Community College Librarians' Research and Publication Practices

Linda Miles and Robin Brown

Community colleges educate an estimated two-fifths of United States college students. Yet community college librarians do not disseminate enough research to enable their colleagues and their libraries to reach their potential. Little is known about what types of supportive measures might increase productivity. The authors collected quantitative and qualitative survey data, finding that a slight majority of participants conduct research, but less than one third of those who research share their findings. Key challenges include lack of time, lack of funding, and lack of confidence. A new baseline understanding will provide a foundation for initiatives to support increased representation.

Introduction

Research focusing on the practices of community college librarians and the library experiences of community college students is underreported in the professional literature, even though by some estimates 41 percent of undergraduates in the United States attend two-year colleges.[1] As Kim Leeder Reed put it, "Community college libraries are deeply underrepresented in the professional literature and organizations of academic librarianship. As a result, the challenges and successes that take place in the community college world are largely invisible to others."[2] Jennifer Arnold, investigating workforce issues among community college librarians, argues that "community colleges should be recognized as a unique segment of higher education, and community college libraries should be considered on their own, rather than simply as a part of the university or college academic library field."[3] In a recent editorial, Carolyn E. Poole pointed to the need for support for community college librarian researchers, arguing that these individuals "can become indispensable assets to their institutions by capitalizing on unexamined, pertinent topics and issues of local concern."[4] In the Fall of 2019, the Executive Committee of the Community and Junior College Libraries Section of ACRL (CJCLS) approved the establishment of a Scholarly Research Task Force to begin exploring ways to encourage scholarly research and publication by librarians working in two-year colleges and, ultimately, to increase representation of the practices and experiences of community college librarians and their students in the literature of the field. In June of 2020, the Executive Committee approved conversion of this task group into a standing committee, affirming the section's investment in this area of work. As the group began exploring the needs and challenges of community

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college librarians around research and publication, it became clear that very little is known about these practices.

Most investigations of academic librarians' research and publication practices have focused on those working in doctoral-granting research institutions.[5] Researchers who do include a broader sampling typically include 5 percent or fewer participants from community colleges, do not use institution type as a lens for analysis, or do not ask for data about institution type.[6] One notable exception comes from Deborah M. Henry and Tina M. Neville, who looked at research, publication, and service requirements for academic librarians. A full 27 percent of their respondents were from two-year institutions, and they found relevant differences in tenure requirements and types of support for research activities.[7] In addition, Christopher V. Hollister conducted an exploratory study about academic librarians' post-tenure practices, including twenty librarians from associate colleges (9% of their study population) and identifying relevant differences in research requirements for both tenure and post-tenure review.[8] By adding to this literature, the present study will support understanding of current behaviors and perceptions and provide a basis for professional development and other support efforts for those who are required to—or who would like to—conduct research as librarians in two-year, post-secondary institutions.

Literature Review

Literature on the research and publication practices of academic librarians covers a range of themes, including some that surfaced through the current study. Marie R. Kennedy and Kristine R. Brancolini, who are among the most recognized scholars working in this area, measured academic librarians' attitudes toward research, along with their perceptions of their own abilities in 2010, finding, among other things, that "self-efficacy" (research confidence) was a key factor.[9] In 2015 Kennedy and Brancolini conducted a follow-up survey employing a new "research confidence scale," and finding that self-efficacy continued to matter, and that institutional support for research activity was becoming more common.[10] Together with other colleagues, these two prolific scholars have continued to contribute a wealth of research literature related to this field of study.[11]

There is a relatively long history of articles that variously assess what leads to research and publication success, in many cases emphasizing the impact of institutional culture. Back in 1994, William K. Black and Joan M. Leysen suggested that institutions provide a "supportive structure," where librarians routinely connect scholarship to their day-to-day responsibilities, that they receive mentoring and release time for research, and that some of their daily responsibilities be shifted to other staff members.[12] In a highly cited 2008 study, Joseph Fennewald interviewed librarians at Penn State University, finding that a "collegial climate" makes the biggest impact, a culture that includes formal and informal mentoring, peer support, collaboration, and camaraderie.[13] In 2012, Alvin M. Schrader, Ali Shiri, and Vicki Williamson called for development of a "framework" of supports.[14] Kristin Hoffmann, Selinda Adelle Berg, and Denise Koufogiannakis performed a content analysis of the literature in 2014, finding that factors contributing to research success form a complex combination of individual, communal, and institutional characteristics.[15] These researchers further pursued this line of inquiry in 2017, surveying Canadian research librarians and finding that supports from all three categories (individual, communal, and institutional) had significant impact on research productivity. They advocated for development of a research environment that features this range of support for librarian researchers.[16]

There is also a history in the literature of calls for the involvement of professional associations in helping to support librarians' research and publication success. Based on their 2018 research with early career librarians, Erin Ackerman, Jennifer Hunter, and Zara T. Wilkinson argued that such organizations should get into the game because of their reach and collective resources: "Because they serve a wider base of constituents by design, professional organizations can offer research supports that may be vital for librarians who have fewer opportunities or who have difficulty finding informal mentors or collaborators in their own libraries."[17] These latter constraints are among the concerns raised by the community college librarians surveyed in the present study. Indeed, there is an established history of association involvement in this work, primarily in support of librarians working in research institutions. Most notably, in 2011 the Canadian Association of Research Libraries (CARL) developed the Librarians' Research Institute (LRI), which debuted in 2012 and continues to provide research librarians in Canada with intensive professional development to this day.[18] In 2017, Vicki Whitmell reported on the LRI, arguing that there is a role for academic library associations to play in providing relevant professional development because their members may need this support to meet research and publication requirements placed on them by their institutions.[19]

Methodology

Through this exploratory research project, the authors seek to develop an understanding of the current research and publication practices of community college librarians, the types of support they receive for this work, and their perceptions of barriers that make this work more challenging. The research questions include the following:

1. How much research do community college librarians do, and what types of research (disciplines or areas of librarianship covered, solo vs. collaborative, etc.) do they take on?
2. How much research-related publication or presentation do community college librarians do, and in what venues?
3. What motivates community college librarians to do research?
4. What are the perceived barriers to, and supports for, this kind of work, and how do community college librarians think about them?
5. Are there correlations between certain personal or institutional characteristics and these data (having a second master's degree, tenure status for librarians, and so on)?

Although many community and junior colleges do not have established procedures for vetting research designs through institutional review boards (IRBs), the authors' institutions are part of the City University of New York, a large urban university with clear IRB requirements. The design of this study was reviewed and approved by the IRB Committee of the Borough of Manhattan Community College. For this project, the authors designed an online survey that included thirty-six closed and open questions (see appendix A). Of these, one question addressed potential respondents' eligibility for participation;[20] twelve focused on research activity from the previous five years; two addressed dissemination practices; four were about perceived barriers and supports; and seventeen focused on personal and institutional demographics. The survey was tested by seven colleagues of the authors, finalized with minor adjustments to language, and conducted on Springshare's LibWizard platform. Recruitment via multiple regional and national listservs began on June 10, 2020, and closed on September 30, 2020. A total of 244 responses to the survey were received. After resolution of a few inconsistencies, there were 234 qualified submissions.

