

RESEARCH ARTICLE / ARTICLE DE RECHERCHE

Library technicians collaborating with librarians on knowledge syntheses: a survey of current perspectives

Glyneva Bradley-Ridout* and Alissa Epworth

Abstract: Introduction: Though it is well recognized that librarians bring value to knowledge synthesis teams, library technicians have largely been excluded from this process. This study was designed to determine the extent to which library technicians are currently participating in knowledge syntheses, to investigate where these two professional groups, librarians and library technicians, see opportunities for future collaboration, and to identify the challenges and successes perceived by both groups. **Methods:** An electronic survey, consisting of multiple choice and short answer queries, was distributed to targeted listservs. The target audience for survey participants was librarians, or library technicians, who work in a library with any scale of knowledge synthesis service. Responses were collated, coded, and organized by themes. **Results:** 170 responses were received and evenly represented librarians (n=84) and library technicians (n=79), including 7 incomplete responses. 31% (n=50) of respondents stated that they currently collaborate or have collaborated in the past on knowledge synthesis projects with the other professional group. Tasks completed by the library technician included article retrieval, citation management, retrieving reference lists, and database searching. The major challenge reported with collaboration on knowledge synthesis projects was library technician qualifications. Major successes included time efficiency for librarians, and the opportunity for technicians to develop new skills. **Discussion:** Librarians and library technicians collaborate on knowledge synthesis projects in several ways, and those expanding their services should consider library technicians as possible collaborators. There are also challenges and limitations to keep in mind with these collaborations. More research and discussion in this area is needed.

Introduction

Knowledge syntheses are methodological reviews and summaries of the literature that inform evidence-based decision making [1, 2]. Traditionally, systematic reviews have been the most common form of knowledge synthesis, but other methodologies such as scoping reviews, rapid reviews, and realist reviews, are gaining prominence. While originally designed to meet the needs of healthcare settings, knowledge

syntheses are now increasingly being utilized in social science settings as well [3].

Medical librarians and information specialists have long been recognized as valuable members of knowledge synthesis teams for the unique skills that they bring [4-6]. As members of the team, librarians are most often involved during the search development and execution stage, but recent literature has noted that this role has expanded. Librarians are increasingly being asked to participate beyond searching, holding roles that

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range from planning, organization and project management to technical roles such as data management and full text retrieval [7-9]. A study by Spencer and Eldredge (2018) identified 18 distinct roles librarians held as part of the systematic review team, including question formulation, reporting and documentation, de-duplication, and citation management [10]. Involvement in a knowledge synthesis project can involve a significant amount of time for a librarian, often equating to several weeks of work for 1 project [11, 12].

The profession of the library technician has also had an evolving history. In Canada, in order to work as a library technician, one must be qualified through an applicable 2-year college degree [13]. In 1961, there was 1 library technician diploma program in Canada, which grew to 29 programs in the 1990's. As of 2020, 17 colleges offer a library technician degree in Canada [14, 15]. In the United States, the education requirements to work as a library technician are less rigid, and the education level of individuals working as library technicians vary widely [13]. Therefore, while 'library technician' is the appropriate title for an individual qualified with a library and information technology diploma in Canada, other job titles may include library assistant, information technician, paraprofessional and others [13].

As the library technician educational programs have evolved over the decades, so to have the job responsibilities and training that library technician graduates receive. Modern library technician curricula generally include a suite of practical courses, on areas such as cataloging, electronic searching, information technology, and records management [16]. On the job, there are many roles that library technicians typically fill in libraries. In a 2015 survey examining the changing roles of both librarians and library technicians, library technicians noted that their roles were evolving to include increased levels of responsibility such as management of other staff, technological expertise, and research related tasks like data management [13]. To meet the

increasing and changing demands of library work, library technicians continue to search for new skills to enhance their skill set and provide opportunities for career growth [17, 18].

Some roles of a library technician may be seen to naturally align with the knowledge synthesis workflow, including citation management, article retrieval, and technical support [19, 20]. However, previous literature specifically pertaining to library technicians and their roles in knowledge synthesis projects, or their job duties in a library with a knowledge synthesis service, could not be identified.

It has been noted that library technicians are traditionally an understudied group in the library and information sciences research field [21]. In light of this, as well as the lack of previous research on library technician involvement in knowledge syntheses projects specifically, the aim of this project was to investigate the extent to which library technicians are currently working with librarians during the knowledge synthesis process, and to determine the potential for future collaboration. Challenges and successes observed in existing collaborations and perceived in future collaborations were also investigated.

Methods

An electronic survey of multiple choice and short answer queries was constructed and distributed across library listservs in North America. The survey was tested for clarity by two individuals representative of the target audience, who were not associated with the research project, before it was widely distributed. The target audience was librarians and library technicians who worked in a library setting providing any scale of knowledge synthesis service. A recruitment email was distributed inviting participation and obtaining consent. Eight listservs were chosen based on their relevance to the targeted response population. A copy of the recruitment email, as well as the listservs chosen, is provided in the Appendix 1. The survey was anonymous, provided the opportunity to withdraw

at any time before submitting, and did not collect any personally identifying information. Participants were not offered any financial incentive to participate.

