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Conceptions of Research among Academic Librarians and Archivists

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ABSTRACT

Academic librarians and archivists occupy a unique role as researchers and as practitioners who support faculty and student researchers. However, the ways in which librarians and archivists think about research is largely unexamined, while faculty conceptions of research have been studied extensively. In this study, we analyzed drawings and interviews of 25 Canadian academic librarians and archivists and identified six conceptions of research: research is a shared, community experience; research leads to learning and growth; research is influenced by personal and professional experience; research is a process involving interrelated components; research involves refining and answering a question; research by librarians and archivists is not “real” research. Our analysis also shows that librarians and archivists experience research in much the same way as faculty researchers. These findings represent a new understanding of librarians and archivists as researchers and are a contribution to the literature on conceptions of research more broadly. The six conceptions of research will help librarians and archivists think in new ways about their roles as researchers and as practitioners.

Keywords: *academic archivists · academic librarians · conceptions of research · research · research support*

RÉSUMÉ

Les bibliothécaires et les archivistes universitaires jouent un rôle unique en tant que chercheurs et praticiens qui appuient les professeurs et les étudiants chercheurs. Cependant, la façon dont les bibliothécaires et les archivistes perçoivent la recherche n’a pas fait l’objet d’un examen approfondi, tandis que la conception de la recherche par le corps professoral a été étudiée en profondeur. Dans cette étude, nous avons analysé les dessins et les entrevues de 25 bibliothécaires et archivistes universitaires canadiens et défini six conceptions de la recherche : la recherche est une expérience communautaire partagée; la recherche mène à l’apprentissage et à la croissance; la recherche est

influencée par l'expérience personnelle et professionnelle; la recherche est un processus comportant des composantes interreliées; la recherche implique de cerner une question et d'y répondre; les recherches des bibliothécaires et archivistes ne sont pas de « vraies » recherches. Notre analyse démontre également que les bibliothécaires et les archivistes ont une approche pratique de la recherche semblable à celle des chercheurs du corps professoral. Ces résultats représentent une nouvelle compréhension des bibliothécaires et des archivistes en tant que chercheurs et constituent une contribution à la littérature sur les conceptions de la recherche en général. Les six conceptions de la recherche aideront les bibliothécaires et les archivistes à réfléchir d'une nouvelle façon à leur rôle de chercheurs et de praticiens.

Mots-clés : *archivistes universitaires · bibliothécaires universitaires · conceptions de la recherche · recherche · soutien à la recherche*

ACADEMIC librarians and archivists (L/As) contribute to research and scholarship both as researchers and as practitioners. As researchers, most L/As in universities in Canada and the United States conduct and disseminate research as part of their professional responsibilities. There is evidence that academic libraries are increasingly requiring more publications in order for librarians to be promoted or to gain tenure or tenure-like status at their institutions (Sassen and Wahl 2014). L/As conduct research on a wide range of topics in archival studies and library and information science, as well as other disciplines, and some L/As tie their research directly to their practice.

As practitioners, academic L/As support the teaching and research missions of their institutions, with a growing focus on library services and resources to support researchers. Within the neoliberal university, research funding and research outputs are of considerable importance, and many L/As support researchers by providing education and expertise on copyright and intellectual property, assisting with grant applications, advising researchers on dissemination and publishing options, and supporting the creation and use of research data management plans (Jaguszewski and Williams 2013; Auckland 2012).

The practitioner-researcher role, as well as differences between L/As and faculty researchers (e.g., terminal degree required, workload percentage devoted to research), gives academic L/As a unique position with respect to research. The ways in which faculty and graduate student researchers define or conceive of research have been well studied; however, there is a gap in understanding how academic librarians and archivists conceive of research. The distinct role of the practitioner-researcher means that we cannot assume that faculty researchers' conceptions of research can be directly applied to L/As; this must be explored empirically.

The purpose of this study is to develop an understanding of the conceptions of research held by L/As who support researchers as practitioners and/or who are researchers. Our research question is: What are academic librarians and archivists' conceptions of research? By identifying these conceptions of research, we seek to provide librarians and archivists with a framework in which to understand their own experiences as researchers. These conceptions can also inform organizations or individuals as they work to support L/A researchers formally and informally and foster a stronger research culture among L/As.

Additionally, we are interested in comparing these conceptions to those identified in previous studies of faculty researchers. A better understanding of the similarities and differences between faculty's and L/As' conceptions of research will help L/As to more clearly identify their position in the world of research. As mentioned above, one aspect of L/As' professional roles is to develop and provide services to support faculty and students in their research. These services will be more relevant for faculty and student researchers if they are informed by an understanding of conceptions of research, and if the L/As developing those services understand how their conceptions relate to those of faculty.

Literature Review

In order to situate this study, we will focus our review of the literature on librarians and archivists' conceptions of research, and faculty and graduate student researchers' conceptions of research. There is also a large and growing body of literature on librarians as researchers that examines issues such as content and methodology of publications (O'Brien and Cronin 2016; Turcios, Agarwal, and Watkins 2014), research productivity (Hollister 2016; Hoffmann, Berg, and Koufogiannakis 2017), research culture (Walkley Hall 2018; Walters 2016), and research communities (Kennedy, Kennedy, and Brancolini 2017; Luo et al. 2017). There is very little published literature about archivists as researchers. A comprehensive review of the general literature on librarians as researchers is outside the scope of this paper; for those wishing to read further in this area, the references here provide a thorough introduction.