The authors analyzed quantitative data using descriptive analysis to determine central tendencies, particularly utilizing calculations of frequency and mean. Analysis of data related to demographics, professional experience, and institutional context provides an understanding of sample characteristics. Analysis of grouped data representing numbers of both research projects and acts of dissemination of findings addresses research questions one and two. Cross-tabulation analysis was also performed, looking at the levels of participation in research and dissemination against the areas of LIS in which individuals work, faculty status, and tenure or tenure-track status, to provide a more nuanced understanding about who engages in research and dissemination practices and in what types of institutional contexts. Consideration of data related to research topics and research team structure provides insight about the nature of participants' research experiences, and data regarding the type and nature of publication or presentation outlets helped us understand how community college librarians' research findings are represented in the field. The decision to focus on central tendencies in this exploratory study aligns directly with its purpose: to provide a baseline understanding of current practices that can serve as a foundation for initiatives in support of increased participation and representation. Qualitative data was analyzed using a systematic, iterative, and inductive coding process to identify common themes and dissenting perspectives (see the code book in appendix B). Survey comments from participants are employed in this report to help contextualize and enrich the discussion.

Findings and Discussion
Survey Participant Demographics
Survey participants were asked questions related to personal and institutional demographics (see table 1).

Very few respondents were under the age of 31 (10/4.27%), but a larger number were in their first five years of professional librarianship (41/17.52%). This is understandable, given that a full 45.3 percent came to librarianship as a second (or later) career. The authors had hypothesized that full-time librarians would be most likely to respond to their call for participation, and most respondents were employed full-time (220/94.02%). Participants were allowed to select multiple responses to describe the area(s) of librarianship they had worked in during the past five years, and an overwhelming majority listed public services (196/83.76%), followed at a distance by library management (83/35.47%). Based on anecdotal information gleaned from their own experience on the job market, the authors had assumed that the requirement of a second master's degree, while not universal, was fairly standard for community college librarian positions. However, most of their respondents did not have a second advanced degree (136/58.12%). Fewer than half reported that they had held tenured or tenure track appointments (108/46.15%) compared with those who had not, either because their institutions did not award tenure to librarians or because they did not serve in those roles (126/53.85%). Finally, a majority of respondents had served in positions with faculty status in the past five years (147/62.82%).

Research and Dissemination Activity
Slightly more than half of the survey respondents report having served as a researcher/investigator on at least one project during the past five years (138/58.97%), which means that 96 individuals (41.03%) had not served in this role (see figure 1). Of the 138 researchers, the vast

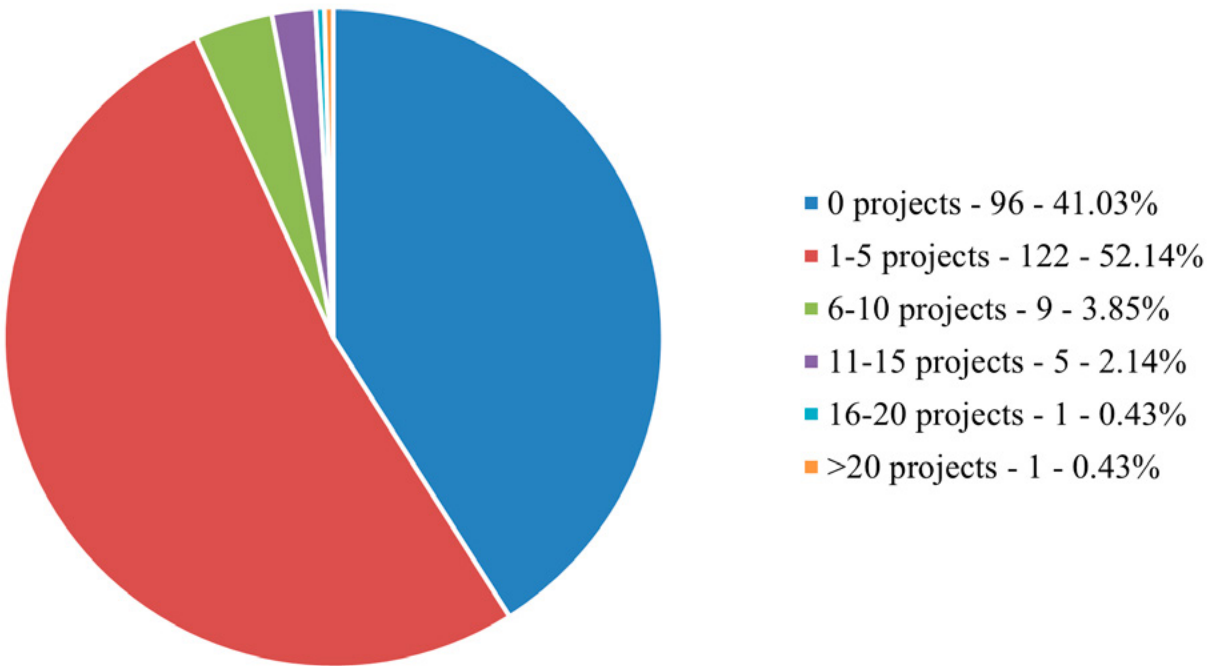| TABLE 1 Survey Participants' Demographic Data (*n* = 234)		Respondents	Percentage
Age	20–30	10	4.27%
	31–40	64	27.35%
	41–50	69	29.49%
	51–60	55	23.50%
	>60	34	14.53%
	No response	2	.85%
Years as a professional librarian	<1	1	.43%
	1–5	40	17.09%
	6–10	56	23.93%
	11–20	75	32.05%
	>20	62	26.5%
Librarianship is first career	Yes	128	54.7%
	No	106	45.3%
Full time/part time[a]	Full time	180	76.92%
	Part time	14	5.98%
	Both	40	17.09%
Areas of librarianship[ab]	Public services	196	83.76%
	Library management	83	35.47%
	Access services	71	30.34%
	Technology	65	27.78%
	Technical services	57	24.35%
	Other	44	18.8%
Second advanced degree	Yes	98	41.88%
	No	136	58.12%
Faculty status[a]	Yes	147	62.82%
	Does not exist in my institution	79	33.76%
	Exists at my institution, but I was not in that role	8	3.42%
Tenured or tenure-track[a]	Yes	108	46.15%
	Does not exist in my institution	104	44.44%
	Exists at my institution, but I was not in that role	22	9.4%
Institutional FTE	<1,000	17	7.26%
	1,001–5,000	78	33.33%
	5,001–10,000	47	20.09%
	10,001–15,000	27	11.54%
	15,001–20,000	14	5.98%
	>20,000	26	11.11%
	Unknown	25	10.68%

Source: authors' calculations
[a]Question specified "in the past five years."
[b]Question specified "select all that apply."

majority had participated in one to five research projects (122/88.41%); only nine reported six to ten projects, the next closest category (6.52%). With the exception of one participant in the outlier category with less than one year on the job, research activity was fairly evenly split for categories based on years in librarianship (see table 2). Those with six to ten years in the profession were most likely to have done research (38 out of 56/67.86%). The librarians least likely to have taken on research projects were those with just one to five years in the profession (20 out of 40/50%), but the difference between these two categories is a relatively slim 17.86 percent.

