# Partnership

PARTNERSHIP

# "We Learned As We Went Like Everyone Else"

## Experiences of Librarians Teaching Information Literacy At Canadian Universities During the COVID-19 Pandemic

# « Nous avons appris au fur et à mesure, comme tout le monde »

## Expériences des bibliothécaires enseignant la maîtrise de l'information dans les universités canadiennes durant la pandémie de la COVID-19

Janet L. Goosney

See table of contents

Explore this journal

Cite this article

Article abstract

The global COVID-19 pandemic led to an unprecedented shift in teaching and learning at Canadian universities as campuses closed, in-person classes were suspended, and institutions transitioned to entirely online modes of instruction. This transition included information literacy librarians, who worked to support the learning and research needs of students during this extraordinary time. In this study, an 18-question survey was distributed to professional librarians at English and bilingual universities throughout Canada to investigate their experiences designing and teaching information literacy instruction from March 2020 to August 2021, when most institutions were closed to in-person instruction. The goal of this study was to gain insight into the needs of survey participants and the challenges they experienced as they transitioned to emergency remote teaching (ERT), the strategies and supports they used to navigate the transition, and the impact of their experiences on their professional and personal lives during the pandemic and into the future. The survey findings reveal that, while most librarians in Canada did not have extensive online teaching experience prior to the pandemic, they made significant changes to their instructional practices to provide continued information literacy support. While most found this transition to be at least moderately challenging, the majority also report that they have benefited from these experiences, expanding their instructional repertoire, gaining confidence in their ability to teach online, and acquiring new skills.

érudit

This article is disseminated and preserved by Érudit.

Érudit is a non-profit inter-university consortium of the Université de Montréal, Université Laval, and the Université du Québec à Montréal. Its mission is to promote and disseminate research.

https://www.erudit.org/en/

# "We learned as we went like everyone else": Experiences of librarians teaching information literacy at Canadian universities during the COVID-19 pandemic

# « Nous avons appris au fur et à mesure, comme tout le monde » : Expériences des bibliothécaires enseignant la maîtrise de l'information dans les universités canadiennes durant la pandémie de la COVID-19

Janet L. Goosney
Information Literacy Coordinator
Queen Elizabeth II Library, Memorial University
jgoosney@mun.ca

## Abstract / Résumé

The global COVID-19 pandemic led to an unprecedented shift in teaching and learning at Canadian universities as campuses closed, in-person classes were suspended, and institutions transitioned to entirely online modes of instruction. This transition included information literacy librarians, who worked to support the learning and research needs of students during this extraordinary time. In this study, an 18-question survey was distributed to professional librarians at English and bilingual universities throughout Canada to investigate their experiences designing and teaching information literacy instruction from March 2020 to August 2021, when most institutions were closed to in-person instruction. The goal of this study was to gain insight into the needs of survey participants and the challenges they experienced as they transitioned to emergency remote teaching (ERT), the strategies and supports they used to navigate the transition, and the impact of their experiences on their professional and personal lives during the pandemic and into the future. The survey findings reveal that, while most librarians in Canada did not have extensive online teaching experience prior to the pandemic, they made significant changes to their instructional practices to provide continued

information literacy support. While most found this transition to be at least moderately challenging, the majority also report that they have benefited from these experiences, expanding their instructional repertoire, gaining confidence in their ability to teach online, and acquiring new skills.

La pandémie mondiale de la COVID-19 a entraîné un changement sans précédent dans l'enseignement et l'apprentissage au sein des universités canadiennes : les campus ont fermé, les cours en présentiel ont été annulés et les établissements sont passés à des modes d'enseignement entièrement en ligne. Cette transition a affecté les bibliothécaires de formation qui se sont efforcés de répondre aux besoins des étudiants en matière d'apprentissage et de recherche des étudiants durant cette période exceptionnelle. Pour cette étude, un sondage composé de 18 questions a été distribué aux bibliothécaires professionnelles travaillant dans une université anglophone ou bilingue au Canada afin de mieux connaître leurs expériences quant à la conception et à l'enseignement de la maîtrise de l'information de mars 2020 à août 2021 lorsque la plupart des établissements étaient fermés pour la formation en personne. Le but de cette étude était de mieux comprendre les besoins des participants et les défis vécus durant la transition vers l'enseignement en ligne en situation urgente, les stratégies et ressources utilisées pour naviguer cette transition, et l'impact de leurs expériences sur leurs vies professionnelle et personnelle durant la pandémie et tournées vers l'avenir. Les données du sondage montrent que, même si la plupart des bibliothécaires au Canada n'avaient pas une expérience exhaustive en enseignement en ligne avant la pandémie, ils ont apporté plusieurs changements à leurs pratiques d'enseignement afin de fournir un soutien continu en formation documentaire. Quoique la plupart des répondants ont trouvé que cette transition a été tout de même modérément difficile, la majorité exprime également qu'ils ont tiré profit de ces expériences en élargissant leur répertoire d'enseignement, en prenant confiance en leur capacité à enseigner en ligne et en acquérant de nouvelles compétences.

## Keywords / Mots-clés

## Introduction

In the winter of 2020, the arrival of the global COVID-19 pandemic led to an unprecedented shift in teaching and learning at Canadian universities as campuses closed, in-person classes were suspended, and institutions transitioned to entirely online modes of instruction. This transition included academic libraries, as librarians responsible for the planning, design, and delivery of information literacy instruction worked to continue supporting the research and information literacy needs of students during this extraordinary time. In this study, 217 librarians with information literacy-related responsibilities at English and bilingual universities throughout Canada were surveyed to gain insight into their teaching and learning experiences during the pandemic. The survey examined librarians' feelings of confidence and preparedness for

online teaching; the needs and challenges they experienced; the strategies and supports they used to prepare for and manage the transition; and the impact of those experiences on their professional and personal lives, both during the pandemic and into the future.

The results of this study reveal that, while most librarians in Canada did not have extensive online teaching experience prior to the pandemic, they nevertheless made significant changes to their instructional practices to provide continued information literacy support. Not surprisingly, most found this transition to online instruction to be at least moderately challenging. However, the majority also found that they benefited from these experiences, expanding their instructional repertoire as they developed online classes and content, and gaining confidence as they developed new strategies for remote teaching.

## *Literature Review*

During the global COVID-19 pandemic, as librarians and other university educators worked to understand the impacts of the rapid transition to online teaching on both their students and themselves, a body of literature emerged examining and describing those experiences. While much of the literature published in the early days of the pandemic took the form of first-person accounts and articles based on no or limited research, some larger studies emerged to contribute to a broader understanding of librarians' and academics' teaching experiences during this time.

Two studies, by Watermeyer et al. (2021) and Littlejohn et al. (2021), investigated the experiences of university teachers in the United Kingdom as they transitioned to online teaching during the lockdown. In Canada, Danyluk and Burns (2021) surveyed full-time and contract university faculty to examine and compare their experiences during the transition. A later study by Trevisan and De Rossi (2023) examined the impacts on education faculty in Italy and the United States, a year after moving to digitized instruction. Although the latter three studies were smaller in scope, with each focusing on a smaller number of educators at one or two universities, the larger study by Watermeyer et al. surveyed 1148 academics at universities throughout the UK.

In addition to studies which examined the experiences of university teachers in general, a few researchers have focused specifically on information literacy librarians. For example, Shin et al. (2022) surveyed 244 academic librarians residing primarily in the United States to examine their experiences providing information literacy instruction during the pandemic. Their survey posed questions about librarians' pedagogical approaches, instructional techniques, and the digital technologies that they used during online instruction, and explored how librarians' experiences during the pandemic might impact their work moving forward. Another group of researchers, Ibacache et al. (2021), surveyed 202 librarians on US-based listservs, focusing on the digital technologies that they used during online teaching and examining the benefits and drawbacks of those tools, as well as challenges or gaps that contributed to inequitable access to information literacy instruction in the online learning environment. In Canada, McLay Paterson and Eva (2022a) conducted semi-structured interviews with nineteen academic librarians to

identify commonalities in their experiences and satisfaction while working at home during the pandemic. Although participants in this study were from all areas of professional librarianship, several identified information literacy among their responsibilities.

Finally, a number of review articles attempted to bring together and draw wider conclusions from the early pandemic literature on teaching and learning. Khan (2021) conducted a rapid review of 39 articles from the "early reactive literature" published primarily in the United States to assess the impacts of the pandemic on post-secondary education. Yatcilla and Young's bibliometric study (2021) examined 237 articles from the library literature to identify themes and impacts relating to libraries and the COVID-19 pandemic.

Several recurring themes have emerged from the information literacy and post-secondary education literature regarding educator experiences during the pandemic. One important concept codified early in the pandemic is Emergency Remote Teaching (ERT). First described by Hodges et al. (2020), ERT can be distinguished from planned online teaching both in terms of evolution and urgency:

In contrast to experiences that are planned from the beginning and designed to be online, emergency remote teaching (ERT) is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances…. The primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis (p. 14).