While much has been written about the research role of academic librarians, we could find only one published study about librarians' conceptions of research. Cox and Verbaan (2016) interviewed librarians at a research-centred university in England about their "notions of research" (321). The authors identified the following discourses or conceptions of research among librarians: librarians' information literacy roles in research-led teaching; library collections and services (e.g., publication and copyright support) as research infrastructure for faculty researchers; research as investigation, which the authors also tie to reference work; and research as a political

arena where institutions are competing for funding and prestige. Cox and Verbaan (2016) also found that the librarians' own research was primarily research for service development, pedagogic research, or continuing professional development; this is in keeping with earlier publications showing a focus on practice-based research in the UK (e.g., Hall 2010). Participants "hinted at or directly identified a categorical difference between what they might do and what academics do" (322); they felt that librarian research cannot be counted as academic research. The authors found a number of differences between their results and the results of those who studied faculty researchers, and felt that these differences "reflect fundamental gaps between librarians' conceptions of research and that of researchers themselves" (324).

There is an established and growing body of literature about faculty and graduate student researchers' conceptions of research, with a wide range of participants, methods, and findings. Participants in these studies varied by role (graduate student, faculty member as researcher, faculty member as supervisor), length of time in role, discipline, and gender. Some authors focused on a certain discipline, such as physics (Ingerman and Booth 2003); others purposefully studied participants in a wide range of disciplines (e.g., Brew 2001; Stubb, Pyhältö, and Lonka 2014). Stubb, Pyhältö, and Lonka found that researchers from different disciplines and different stages in their career showed some differences in their conceptions of research (2014); conversely, Brew hypothesized that this would be true but it was not supported by her findings (2001).

Methods used to study conceptions of research of these groups included survey instrument (Meyer, Shanahan, and Laugksch 2005; McCollum 2007), drawing (Bryans and Mavin 2006), focus groups (Bills 2004), and interview (Brew 2001; Åkerlind 2008a, 2008b; Stubb, Pyhältö, and Lonka 2014).

Two Australian researchers have been at the forefront of this research; Brew's 2001 paper is the basis of much of the work in this area. She identified four categories that demonstrate the variations in the ways in which faculty researchers experienced the phenomenon of research:

- Domino variation: research is a process of synthesizing separate elements so that problems are solved, questions answered or opened up
- Trading variation: research is a kind of social marketplace
- Layer variation: research is a process of discovering, uncovering, or creating underlying meanings
- Journey variation: research is a personal journey of discovery

Åkerlind's 2008a integrative review identified ten key studies of conceptions of research conducted between 2001 and 2005, including Brew's influential 2001

study; seven looked at faculty in their role as researchers, two investigated faculty as supervisors of graduate students, and one study involved graduate students. Åkerlind also conducted and reported on her own study of faculty researchers' conceptions of research in this paper. Across the 11 total studies, Åkerlind identified four qualitatively different ways of understanding being a university researcher:

- Fulfilling requirements: research is experienced as an academic duty
- Establishing oneself: research is experienced as a personal achievement
- Developing personally: research is experienced as a route to personal understanding
- Enabling change: research is experienced as an impetus for change to benefit a larger community

Table 1 presents these four conceptions and the five dimensions associated with each conception: intentions, process, outcomes, questions, and affect. Åkerlind identified researcher affect as a dimension in her own study but did not see it in the ten studies she reviewed.

Categories / Conceptions of Research				
Dimensions	Fulfilling requirements	Establishing oneself	Developing personally	Enabling change
Researcher Intentions	Fulfil academic role	Become well known	Solve a puzzle	Make a contribution
Researcher Process	Identify and solve a problem	Discover something new	Investigate an interesting question	Address community issues
Researcher Outcomes	Concrete products	Academic standing	Personal understanding	Benefits to community
Researcher Questions	Independent research questions, bounded by a field of study	Integrated research questions, related to a field of study	Integrated research questions, related to field and personal issues	Integrated research questions, related to field / social issues
Researcher Affect	Anxiety to satisfaction	Frustration to joy	Interest and enthusiasm	Passionate engagement

TABLE 1 Conceptions of research and dimensions identified by Åkerlind (2008a).

More recent research has examined how ideas about research compare with ideas about teaching (Visser-Wijnveen et al. 2009), how the neoliberal university has

affected researcher identity (Elizabeth and Grant 2013), and connections between conceptions of research and productivity (Brew et al. 2016).

In the context of the literature reviewed here, our study contributes a new perspective to the literature on conceptions of research. The lack of publications on librarians and archivists' conceptions of research points to a gap in the understanding of librarians and archivists as researchers, which our study aims to address.

Methodology

Our study takes a phenomenographic approach and draws on visual research techniques for data collection. Phenomenography is “an approach that investigates the variation of conceptions related to a given phenomenon” (Cibangu and Hepworth 2016). It involves first identifying the categories that describe how a phenomenon is experienced and then determining the structural relationships between those categories (Åkerlind 2012; Brew 2001). The emphasis is on variation of experience among individuals within a group, and not on the variation of an individual's experience (Åkerlind 2012). Phenomenography has been used in many previous studies of conceptions of research (Åkerlind 2008a; Brew 2001). With a phenomenographic approach, frequency or prevalence of each conception and the ways in which individuals have combinations of conceptions are not determined; the focus is on the existence of a variation of the conception.

Visual research techniques have been used in many areas of social research (Banks and Zeitlyn 2015), including information science (Hartel 2014; Pollak 2017). Our study design is based on that of Bryans and Mavin (2006), where participants were given the brief instruction to draw ‘research’ or ‘a researcher,’ and then asked to describe their drawing. This technique of graphical elicitation for data collection has been found to be useful for probing participants' knowledge or cognitive structures or for examining abstract research topics (Umoquit et al. 2011). Drawing may help surface emotional, unconscious, or personal aspects about participants' conceptions of research (Bryans and Mavin 2006).