FIGURE 1
Research Activity

- 0 projects - 96 - 41.03%
- 1-5 projects - 122 - 52.14%
- 6-10 projects - 9 - 3.85%
- 11-15 projects - 5 - 2.14%
- 16-20 projects - 1 - 0.43%
- >20 projects - 1 - 0.43%

Source: authors' calculations
Question specified "in the past five years."
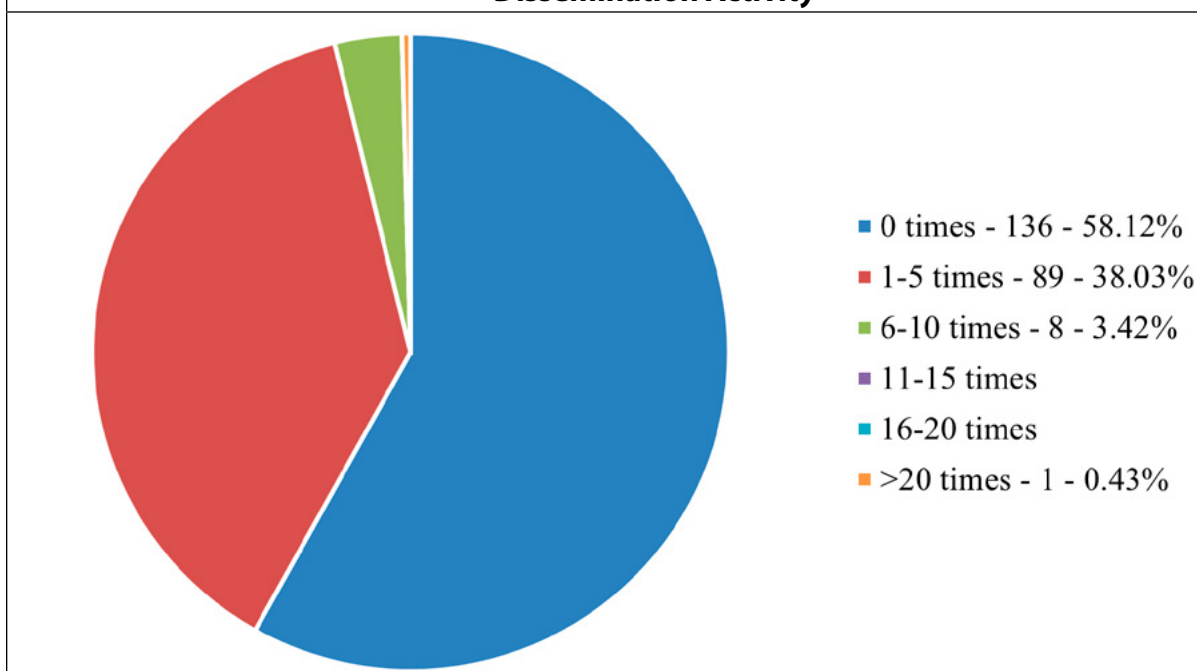
TABLE 2
Years in Librarianship and Research/Dissemination Activity (*n* =234)

Years in Librarianship	Respondents	Percentage of Total Respondents	Respondents Participating in Research Projects	Percentage of Respondents in the Category (Research)	Respondents Participating in Dissemination	Percentage of Respondents in the Category (Dissemination)
<1 year	1	.43%	1	100%	1	100%
1–5 years	40	17.09%	20	50%	15	37.50%
6–10 years	56	23.93%	38	68.86%	32	57.14%
11–20 years	75	32.05%	41	54.67%	26	34.67%
>20 years	62	26.5%	38	61.29%	24	38.71%
Source: authors' calculations						

Similar to the findings in the case of research activities, more than 90 percent of librarians who disseminated their research report having done so only one to five times during the period under study (89 of 98/90.82%) (see figure 2). Those with six to ten years of librarian experience are most likely to have published/presented in the past five years (32/57.14%), while those in the categories one to five years, eleven to twenty years, and >twenty years all fall in the mid- to high thirties, percentagewise (see table 2). The authors speculate that the jump in activity among those with six-ten years in the profession may be linked to the typical timeframe for the tenure-track, in which tenure is customarily awarded after seven years of service. Another possible explanation is that emphasis on research and dissemination activity may wax and wane over time, and these individuals may have entered the profession at a time when this sort of activity was highly valued, thereby setting a pattern for continued activity during their careers.

FIGURE 2
Dissemination Activity

- 0 times - 136 - 58.12%
- 1-5 times - 89 - 38.03%
- 6-10 times - 8 - 3.42%
- 11-15 times
- 16-20 times
- >20 times - 1 - 0.43%

Source: authors' calculations
Question specified "in the past five years."
Includes publication and live or virtual presentation.

The findings also indicate that community college librarians are doing more research than they are publishing; while 58.97 percent of the 234 respondents (138 individuals) report serving as a researcher/investigator on at least one project, only 41.88 percent (98 individuals) report having engaged in publication or presentation related to their research.[21] This means that 58.12 percent of total respondents (136 of 234) have not published or presented during that time period, which translates to 98 or just over 71.01 percent of our 138 researchers.

When it comes to publication or presentation venues, conference presentations were most frequently reported (63 of 98/64.29%), followed by peer-reviewed articles or books (43/43.88%), editorially reviewed publications (36/36.73%), blogs or websites (22/22.45%), and trade publications (15/15.3%) (see table 3).

TABLE 3 Publishing or Presentation Venues[a] (*n* = 98)					
	Respondents	**Percentage**		**Respondents**	**Percentage**
Conferences, symposia, institutes, etc. (virtual or face-to-face)	63	64.29%	LIS-related only	39	39.8%
			Non-LIS-related only	7	7.14%
			Both LIS and non-LIS	17	17.35%
Peer-reviewed academic/scholarly journal or books	43	43.88%	LIS-related only	31	31.63%
			Non-LIS-related only	6	6.12%
			Both LIS and non-LIS	6	6.12%
Editorially reviewed (but not peer-reviewed) academic/scholarly journals or books	36	36.73%	LIS-related only	28	28.57%
			Non-LIS-related only	6	6.12%
			Both LIS and non-LIS	2	2.04%
Blogs or websites	22	22.45%	LIS-related only	12	12.24%
			Non-LIS-related only	10	10.2%
			Both LIS and non-LIS	0	
Trade publications	15	15.3%	LIS-related only	9	9.13%
			Non-LIS-related only	5	5.1%
			Both LIS and non-LIS	1	1.02%
Other	3	3.06%			
Source: authors' calculations					
[a]Question specified "in the past five years" and "select all that apply."					