The survey was created using SurveyMonkey and was comprised of 26 questions. The survey was submitted to and approved by the University of Toronto Social Sciences, Humanities, and Education Ethics Review Board. Participants were asked in questions 1-3 to identify their sector of employment (academic, public, hospital, etc.), education history, and job title for their current role. These questions were mandatory and could not be skipped. Respondents were then divided into either a 'librarian' or 'library technician' group based on their job title responses. Both groups were then asked to identify whether or not they currently or previously had worked with the other professional group on knowledge synthesis projects. All questions following question 3 were optional and contained a mix of closed and open-ended questions. A break-down of all questions and pathways is provided in Appendix 2.

Following data collection, the results were analyzed in Microsoft Excel. All open-ended, qualitative responses were categorized and coded based on themes and trends identified in the responses. Coding was done by 2 authors individually, and in instances of disagreement, meetings were held to achieve consensus. Due to the variety of open-ended questions asked, 2 coding frameworks were created. One addressed questions related to perceived or actual successes, and the other addressed questions related to

perceived or actual challenges. Definitions and descriptions of the coding frameworks are provided Appendix 3.

Results

Demographic

We received 170 responses from professionals in a variety of sectors, 163 of which fully completed the survey. There was a nearly equal number of responses from librarians (52%, n=84) and library technicians (48%, n=79). The majority of respondents worked in academic university or college library settings (44%, n=71), with other common sectors being hospitals (22%, n=36) and schools (22%, n=36). The remaining respondents were fairly evenly distributed amongst government, public, non-profit, and special libraries.

Current Collaborations

A total of 31% (n=50) of respondents stated that they currently, or have in the past, collaborated on knowledge synthesis projects with the other professional group, which included 32% (n=27) of librarian respondents and 29% (n = 23) of library technician respondents.

When asked in a multiple-choice question which tasks library technicians are currently undertaking within knowledge synthesis projects, article retrieval was most commonly selected. Figure 1 illustrates responses from both librarians and library technicians.

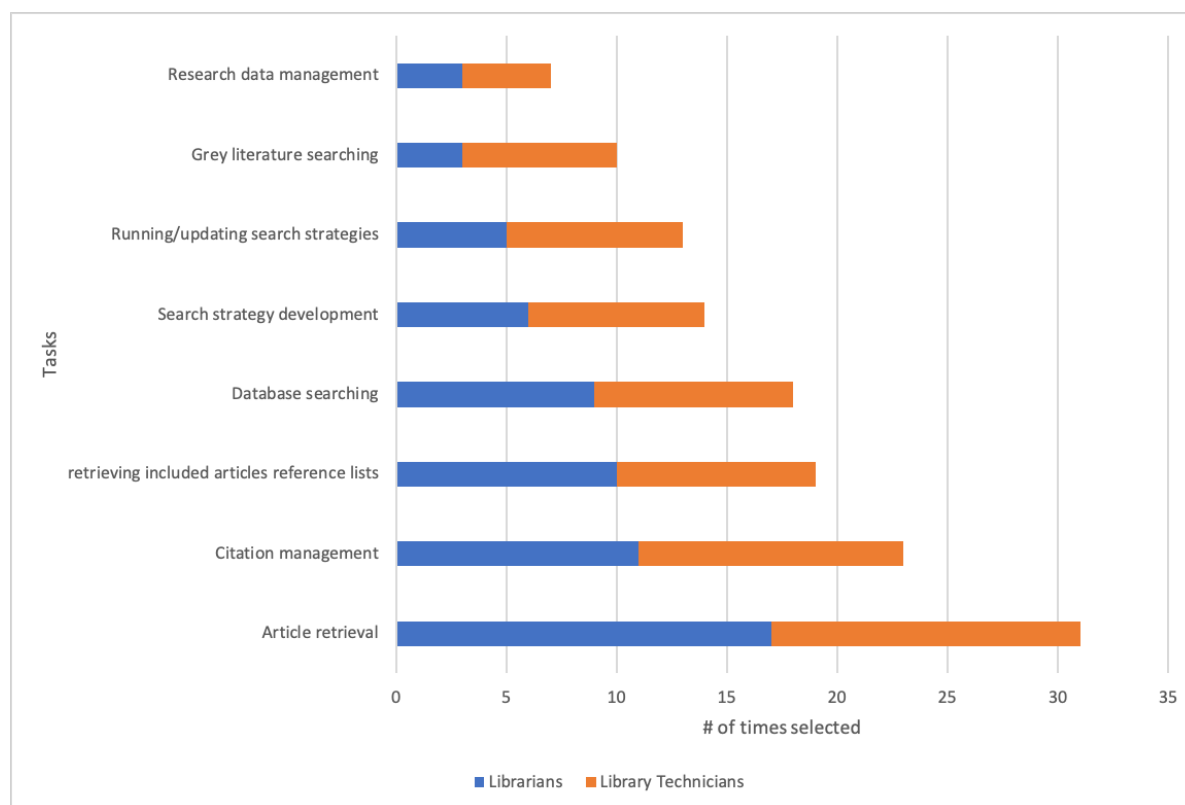


Fig. 1: Top responses to the question: “What tasks was the library technician involved in?”

When librarians and library technicians were asked in an open-ended question if they faced challenges collaborating with each other on knowledge synthesis projects, the most commonly stated response was no/none. Figure 2 illustrates the most common challenges discussed by both groups. Some of the quotes highlighting challenges from the librarian respondents included:

- [Librarian] “Although lib techs are expected to do the work of librarians, they don't possess the necessary credentials and training.”
- [Librarian] “I worried about the blurring of roles between library technician and librarian”
- [Librarian] “Time! They have the skills. Just needed the time to do the work, which is true of all of us.”
- [Librarian] “Their time constraints – the individual I worked with had other duties/projects to work on and had desk

schedule. Also, hard to convey systematic review as a whole and how what they are working on fits in.”