Participants and Data Collection

In this study, we explored librarians and archivists' conceptions of research by asking participants to draw “research” and describe their drawings. Our participants were academic librarians or archivists who were active researchers and/or who supported researchers at their university as part of their professional responsibilities.

Our participant pool was librarians and archivists who worked at one of five Ontario universities: Ryerson University, University of Toronto (St. George campus),

University of Waterloo, University of Western Ontario, or Wilfrid Laurier University. These institutions were chosen both because they were geographically feasible for us to do in-person interviews and because they represent a range of types and sizes of universities. We are professional acquaintances of some potential participants and coworkers of the potential participants at our own institution. We adhered strictly to our recruitment protocol (as reviewed initially by the Non-Medical Research Ethics Board at the University of Western Ontario and subsequently by ethics boards at the other institutions¹); we did not initiate discussions about recruitment with potential participants, and during the interviews we emphasized the voluntary nature of participation.

We sent email invitations to all 283 librarians and archivists identified on those libraries' publicly available contact pages, with the goal to interview between 20 and 30 participants. Those who replied to our initial invitation were sent a follow-up email with pre-screening questions about years of experience as a librarian or archivist, additional graduate degrees, type of experience as a researcher in the previous two years, and type of experience supporting researchers. We used those responses to select a group of participants that showed maximum variation among those characteristics, as appropriate for phenomenography.

Forty-one potential participants responded to our email invitation, and 25 participated in the study. Among those 25, there were 23 librarians and two archivists; one librarian indicated that they had also worked as an archivist. Our participants' years of experience ranged from less than one year to 30 years. Eleven had or were working on additional graduate degrees. We interviewed between three and seven participants at each university.

Five participants had conducted research in the previous two years and did not directly support researchers as part of their responsibilities, and we gave them this prompt to create their drawing: "Thinking primarily of your own experience as a researcher, create a drawing or diagram of 'research.'" Two participants supported researchers and had not conducted research; their prompt was, "Thinking primarily about your understanding of the experience of the researchers you support, create a drawing or diagram of 'research.'"

The remaining 18 participants both supported researchers and had conducted research; for each participant in this group, we chose one of the above prompts so that we had an approximately equal number of participants at each university and overall who created their drawing with each prompt. For participants in this last group, after they described their drawings we also asked them if they would change anything in their drawing if we had also asked them to think about the opposite scenario. For

1. The University of Toronto required only administrative review.

example, those who created drawings based on their own experience as a researcher were asked, “Would you have changed anything if we had also asked you to think about the experience of the researchers you support?”

Each interview took place in a private room in a library at the participant’s university. Both researchers were present for each interview, and we alternated between being the primary interviewer and taking notes. We gave each participant a sheet of 10-inch square cardstock paper and a selection of pens, pencils, and markers in various colours. The interviewer began by explaining the study and asking the participant to create a drawing or diagram based on one of the above prompts. We then left the room while the participant created their drawing. We initially allotted 15 minutes for creating the drawing; some participants finished before then, and some asked for more time to complete their drawing. We then asked the participant to describe their drawing or diagram, and we audio-recorded their descriptions.

Participants self-selected to take part in the study. As we conducted interviews, we noted that all of our participants expressed some appreciation for or enjoyment in doing research. As such, our findings are limited in that we were not able to discover potential conceptions of research for participants who do not enjoy conducting research or working with researchers to support research.

While we had pre-tested our interview process with three colleagues and made adjustments based on their feedback, our participants raised other limitations of the process throughout their interviews. One set of limitations was related to the drawing materials: one participant self-identified as colour-blind and wasn’t sure of the colours they were using, and we realized that anything drawn in yellow was hard to see. Another set of limitations related to the time constraints: participants noted that their drawings reflected what they could do with the time they had, and they often noted clarifications as they were describing their drawings, sometimes only verbally and sometimes by adding to their drawings as they were talking.

Analysis of Data

We transcribed the audio of each interview and imported the transcripts into NVivo software to help with analysis. In our analysis, in keeping with a phenomenographic approach, we looked for variation in how participants expressed their conceptions of research. As such, we reviewed the transcripts and drawings comprehensively to capture all of our participants’ ideas about research, not just the ideas that were most prevalent. We restricted ourselves to the ideas that we saw in the transcripts and drawings, being careful to remind ourselves to set aside our own conceptions of research. This process was both independent and collaborative, with each researcher

reading and re-reading the transcripts and both researchers developing a list of key ideas and related aspects over multiple conversations.

As we identified these ideas, we considered how they could be sorted and grouped together, until we arrived at unique themes that represented the full variation of conceptions of research for our participants. Finally, we reviewed each transcript and drawing, comparing it with those themes, to ensure that each participant's portrayal of research could be explained by one or more of the conceptions of research.

We also looked for trends in conceptions according to years of experience as a librarian or archivist, additional graduate degrees, experience as a researcher, or experience supporting researchers. While we initially focused on these characteristics in order to obtain maximum variation among participants, we were also curious as to whether participants with one of these characteristics would show a preference for a particular conception of research. This was not the case.

We intended to analyze our data as one large group, and also as two subgroups based on the prompt we gave to the participant: L/As as researchers ("Thinking primarily of your own experience as a researcher . . .") and L/As as practitioners ("Thinking primarily about your understanding of the experience of the researchers you support . . ."). We expected that it would be clear in the interviews and drawings when participants were speaking from one of these perspectives. However, participants often spoke from their positions as researchers and practitioners interchangeably, or didn't distinguish what position they were speaking from; for some participants the roles of practitioner and researcher were so intertwined that they could speak only from a holistic perspective. It was not feasible to determine whether individual statements were coming from a particular perspective, and for that reason we analyzed only the large (25-participant) group.