As Hodges et al. (2020) and other researchers have pointed out, the sudden move to ERT in the winter of 2020 meant that university educators, including information literacy librarians, had to abruptly adapt their instructional practices and transition from the classroom to online teaching, often in just a few days (Danyluk & Burns, 2021; Khan, 2021; Littlejohn et al., 2021; Shin et al., 2022; Watermeyer et al., 2021). Hodges et al. observed that this change left many educators feeling like "instructional MacGyvers, having to improvise quick solutions in less-than-ideal circumstances" (p. 3). Shin et al. found that, although most librarians reported feeling that their transition to online learning had been successful, for many it was a qualified success, in which "they felt they had done as well as they could given the situation" (p. 13). Watermeyer et al. noted that while many participants in their study reported negative experiences during the transition, "these views should be understood as nascent experiences of digital education shaped under the panic and duress of emergency conditions" (pp. 631–632).

In addition to the inherent difficulties of ERT, other challenges experienced by librarians and teaching faculty also recur as themes in the literature. These include difficulties relating to time and workload; challenges with technologies and online pedagogies; and personal factors relating to stress, anxiety, and work-life balance. The transition to online teaching in early 2020 brought with it an increased workload for many university educators, along with an often intense learning curve as they rapidly adopted new online technologies and pedagogies. For example, Littlejohn et al. (2021) discussed

how online teaching required additional time as well as resources (p. 8). Danyluk and Burns (2021) found that adapting courses and pedagogies added to existing workloads, and that online teaching was more time-consuming for educators than traditional classroom-based teaching, as they struggled to balance this additional work with their other academic and professional responsibilities (pp. 63, 68–69). Watermeyer et al. (2021) found that, in addition to immediate workload concerns, most educators expected this challenge to be ongoing, with the majority indicating that they believed pandemic-related changes to teaching and learning would "increase workload as a whole over the next three years" (p. 629).

McLay Paterson and Eva (2022a), Shin et al. (2022), and Ibacache et al. (2021) each observed that, for the librarians participating in their studies, technological challenges came in two forms: the need for access to reliable internet and computers when working from home, and the need to become familiar and at ease with the digital tools and resources available to them for online teaching. As Ibacache et al. noted, online teaching tools "are meant to facilitate instruction and engagement, but they require students and instructors to be comfortable with technology" (p. 3).  McLay Paterson and Eva found that "the steep learning curve of new remote-work software" as well as "difficulties with consistent internet connections" were both significant sources of stress for the librarians who participated in their interviews (p. 15).

In addition to those technological challenges, Shin et al. (2022) also found that librarians experienced pedagogical challenges during their transition to remote teaching, including "a lack of familiarity with best practices" (p. 18). Watermeyer et al. (2021) observed dissatisfaction with the quality of teaching, noting that most survey respondents felt their pedagogical practices had been "reduced to the fulfillment of rudimentary technical functions" (p. 631). This is perhaps not surprising, given that the rapid transition to ERT afforded little time for educators to learn and experiment with new and unfamiliar online teaching strategies.

Another notable pedagogical challenge that recurs in the literature is student engagement, both in terms of inspiring interest and participation, and gauging the level of student engagement in the online environment. Littlejohn et al. (2021) found that many educators struggled with having fewer visual cues to help them assess student interest and participation in the online environment (p. 3). Shin et al. (2022) noted that, although librarians observed improvements in attendance, some found that it was difficult to engage students or to judge their level of involvement online (p. 8). Ibacache et al. (2021) found that "for instruction librarians, student engagement is paramount" (p. 3) and discussed how factors such as digital literacy and equitable access can impact a student's ability to engage in the online learning environment (pp. 3–4, 16).

Researchers have also explored the professional, personal, and psychological impacts that ERT and working at home have had on librarians and other post-secondary educators. For example, Watermeyer et al. (2021) found that at-home work "was viewed as actually contributing to work intensification and the erosion of work-life balance," with the deterioration of traditional boundaries between home and work lives contributing to "hyper-professionality" and working to excess (p. 633). Similarly, Trevisan and De Rossi

(2023) found that the "pervasiveness of work time in personal life" was the greatest challenge identified by their survey participants (p. 68). Meanwhile, Littlejohn et al. (2021) observed that "working from home fundamentally changes each educator's capacity to teach" (p. 4) as well their interactions with colleagues and students; this can be especially challenging for those with caregiving responsibilities and those who lack dedicated at-home office space (p. 9). Similarly, Shin et al. (2022) found that time management was "a meaningful struggle for some respondents… particularly the balancing act between personal life and work life while both were expected to happen inside the home during the lockdown" (p. 18).

Several researchers investigated how the struggles described above were magnified for women, who frequently bore the majority of caregiving, homeschooling, and other domestic responsibilities during the lockdown. For example, Minello et al. (2021) found that, in the absence of childcare, academic mothers were more likely to prioritize teaching at the expense of their research, and predicted that "in the long run, these changes in productivity will affect careers" (p. S84). Watermeyer et al. (2021) also found that the challenges of working at home were magnified for parents and suggested that female academics were the most impacted by competing academic and caregiving priorities (p. 633). Littlejohn et al. (2021) also found that university educators struggled with the competing demands of childcare and homeschooling, and that these challenges were more frequently reported by female survey participants (p. 9).

Gender-related concerns regarding personal and career impacts of the pandemic are particularly significant in the context of academic librarianship due to the high proportion of women in the profession. For example, Eva et al. (2021) noted that "academic librarianship is a heavily feminized profession, with women making up between 72 and 74% of the workforce based on statistics in Canada and the US," and argued that, as a result, gender inequalities that are more generally observed in the workplace "are magnified in the library context" (p. 1).

Several authors also focused on the psychological impacts of the pandemic and the transition to ERT. Littlejohn et al. (2021) described "loss and disruption" as major themes that recur in their research findings, including disruptions to "patterns of work that formed individuals' sense of professional identity" (pp. 10, 13). Watermeyer et al. (2021) observed that "the results of our survey show academics bruised by their experience… Their accounts are a story of trauma" (p. 637). Similarly, Khan (2021) noted that "psychological and emotional influences have been apparent since the start of the COVID-19 pandemic," leaving educators "bewildered and dealing with a variety of difficulties that can contribute to increased anxiety and stress, such as job instability, financial concerns, home schooling, despair, loneliness, loss, trauma, and sickness" (pp. 2, 8).

Along with the challenges, however, several positive themes also recur in the literature. Shin et al. (2022) found that while the transition to online teaching was challenging, 93.3% of the librarians surveyed also identified it as a success (p. 10). In contrast, Watermeyer et al. (2021) found that most respondents perceived the

experience negatively, but there were some who "adopted a far more positive and optimistic tone in deliberating on the impact of COVID-19 on higher education" (p. 625).

One positive theme that appears in the literature is the opportunity for pedagogical development, creativity, and growth afforded by the forced transition to ERT. For example, Danyluk and Burns (2021) found that a quarter of their survey respondents identified the transition to online teaching as being "wide open for growth" and an opportunity to "explore new methods of teaching and learning" (p. 72). Other researchers identified benefits such as an increase in technical skills (Khan, 2021, p. 6), the opportunity (albeit forced) for creativity and experimentation (Shin et al., 2022, p. 20), usefulness in future teaching (Trevisan & De Rossi, 2023, p. 68), and the "unparalleled opportunity for pedagogical reinvention" (Watermeyer et al., 2021, p. 637).

Support also appears as a positive and recurring theme. For example, Shin et al. (2022) noted that the emergency online transition was particularly successful for librarians who felt that they had the support of their institution and colleagues (p. 23). Trevisan and De Rossi (2023) found that respondents highly appreciated their institutions' efforts to support digital and online instruction (p. 68). Watermeyer et al. (2021) found that most survey participants felt supported by their institutions and had access to the technologies they needed to support their online teaching (pp. 27–29).

Finally, although many challenges were identified with at-home work, some researchers did remark on the benefits of working from home for some individuals. For example, Danyluk and Burns (2021) observed that some faculty enjoyed the freedom and flexibility it afforded, and some felt safer working from home during the pandemic than they would have in the classroom (pp. 72–74). Littlejohn et al. (2021) also found that, while feelings about working from home were mixed, some educators experienced benefits such as increased focus, productivity, and relief from lengthy commutes, though they point out that at-home work was far less beneficial for those with conflicting responsibilities in the home (p. 12). In contrast, McLay Paterson and Eva (2022a) found that some librarians appreciated the flexibility of working from home as they balanced work with parenting commitments (p. 18).

## Research Methods

This study was reviewed and approved by the Interdisciplinary Committee on Ethics in Human Research (ICEHR), Memorial University. An 18-question survey, appended at the end of this article, was developed to investigate the experiences of instruction librarians at universities in Canada during the COVID-19 pandemic, and was administered using the Memorial University instance of Qualtrics. Although the survey was distributed to librarians in late 2021 and early 2022, most questions asked participants to reflect on the period between March 2020 and August 2021, when most Canadian universities were closed to in-person instruction. For some questions, librarians were asked to compare their experiences during this period to their feelings or experiences at the time of responding to the survey.

Survey participation was limited to professional librarians at Canadian English-language and bilingual universities whose work involved the design, delivery, and/or administration of Information Literacy (IL) instruction during the period under examination. Although many IL librarians can be identified by job title or by the organizational unit in which they work, instruction responsibilities are not always evident based on available information on library websites. Because of this difficulty the decision was made to distribute the survey to all librarians at English and bilingual universities in Canada, with the goal of reaching those who were not easily identifiable as instruction librarians but were nevertheless engaged in information literacy instruction activities.[1]

The survey was initially distributed by email in November 2021. A follow-up email was sent to the same list in late January 2022, two weeks before the survey closed. A total of 1399 email addresses were contacted; seventeen automated replies indicated that the email was undeliverable or that the account was inactive, leaving 1382 presumably valid emails.