Library technicians who had been involved in knowledge synthesis projects with librarians also expressed challenges, such as:

- [Library Technician] “Occasionally there has been pressure to have a librarian officially lead the SR process even when a technician is doing the bulk of the work; clients have written up the methods erroneously listing library technicians as librarians.”
- [Library Technician] “The line between work... is generally unclear and depends on workload of the librarian, so there can be a feeling of doing tasks which are not part of my job duties.”
- [Library Technician] “Perceived lack of knowledge as a library technician.”

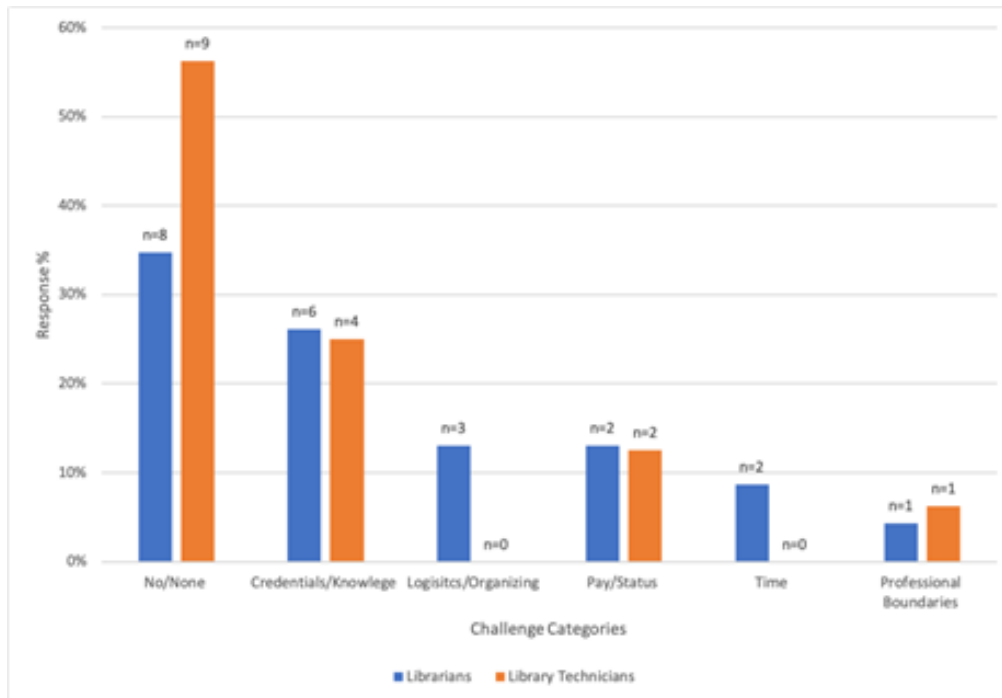


Fig. 2: Most common challenges to collaboration discussed by librarians and library technicians.

Respondents were also asked in an open-ended question if they had experienced any successes collaborating with the other group on knowledge synthesis projects. Top responses from both groups can be found in Figure 3. For librarians, the most commonly discussed success was that collaborating with a technician saved time, followed by utilizing the technician's unique skills. For example, some quotes included:

- [Librarian]: "Great successes with regard to time saved, trouble-shooting problems and accessing things that are difficult to find."
- [Librarian]: "Yes. Article retrieval and managing references is a skill many library technicians possess. They can do it faster and better than most others."
- [Librarian]: "They (Library Technicians) often are more focused and detail oriented that I am. They have the skills we have when it comes to searching and will dive deeply into the databases"

- [Librarian] "It reduced stress on my part... it gave me a chance to train the library technician (increasing the capacity for this type of work at our library). I think the library technician had a better understanding of my work."

For library technicians, the most commonly discussed success was that collaboration allowed them to utilize their full skill set and unique qualifications to benefit clients:

- [Library Technician]: "The information specialists/librarians that I work with are all very appreciative of the contribution that I'm making to their projects and value the speed with which I'm able to complete their client's article lists."
- [Library Technician]: "I successfully supported a systematic review by coordinating and delivering 1000's of articles identified in the search to the clients."