Conceptions of Research

We found six unique conceptions of research among our participants' descriptions and drawings of research:

- Research is a shared, community experience
- Research leads to learning and growth
- Research is influenced by personal and professional experience
- Research is a process involving interrelated components
- Research involves refining and answering a question
- Research by librarians and archivists is not "real" research

These conceptions represent the variation in our participants' understandings of research, with each conception highlighting a distinct aspect of research as explained by our participants. An individual conception of research should not be seen as a complete picture of research; each of our participants' descriptions of research showed at least two of these conceptions. The descriptions displayed the conceptions in various combinations, and no description showed all of them. Participants with additional graduate degrees showed a range of conceptions of research, and so did those without additional graduate degrees, and so on for each of the characteristics we used to recruit a varied group of participants.

We will explain each conception in more detail, with examples from our participants' descriptions and drawings. Each participant is identified by a number from 1 to 25. In the first five conceptions, "researcher" refers to any researcher, whether librarian, archivist, faculty, or student. The sixth conception relates only to librarian and archivist researchers. Because phenomenography is not concerned with frequency of occurrence, we are not reporting on how conceptions were combined for participants nor how many participants showed each conception.

Research is a shared, community experience

Research is happening with a lot of bodies giving consultation or collaborating or writing together, because it can be overwhelming to have to do it all yourself. (20)

In this conception, research discussions and collaborations are facilitators and motivators of research, and it is essential to contribute to the research community by sharing results quickly and openly.

People are a significant part of researchers' experiences. Many participants' drawings included the researcher within a greater community, such as in Figure 1. Researchers rely on a supportive peer community to informally bounce ideas off of and to ask for specific information or guidance in their areas of expertise. For L/A researchers, this peer community comprises mostly other L/As; however, others in the peer community may be faculty, teaching support professionals, statistical consultants, family, friends, or students. One participant described reaching out "to peers to get their ideas or check in with them about ideas that I'm thinking of, you know, 'Am I totally off-base here?'" (13). Participants identified a range of situations where they've consulted others, from a broad interest in wanting to "drink tea with people and talk about things" (1) to the more specific "[we] talked to different people about questions we should ask. . . . We had a couple of people look over our survey before we sent it out" (11). For the most part, L/A researchers do not view themselves as the sounding boards or experts to whom other researchers (librarians, archivists, or faculty) look for support in this way.

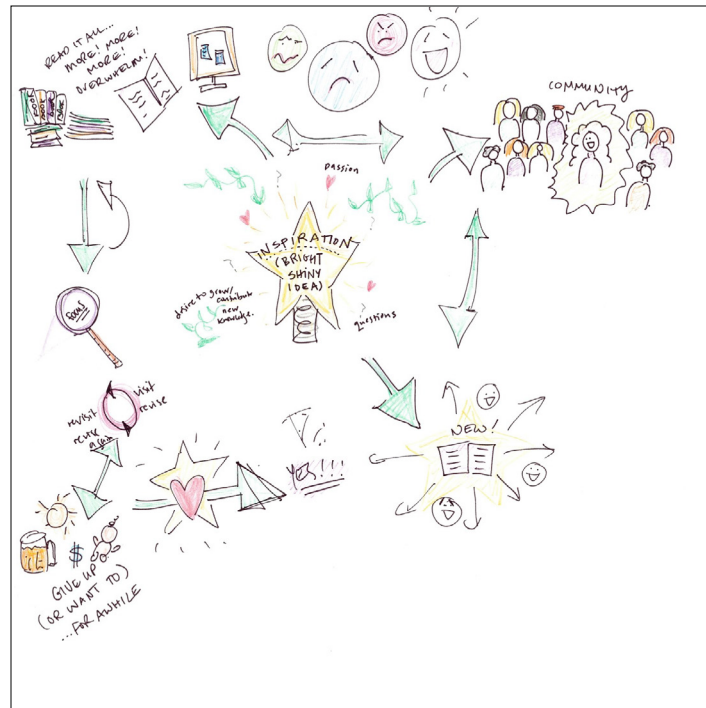


FIGURE I Drawing with “community” shown as a key aspect of research in the upper right-hand side of the drawing.

Collaboration with other L/A researchers is valuable and important; sometimes L/A researchers and faculty also collaborate on research. Collaboration serves as a motivation; for example, “I really appreciate having a collaborator in my research, because I find that I will be more motivated to get things done for them than I will for myself” (3), or “I usually like to collaborate . . . For me the idea of taking on a massive writing project by myself is just like ‘ugh!’” (20). Collaboration is associated with camaraderie and happiness; “It’s not as scary when you’re working with other people” (6). Collaboration is also an opportunity to learn: “I’m really happy because I’m working with other smart people, and I know I’ll learn something from them and from the process” (24).

This conception is also directly related to dissemination of research. L/A researchers want to share the outcomes of research projects as quickly and openly as possible, in order to benefit other L/As and, by extension, the users they support. Publishing journal articles and presenting at conferences are important for many participants; for others, more informal and open methods, such as blog posts, websites, or reports, supplement or replace traditional dissemination methods.

Research leads to learning and growth

With the leaves I sort of tried to get at that desire to grow or to contribute something new.

(9)

It was kind of like, do I just give up? But I didn't, I kept going forward. That was a good experience for me 'cause it taught me to be more resilient in my research, so if you push through you will get some success. (6)

In this conception, learning and growth are fundamental aspects of and motivations for doing research. Doing research means learning about the topic being researched, which also results in more learning: "The more you learn about something, the more you realize, 'I don't know anything about this!'" (24).