The finding of a preference for conference presentations accords with findings from Ackerman, Hunter, and Wilkinson, who had determined that conference papers and posters were the most common form of research dissemination among academic librarians overall.[22] Gary W. White discussed the importance of research and dissemination practices on reference librarians' professional growth, describing the specific advantages of conference presentations, since these present opportunities to hear about the most recent research and also provide a venue for immediate feedback for the researcher.[23] Publication practices across the arc of community college librarians' careers could be a fruitful area for future research.

When asked about research topics, survey participants were able to select any number of responses that seemed relevant to their work. It is no surprise that, for the 138 respondents who conducted research in the preceding five years, 119 said they have researched in the LIS discipline (86.23%), while all other disciplines together were only selected by 59 individuals (42.75%). In considering specific areas of LIS, public service was reported to be the focus of research by the largest number of participants (48 of 119/40.34%), with library management a distant second (21/17.65%). The focus on public service topics may be because, in many community colleges, librarians from all areas of library work provide reference and instruction services. In addition, student learning—that is to say, instruction, a component of public services in libraries—is a popular focus for research in higher education overall, not just in libraries. This dominance of public services as a research topic is very interesting considering that the demographic data indicate that librarians who work in technology are most

likely to have engaged in research (43 of 65/66.15%), followed by those in management (51 of 83/61.45%) or technical services (35 of 57/61.40%). Public services come in fourth out of five (114 of 196/58.16%) (see table 4).

TABLE 4 Librarians Who Conduct Research, by LIS Area				
	Respondents working in that LIS area[a] (n = 234)	**Percentage**	**Respondents working in that LIS area who have done research[b]**	**Percentage**
Technology	65	27.78%	43	66.15%
Library Management	83	35.47%	51	61.45%
Technical Services	57	24.36%	35	61.40%
Public Services	196	83.76%	114	58.16%
Access Services	71	30.34%	40	56.34%
Source: authors' calculations [a]Question specified "select all that apply" [b]Question specified "in the past five years"				

Collaboration emerged as an important theme in this study. More than half of the 138 researchers had done solo research during the previous five years (87/63.04%), but even more had worked collaboratively on one or more projects (103/74.64%). Just over one quarter of them had *only* worked on solo research projects (35/25.36%). This may be attributable to the collaborative nature of much of the work that librarians do. Most reported collaborations involved librarians working with individuals from their own institution (78 of 103/75.73%), followed by those who reported collaboration with individuals from other institutions of higher education (40 of 103/38.83%), and just over 10 percent with individuals from organizations beyond higher education (11 of 103/10.68%). The survey also asked participants whether their collaborative partners came from "within the library," "non-library academic departments," or "other."[24] Some of the most interesting data to emerge from this area of inquiry came from the open-ended descriptions related to "other" types of units within the organization. Counseling, human resources, financial aid, and facilities were all mentioned by respondents who collaborated with other higher ed partners, while two respondents reported they had done collaborative research with architects from non-academic institutions. Through comments, the author's learned that some community college librarians find it easier to collaborate with classroom faculty than with their own library colleagues, for a variety of reasons. Others mentioned that they are only allowed to carry out this work during compensated working hours when it involves work with non-library colleagues as part of a campus-wide committee.

Motivation to Research and Publish (or Not)
Some respondents discussed the reasons why they do *not* engage in research or publication. One common response was the lack of external motivation in cases where this kind of activity is not required of them as a part of their job, nor as a factor in tenure or promotion decisions. One individual described a distinct lessening of motivation for scholarship activity after transitioning from a four-year institution with a strict mandate to research and publish. Another worried about taking away valuable presentation opportunities from others for whom this

area of work is required. Another librarian reported that they did not believe that anyone from their institution would take their research findings seriously. Finally, one participant described "being told community college librarians aren't supposed to publish."

Barriers and Supports

When asked what barriers they had experienced related to research or research-related publication, lack of time was by far the most common response from participants (224/95.73%). The second and third most-often selected barriers were insecurity about their own research skills (207/88.46%) and an unmet need for funding (203/86.75%). Participants were also asked how impactful they felt these obstacles have been, on a scale of one (minimal impact) to five (completely insurmountable). Looking at the higher end of that scale—librarians who rated a given barrier four or five—well over half of individuals surveyed are really struggling with the issue of time (135/57.69%), followed at a distance by lack of money (90/38.46%) and a general lack of support from the institution (89/38.03%) (see Figure 3).

When asked about types of institutional supports that may have been available for those wishing to research or publish, participants reported that the supports most often available are professional development opportunities (183/78.21%) and distribution of information about professional development opportunities (170/72.65%). Potential institutional supports that might address the two most impactful barriers (lack of time and lack of money) fall way below. Time set aside specifically for research activities was available for only 28.63 percent of respondents (67); only research design support was less often available (64/27.35%).