A total of 221 librarians across Canada responded to the survey. Of those, four participants indicated at the beginning of the survey that information literacy was not a part of their professional responsibilities between March 2020 and August 2021. Respondents who were not involved in IL instruction during this specified period were directed to the end of the survey and have not been counted in the total number of responses. Excluding those four, 217 responses were received, a 15.70% response rate. However, because not all librarians who received the survey fell within the target group, it is likely that the response rate from librarians with IL responsibilities was considerably higher. Although this response rate cannot be accurately calculated, 56.4% of librarians who responded to the Canadian Association of Professional Academic Librarians (CAPAL) 2018 Census selected "Instruction and Information Literacy" as one of their areas of professional expertise (p. 25). When this information is used to approximate the percentage of librarians contacted for the present study who have IL-related responsibilities ($n$ = 779, 56.36%), the suggested response rate is estimated at 28%.

The invitation to participate, distributed via email, included a link to the online survey. The link opened to an introductory page which explained the purpose of the study, how to participate, the risks and benefits of participating in the research, where and for how long the data would be stored, where to direct questions, and how to withdraw from participation. Participants were then asked to give consent by selecting the statement "I consent for the data I provide to be used in this research study" and then clicking on "begin survey" before proceeding to the survey questions.

---

[1]  The contact list used for this research was compiled by Kelly Hatch, Teaching & Learning Librarian at Western University, using publicly available information on Canadian university websites. The author wishes to extend enthusiastic thanks to Ms. Hatch for generously sharing the list for use in this study.

Survey participants were then asked to complete a combination of quantitative and qualitative question types. Some demographic questions were asked relating to the size of the institution at which respondents were employed, as well as the amount and type of experience they had with IL instruction. Most questions focused on participants' IL instruction experiences during the COVID-19 pandemic, such as their confidence in their ability to teach online and benefits and challenges that they encountered during the lockdown. Following survey completion, all quantitative data was downloaded and analyzed using Excel. The qualitative data was downloaded and coded thematically using NVivo.

## Results & Analysis

### Demographics

Of the 217 librarians who responded to the survey, the most sizable group ($n = 89$, 41.40%) indicated that they were located at universities serving large (30,000–39,999) or very large (40,000+) student populations. An additional 34% indicated that they were employed at institutions serving medium (10,000–19,999) or medium-large (20,000–29,999) student populations ($n = 74$, 34.42%). Finally, approximately one quarter of respondents indicated that they worked at small- to medium-sized universities with populations of 9,999 students or less ($n = 52$, 24.18%).

When asked how long their work has involved information literacy instruction, just over half ($n = 115$, 53.24%) of all survey participants said ten or more years, with 19.44% ($n = 42$) indicating that they had been involved in IL for 20 years or more. Of the remaining 46.75% ($n = 101$), the majority had been engaged in IL instruction for 3–9 years, while a small number ($n = 15$, 6.94%) had been involved in IL for three years or less.

More than half ($n = 117$, 53.19%) of all respondents indicated that IL constituted a large part (or in a few cases all) of their professional responsibilities during the period of March 2020 to August 2021. Most other respondents ($n = 75$, 34.09%) indicated that IL was a moderate part of their responsibilities, while a small number of participants ($n = 24$, 10.91%) indicated that IL instruction made up only a small portion of their responsibilities during this period.

When asked for further information about the scope of their IL responsibilities during the pandemic, all respondents except two indicated that they were directly engaged in teaching, including those who also had IL-related administrative responsibilities. For example, 35% ($n = 78$) indicated that they had both taught and organized, managed, or coordinated IL within a specific subject area or discipline, for example as a liaison librarian or subject specialist. Of the relatively small number of librarians (11.95%) who indicated that they had library- or system-wide administrative responsibility for IL programming, the majority (24 out of 27) indicated that they were also directly engaged in teaching IL. The largest group of respondents ($n = 111$, 49.12%) indicated that they delivered information literacy instruction during the pandemic but did not oversee, manage, or coordinate an IL program.

In terms of how that instruction was delivered, for almost all participants ($n$ = 202, 93.52%) the entirety of their teaching took place online between March 2020 and August 2021. Only fourteen librarians (6.48%) indicated that they had engaged in any sort of in-person classroom-based instruction during that time.

Of the 202 respondents who taught only online, close to half ($n$ = 96, 47.52%) reported engaging exclusively in synchronous modes of instruction, for example via videoconferencing products such as Zoom or Webex. Most of the remaining respondents ($n$ = 90, 44.55%) indicated that they used a mix of synchronous and asynchronous strategies, with one respondent commenting that their instructional approach varied depending on the professor with whom they were working and the mode of instruction already in use in the course. Only a very small number of participants ($n$ = 16, 7.92%) reported teaching asynchronously only.

When asked how much experience they had with online teaching prior to the pandemic, almost three quarters ($n$ = 159, 73.96%) of survey participants indicated that they had very little or no prior experience teaching online. Although the remaining librarians reported having either moderate ($n$ = 38, 17.67%) or extensive ($n$ = 18, 8.38%) pre-pandemic online teaching experience, it is evident that for the majority of academic librarians in Canada, the transition to ERT presented a significant learning curve (see Figure 1). This information points to the significant need for instructional support that emerged as librarians made the rapid transition to teaching online.

**Figure 1**

*Percentage of librarians with moderate or extensive online teaching experience prior to the pandemic, compared with those who taught online during the pandemic.*
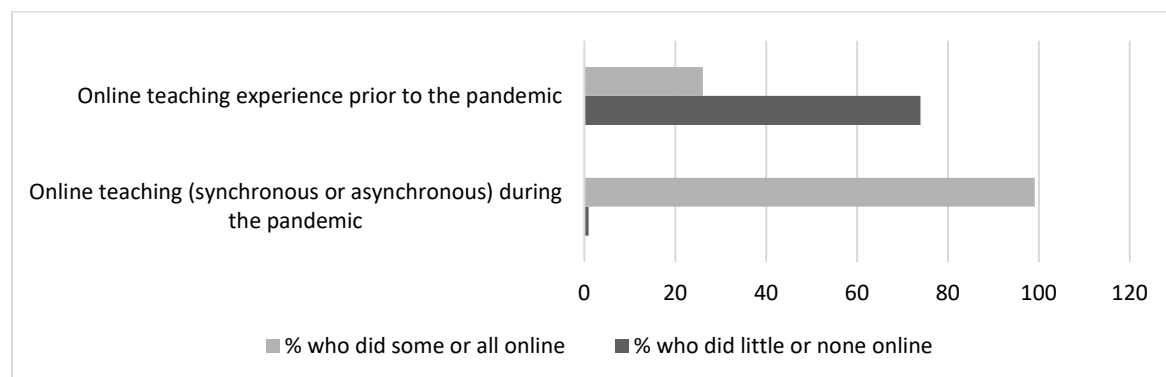


## Confidence

When asked to rate their overall confidence when they first began to prepare for the transition to online teaching, just over half of all survey respondents (53.24%) reported a general lack of confidence, with one quarter ($n$ = 53, 24.54%) indicating that they were "not at all confident" and close to 30% indicating that they were "not quite confident" ($n$ = 62, 28.70%).

However, the most frequently chosen single category, selected by 34.26% of participants (*n* = 74), was "somewhat confident," indicating that although most librarians felt unprepared, a significant proportion felt at least some level of readiness to transition to ERT. The least chosen category was "very confident", with 12.50% (*n* = 27) selecting this answer.

By contrast, when librarians were asked how confident they felt about teaching online almost two years later, their responses suggested significant growth during the pandemic. Almost every survey participant (*n* = 201, 93.05%) indicated that they felt either somewhat (*n* = 115, 53.24%) or very confident (*n* = 86, 39.81%) in their ability to teach online at the time of the survey. Only fifteen respondents, or 7%, indicated low levels of confidence (either "not quite" or "not at all" confident) with online teaching at that time. A comparison of librarians' overall confidence at the outset and later in the pandemic is shown in Figure 2.