Another part of this conception is that researchers may need to learn specific tools or techniques in order to carry out a research project. All researchers have things to learn when it comes to research. The learning process looks different for L/As than for faculty or for student researchers. For example, participants identified that they had learned, or needed to learn, about methodologies or tools and techniques for analyzing research findings, whereas they talked about faculty needing to learn about citation management tools, data management principles, or open access options.

More broadly, this conception is related to understandings of research and how to approach research. Researchers' approaches evolve over the course of their research careers. Doing research results in knowing more about what it's like to do research. "[It's] getting easier and easier and easier. I think about the bag of tricks that I have, and so, I know the [university] system, I've figured out the politics and a lot of the policies" (10). Mostly, participants reflected backward in time and talked about how they observed a growth and maturation in their ideas about research. Occasionally, participants also reflected on the future and anticipated more such growth.

Within this conception, a powerful reason to do research is the desire for personal growth and learning over the course of one's career. The metaphor of a tree came up here for several participants, with the tree representing a researcher's growth over the course of their career. One participant whose drawing was based on a tree metaphor, shown in Figure 2, also included nodes that they described as "growth points," specific times or experiences when a researcher would learn something that would have a significant effect on their subsequent research.

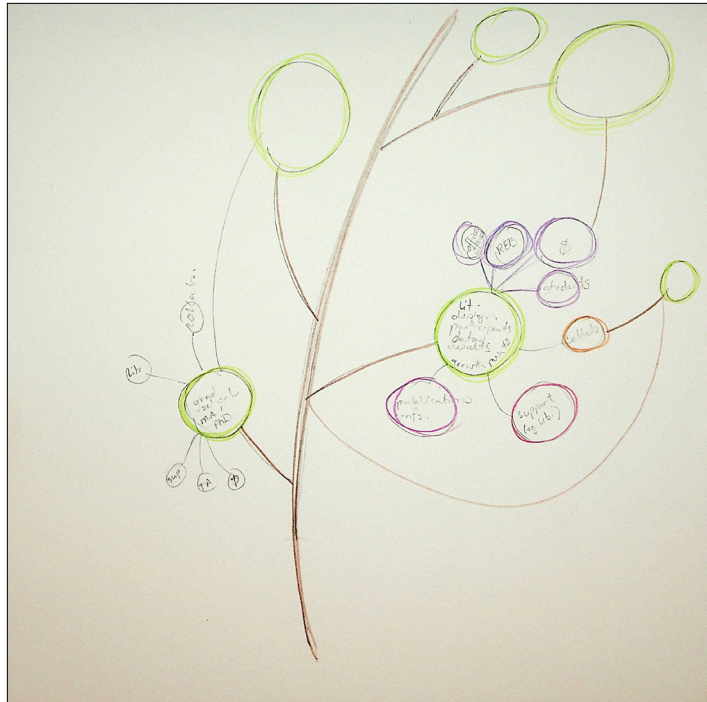


FIGURE 2 Drawing based on a tree metaphor. The circles are nodes described as “growth points.” The words in the circles refer to different aspects of research. This drawing was scanned with settings that changed the background colour, to improve the capture of the handwriting. The drawing was done with the same white paper as the other drawings.

Research is influenced by personal and professional experience

Research is part of everything that you’re doing. . . . We’re not researchers independent of all of this other stuff that’s happening. (3)

I draw things from outside in the world. So new information, maybe I meet new people, I’m encountering new stuff. (14)

In this conception, personal, educational, and work experience all affect how and what research is done. Research ideas and projects arise from and are influenced by many different conversations, media, and experiences, both personal and professional. For example, “All of this is really informed by what I’m reading or exploring or watching. . . . What different experiences I’ve had, who I’m interacting with, sometimes that can be in my personal life” (3). Graduate school experiences in non-LIS disciplines also shape ability and interest in research.

Researchers are also informed by popular literature and media, by LIS or other disciplinary literature, and by tangents or interesting ideas that arise in their research. For example, one participant described their experience reading a paper about teaching primary sources that had been posted to a listserv and contemplating whether it applied in the Canadian context. They were inspired to talk with

colleagues about how they could build on that paper by developing a new study with a Canadian focus.

Researchers are influenced by practice, getting ideas from their environment, from projects they're working on as part of their practice, or from seeing that there's an issue with services and wanting to investigate it further.

Research happens alongside the other components of researchers' professional lives. "There's this awkward juggling of our professional practice versus our scholarship" (15). Professional life is also intertwined with personal life for some; one participant crumpled the paper we provided to create a three-dimensional drawing, shown in Figure 3, to represent the "overall chaos of dealing with [research] in the context of all the other responsibilities of work and life."

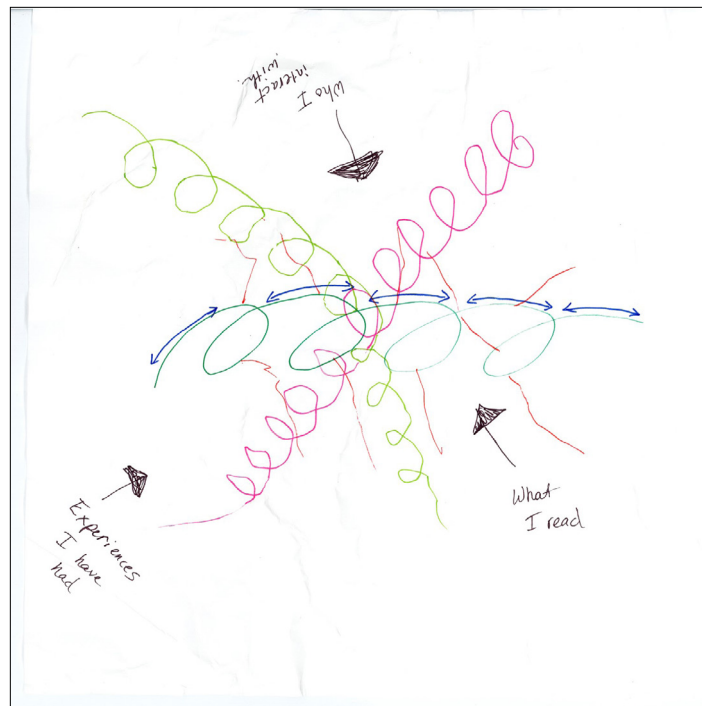


FIGURE 3 The participant crumpled this paper after creating their drawing. In this scan of the drawing, evidence of the crumpled paper can be seen in the uneven lines and shadows in the image.