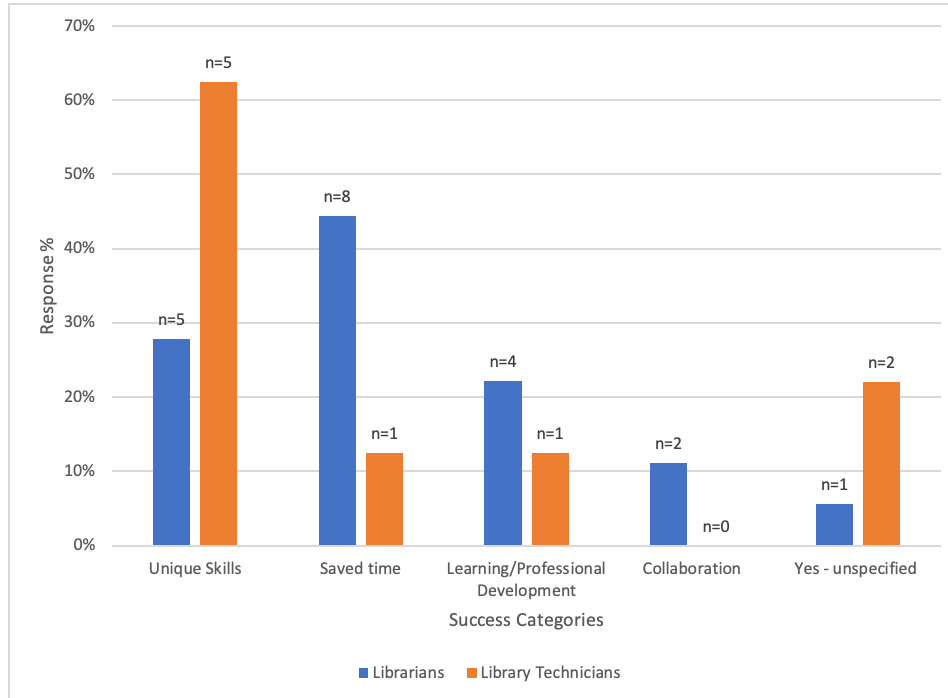


Fig. 3: Most common successes to collaboration discussed by librarians and library technicians.

Future collaborations

The majority of respondents (69%, $n = 113$) stated they had never collaborated on knowledge synthesis projects with the other professional group. This number included 68% ($n = 57$) of librarian and 71% ($n = 56$) of library technician respondents.

When asked in an open-ended question why they had not collaborated with the other on knowledge synthesis projects, librarians were concerned primarily about the credentials and knowledge of library technicians, as well as professional boundaries. Some quotes from librarians included:

- [Librarian]: “They (Library technicians) aren’t qualified or knowledgeable about systematic reviews.”
- [Librarian]: “We don’t have any (library technicians) that would be up to the task, but also they are unionised, and this would fall outside their job descriptions.”
- [Librarian]: “The librarian and library technician roles at my institution are very

distinct, so we don’t collaborate on much due to lack of overlapping work.”

Library technicians also discussed why they haven’t participated in knowledge synthesis projects, with the largest cited reason being that they had never been asked too. Other reasons included issues of professional boundaries, pay and status, and static job descriptions, meaning a conflict with union collective agreements. Some quotes included:

- [Library Technician]: “At my institutions the librarians and library assistants are in two different unions and have different collective agreements. Librarians who work on systematic/scoping review projects want to ensure that work stays under the purview of librarians.”
- [Library Technician]: “It was not considered to be the role of the library technician to participate.”

However, future collaborations were identified as having real potential, as 61% ($n=27$) of librarians and 69% ($n=29$) of technicians indicated ‘yes’ when asked if they would consider

partnering with the other group on future knowledge synthesis projects.

Both librarians and library technicians were asked in an open-ended question if they anticipated any hypothetical challenges when considering future collaboration on knowledge synthesis projects. The largest single response from both groups was 'no' or 'none' (Figure 4). Some hypothetical challenges identified by librarians included:

- [Librarian]: “Training of techs, adding to their already considerable workload...navigating authorship concerns.”
- [Librarian]: “Whether or not job class structure in a unionized environment would allow for technicians to take on this kind of work. Also cultural acceptance

among professional librarians would be necessary.”

Library technicians also anticipated some challenges if they were to collaborate on knowledge synthesis projects in the future. For example:

- [Library Technician]: “Our different collective agreements and the desire of those within librarian positions to keep this work as 'librarian work' are major challenges to this kind of collaboration.”
- [Library Technician]: “Yes, depending on the people involved. Both librarians and technicians need to be open to the collaboration and participation would have to be as equal members of the team.”

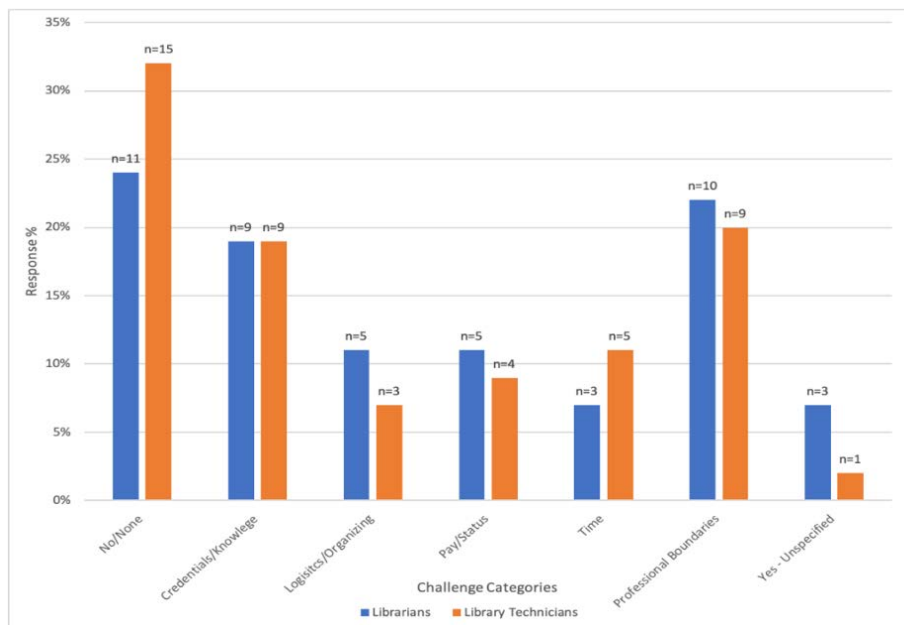


Fig. 4: Most common challenges to hypothetical collaboration discussed by librarians and library technicians.