**Figure 2**

*Librarians' confidence in their ability to teach online at the beginning of (pre) and following (post) the COVID-19 lockdown*
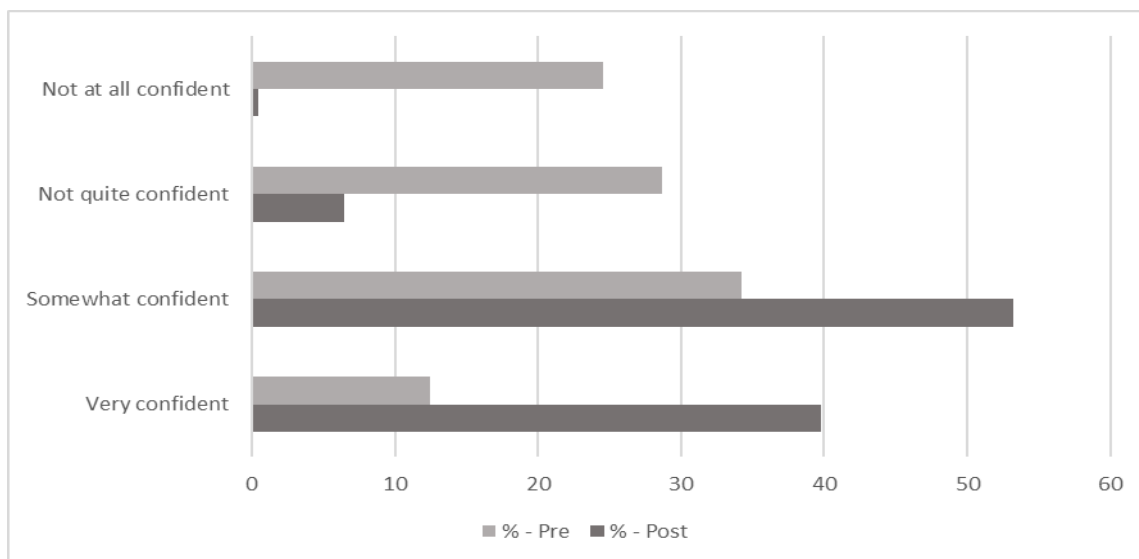


Further evidence of growth can also be seen in the comments provided by survey participants. One librarian writes, for example, that "my comfort and ease with online teaching varied over the course of the pandemic, from anxiety and unpreparedness at the start to much more comfort and even enjoyment as I gained experience." Similarly, another respondent commented, "I am glad I was able to learn to use technologies for teaching - my confidence levels have certainly increased for teaching online." A third librarian observed that "it was mostly just a matter of doing it. My prior discomfort stemmed from an unfounded skepticism that quickly evaporated once I started doing it."

Participants were also asked to rate their feelings of readiness in five specific areas relevant to online instruction, both at the outset of the pandemic and again when they were responding to the survey. The five areas of readiness were as follows. The results can be seen below in Table 1.

1. *Having the hardware (computing resources, speakers, microphone, etc.) that you needed*

2. *Having the software/apps (either desktop or cloud-based) that you needed*

3. *Knowing what technologies existed that might be useful to you for online teaching*

4. *Having the knowledge, experience, or training you needed to effectively use those technologies*

5. *Having the pedagogical knowledge, experience, or training you needed to engage in effective online teaching*

**Table 1**

*Librarians' feelings of preparedness in specific areas[2]*

| Area of preparedness | Beginning of lockdown - Not prepared (%) | Beginning of lockdown - Prepared (%) | Following lockdown - Not prepared (%) | Following Lockdown - Prepared (%) |
|---|---|---|---|---|
| 1. Having the necessary hardware | 34.72% (*n* = 75) | **65.28%** (***n* = 141)** | 4.63% (*n* = 10) | **95.37%** (***n* = 206)** |
| 2. Having the necessary software/apps | 33.33% (*n* = 72) | **66.66%** (***n* = 144)** | 4.17% (*n* = 9) | **95.84%** (***n* = 207)** |
| 3. Knowing what learning technologies exist | **51.63%** (***n* = 111)** | 48.37% (*n* = 104) | 5.55% (*n* = 12) | **94.45%** (***n* = 204)** |
| 4. Knowing how to effectively use learning tech | **56.02%** (***n* = 121)** | 43.99% (*n* = 95) | 6.48% (*n* = 14) | **93.52%** (***n* = 202)** |
| 5. Knowing/being aware of online pedagogies | **60.19%** (***n* = 130)** | 39.82% (*n* = 86) | 15.28% (*n* = 33) | **84.72%** (***n* = 183)** |

---

[2] "Completely unprepared" and "Somewhat unprepared" have been combined in the "Not prepared" columns; "Somewhat prepared" and "Completely prepared" have been combined in the "Prepared" columns.

When asked about their confidence in the specific areas listed above at the beginning of the pandemic, a more fulsome picture begins to emerge. While many librarians felt prepared in terms of having the necessary technologies at their disposal, they did not necessarily feel equipped to make effective use of them in their teaching. For example, although many participants indicated that they had the hardware ($n$ = 141, 65.28%) and the software or apps ($n$ = 144, 66.66%) that they needed, just over half of the respondents said that they felt either somewhat or completely unprepared in terms of knowing what teaching and learning technologies existed ($n$ = 111, 51.63%), and having the knowledge, training, or experience to use them effectively ($n$ = 121, 56.02%).

Survey participants also indicated that, at the start of the pandemic, they felt even less confident about online pedagogies than they did about their technological knowledge. Well over half of the respondents ($n$ = 130, 60.19%) said that they felt either somewhat or completely unprepared in terms of having the pedagogical knowledge, experience, or training they needed to engage in effective online teaching. This apprehension may point to an awareness among instruction librarians that effective online teaching strategies differ significantly from in-person methods and indicates that there was a widespread need for instructional support at the beginning of the pandemic.

By contrast, when asked how prepared they felt in the same five areas at the time of taking the survey, a very different picture emerged, with librarians reporting high levels of confidence in all areas. For example, almost all librarians reported that they felt either somewhat or completely prepared in terms of having the hardware ($n$ = 206, 95.37%) and software or apps ($n$ = 207, 95.84%) that they needed to teach online, with most of them feeling completely prepared. Almost every librarian reported feeling either somewhat prepared or completely prepared in terms of knowing what useful technologies exist (94.45%; $n$ = 204) and having the knowledge, experience, and/or training to effectively use those technologies ($n$ = 202, 93.52%).

Finally, librarians' confidence in their ability to teach effectively online also increased significantly. Most respondents, 84.72%, reported feeling somewhat ($n$ = 129, 59.72%) or completely ($n$ = 54, 25%) prepared in terms of having the pedagogical knowledge, experience, and/or training needed to effectively teach online. However, while the majority reported feeling at least somewhat prepared in this area, this remained the area in which librarians felt least prepared, even after many months of ERT and considerable exposure to teaching online. This concern is reflected in the qualitative data, with one librarian commenting:

I found myself exposed to a wide variety of technologies and methods…yet I found myself unable to emulate, implement or otherwise incorporate these new tech and methods into my own teaching. I'm still very much stuck in "demonstration" mode, still unable to facilitate more interactive learning activities with students in virtual environments.

These results may be due to the sudden and haphazard nature of the emergency transition to online instruction during the pandemic, which may have limited opportunities for librarians to engage in in-depth instructional development. These

results also suggest an ongoing need for pedagogical support and learning opportunities for librarians who continue to teach online.

**Challenges**

Librarians were also asked to indicate which specific aspects of online teaching they found to be challenging during the pandemic. The options presented to them were as follows:

1. Learning to use online teaching & learning technologies

2. Developing online teaching strategies, and/or adapting classroom pedagogies for online instruction

3. Fostering student participation and engagement online

4. Finding the additional time needed to design and/or deliver online instruction

5. Other (please describe)

The most frequently selected answers were "developing online teaching strategies, and/or adapting classroom pedagogies for online instruction" ($n$ = 158, 71.49%) and "fostering student participation and engagement online" ($n$ = 179, 81.00%). This response is consistent with the finding that many librarians felt unprepared in terms of having the pedagogical knowledge, experience, or training they needed to engage in effective online teaching, particularly at the outset of the pandemic. On the other hand, respondents struggled considerably less with instructional technology, with only about a third ($n$ = 80, 36.20%) saying that it was challenging to learn about and use online teaching and learning technologies.

Half of the survey respondents ($n$ = 114, 51.58%) indicated that it was challenging to find the time they needed to design and deliver online instruction. This Information is perhaps unsurprising given the rapid pace of the transition to ERT, as well as the competing caregiving and homeschooling responsibilities that many librarians dealt with during the lockdown.

Of the 26 respondents who selected "other" (4.67%) the most frequently recurring theme related to the unique challenges of working from home in an online environment. For example, several librarians described having unreliable home internet as a significant barrier, while one librarian mentioned "making sure my cats don't interrupt my teaching while working from home"—a familiar pandemic challenge for pet owners everywhere!

Another survey question asked participants to rate the extent to which personal and environmental factors created difficulties for their instructional practice. The five factors that respondents were asked to evaluate using a four-point Likert scale (from "extremely challenging" to "not at all challenging") are as follows:

1. Family commitments (e.g. childcare; homeschooling; elder care)

2. Social and/or professional isolation

3. Your home office or workspace

4. Stress or anxiety related to teaching online

5. Screen fatigue

Of these five areas, the one that librarians found to be most universally difficult was screen fatigue, with more than three quarters (77.21%) reporting that they found it to be either extremely ($n$ = 68, 31.62%) or somewhat ($n$ = 98, 45.58%) challenging. This concern was also echoed in the comments of some participants, with one librarian noting that "Zoom fatigue hit me almost instantly." Another participant describes it as an ongoing challenge as much day-to-day work continues to be online: "screen fatigue is still an issue - I try to take bigger breaks on the days I have to teach online."

In addition, half the survey participants indicated that social or professional isolation ($n$ = 111, 51.63%) was a challenge. As one librarian writes, "it was pretty miserable and isolating overall and I really missed the engagement with students in the classroom." Also, almost half ($n$ = 104, 48.15%) indicated that their at-home office or workspace presented challenges that impacted their instructional practice, and more than half ($n$ = 115, 53.49%) reported experiencing stress or anxiety related to online teaching.