Research is a process involving interrelated components

I think it always starts with "project begins" and always ends with "creating a thing." (14)

I like [depicting research] as an ecosystem, because I like to believe that when there's a lot of balance and mutual interconnectivity, it's fundamentally a healthier process. (1)

In this conception, research can be divided into discrete parts that, together, form a process. The process may be a series of sequential steps, as drawn by one participant in Figure 4, or steps that are highly interrelated and intersecting. In drawings, participants often used arrows as a visual depiction of the direction of movement throughout the process, with double-headed arrows or intersecting arrows used to show the iterative nature of research and that certain steps are often revisited throughout the process, such as in Figure 5. Researchers describe going back and forth between and among steps as messy and complex. They do not always know where they are going when they start, nor do they always know how to carry out a certain part of the process.

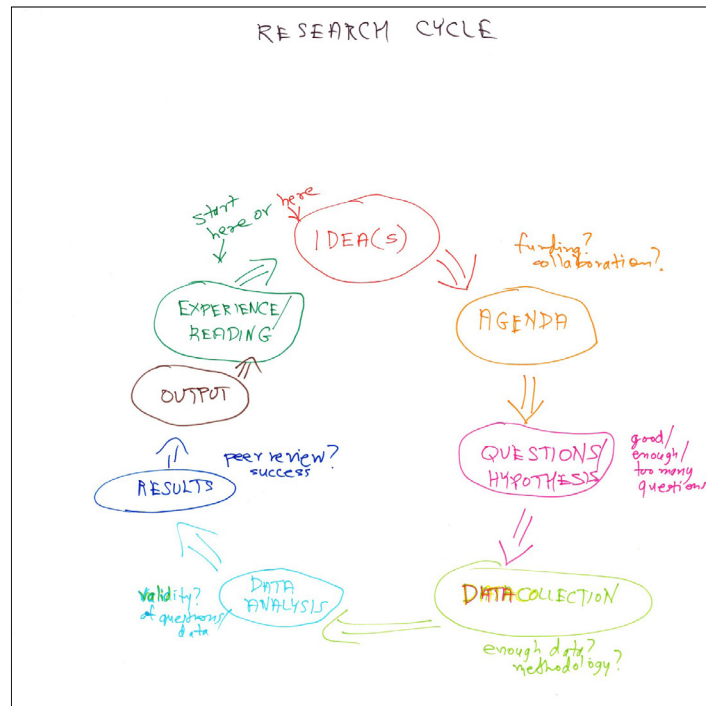


FIGURE 4 Drawing that shows the research process as a cycle consisting of discrete steps.

Researchers may think of steps in the process as very specific (e.g., research ethics board proposal, literature review, data collection, manuscript submission) or as very broad (e.g., exploration, thinking). They also think of the overall research process as including subprocesses, such as research aspects (e.g., conducting the study), administrative aspects (e.g., ethics application), or library aspects (e.g., literature searching). Researchers have their own terminology for thinking about these subprocesses, such as the core or “the guts of it” (8) for the research aspects, or non-core or “the [university] system” (10) for administrative aspects.

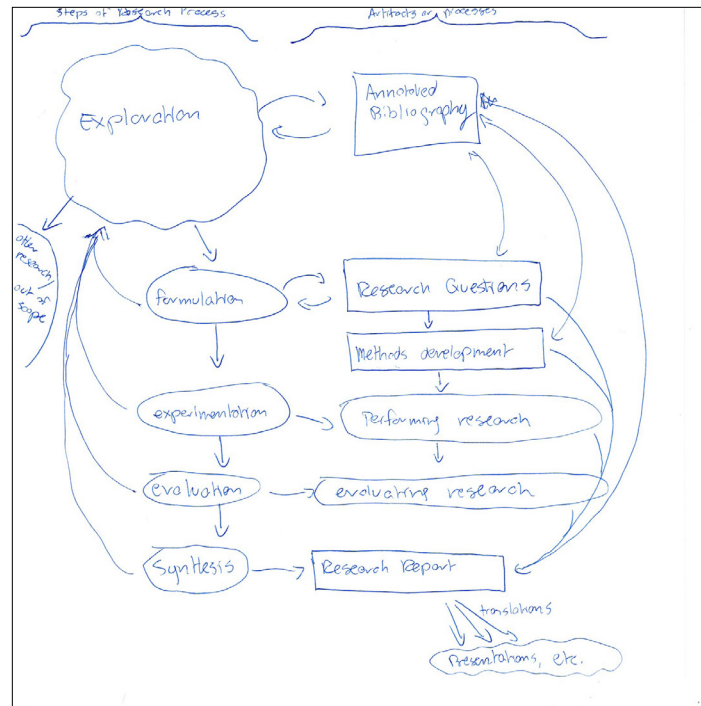


FIGURE 5 Drawing with many arrows showing the iterative nature of the research process.

A key component of the research process is dissemination or publication in traditional formats, such as conference presentations or journal articles. In this conception, dissemination is described as a step to be done rather than as a means of sharing about research, as in the first conception. Publishing is a motivation for many researchers. As part of this dissemination step, researchers make decisions based on the openness or accessibility of the publication and whether a given venue will reach the intended audience.