FIGURE 3
The Impact of Potential Barriers to Conducting Research or Engaging in Publication Tied to Research (*n* = 234)
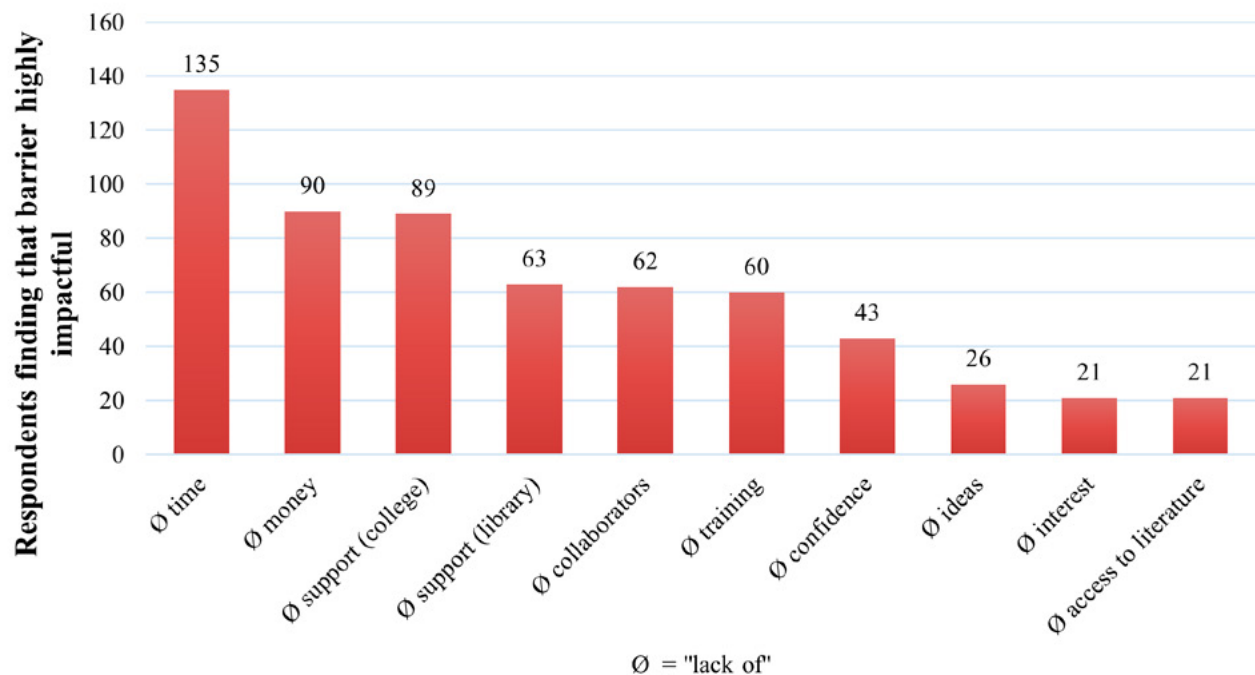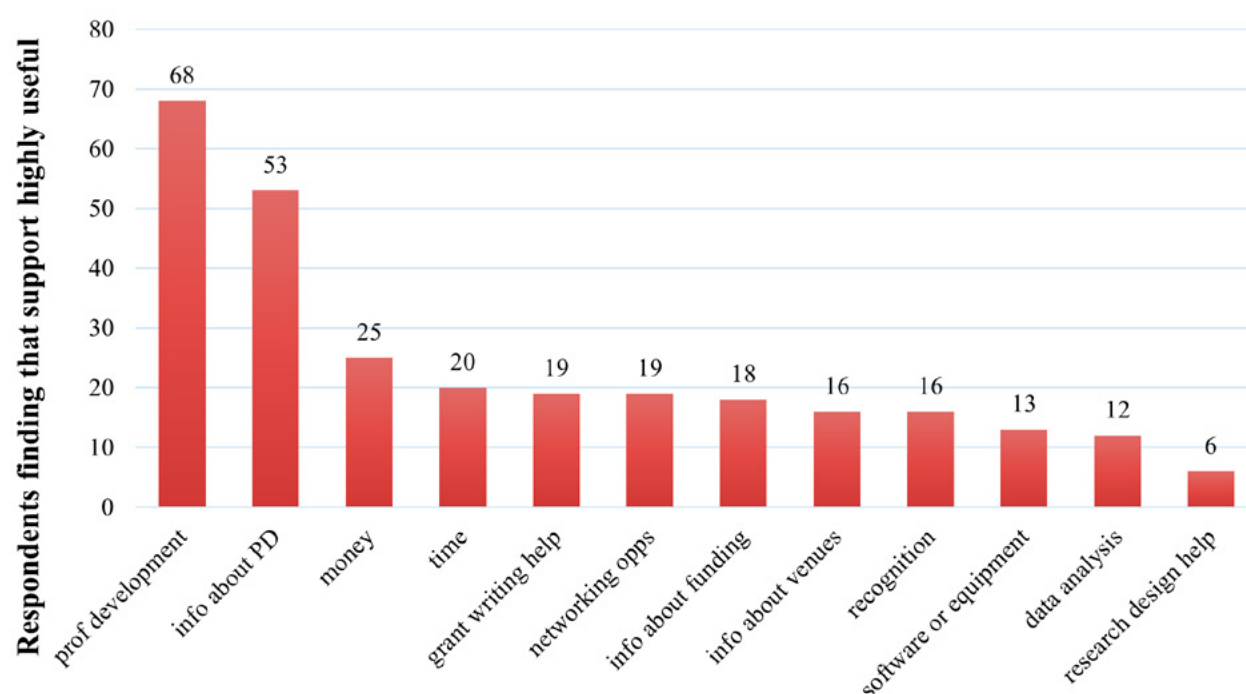
Source: authors' calculations
Question posed a scale of one (minimal impact) to five (completely insurmountable), and this measure includes ratings of four or five.

Funding-related categories include distribution of information related to funding sources, at sixth place for availability out of twelve potential supports (101/43.16%), and funding itself, in eighth place (92/39.32%). The authors also asked respondents to tell them how useful these supports were for their research and publication activities, on a scale of one (not useful at all) to five (extremely useful), and specifically examined the responses that fell at the higher end of that scale, from librarians who rated a given support a score of four or five for usefulness (see figure 4).

FIGURE 4
The Usefulness of Institutional Supports for Conducting Research or Engaging in Publication Tied to Research

Source: authors' calculations
Question posed a scale of one (not useful at all) to five (extremely useful), and this measure includes ratings of four or five.

Mirroring the findings regarding the most impactful barriers, when the forms of institutional support that are considered most useful by those who have access to them are considered, the leading answer, again, is time. As mentioned earlier, lack of time was both the most reported and the most impactful barrier for librarians who might want to research or publish. In addition, of the ninety-one open-ended survey comments related to barriers, forty-six concern lack of time (50.55%). When asked about institutional supports, only a relatively small number of survey respondents reported that compensated time for research or publication was made available to them (67/28.63%). Just a little over half of those who were offered research time have taken advantage of it (38 of 67/56.72%). And yet, this type of support is most appreciated by those who have taken the opportunity to use it (20 of 38/52.63%). A number of participants talked about the need to do research and writing for publication "on their own time." While faculty in non-library departments often have significant control

over how they spend their non-classroom work hours, librarians are typically scheduled to work full-time in the library, for the most part focusing on tasks related to library operations. Understandably, respondents worry that work-life balance will suffer if they use evenings and weekends to research and write. This situation causes "a lot of frustration." Discussion of lack of time is often paired with mention of inadequate staffing in libraries, whether a funding issue or a matter of institutional policy. Multiple respondents mentioned the strict prioritization of library operations as a barrier.

This lack of time to devote to research and publication is also by far the most apparent barrier mentioned in the literature, regardless of type of institution.[25] For example, Smigielski, Laning, and Daniels reported that, while over 86 percent of the research library directors they surveyed believe that dedicated time for research and publication activities has a positive impact on librarian researchers' success, only just over 70 percent of libraries offering tenure and under 67 percent of those without tenure offer this kind of support.[26] Fox surveyed Canadian research librarians, reporting that these full-time professionals spent approximately forty-seven hours per week on all job responsibilities, dedicating less than five of those to scholarly activities. While these librarians would like to be able to spend about 15 percent of their time on scholarly pursuits, they are able to dedicate just 7–8 percent.[27] Many academic librarians have complex jobs, with both overlapping and competing responsibilities. Still, there is an anecdotal understanding that lack of time and competing responsibilities may impact community college librarians to a greater extent, as evidenced in a number of comments from survey participants describing the rationale that community colleges are, by definition, focused more on teaching than research. This would be an interesting question for future research.