Although slightly less than half of respondents ($n$ = 95, 44.81%) indicated that family commitments, such as homeschooling, childcare, or elder care, were a challenge for them during the pandemic, a "not applicable" option was not provided. This oversight makes it difficult to know what percentage of librarians with caregiving responsibilities found them to conflict with their instructional practice, or how many librarians indicated that it was not a challenge simply because they did not have those responsibilities. It is likely, however, that of the 74 participants (34.91%) who indicated that family commitments were "not at all challenging," many did not have childcare, homeschooling, or elder care responsibilities.

Other pandemic researchers have found that parenting and caregiving responsibilities divided the work of many university educators during the pandemic, and that women were most significantly impacted by these challenges (Minello et al., 2021; Watermeyer et al., 2021; Khan, 2021; Littlejohn et al., 2021). Given that close to three quarters of academic librarians in Canada identify as female (Canadian Association of University Teachers, 2017; Canadian Association of Professional Academic Librarians, 2019), it is likely that these factors had a significant impact on the work of many, with longer-term impacts to their careers not yet fully realized.

**Support & Professional Development**

As others writing about educator experiences during the COVID-19 pandemic have discussed, the transition to online teaching in the winter of 2020 was both rapid and

unexpected, affording little time to learn about new teaching strategies and technologies, adapt existing classes and methodologies to the online learning environment, or reflect on the effects of ERT on our instructional practices (Hodges, 2020; Khan, 2021; Littlejohn et al., 2021; Shin et al., 2022). For the librarians who participated in this study, these challenges were compounded by the fact that the majority had little or no experience teaching online prior to the pandemic. Yet despite these limitations, survey participants rapidly found ways to adapt their instructional practices to the online teaching and learning environment.

When asked how much time they dedicated to professional development (PD), either formal or informal, related to online teaching during the pandemic, participants' answers varied. One quarter of respondents ($n$ = 55, 25.46%) estimated that they had dedicated more than twenty hours to online teaching-related PD during the pandemic; for some it was likely to have been much more. But almost as many ($n$ = 45, 20.83%) indicated that they had spent much less, estimating between six and ten hours. Overall, respondents were divided between those who spent more than 10 hours on various forms of professional development ($n$ = 120, 55.5%), and those who spent ten hours or less ($n$ = 96, 44.44%).

When examined more closely, factors such as confidence and prior experience with online teaching do not appear to have impacted the number of hours of PD in which librarians engaged. A chi square test found no significant relationship between the number of hours spent on PD during the pandemic and the amount of experience respondents had teaching online before the pandemic, $x^2$ (20, $N$ = 214) = 8.75, $p$ = .05. Similarly, there was no significant correlation between respondents' confidence at the start of the pandemic and the number of hours they engaged in professional development, $x^2$ (15, $N$ = 216) = 18.66, $p$ = .05. One factor that did appear to have an impact, however, was librarians' perceptions of support, with time spent on PD being positively associated with satisfaction with the supports and learning opportunities available at their library or institution, $x^2$ (15, $N$ = 215) = 33.25, $p$ = .05.

When asked how satisfied they were with the amount and/or kinds of teaching supports available to them during the pandemic, either within their libraries or in their academic institutions, most librarians across Canada responded positively. More than three quarters ($n$ = 167, 77.67%) of survey respondents indicated that they were either "somewhat satisfied" ($n$ = 127, 59.07%) or "extremely satisfied" ($n$ = 40, 18.60%) with the available supports. However, close to one quarter ($n$ = 48, 22.33%) of librarians felt unsupported, reporting that they felt either "somewhat dissatisfied" ($n$ = 35, 16.28%) or "extremely dissatisfied" ($n$ = 13, 6.95%) with the amount and/or kinds of support available to them. These concerns were also evident in the comments from some survey participants, with one person writing, for example, "my institution invested in technology over the pandemic, but no other supports (training, instructional assistance, etc.)." Another librarian commented, "I was expected to perform at a high level without any formal knowledge or training in the use of the technology required to teach online." Finally, a third respondent noted, "there was little patience… for librarians who were not totally up to speed immediately. I think because we work in a techy world there is the perception that we could easily move online at a moment's notice."

Survey respondents were also asked to indicate what types of instructional development opportunities and supports they accessed to help them prepare for online teaching during the pandemic, by selecting all relevant answers from the following list of options:

1.  Workshops or webinars offered by your library

2.  Workshops or webinars offered by your institution

3.  Workshops or webinars offered outside of your institution

4.  Individual training and/or one-on-one help from a dedicated teaching & learning librarian or other support person at your library

5.  Individual training and/or one-on-one help from a dedicated teaching & learning support person at your institution

6.  Guides, tools, and/or documentation provided by your library or institution

7.  Informal self-study using online resources and/or professional or research literature

8.  Formalized peer support (e.g. team-based planning and/or teaching; peer mentoring; reflective dialogues; etc.)

9.  Informal peer support (i.e. asking a colleague for help)

10. Other - please describe

By far the most frequently selected strategies, as shown below in Figure 3, were those which were self-directed, collegial, and informal. For example, close to three quarters of librarians indicated that they had engaged in informal self-study ($n$ = 161, 72.85%) or informal peer support ($n$ = 163, 73.76%), with the latter perhaps pointing to the collegial culture that exists among information literacy librarians in Canada. As one participant commented, "I absolutely got the most benefit from informal sharing of what worked and what didn't between library colleagues." Organized collaborative supports, such as formal peer mentoring, reflective dialogues, and team-based instruction, were less commonly identified, with only 21.27% ($n$ = 47) indicating that they had participated in such initiatives.

Although formal supports were less frequently selected, 60.63% ($n$ = 134) of respondents indicated that they had participated in workshops or webinars offered by their institution, and half ($n$ = 111, 50.23%) indicated that they had made use of guides, tools, or documentation provided by their library or institution. Also, half ($n$ = 109, 49.32%) indicated that they had participated in online activities such as workshops or webinars offered outside of their institution, with one librarian commenting that "conferences were extremely helpful - LOEX 2021 in particular." However, only one third of librarians ($n$ = 75, 33.94%) indicated that they had participated in workshops or

webinars offered by their library. This suggests that while the formal supports available to librarians may have been either specific to information literacy or specific to their institutional context, for most librarians they were not likely to be both.

Individualized help services were the least commonly selected type of support. Less than 20% ($n$ = 40, 18.10%) of respondents indicated that they had received one-on-one help or training from a dedicated teaching and learning support person at their institution. Even fewer ($n$ = 28, 12.67%) indicated that they had received individual support from a dedicated teaching and learning librarian or other support person at their library.

Other forms of support, identified by a very small number of respondents ($n$ = 6, 2.71%), included drawing on their own experiences as an online learner and technical support from a third-party vendor. Three participants indicated that no library or institutional supports were available to them whatsoever, or that they were so busy with teaching that there was no time for them to take advantage of available supports.

**Figure 3**

*Instructional development opportunities and supports accessed by librarians, by percent of respondents who selected each answer.*
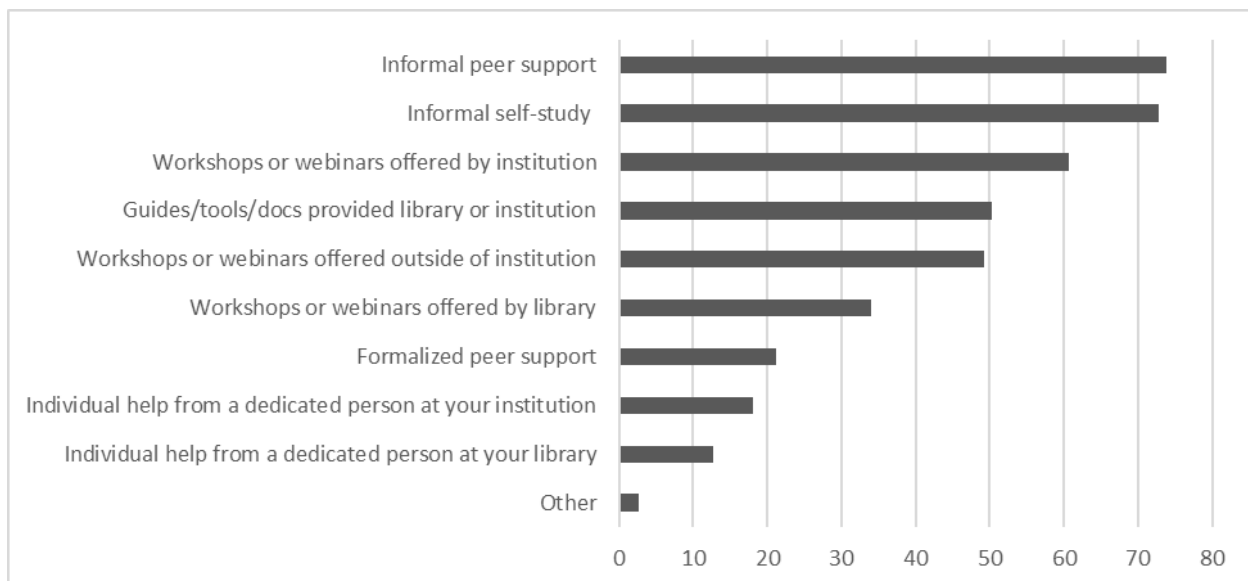


Finally, when asked whether their library had a dedicated person, unit, or committee responsible for instructional support and training of librarians who teach information literacy, just over half ($n$ = 113, 52.31%) of respondents indicated that they did, with one librarian commenting, "I am so grateful to the library teaching & learning team at my institution for their help and support." However, a sizable minority ($n$ = 89, 41.20%) indicated that their library offered no such support. One librarian commented on the difficulty of not having a dedicated support person at their library, writing, "the lack of an IL Coordinator…was a huge impediment as librarians were largely working in isolation and re-inventing the wheel." At the same time, one survey participant who was an IL

coordinator noted that they too experienced challenges during the transition: "the shift to online was as challenging for me as it was for the rest of the teaching librarians, and I was not prepared to provide support for online teaching—none of us did it previously so I had no more actual experience than the team." Fourteen participants (6.48%) indicated that they were unsure whether their library had a person or group responsible for instructional support or not.

