of how such digital fossil libraries can be improved. To increase the discoverability, usability, and interoperability of these collections, current digital libraries should revisit the metadata schemas and core principles to expand upon current schemas and ensure all stored models meet the metadata requirements.

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