According to survey results, funding, the third most common and second most impactful barrier, ranks fourth for usefulness as a form of support (25 of 78/32.05%) (see figure 4). In addition to funding for research-focused release time and adequate staffing, more direct costs may include access to specialized software or equipment, which came in fifth on our list of useful supports (13 of 50/26%). Lack of funding may also impact librarians' ability to participate in professional organizations, or to attend conferences and symposia. When librarians are encouraged to become active beyond their own institution, and afforded the time and funding to do so, they can keep abreast of trends and best practices and connect with potential research collaborators. As mentioned earlier, some associations also provide professional development opportunities related to research, either free with membership or through more formal fee-based programs such as the LRI mentioned earlier and the Assessment in Action program of ACRL.[28] However, participation requires an investment of time and funding that may be difficult for librarians to cover on their own.

A good portion of survey participants indicated they were severely challenged by their own insecurity about research skills (43/18.38%). This finding accords with those of Crampsie, Neville, and Henry; Kennedy and Brancolini; and Burdick et al., who each described lack of research confidence as an issue in the populations they studied.[29] Although Ackerman, Hunter, and Wilkinson report that 65 percent of their survey respondents had at least one research methodology course under their belt, they heard from many of their respondents that they had not received this type of training, whether in their MLIS programs or via other initiatives.[30] Survey participants in the present study talked about lacking confidence or feeling "out of my element even considering being a contributor." A lack of access to the research literature registered as the least impactful barrier (21/8.97%), tied with a lack of personal interest in do-

ing research. Community colleges are not research institutions, as has been mentioned previously, and they may not be set up to provide access to the research literature in any given discipline, not just in librarianship. The low level of impact for this barrier is most likely due to the ability of individuals to circumvent this situation by use of interlibrary loan, but this was still seen as a challenge, adding a layer of effort to an already difficult task.

Institutions and Organizational Cultures

Close to two-thirds of the 234 community college librarians who responded to the survey have faculty status (147/62.82%), but less than half are tenured or on the tenure track (108/46.15%). Being in a position with faculty status did not have a large impact on whether survey respondents had done research in the past five years, but being tenured or on the tenure track did make a noticeable difference. Just over two percentage points separate those with faculty status who had completed research during the past five years from those without faculty status, while just over 14 percentage points separate those tenured or on the tenure track who had conducted research versus those not on the tenure track (see table 5). When it comes to research publication/presentation, these differences are slightly less important. Just over four percentage points separate faculty members who have published or presented from non-faculty author/presenters, and there is more than a 11.5 percentage point gap separating those tenure-track or tenured individuals who published or presented from those not tenured or on the tenure-track.

		Respondents	Percentages	Respondents Who Have Done Any Research[a]	Percentages	Respondents Who Have Done Any Publication Or Presentation[a]	Percentages
Faculty status[b]	**yes**	147	62.82%	88	59.86%	65	42.22%
	no	87	37.18%	50	57.47%	33	37.93%
Tenure/ tenure track[b]	**yes**	108	46.15%	72	66.67%	52	48.15%
	no	126	53.85%	66	52.38%	46	36.51%

TABLE 5
Differences in Research and Publication/Presentation Rates Based on Faculty Status or Being Tenured or on the Tenure Track

Source: authors' calculations
[a]Questions specified "in the past five years"
[b]Numbers for respondents designating "no" include individuals whose institutions provide faculty status or tenure to librarians, but these individuals did not serve in those roles

Several survey participants mentioned in comments that they are not considered faculty and therefore are not expected to pursue research or publication. As alluded to earlier, in some community colleges the traditional emphasis on teaching effectively devalues scholarship activities. Relevant comments from participants included that "institutional supports for research and publication are simply not in the DNA of community colleges," or, in a library where the respondent is the first, historically, to show an interest in research, "it feels like as

a new librarian I'm trying to figure this out completely on my own." A few respondents reported that tenure or promotion requirements for librarians in their institutions focus solely on library operations and services to students. In fact, in several institutions that do have a tenure track, no one—librarian or teaching faculty—is required or encouraged to conduct research. Reported negative institutional responses range from silence, apathy, or a lack of encouragement/expectation for research on one side, to antipathy or direct restrictions on participation in such activities on the other. Of course, all of this adds to a problem the current study aims to address: a lack of representation of community college library concerns in the scholarly literature. One way to think about research is that when we study our problems, practices, and the interactions our constituents have with us and with our libraries, we develop professionally, make evidence-based decisions about practice, and help members of our college community improve their teaching and learning. In other words, it helps librarians do their jobs more effectively. This suggests a certain shortsightedness in some of these institutional policies. Not only do these organizations not value research as a way to contribute to the field, they also do not value it as a means of development for their professional staff, nor as a means to improve services, thereby improving teaching and learning.

Education and Preparedness to Conduct Research
As mentioned earlier, fewer than half of our 234 survey respondents hold any advanced degree beyond an ALA accredited master's degree in LIS. For those 98 individuals, there is an apparent correlation between having a second master's degree and a 12 percent increased likelihood of having both conducted research (65 of 98/66.33%) and engaged in publication or presentation tied to research (48 of 98/48.99%). Reflecting on their own preparedness to do this kind of work, the authors of the present study recognize that the research and publication activities required or encouraged for their second or third advanced degrees has helped provide them with some of the skills and confidence that makes the leap into research and publication in LIS a more natural stretch. In addition, one survey respondent reported pursuing a PhD specifically in order to increase their research skills.

Conclusion
This project seeks to increase understanding of community college librarians' current research and publication behaviors and of their perceptions of research and publication in their libraries. The authors explore questions such as how much and what types of research and publication community college librarians do currently, what barriers and supports they encounter, and what motivates them to do this kind of work. The ultimate goal of this study is to support an increase in research activity and the representation of the experiences of community college librarians and their student patrons in the LIS literature.

Close to 60 percent of the community college librarians the authors surveyed have been active researchers during the past five years, most often investigating LIS-related topics, primarily in public services. Collaborating on research projects and focusing on areas related to the regular responsibilities of the job can be valuable strategies. Many participants attribute their success to the collaborative nature of their projects, and new initiatives aimed at making connections and building teams could prove valuable. Librarians who participate in committee or task-force work on campus may find ready collaborators in their colleagues from different areas of campus, and any shared project could become a focus for research. Networking and

cohort-based professional development could help bring together researchers with complementary experience and skills and foster potential mentoring relationships. Participation in regional and national professional organizations should be recognized as valuable, both for networking opportunities and professional development.