**Post-Pandemic Information Literacy Instruction**

Survey participants were asked to comment on whether they felt their experiences with online teaching during the pandemic would impact or influence their post-pandemic information literacy instruction, and if so how. Not surprisingly, almost all respondents felt that they would, with many predicting lasting changes to their own individual teaching practice and/or institutional approaches to information literacy. Although some librarians expressed a desire to return to in-person instruction, only six indicated that their pandemic experiences were not likely to have any impact on their teaching going forward.

Participants felt that their experiences during the pandemic would influence future IL instruction in a variety of ways. The majority predicted that it would fundamentally alter the way that information literacy was offered, either on an individual level or across their institutions. Although few believed that they would continue to teach in a wholly online environment, most felt that they would incorporate technologies and strategies used during the pandemic into hybrid, flipped, and blended modes of instruction. As one respondent wrote, "we won't be strictly online but there will be a shift to more online in the in-person model."

Other respondents focused on the potential for greater flexibility in being able to offer both online and in-person instruction. For example, one librarian commented that "while in-person will come back and be impactful, some sessions worked well online…both pedagogically and in terms of accessibility," adding, "I will keep employing different delivery methods in the future to keep serving those who have found online methods more helpful for their information literacy learning." Another observed that, "I think [our experiences] will influence post-pandemic IL greatly, in a positive way, and more creatively, too. We've had to adapt and…implement flexible learning into IL," while a third wrote, "it's proven that we can provide flexible support and instruction for learners and I envision providing the same level of support post-pandemic."

Related to this, many librarians wrote about their new-found confidence, skills, and familiarity with learning technologies, noting, for example, that it "provided more experience and made me increasingly comfortable delivering online sessions" and that they would be "more likely to undertake online teaching now that I have experience with it." Others observed that things learned during the pandemic would serve them well in all teaching situations, not simply when teaching online. As one librarian writes, "anytime we learn how to teach something new or teach in a new way, it is positive. Another tool in the tool belt. Learning how to teach better when online will help me to be a better teacher overall."

At the same time, some librarians pointed out that they still have much to learn, with one librarian observing that "some aspects of teaching IL online are likely here to stay, I think… so I would like to continue to take advantage of PD opportunities to improve my online teaching skills." Another participant writes, "I hope to have more online teaching but need to be 'better' at it," while another notes, "I'd like to do more of it, but better." Finally, one librarian expressed concern over maintaining their online teaching skills post-pandemic: "I love teaching online but I feel challenged that technology changes so frequently that if I don't keep up, I'll end up starting all over again."

Although many participants were optimistic about the ways that the pandemic would influence the future of IL instruction, there were some who expressed concerns. Several respondents wondered whether instructors would be willing to return to in-person IL, with one librarian writing,

I'm very worried that instructors aren't going to want to go back to face-to-face instruction. The module I created for first year is achieving okay results and takes none of their class time. We are hoping to transition into a model where students do async instruction, then have [face-to-face] follow up, but uptake on the follow up has been low.

Another librarian described similar experiences and concerns, noting that "some faculty are asking for online workshops even though their class is on campus and I would attend in person. This is frustrating. I don't believe that students benefit as much from this sort of online workshop."

A few librarians commented that while their libraries or institutions are very much in favour of adopting flexible and hybrid models of instruction moving forward, they have concerns about the extra time and skill development those changes will require. As one respondent writes,

the university is adding more online and hybrid courses to the curriculum to increase enrollment, so I will need to use the skills I have gained… It does take a lot more time to develop this content, however… which is something we will have to work through.

Another shared similar thoughts: "There are some positive outcomes of asynchronous instruction…that are beneficial for learners but tend to require a significant increase in prep and delivery." Finally, a third survey participant notes,

both online and in-person instruction…is the academic library wave of the future. Yet, we don't have the facilities, equipment, training and most importantly the time to pivot in this direction when we have less staff, fewer resources, and even more pressure to meet student, faculty and library needs.

Interestingly, although no questions were asked in the survey about individual research consultations, a significant number of participants commented on this service, identifying it as a form of online information literacy support with which they had great success. Several librarians shared their intention to continue offering research consultations online "for the foreseeable future," with one person commenting that, "one-on-one teaching has turned out to be great, virtually, and has advantages over in-

person, especially when the focus is on exploring online resources." Similarly, another participant writes, "I consider the subject-specific reference that I do in my liaison areas to be opportunities for information literacy instruction and it works better in an online format."

## *Limitations & Further Research*

### Study Limitations

One limitation of this study is related to question design. The question regarding how pandemic experiences might impact future instruction was designed to gather qualitative, open-ended data, by inviting participants to provide written comments rather than selecting from a series of pre-defined answers. This question design was deliberately chosen to allow for broader and more reflective responses; however, a downside was that fewer participants (168 out of 217) chose to answer this question compared with quantitative survey questions.

Additionally, the predictive nature of this question may have contributed to a type of response bias known as hypothetical bias. Walters (2021) explains hypothetical bias as a situation in which "respondents' assertions about what they would do in a given situation do not match the behavior they would actually display in that situation" (p. 2). Follow-up research would be useful here to examine the true long-term impacts of the pandemic on information literacy instruction.

Unlike the qualitative question discussed above, several other survey questions relating to personal and professional challenges were asked using quantitative question formats. For example, one question asked, "To what extent did each of the following factors create challenges for your instructional practice between March 2020 and August 2021?" Participants were then invited to rate a series of challenges such as family commitments, isolation, and screen fatigue, using a Likert scale. Another question asked, "Which of the following aspects of online teaching, if any, have you found to be challenging during the pandemic? Please check all that apply," and participants responded by selecting from a list of pre-defined options such as learning to use new technologies, developing and adapting pedagogies, and fostering student engagement. Although an "other" option and associated comment box were included in the latter question, few participants selected this option. While both questions garnered a larger response rate than the qualitative question, the inclusion of pre-defined answers may have limited the depth and scope of participants' replies, potentially causing valuable information to be overlooked by this study.

Finally, the survey question "To what extent did each of the following factors create challenges for your instructional practice between March 2020 and August 2021?" was limited by the fact that no "not applicable" option was provided. Because of this omission, participants were unable to indicate if any of the challenges listed simply did not apply to them. This made it difficult to accurately assess the extent to which family commitments such as childcare, homeschooling, or elder care presented challenges to

librarians, since it is not known how many respondents had or did not have caregiving responsibilities.

**Areas for Further Research**

Several themes that were not directly explored by this survey were nevertheless discussed by respondents in the qualitative data, suggesting potential areas for further study. For example, a number of participants spoke positively about their experiences providing research consultations in the online environment and indicated that they found this to be a successful outcome of the move to online services. These comments point to the potential for additional research to investigate questions such as whether libraries continued or increased their provision of online consultations following the lockdown, and whether online consultation services have differed from in-person consultations in terms of patron satisfaction, number of requests, or number of missed appointments.

Similarly, although this survey focused on the experiences of librarians, many commented on the experiences of their students. While some shared the opinion that students benefited in various ways from the online learning environment, others questioned this assumption, with one librarian commenting, "I still believe in my heart that there's no substitute for the in-person classroom experience and I still question students' preference for online learning (is it really better for their learning or is it more convenient?)" Although other researchers have explored student experiences of online learning during the pandemic (Eckley et al., 2023; Houlden & Veletsianos, 2022; White, 2022), future research could examine long-term impacts by evaluating the information literacy skills of students who completed their early university education during the pandemic.

Finally, further study is needed to investigate the short- and long-term impacts of the pandemic on female-identifying librarians. As already discussed, other pandemic researchers have found that female academics were most significantly impacted by parenting and caregiving responsibilities during the pandemic (Khan, 2021; Littlejohn et al., 2021; Minello et al., 2021; Watermeyer et al., 2021). Minello et al. (2021) observed that many women felt forced to delay or discontinue research during the pandemic, noting that "the fact that universities did not take…measures (shortened semester/hours) to help parents sent a message to women about their value, and how invisible the burden of motherhood is in academia" (p. 291). Related to this, Eva et al. (2021) examined the gender disparity in librarianship, finding for example that female librarians earn an average of $10,000 CDN less annually than their male colleagues and are less likely to attain higher academic ranks (p. 1). They argue that women still have "a long way to go in terms of parity with men in academic librarianship" (p. 9). Further investigation is needed to examine how the pandemic has impacted female-identifying librarians, potentially exacerbating already long-standing gender disparities.