Finally, both librarians and library technicians were asked in an open-ended question if they anticipated any potential successes when collaborating on knowledge synthesis projects in the future. Figure 5 provides the top responses from both groups. For librarians, the most commonly discussed anticipated success was that

the library technician could save them time. Some quotes included:

- [Librarian]: “Reviews are labor intensive, so collaboration can help projects progress more quickly.”
- [Librarian]: “Technicians have many useful skills in relation to SR work... even if the librarian ended up continuing to

develop and run searches, offering assistance to teams in relation to deduplication and article retrieval could be very beneficial.”

Alternatively, for library technicians, the highest stated anticipated benefit was the opportunity to have better collaboration with librarians. For example, some quotes included:

- [Library Technician]: “I think the roles of libraries is changing significantly and we need to rethink our roles and what

technicians "should do" and librarians "should do". I think collaboration needs to happen more frequently in many different areas.”

- [Library Technician]: “Library Technicians would get more respect and would be using their many skills. It is the not even being asked or included that is detrimental. We are a vastly underutilized wealth of knowledge and experience.”

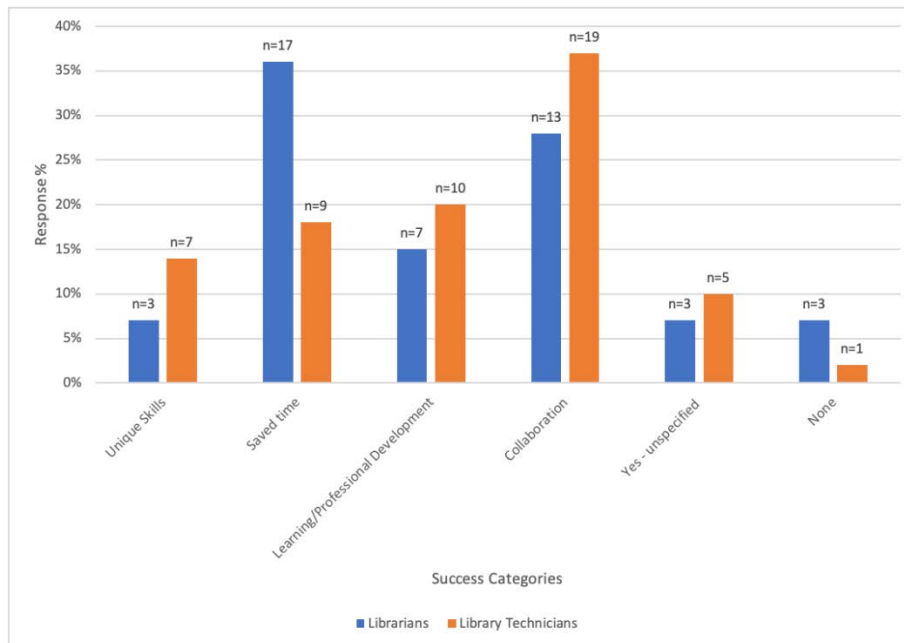


Fig. 5: Most common successes with hypothetical collaboration discussed by librarians and library technicians.

The results from this survey may be analyzed in many ways, and additional explorations of the

results are encouraged. Raw data collected is provided as online supplementary material.

Discussion

Based on the lack of previous discourse on this topic, it was not surprising that the majority of respondents had not worked on a knowledge synthesis project in which a library technician was involved. However, a significant portion (31%, n=50) of the respondents had worked on a knowledge synthesis project with a library technician, which indicates that this kind of collaboration already exists and is perhaps continuing to grow.

Opinions about this collaboration seem to be diverse and opposing. Previous research has indicated that working relationships between librarians and library technicians can be tense and difficult, and this reality was evident in our survey results as well [22, 23]. For example, many library technician respondents highlighted the ways in which their skill set, learned both through education and on-the-job training, is in alignment with knowledge synthesis tasks. However, librarians often questioned the qualifications of library technicians, and discussed why they would

not be willing to include library technicians, citing lack of experience and knowledge. When asked about challenges to collaborating, 1 library technician stated that they believed librarians may feel “threatened” by library technicians at the possibility of being replaced. Similarly, concern was expressed that increased partnerships could influence economic decision making by replacing librarian positions in favour of library technician positions, which are seen to be more cost effective. Librarians in particular also expressed concerns that the profession of librarianship would be diluted if library technicians were to be involved in knowledge syntheses.

It was interesting to note the different challenges highlighted by both groups. For librarians, most concerns were logistical, such as union issues, credentials, time required for training, and the existing time constraints of library technicians. There were also some comments regarding the initiative and interest of the library technician. In contrast, library technicians were concerned about different potential issues. Being under-valued, under-appreciated, and under-utilized by librarians when collaborating on a knowledge synthesis project were the most commonly mentioned concerns. Other anticipated challenges included the inability for the 2 professions to work harmoniously together, lack of training and support if asked to take on further duties, lack of role clarity regarding the responsibilities of a librarian vs. library technician, and union or compensation issues.

While these tensions and challenges were evident in some responses, others shed a much more positive view on the possibility of collaborating on knowledge synthesis projects. There was a recognition that library technician roles are evolving and that historical assumptions about their abilities may no longer be applicable. Responses from both groups highlighted the fact that working together could bring harmony to the workplace and unify team members. There was also an emphasis on how utilizing a library technician could save time and improve quality of

work for library users. It was clearly illustrated that both groups are aware of potential benefits or have experienced them when working with one another on knowledge synthesis projects.