Less than 30 percent of those who report research activity have done any research-related publication or presentation during the past five years. If some community college librarians are conducting research but not necessarily publishing or presenting their results, perhaps support initiatives aimed at demystifying the publication process and emphasizing the value of shared research findings could be a first step toward increasing representation. Respondents with six to ten years of experience are most likely to have researched or shared their findings. Support programming that targets community college librarians in their first five years of practice could prove particularly useful for those who are on a typical seven-year tenure clock and might also help instill in early-career librarians a lasting appreciation for this area of work. This may also contribute to the development of a corps of veteran, post-tenure researchers, who would be in an excellent position to mentor those who follow. For respondents in this study, conference presentations are the most popular type of venue for sharing their research, and it might be useful to begin to popularize the concept of conference presentation as just a first step in dissemination of research findings, encouraging eventual follow-up publication of a more complete analysis in other venues.

Considering perceived barriers and supports, time to devote to research and publication and funding for a range of resources seem to be most impactful for study participants, and external motivation in terms of requirements and formal expectations for scholarship are also very important. Shifting industry-wide workload issues or institutional policy seems daunting in the near term, but perhaps over time better representation in the literature of best practices for community college libraries can lead to higher valuation of librarians' research and publication work. In the meantime, however, respondents' insecurities about their research skills yields a more promising area for direct intervention. For example, innovative library leaders and organizations such as CJCLS could support advances in research by providing opportunities for librarians to gain experience and increase skill levels through professional development or mentoring. Several respondents mentioned the need to learn more about research design, qualitative and quantitative analysis, or how to use data processing software.

Increasing representation of the experiences of community college librarians and their students will expand knowledge related to issues that arise in that context, contribute to librarians' professional development, and ultimately support improved services for community college students. In the near term, the Scholarly Research Committee of CJCLS will be able to base their program of professional development and other types of support on this new understanding, and library and institutional leaders who are interested in increasing professional development for librarians or in contributing to a greater representation of community college librarians' concerns in the literature may also find this new information valuable.

Acknowledgements

Appendix A.

Survey Instrument
Eligibility to Participate
Are you an **academic librarian** who has been employed within the past five years as a librarian at one or more **community or junior colleges**? (By "community or junior college," we mean any two-year, post-secondary educational institution that offers an associate's degree and/or certifications.)
Yes/No

Research Activity
In the past five years, for how many **research projects** have you served **as a researcher/investigator**? (By "research project," we mean any project that involves gathering data and analyzing it either to improve practices or better understand the world. This may or may not involve publication of findings.)
    □ 0 projects
    □ 1–5 projects
    □ 6–10 projects
    □ 11–15 projects
    □ 16–0 projects
    □ 21 projects or more

In the past five years, **in what disciplines** have you done research? (select all that apply)
    □ LIS (Library and Information Science)
    □ Social Sciences
    □ Natural Sciences
    □ Humanities
    □ Mathematics
    □ Business
    □ Other (please describe)

Which library-related activities would you describe as closely related to your LIS research topic(s)? (select all that apply)
    □ Public Services
    □ Access Services
    □ Technical Services
    □ Technology
    □ Library Management
    □ Other (please describe)

For how many research projects in the past five years have you been designated as **Principal Investigator** or **Co-Principal Investigator**? (By "Principal Investigator" we mean the researcher/investigator who takes primary responsibility for the project.)
    □ 0 projects
    □ 1–5 projects

    ☐ 6–10 projects
    ☐ 11–15 projects
    ☐ 16–20 projects
    ☐ 21 projects or more

How many **solo research** projects have you conducted in the past five years? (By "solo research," we mean research where you have been the sole investigator, although your project may have involved research assistants or the help of other individuals).
    ☐ 0 projects
    ☐ 1–5 projects
    ☐ 6–10 projects
    ☐ 11–15 projects
    ☐ 16–20 projects
    ☐ 21 projects or more

In the past five years, how many **collaborative research** projects have you been a part of? (By "collaborative research," we mean those projects where you served as a researcher/investigator in collaboration with one or more additional researchers/investigators.)
    ☐ 0 projects
    ☐ 1–5 projects
    ☐ 6–10 projects
    ☐ 11–15 projects
    ☐ 16–20 projects
    ☐ 21 projects or more

In the past 5 years, have you collaborated on research projects with other researchers/investigators **from your own institution**? (By "your own institution," we mean the community or junior college you were working for at the time.)
    ☐ Yes ☐ No

For those collaborations with researchers/investigators *from your own institution*, how would you describe **their position within the institution**? (select all that apply)
    ☐ From within the Library department/staff
    ☐ From non-library academic department(s)
    ☐ From other entities within the institution (please describe)

In the past five years, have you collaborated on research projects with researchers/investigators who were employed **at other higher education institutions**?
    ☐ Yes ☐ No

For those collaborations with researchers/investigators *from other higher education institutions*, how would you describe **their position within the institution**? (select all that apply)
    ☐ From within the Library department/staff
    ☐ From non-library academic department(s)
    ☐ From other entities within the institution (please describe)

In the past five years, have you collaborated on research projects with researchers/investigators from other, **non-higher-education institutions**? (By "non-higher-education institutions" we mean any institution or organization that is not a post-secondary educational institution.)
> □ Yes □ No

For those collaborations with researchers/investigators *from non-higher-education institutions*, how would you describe **their position within the institution**? (select all that apply)
> □ From within the Library department/staff (if there is a library)
> □ From other entities within the institution (please describe)

Publication Tied to Research

How many times in the past five years have you engaged in **publication activity tied to research**? (By "publication activity tied to research," we mean sharing research results or narratives about research processes in any kind of publication or live/virtual presentation.)
> □ 0 projects
> □ 1–5 projects
> □ 6–10 projects
> □ 11–15 projects
> □ 16–20 projects
> □ 21 projects or more

What **types of venues** have you used for publication tied to research activity? (select all that apply)
> □ LIS-related, peer-reviewed academic/scholarly journals or books
> □ LIS-related, editorially reviewed (but not peer-reviewed) academic/scholarly journals or books
> □ LIS-related trade publication
> □ LIS-related blogs or websites
> □ LIS-related conferences, symposia, institutes, etc. (virtual or face-to-face)
> □ Non-LIS-related peer-reviewed academic/scholarly journals or books
> □ Non-LIS-related, editorially reviewed (but not peer-reviewed) academic/scholarly journals or books
> □ Non-LIS-related trade publication
> □ Non-LIS-related blogs or websites
> □ Non-LIS-related conferences, symposia, institutes, etc. (virtual or face-to-face)
> □ Other (please describe)

Barriers and Supports

In the past five years, have you experienced any of these **potential barriers** to conducting research or engaging in publication tied to research (indicate whether you've experienced these or not, and indicate for each **how impactful** that obstacle has been for your ability to conduct research and/or engage in publication tied to research)