## *Conclusion*

Participants in this study experienced a variety of personal and professional challenges during the pandemic, many of them ongoing. As one librarian writes, "it's been hard and

it remains hard." It will take time and further research to fully understand the long-term impacts of the pandemic on librarians, on students, and on information literacy in Canada. Meanwhile it would be a mistake for institutions to assume that librarians are now fully versed in online teaching and learning as a result of their ERT experiences, or that online instruction is a simpler, faster, or more efficient way to teach information literacy when compared with other modes of instruction. Although online and hybrid modes of information literacy instruction are likely here to stay, with benefits for both learners and librarians, it is essential for employers to provide ongoing training, support, and resources to help instruction librarians achieve success.

Despite the many professional and personal challenges experienced by librarians during the pandemic, the results of this study also convey a sense of optimism, positivity, and growth. Although most survey participants indicated that they had limited experience teaching online prior to the pandemic, they reported significant increases in confidence and in their ability to teach online as the lockdown period progressed. This confidence and positivity can be seen in observations shared by many of the survey participants:

My comfort and ease with online teaching varied over the course of the pandemic, from anxiety and unpreparedness at the start to much more comfort and even enjoyment as I gained experience.

It was a challenge for everyone, however I think it made me a better instructor, in fully thinking through what I was delivering, and re-thinking how to make the online classroom experience accessible to learners.

It was stressful to be thrown in without preparation, but it was great to see our team rise to the challenge and become more confident. I think everyone (students, faculty, library staff etc.) has become more flexible and tolerant in the online environment, and more willing to take risks, which are positive outcomes.

Online teaching during the pandemic felt like a real challenge, but I would say that I feel more energized to come up with new ways to teach IL/research skills content than I was before the pandemic. There seem to be more opportunities and environments now to reach more people than we did pre-pandemic, and that is exciting.

The above comments point to the care, resilience, and flexibility that characterizes academic librarianship in Canada. However, some have cautioned that this optimism does not always serve our profession well, potentially taking the form of "toxic positivity," and a "refusal to acknowledge…the negative aspects of librarianship" which can ultimately lead to professional burnout (Dixon, 2022, p. 47). Similarly, McLay Paterson and Eva (2022b) describe this "centering of care" as both "a cause of and a possible antidote to academic burnout" (p. 8).  It should be remembered that the long-term positive and negative impacts of the pandemic—on our students, on our services, and on our professional and academic careers—continue to emerge and are not yet fully understood.

For now, though, while many librarians in Canada experienced frustration and concern during the pandemic, those experiences are balanced by a sense of satisfaction with what they have survived, accomplished, and shared. In the words of one survey participant, "It was a scramble and there was much time spent discussing and learning from my colleagues. We learned as we went like everyone else."

## *References*

Canadian Association of University Teachers. (2017, May). Librarians in Canada's universities and colleges: State of the profession 2000–2014. *CAUT Education Review*, 2–12.

Canadian Association of Professional Academic Librarians (2019). *CAPAL-ACPAB 2018 census of Canadian academic librarians: User guide and results summary.*

Danyluk, P., & Burns, A. (2021). Experiencing the shift: How postsecondary contract and continuing faculty moved to online course delivery. *Brock Education, 30*(2), 63–78.

Dixon, J. A. (2022). Feeling the burnout. *Library Journal, 147*(3), 44–47.

Eckley, D., Allen, A., Millear, P., & Rune, K. T. (2023). COVID-19's impact on learning processes in Australian university students. *Social Psychology of Education: An International Journal, 26*(1), 161–189.

Eva, N., Lê, M.-L., & Sheriff, J. (2021). Less money, less children, and less prestige: Differences between women and men academic librarians. *Journal of Academic Librarianship, 47*(5), 1–11.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). *The difference between emergency remote teaching and online learning.* Educause Review.

Houlden, S., & Veletsianos, G. (2022). A synthesis of surveys examining the impacts of COVID-19 and emergency remote learning on students in Canada. *Journal of Computing in Higher Education, 34*(3), 820–843.

Ibacache, K., Koob, A. R., & Vance, E. (2021). Emergency remote library instruction and tech tools: A matter of equity during a pandemic. *Information Technology and Libraries, 40*(2), 1–30.

Khan, M. A. (2021). COVID-19's impact on higher education: A rapid review of early reactive literature. *Education Sciences, 11*(8), 1–14.

Littlejohn, A., Gourlay, L., Kennedy, E., Logan, K., Neumann, T., Oliver, M., Potter, J., & Rode, J. A. (2021). Moving teaching online: Cultural barriers experienced by university teachers during Covid-19. *Journal of Interactive Media in Education, 2021*, 1–15.

McCutcheon, C. & Lambert, N. M. (2001). Tales untold: The connection between instruction and reference services. *Research Strategies, 18*(3), 203–214.

McLay Paterson, A. & Eva, N. (2022a). "Always at work": Canadian academic librarian work during COVID-19. *Partnership: The Canadian Journal of Library and Information Practice and Research, 17*(2), 1–24.

McLay Paterson, A. & Eva, N. (2022b). "Relationships of care": Care and meaning in Canadian academic librarian work during COVID-19. *Partnership: The Canadian Journal of Library and Information Practice and Research, 17*(2), 1–26.

Minello, A., Martucci, S., & Manzo, L. K. C. (2021). The pandemic and the academic mothers: Present hardships and future perspectives. *European Societies, 23*(1, Suppl.), S82–S94.

Shin, N., Pine, S., Martin, C., & Bardyn, T. (2022). Academic library instruction in the time of a COVID-19 pandemic: Lessons learned. *Journal of Web Librarianship, 16*(1), 1–30.

Trevisan, O. & De Rossi, M. (2023). One year later: digitalized higher education in pandemic times. An international study of higher education faculty's response. *Research on Education and Media,15*(1), 64–71.

Walters, W. H. (2021). Survey design, sampling, and significance testing: Key issues. *The Journal of Academic Librarianship, 47*(3), 1–9.

Watermeyer, R., Crick, T., Knight, C., & Goodall, J. (2021). COVID-19 and digital disruption in UK universities: afflictions and affordances of emergency online migration. *Higher Education, 81*(3), 623–641.

White, E. B. (2022). A compassionate approach to IL instruction: What we can learn from the COVID-19 pandemic. *Portal: Libraries and the Academy, 22*(1), 151–175.

Yatcilla, J. K., & Young, S. (2021). Library responses during the early days of the pandemic: A bibliometric study of the 2020 LIS literature. *Journal of Library Administration, 61*(8), 964–977.

## *Appendix*

**Information Literacy Instruction: Experiences of Academic Librarians in Canada during the Pandemic**

You are invited to participate in a survey entitled Information Literacy Instruction: Experiences of Academic Librarians in Canada during the Pandemic.

This research project is being conducted by Janet Goosney, Information Literacy Coordinator at the Queen Elizabeth II Library, Memorial University.  Results of this research will be disseminated through conference presentations and/or peer reviewed journal publication.  Results will also be shared in the Memorial University Research Repository (http://research.library.mun.ca/).

The following information will provide you with the information you need in order to provide informed consent for participation in the study.  The sections below describe the purpose of the study; how you can participate and your right to withdraw from the study; risks and benefits of the research; where and for how long the data will be stored; and where to direct any questions you may have.  Please take the time to read this information fully to ensure that you are aware of all the information that has been provided.

### *Purpose of the survey*

The onset of the global Covid-19 pandemic led to an unprecedented shift in teaching and learning at Canadian universities, as on-campus classes were suspended and institutions transitioned to remote and online instruction. This transition included academic libraries, as librarians worked to provide information literacy instruction to students using online and remote modalities. This study aims to examine the experiences of instruction librarians at universities across Canada during the pandemic, during the period between March of 2020 and August of 2021.

This research seeks to gain insight into the needs and challenges experienced by librarians during this unprecedented period, the strategies and supports they used in order to prepare for this transition, and the impact those experiences had had on their instructional practice. The project also seeks to investigate how librarians believe their pandemic-related experiences will impact post-pandemic information literacy instruction.

### *Participation*

If you choose to participate in this survey, you will be asked to respond to a series of questions about you, your library, and your experiences of planning, designing, and teaching information literacy instruction during the global Covid-19 pandemic.  The survey consists of 18 questions, and should take about 10-12 minutes of your time to complete.

Every reasonable effort will be made to ensure your anonymity.  You will not be asked to provide your name or contact information, or any other information that could be used

to identify you individually.  Before the data is shared in any way, it will be reviewed by the researcher in order to remove any comments or other data that could potentially reveal your identity.

Please note that it is entirely up to you to decide whether or not to participate in this research.  If you choose to participate, you may skip any questions you do not wish to answer, with the exception of the consent to participate, which appears at the bottom of this page.

You may also choose to withdraw from the survey once it has started, with no negative consequences to you, either now or in the future.  To withdraw, simply close your browser window or navigate away from the survey without clicking on the "Go to last page" or "Submit survey" buttons located at the bottom of each page.  However, please be aware that because all responses are collected anonymously, your data cannot be removed once it has been submitted by clicking on the "Go to" or "Submit" button on each page.

### *Risks*

Because this survey asks respondents about their experiences during the Covid-19 pandemic, it is possible that some individuals may experience mild feelings of stress or anxiety while reflecting on the impacts to their teaching during this time period.  Please keep in mind that you may discontinue your participation in the survey at any time, should you experience any psychological discomfort.

Some survey questions will ask about your level of knowledge and preparedness for online teaching during the pandemic.  It is possible that some participants may feel concern that their responses could adversely affect their professional reputation or cast doubt on their expertise.  Please keep in mind that you are welcome to skip any question in this survey that you do not wish to answer.  Also, the anonymous nature of the survey, as well as the careful omission of any comments containing potentially identifying data, will ensure that you will not be identifiable in any outputs of this research.