The number of knowledge syntheses published every year continues to rise, and as such, more libraries may be continuing to develop or expand knowledge synthesis supports [11, 24]. When considering a new or expanded knowledge synthesis service, it seems that an option to meet the demand and reduce librarian time commitment is to involve library technicians as members of the review team in addition to librarians. We propose that such considerations of involvement should be dependent on the skillset, interest, and qualifications of each specific library technician. While some may have the education and willingness to participate, others may not, and therefore the tasks required, and the level of involvement should be a negotiation between librarians and library technicians when considering new workflows. Further, if library technicians are to be involved in a knowledge synthesis project, the role would need to be clearly and explicitly defined in order to avoid tensions and misunderstandings of roles during the course of the project.

It is important to acknowledge the study’s limitations. As our sample is limited both in size, and in geographical scope, it is difficult to determine if our sample was an effective proportional representation of the total population. Furthermore, our participants were targeted using a convenience sample strategy, which may have introduced sampling and accessibility bias, including who was aware of the survey, and who had access to participate in the survey. We recognize that we may be missing perspectives, and that this makes it challenging to draw inferences regarding library technician involvement in knowledge synthesis projects beyond those expressed in our survey. As well, by analyzing the responses, it was clear that a small number of participants were not aware of what a systematic or scoping review was. We made the incorrect assumption that only library technicians

or librarians who were aware of these projects would respond to the survey. In the future, we would recommend that a knowledge testing question be included at the beginning of any survey to ensure responses are only garnered from those populations that have knowledge in synthesis methodologies. Despite these limitations, a wide range of perspectives and opinions regarding the current and potential roles of library technicians on knowledge synthesis teams were identified.

There is a need for more research on library technician involvement in knowledge synthesis projects. While this survey provides evidence of existing collaboration, no literature could be identified that reported this, indicating a gap in the research on this subject. More discussion on this topic is needed, and there are several areas in which future research may be warranted. Our survey did not examine the professional culture or organizational structures in which library technicians are currently working on knowledge syntheses. A study that looked closer at the types of libraries and their staffing situations would add value to this body of research. More investigation into the union environments and current professional role boundaries of library technicians is also an important piece to this topic that warrants further study.

This study investigated potential opportunities for librarian and library technician collaboration, while understanding and acknowledging the unique skill set of both. We do not suggest that library technicians could or should take on all the elements of knowledge synthesis work traditionally done by librarians, as there are certain tasks which are best suited to each profession's unique skills. Based on our findings, there could be opportunities for library technicians to be involved in knowledge synthesis tasks such as citation management, de-duplication, and article retrieval, among others. Successes with collaborating have included time saved, utilization of skills, and improved team environments. It is also clear that there are significant barriers to collaborating including

static job descriptions, time and logistics, and fears over professional boundaries. As libraries continue to develop, adapt, and grow, it is necessary to consider the skill sets of all staff within the library, and look towards promoting better collaborations.

References

1. Whittemore R, Chao A, Jang M, Minges KE, Park C. Methods for knowledge synthesis: an overview. *Heart Lung*. 2014 Sep-Oct;43(5):453-61.
2. Tricco AC, Tetzlaff J, Moher D. The art and science of knowledge synthesis. *J Clin Epidemiol*. 2011 Jan;64(1):11-20.
3. Tricco AC, Soobiah C, Antony J, Cogo E, MacDonald H, Lillie E, Tran J, D'Souza J, Hui W, Perrier L, Welch V, Horsley T, Straus SE, Kastner M. A scoping review identifies multiple emerging knowledge synthesis methods, but few studies operationalize the method. *J Clin Epidemiol*. 2016 May;73:19-28.
4. McGowan J, Sampson M. Systematic reviews need systematic searchers. *J Med Libr Assoc*. 2005 Jan;93(1):74-80.
5. Rethlefsen ML, Murad MH, Livingston EH. Engaging medical librarians to improve the quality of review articles. *JAMA*. 2014 Sep 10;312(10):999-1000.
6. Dudden RF, Protzko SL. The systematic review team: contributions of the health sciences librarian. *Med Ref Serv Q*. 2011;30(3):301-15.
7. Foster M. An overview of the role of librarians in systematic reviews: from expert search to project manager. *J Eur Assoc Health Inf Libr [Internet]*. 2016 Mar 11 [cited 2020 Sep 1];11(3):3-7. Available from: <http://ojs.eahil.eu/ojs/index.php/JEAHIL/article/view/52>