Research involves refining and answering a question

This is the driver of research, answering the question. (7)

I feel that there's a real essential component of research that requires independent deep thought and synthesis of information. (19)

In this conception, research has two key aspects: it requires the existence and development of a question, which participants usually referred to as “the research question,” and it involves a process of analysis or synthesis to try to answer that question. While refining and answering a question were also described as distinct steps in a process (which fits in with the previous conception of research), in this

conception the focus is less on “the research question” as a “step” and more on viewing questions as central to research.

Questions are “at the heart of the research” (5), and the best research questions are those that the researcher finds interesting. It’s important for research questions to be “good,” that is, well thought-out and focused. Researchers investigate the published literature as they develop their research questions, and it often takes time and effort to refine a question. Participant 24 reflected that “the more talking we did, the more complicated the question became.” This refinement might continue after a research project begins, as a researcher finds that their initial question can’t be answered with the evidence that’s available to them.

Researchers think about working toward answering the research question in many ways: synthesizing information, reflection, a “making-sense-of-it step” (14), a “thinking phase” (11), “independent deep thought” (19), or “bringing everything together” (12). As illustrated by the drawings in Figures 6 and 7, refining and answering a question are not simple or straightforward; the metaphor of applying pressure implies that effort has to be expended. This analysis is complex and challenging; “I have yet to get results that didn’t confuse me” (12). Researchers reshape and rethink their focus, and sometimes even their research question, as they analyze the data they have collected.



FIGURE 6 Drawing with concentric circles representing layers of pressure that compress and crystallize to create what’s at the very centre.

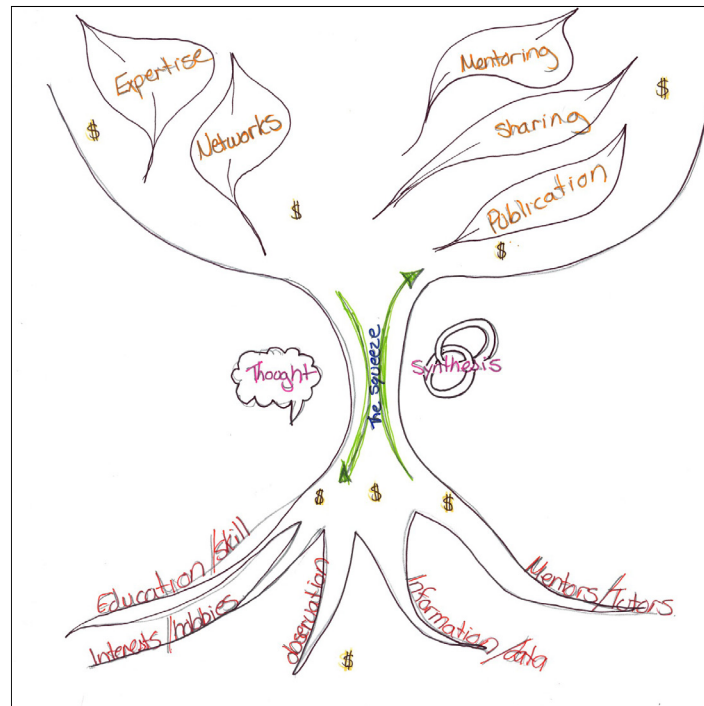


FIGURE 7 Drawing that shows a tree trunk as “the squeeze” where the researcher perseveres and focuses in order to do the work of deep thinking and synthesizing, as shown by the thought bubble and links joined together.

Research by librarians and archivists is not “real” research

I have the impression that doing research as a librarian is not viewed as capital-R research. (22)

I’m just kind of doing the nerdy librarian research that’s not saving anyone’s life. (13)

In this conception, L/A researchers believe that their research is not real research, and also believe that faculty do not perceive their research to be real research.

L/A researchers minimize the importance of research in librarianship, or state that it is better for librarians to “do collaborative research with people in other fields and publish in those fields” than to focus on research related to librarianship (3). They may question whether a project is “real research,” because it is based on professional practice work (6). They also feel a professional inequality with faculty, as with one participant who said, “It brings up these other emotions I have about being a medical librarian and not feeling like an equal partner with the people in the health professions . . . a whole lot of insecurities that I have about being a librarian” (10).

This conception may be related to ideas about the state of research in librarianship, as reflected by one participant who mused that perhaps research by librarians was simply not mature enough and needed more time to develop.

Discussion of Conceptions of Research

In considering the six conceptions of research, we observed two groupings: those that are focused on people, and those that are focused on process, as shown in Table 2.

People-Focused	Process-Focused
Research is a shared, community experience	Research is a process involving interrelated components
Research leads to learning and growth	Research involves refining and answering a question
Research is influenced by personal and professional experience	
Research by librarians and archivists is not “real” research	

TABLE 2 Groupings of conceptions of research.

The people-focused conceptions include an internally oriented awareness of the researcher themselves, as well as an external orientation toward the researcher’s interactions with others. The process-focused conceptions deal with specific activities or moments that occur as research is being carried out; while there is a recognition that the researcher is the one carrying out these activities, the focus in these conceptions is on *what* they are doing.