### *Benefits*

This survey will provide you and other participants with an opportunity to reflect on and share your instruction-related experiences during the pandemic. Through dissemination of the research findings, participants and other information literacy librarians will be able to compare and validate their individual experiences by learning about the related experiences of their peers.

The results of this survey will also provide the information literacy community with insight into changes that have occurred over the course of the pandemic, and may inform conversations about how learned experiences during the pandemic can be used to enhance and evolve IL instruction moving forward.

### *Data Storage*

Data generated by this study will be retained for a minimum of five years, as required by Memorial University's policy on Integrity in Scholarly Research.  All data will be securely stored on the researcher's Memorial University-issued virtual hard drive, as well as on a thumb drive located in a locked cabinet in the researcher's office.

Data collected from this survey will also be hosted and/or stored electronically by Qualtrics and is subject to their privacy policy, and to any relevant laws of the country in which their servers are located.  Memorial University's enterprise license agreement with Qualtrics has been reviewed by General Counsel, Information Access and Privacy, IT Security Group and Information Management and Protection and meets the privacy, security and legislative requirements of the University. However, anonymity and confidentiality of data may not be guaranteed in the rare instance, for example, that government agencies obtain a court order compelling the provider to grant access to specific data stored on their servers. If you have questions or concerns about how your data will be collected or stored, please contact the researcher and/or visit the provider's website for more information before participating. The privacy and security policy of the third-party hosting data collection and/or storing data can be found at: https://www.qualtrics.com/privacy-statement/.

Finally, anonymized data collected from this survey will be made openly available through the Memorial University instance of Dataverse, an institutional data repository. All responses will be closely reviewed and any potentially identifying information removed prior to inclusion in Dataverse.

### *Questions*

You are welcome to ask questions at any point either before, during, or after your participation in this research. If you have questions or would like more information about any aspect of this study, please contact the researcher, Janet Goosney, by email at jgoosney@mun.ca or by telephone at 709-864-3166.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research (ICEHR), Memorial University, and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research, such as the way you have been treated or your rights as a participant, you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.

### *Informed Consent*

By participating in this survey, you agree that:

- You have read the above information about this research project.

- You understand what this study is about, and what you will be doing.

- You are aware that you may ask questions about this study and receive answers prior to continuing, and are satisfied that any questions you may have had have been addressed.

- You understand that you are free to withdraw from participating in this study by closing your browser window or navigating away from this page, and that doing so will not affect you, either now or in the future.

- You understand that this data is being collected anonymously, and therefore your data cannot be removed once it has been submitted at the end of each page of the survey.

Please note that by consenting to this online survey, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

Please retain a copy of this consent information for your records.

By selecting "I consent for the data I provide to be used in this research study", and then clicking on the "Begin survey" button located on the bottom right corner of this page, you are giving your informed consent for the data you provide to be used in presentations, papers, and future research on this topic.

○ I consent for the data I provide to be used in this research study (required to continue)

***End of Block: Default Question Block***

***Start of Block: Demographics***

1. Which of the following best describes your information literacy responsibilities from March 2020 to August 2021?

    ○ Not part of my professional responsibilities

    ○ A small part of my professional responsibilities

    ○ A medium part of my professional responsibilities

    ○ A large part of my professional responsibilities

    ○ All of my professional responsibilities

2. Which of the following best describes your information literacy responsibilities from March 2020 to August 2021?

   ○ I taught information literacy, but I did not oversee, manage or coordinate an IL program.

   ○ I taught information literacy, and I also oversaw, managed, or coordinated IL programming within a specific subject area or discipline.

   ○ I taught information literacy, and I also oversaw, managed, or coordinated IL programming at a library or system-wide level.

   ○ I oversaw, managed, or coordinated IL programming at  a library or system-wide level, but I did not teach IL myself.

   ○ Other - please describe: _____

3. How long has your work as a librarian involved in information literacy instruction?

   ○ 0-2 years

   ○ 3-9 years

   ○ 10-19 years

   ○ 20+ years

4. How large is the university where you work?

   ○ Less than 5,000 students

   ○ 5,000-9,999 students

   ○ 10,000-19,999 students

   ○ 20,000-29,999 students

   ○ 30,000-39,999 students

   ○ More than 40,000 students

5. Does your library have a dedicated person, unit, or committee responsible for the instructional support and/or training of librarians who teach information literacy?

    ○ Yes

    ○ No

    ○ Not sure

6. How much experience did you have with online teaching **before the pandemic**?

    ○ None at all

    ○ A small amount

    ○ A medium amount

    ○ A large amount

    ○ All of my teaching took place online

7. Which of the following best describes your primary mode(s) of instruction **between March 2020 and August 2021**? Please select all that apply:

    ☐ Online, synchronous

    ☐ Online, asynchronous

    ☐ In person, classroom-based

    ☐ Other - please describe: _____

8. In general, how confident did you feel when you **first began** to prepare for online teaching **during the pandemic**?

    ○ Not at all confident

    ○ Not quite confident

    ○ Somewhat confident

    ○ Very confident

9. When you **first began** to prepare for online teaching **during the pandemic**, how ready did you feel in terms of:

|  | Completely unprepared | Somewhat unprepared | Somewhat prepared | Completely prepared |
|---|---|---|---|---|
| having the hardware (computing resources, speakers, microphone, etc.) that you needed? | ○ | ○ | ○ | ○ |
| having the software/apps (either desktop or cloud-based) that you needed? | ○ | ○ | ○ | ○ |
| knowing what technologies existed that might be useful to you for online teaching? | ○ | ○ | ○ | ○ |
| having the knowledge, experience, or training you needed to effectively use those technologies? | ○ | ○ | ○ | ○ |
| having the pedagogical knowledge, experience, or training you needed to engage in effective online teaching? | ○ | ○ | ○ | ○ |

10. In general, how confident do you feel about teaching online **at the present time**?

   ○ Not at all confident

   ○ Not quite confident

   ○ Somewhat confident

   ○ Very confident

11. **At the present time**, how prepared do you feel for online teaching in terms of:

| | Completely unprepared | Somewhat unprepared | Somewhat prepared | Completely prepared |
|---|---|---|---|---|
| having the hardware (computing resources, speakers, microphone, etc.) that you need? | ○ | ○ | ○ | ○ |
| having the software/apps (either desktop or cloud-based) that you need? | ○ | ○ | ○ | ○ |
| knowing what technologies exist that might be useful to you for online teaching? | ○ | ○ | ○ | ○ |
| having the knowledge, experience, or training you need to effectively use those technologies? | ○ | ○ | ○ | ○ |
| having the pedagogical knowledge, experience, or training you need to engage in effective online teaching? | ○ | ○ | ○ | ○ |

12. Which of the following aspects of online teaching, if any, have you found to be challenging **during the pandemic**? Please check all that apply:

☐ Learning to use online teaching & learning technologies

☐ Developing online teaching strategies, and/or adapting classroom pedagogies for online instruction

☐ Fostering student participation and engagement online

☐ Finding the additional time needed to design and/or deliver online instruction

☐ Other - please describe: _____

13. What kinds of instruction supports, if any, did you access to help you prepare for online teaching **during the pandemic**? Please select all that apply:

- ☐ Workshops or webinars offered by your library

- ☐ Workshops or webinars offered by your institution

- ☐ Workshops or webinars offered outside of your institution

- ☐ Individual training and/or one-on-one help from a dedicated teaching & learning librarian or other support person at your library

- ☐ Individual training and/or one-on-one help from a dedicated teaching & learning support person at your institution

- ☐ Guides, tools, and/or documentation provided by your library or institution

- ☐ Informal self-study using online resources and/or professional or research literature

- ☐ Formalized peer support (e.g. team-based planning and/or teaching; peer mentoring; reflective dialogues; etc.)

- ☐ Informal peer support (i.e. asking a colleague for help)

- ☐ Other - please describe: _____

14. How much time would you estimate that you have spent on professional development for online teaching (either formal or informal) **during the pandemic**?

- ○ 0-2 hours

- ○ 3-5 hours

- ○ 6-10 hours

- ○ 11-15 hours

- ○ 16-20 hours

- ○ More than 20 hours

15. Overall, how satisfied are you with the amount and/or kinds of teaching supports that have been available to you at your library and/or institution **during the pandemic**?

    ○ Extremely dissatisfied

    ○ Somewhat dissatisfied

    ○ Somewhat satisfied

    ○ Extremely satisfied

16. To what extent did each of the following factors create challenges for your instructional practice **between March 2020 and August 2021**?

| | Extremely challenging | Somewhat challenging | Not very challenging | Not at all challenging |
|---|---|---|---|---|
| Family commitments (e.g. child care; homeschooling; elder care) | 17. | 18. | 19. | 20. |
| Social and/or professional isolation | 21. | 22. | 23. | 24. |
| Your home office or workspace | 25. | 26. | 27. | 28. |
| Stress or anxiety related to teaching online | 29. | 30. | 31. | 32. |
| Screen fatigue | 33. | 34. | 35. | 36. |

17. Do you think your recent experiences with online teaching during the pandemic will impact or influence your post-pandemic information literacy instruction, and if so, how?

18. Do you have any other comments about your teaching experiences during the pandemic?