8. Naum A. Research data storage and management: library staff participation in showcasing research data at the University of Adelaide. *Aust Libr J* [Internet]. 2014 Apr 8 [cited 2020 Sep 1];63(1):35-44. Available from: <https://www.tandfonline.com/doi/full/10.1080/00049670.2014.890019>
9. Monroe-Gulick A, O'Brien MS, White GW. Librarians as partners: moving from research supporters to research partners. *Association of College and Research Libraries Conference Proceedings*; 2013 Apr 10–13; Indianapolis, IN.
10. Spencer AJ, Eldredge JD. Roles for librarians in systematic reviews: a scoping review. *J Med Libr Assoc*. 2018 Jan;106(1):46-56.
11. Ludeman E, Downton K, Shipper AG, Fu Y. Developing a library systematic review service: a case study. *Med Ref Serv Q*. 2015;34(2):173-80.
12. Dudden RF, Protzko SL. The systematic review team: contributions of the health sciences librarian. *Med Ref Serv Q*. 2011;30(3):301-15.
13. James N, Shamchuk L, Koch K. Changing roles of librarians and library technicians. *Partnersh* [Internet]. 2015 Oct 22 [cited 2020 Sep 1];10(2). Available from: <https://journal.lib.uoguelph.ca/index.php/perj/article/view/3333>
14. Weihs J. The emergence of library technician programs in Canada: a brief history. *Feliciter*. 2008;54(2):70-3.
15. Canadian Library Association [Internet]. Ottawa: Canadian Library Association; c1946-2020. Library technician programs; 2020 [cited 2020 Sep 1]; [about 3 screens]. Available from: <http://cla.ca/careers/schools/library-technician-programs/>
16. Robertson G. Just what is—a library technician? A look at current library technician training. *Feliciter*. 2000;46(6):298-301.
17. Cihak H, Monroe W. Liberating library support staff: it works! *Libr Mosaics*. 2003 Nov-Dec;14(6):12-4.
18. Robertson G. File under tango: lifelong learning for library technicians. *Feliciter*. 2008;54(2):57-9.
19. Weihs J. A picture of the education of librarians and library technicians. *Technicalities*. 2007 May-Jun;27(3):7-10.
20. Erickson N, Shamchuk L. Paraprofessional library education in Canada: an environmental scan. *Can J Inform Libr Sci*. 2017 Jan;41(1-2):18-41.
21. Bielavitz T. A library technician classification study: addressing obsolescence, compression, and retention. *Libr Leadersh Manag*. 2010 Apr 1;24(4):174-7.
22. Hill C. The professional divide: examining workplace relationships between librarians and library technicians. *Aust Libr J*. 2014 Apr 8;63(1):23-34.
23. Fragola, MG. Intergroup dynamics: librarians and paraprofessionals in the workplace [master's thesis]. [Chapel Hill (NC)]: University of North Carolina; 2008. 38 p.
24. Bastian H, Glasziou P, Chalmers I. Seventy-five trials and eleven systematic reviews a day: how will we ever keep up? *PLoS Med*. 2010 Sep 21;7(9):e1000326.

List of Online Appendices**Appendix 1: Email recruitment information****Appendix 2: Question pathways****Appendix 3: Coding framework****Online Supplement: Survey data****ACKNOWLEDGEMENTS**

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Appendix 1: Email Recruitment Information

1. Copy of Recruitment Email

INVITATION TO PARTICIPATE IN A RESEARCH STUDY ON LIBRARIAN AND LIBRARY TECHNICIAN COLLABORATION

You are invited to participate in a survey on collaboration between librarians and library technicians in systematic reviews and other knowledge syntheses projects.

We are interested in hearing from librarians, library technicians, library assistants, students and researchers, whether you have collaborated with technicians/librarians on knowledge synthesis projects or not.

This survey will take approximately 5-10 minutes to complete.

Through this research, we are hoping to determine the current level of involvement of library technicians in systematic reviews, as well as potential future opportunities.

The results of this research will be of interest to library and information professionals who want to know more about the current climate of collaboration with library technicians. This research will contribute to presentations and publications within the Library and Information Science community.

If you choose to participate in this anonymous survey, please click the link below to access the online survey:

https://www.surveymonkey.com/r/KS_LIT_Collaboration

This research is being conducted by ~~Chloe Bradley-Ridout (University of Toronto)~~ and ~~Michelle Epworth (University of Toronto)~~. This research project has been approved by the University of Toronto's Social Sciences, Humanities, & Education Research Ethics Board (REB #37633).

This survey closes on May 13, 2019.

Please contact the research team if you have any questions.

2. List of Listservs Used to Distribute Recruitment Email and Survey Link

Association of Academic Health Sciences Libraries (AAHSL)

American Library Association (ACR – SRRMIG)

CANMEDLIBS (CHLA)

Ontario Association of Library Technicians (OALT)