The conception “Research by librarians and archivists is not ‘real’ research” straddles both of these groupings. It includes a process-focused dimension in librarians and archivists’ perception that their research topics and research outputs have less value than faculty research, and it includes a people-focused dimension in L/As’ feelings of insecurity about their research and their role within the academy. This conception also stands out in that literature about faculty and graduate student conceptions of research does not identify such doubts or insecurities. However, this conception strongly echoes Cox and Verbaan’s (2016) findings that librarians believe that their research is not taken very seriously by librarians or by faculty researchers. We also see a parallel between this conception and library literature that questions the quality of research by librarian practitioner-researchers (Turcios, Agarwal, and Watkins 2014; Hernon and Schwartz 2001; Sturges 2012). Finally, this conception reflects an idea that we have often heard colleagues express informally; its emergence as a conception of research shows that it is more than a passing impression—it is one way that L/As think about research. If there is a desire for librarians and archivists to successfully conduct research, it will be important to further examine

the motivations behind this conception: why do librarians and archivists think their research isn't "real"? How is this related to L/As' roles as practitioners, and, specifically, practitioners who support researchers? What implications does this conception have for L/As' ability to be successful researchers?

Looking at all six conceptions of research that we found, we can also consider how they help us understand librarians and archivists' role as researchers. One consistent theme in the literature is that librarians face challenges in carrying out research, such as lack of time, skill, or confidence. Accompanying this is an increasing focus on supports for librarians as researchers and strategies for overcoming these challenges. The conceptions of research that we have identified will help those who are developing such supports. For example, the conception "Research leads to learning and growth" suggests that L/As become more skilled at research the more they do it. One strategy related to this conception is for L/As to proactively reflect on what they have learned from research projects. The conception "Research is a shared, community experience" fits with the "peers and community" category of factors that encourage research productivity, identified by Hoffmann, Berg, and Koufogiannakis (2017), and reinforces the importance of focusing on community- and peer-based supports for research.

Furthermore, existing supports for L/As as researchers may be geared toward a particular understanding or conception of research. The variation in the conceptions of research that we found shows that researchers experience research and think about their experiences in very different ways. Those who are involved in developing supports can consider how L/As with different conceptions of research may perceive them, or how the supports could be adjusted to reflect additional experiences of research. As well, it will be helpful for L/As to reflect on their own conceptions of research and thereby gain understanding of why particular supports do or don't seem to resonate with them.

What might these conceptions of research reveal about how librarians and archivists understand and enact their role as professionals who support researchers? In our experience as academic librarians, we have noticed that services to support researchers often are framed as supporting "all stages of your research lifecycle" (University of Toronto Libraries n.d.) or show a diagram of a cyclical research process (e.g., Health Sciences Library 2018). This emphasis on process-focused conceptions is similar to Brew's observation that conversations about research are often focused on an "external product orientation" (2001, 282). What would it look like for academic librarians and archivists to incorporate people-focused conceptions of research when talking about their services to support researchers? How might such an expanded

focus change services, or alter how they are perceived and received by faculty and students?

In addition to identifying and understanding L/As' conceptions of research, we also want to understand how these conceptions relate to those of faculty. The conceptions of research that we identified show similarities with those found by Brew (2001) and Åkerlind (2008a), as shown in Table 3.

Conceptions of Research	Parallel Conceptions from Brew (2001)	Parallel Conceptions and Dimensions from Åkerlind (2008a)
Research is a shared, community experience	Research is a kind of social marketplace (trading variation)	Research is experienced as an impetus for change to benefit a larger community (enabling change)
Research leads to learning and growth	Research is a personal journey of discovery (journey variation)	Research is experienced as a route to personal understanding (developing personally)
Research is influenced by personal and professional experience	Research is a personal journey of discovery (journey variation)	Research questions dimension—the nature of the object of study (across multiple conceptions)
Research is a process involving interrelated components	Research is a process of synthesizing separate elements so that problems are solved, questions answered or opened up (domino variation)	Research process dimension—how research is undertaken (across multiple concepts)
Research involves refining and answering a question	Research is a process of synthesizing separate elements so that problems are solved, questions answered or opened up (domino variation) Research is a process of discovering, uncovering, or creating underlying meanings (layer variation)	Research process dimension—how research is undertaken (across multiple conceptions)
Research by librarians and archivists is not “real” research	Not present	Not present

TABLE 3 Comparison of conceptions of research identified in our study to those identified by Brew (2001) and Åkerlind (2008a).

As noted earlier in Table 1, Åkerlind's 2008a study also identified researcher affect, or the underlying feelings of researchers, as an important dimension of conceptions of research. Our participants described feelings very much like those that Åkerlind identified, showing further similarity between L/A and faculty conceptions of research. In contrast, Cox and Verbaan (2016) found that there was a fundamental gap between L/As' conceptions of research and faculty conceptions as described in other published studies. The gap that they found might be attributed to different university environments, research experience, or status of librarians in the United Kingdom versus Canada.

Conclusions

With academic librarians and archivists occupying a unique role as researchers and as practitioners, understanding how this group experiences the phenomenon of research provides insight into how to support L/As in each of these roles. In our study, we identified six conceptions of research held by academic librarians and archivists. These findings represent a new contribution to the understanding of librarians and archivists as researchers, and to the literature on conceptions of research more broadly. Most significantly, with the identification of these conceptions of research for librarians and archivists, we are providing a foundation for others to build upon or use in various ways.

These conceptions of research will help librarians and archivists think in new ways about their role as researchers and the supports that will help them be successful in that role. Since individuals think about research in different ways, we cannot expect all L/As to feel supported by the same set of tools or programs. The variation among conceptions of research points to a need for a similar variation in ways to support L/As as researchers.

Additionally, our analysis shows that L/As experience research in much the same way as faculty researchers. While further research could more thoroughly compare L/A conceptions of research with those of faculty, our initial findings will help librarians and archivists reflect on how they talk about supporting researchers. With a greater understanding that individual researchers hold different combinations of conceptions of research, L/As will be able to develop more relevant supports for faculty and student researchers.

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CONFLICT OF INTEREST STATEMENT

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