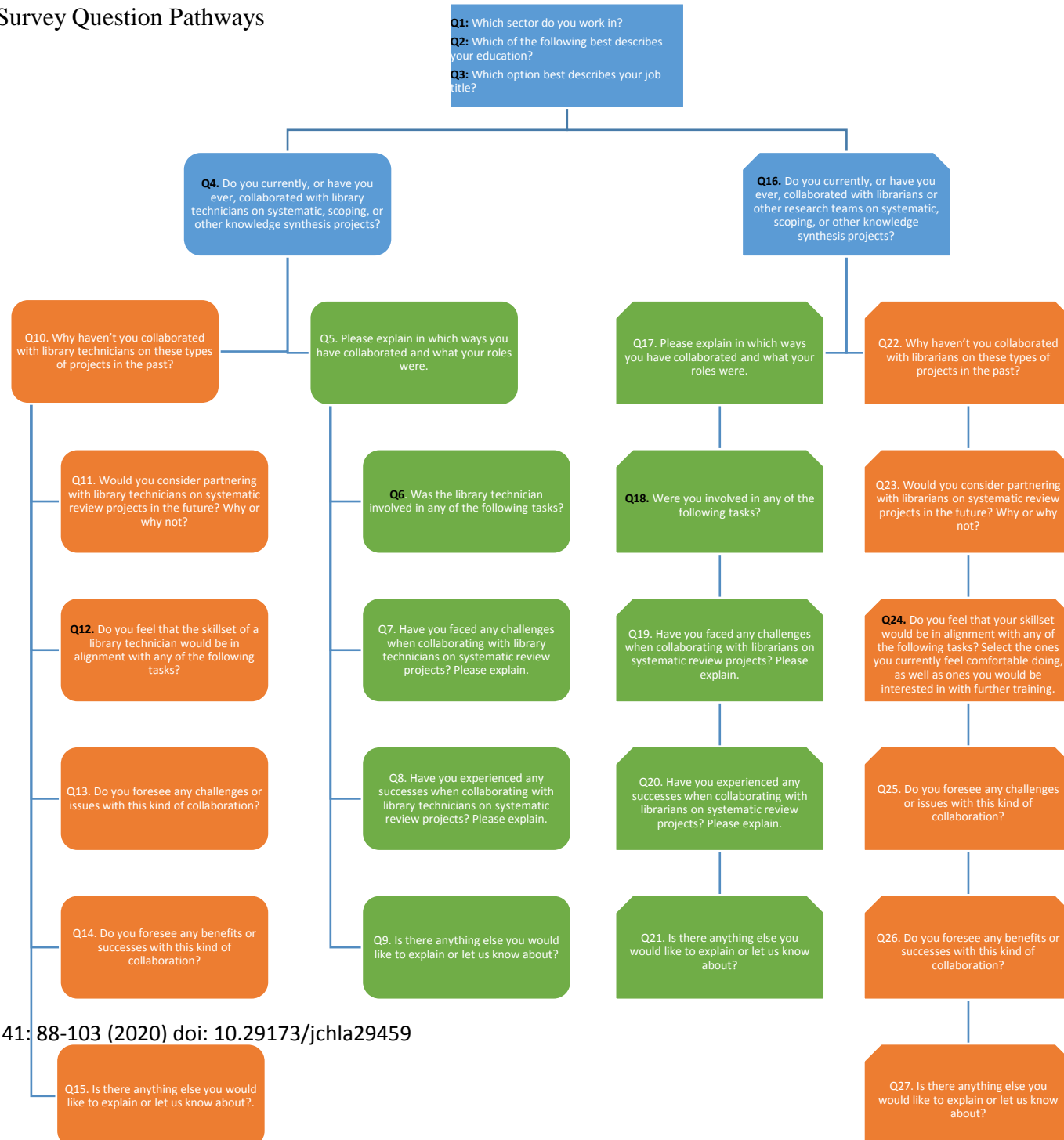
Library and Information Technology Association (LITA)

Health Sciences Information Consortium of Toronto (HSICT)

Canadian Health Libraries Association Knowledge Synthesis Interest Group (CHLA KSIG)

Medical Library Association (MLA)

Appendix 2: Survey Question Pathways



LEGEND

	= Librarian responses
	= Library Technician responses
	= Future collaborations
	= Current collaborations
Black Q	= Multiple choice (closed) question
White Q	= Open ended question

Appendix 3: Coding Framework

Used to assess all open-ended survey questions.

Perceived or actual successes:

Tag	Used for responses that discussed:
Unique Skills	<ul style="list-style-type: none"> • Unique skillset • Expert knowledge about techniques and strategies
Saved Time	<ul style="list-style-type: none"> • Speed of task completion • Overall time saved • Collaboration resulting in lighter work loads • Technicians being able to conduct tasks traditionally done by librarians • Also used when saved money for the client or library was mentioned
Learning/Professional Development	<ul style="list-style-type: none"> • Learned or gained skills • Better understanding about SR process or other library work • Opportunity to expand skillset and experience
Collaboration	<ul style="list-style-type: none"> • Cross position collaboration • Better understanding about the value that each group brings • More teamwork and unity within the team • Information sharing • Closer working relationships
ILL Only	<ul style="list-style-type: none"> • Technician's sole responsibility in KS is/should be inter-library loan
None	<ul style="list-style-type: none"> • None or No responses (not including skipped/ blank responses)
Yes – Unspecified	<ul style="list-style-type: none"> • 'Yes' or other affirmative phrasing, with no additional detail

Perceived or actual challenges:

Tag	Used for responses that discussed:
Credentials/Knowledge	<ul style="list-style-type: none"> • Requiring training • Not having enough training/knowledge • Librarians understanding existing technician training/knowledge
Logistics/Organizing	<ul style="list-style-type: none"> • Scheduling and availability issues • Work flow and task designations • Staffing issues
Pay/Status	<ul style="list-style-type: none"> • Job description limitations • Union issues • Pay or salary

Time	<ul style="list-style-type: none"> • Lack of time to complete tasks • Balancing new work with existing tasks
Professional Boundaries	<ul style="list-style-type: none"> • Resistance to change • Librarian vs. Library technician job tasks • Concerns of library technicians taking over librarian jobs • Concerns of librarians taking over library technician jobs • General role-related conflict • Comments about job overlap • Lack of administrative support • Opportunities not presented for Technicians
ILL Only	<ul style="list-style-type: none"> • Technician's sole responsibility in KS is/should be inter-library loan
None	<ul style="list-style-type: none"> • None or No responses (not including skipped/ blank responses)
Yes – Unspecified	<ul style="list-style-type: none"> • 'Yes' or other affirmative phrasing, with no additional detail