	0 I have never experienced this	1	2	3	4	5 Completely insurmountable
Lack of time						
Lack of money						
Lack of my own personal interest in doing research						
Lack of research ideas						
My own insecurity about my research skills						
Lack of training opportunities						
Lack of opportunities to collaborate						
Little or no access to research literature						
Lack of support from within the library						
Lack of support from beyond the library within the institution						

Are there any comments you'd like to add related to **potential barriers** to research or publication tied to research?
[open]

In the past five years, which of these institutional supports for conducting research or engaging in publication tied to research have been available to you? (indicate whether these have been available to you or not, and indicate for each how useful that support has been for your ability to conduct research and/or engage in publication tied to research)

	n/a This has not been available to me, or I am not aware of it	0 This has been available, but I have not taken advantage of it	1	2	3	4	5 Extremely useful
Research leave or reassigned time specifically for research activities							
Research design support							
Data analysis support							
Professional development opportunities							

Distribution of information related to professional development opportunities								
Funding								
Distribution of information related to funding sources								
Support for the grant application process								
Distribution of information related to opportunities for publication tied to research								
Formal internal networking opportunities								
Formal recognition for research activities/ accomplishments								
Access to specialized software or equipment								

Are there any comments you'd like to add related to **institutional supports** for research or publication tied to research?
[open]

Demographics
What is your age?
- ☐ Less than 20 years old
- ☐ Between 20–30 years
- ☐ Between 31–40 years
- ☐ Between 41–50 years
- ☐ Between 51–60 years
- ☐ 61 years old or older

For a total of how many years have you served in a **professional librarian position**? (include part- or full-time; subtract any gaps in non-sequential employment)
- ☐ Less than 1 year
- ☐ 1–5 years
- ☐ 6–10 years
- ☐ 11–20 years
- ☐ Over 20 years

During the past five years have you served in any of the following
Capacities?
- ☐ As a full-time librarian
- ☐ As a part-time librarian
- ☐ In both full-and part-time librarian positions

In the past five years, in what **areas of librarianship** have you worked? (select all that apply)
- □ Public Services
- □ Access Services
- □ Technical Services
- □ Technology
- □ Library Management
- □ Other (please describe)

Do you hold a Master's degree from a program accredited by the American Library Association?
- □ Yes □ No

Do you hold any advanced degrees **other than** a Master's degree from a program accredited by the American Library Association?
- □ Yes □ No

Besides a Master's degree program accredited by the American Library Association, what **additional advanced degree(s)** do you hold and from **what discipline(s)**?
[open]

During the past five years, have you served in a librarian position with **faculty status**?
- □ Yes
- □ No – my institution(s) provide faculty status for librarians, but I did not serve in that role
- □ No – my institution(s) do not provide faculty status for librarians

During the past five years, have you served in a librarian position **with tenure or on the tenure track**?
- □ Yes
- □ No – my institution(s) employ tenure-track librarians, but I did not serve in that role
- □ No – my institution(s) does not employ tenure-track librarians

Was librarianship your **first career**?
- □ Yes □ No

What are/were your **previous career(s)**? (please describe)
[open]

How is your current two-year, post-secondary institution **funded**?
- □ Publicly funded
- □ Privately funded
- □ Some other funding model (please describe)

What is the **FTE** (Full-Time Equivalent) for your current two-year, post-secondary institution?
- □ 1,000 FTE or less
- □ 1,001–5,000 FTE

- □ 5,001–10,000 FTE
- □ 10,001–15,000 FTE
- □ 15,001–20,000 FTE
- □ 20,001 or more
- □ Unsure

Is your current two-year, post-secondary organization part of a **larger district or institution**? (By "larger district or institution," we mean a community college district, a multi-campus university, or any other umbrella institution).
- □ Yes/No

Please name the **larger district or institution** that organizationally includes your current two-year, post-secondary institution.
[open]

Which of the following best describes the **context** of your current two-year, post-secondary institution?
- □ Urban
- □ Suburban
- □ Rural
- □ Other (please describe)

Additional Comments
Is there **anything else you'd like us to know** about your research and publication practices?
[open]

Appendix B.

Code Book

Barriers and Comments

Category	Code	Notes
Institutional—Structural	Noirb	
	Nopower	There is support from individuals who have no power to help
	Not just libraries	Barriers impact academic departments as well as the library
	Not required	Not required for my job; not required for retention, promotion, or tenure; includes no faculty status
	Others-rank	Others do research in the institution, but no one in my position
	Lack of collaborators	
Institutional—Resource-related	Lack of funding	Referring to monetary resources; includes no travel support; does not include lack of money for staff, unless monetary resources are mentioned
	Lack of time	No time to do research; includes understaffing, workload issues, lack of paid time for this activity
Personal	Emotional	Emotionally charged response
	Immotivated	Personal motivation high, but barriers are tough/insurmountable
	Lack of motivation	Includes lack of interest, and the onus is on the individual
	My topic	Barriers to researching my topics of interest; includes that institutional interest is only in topics focused on institutional advancement
	No expertise	Lack of skill or knowledge; includes lack of confidence, lack of support, lack of training opportunities
Related to the profession	Lack of rep	Lack of community college representation in the literature; includes lack of appropriate venues for publication
	Poor lit access	Difficulty in accessing paywalled materials
Relational	Attitudes	Negative attitudes: apathy, disrespect, problematic organizational culture, includes no provision for academic freedom
	Bad relationships	Personality conflicts, dysfunctional relationships
	Defer to others	Desire to not take resources away from others who are required to do this activity

Supports: Comments

Category	Code	Notes
Institutional —Resource- related	Funding	Any mention of monetary support for research, publication, or presentation
	Lack inst resources	The institution does not have the resources to support
	Lack of funding	Referring to monetary resources; includes no travel support; does not include lack of money for staff, unless monetary resources are mentioned
	Lack of time	No time to do research; includes understaffing, workload issues, lack of paid time for this activity
	Tech infrastructure	For example, use of the institutional repository
	Time	Paid time for this activity; includes sabbaticals, etc.
Institutional —Structural	Ir support	Support from the department handling institutional research
	Lack of collaborators	
	Lack of ir support	No support from the department handling institutional research
	No ir	
	Not just libraries	Barriers impact academic departments as well as the library
	Not required	Not required for my job; not required for retention, promotion, or tenure; includes no faculty status
	Others-funding	Support only for big grant winners
	Others-rank	Others do research in the institution, but no one in my position
Personal	Lack of motivation	Includes lack of interest, and the onus is on the individual
	My topic	Barriers to researching my topics of interest; includes that institutional interest is only in topics focused on institutional advancement
	No expertise	Lack of skill or knowledge; includes lack of confidence, lack of support, lack of training opportunities
Relational	Attitudes	Negative attitudes: apathy, disrespect, problematic culture, no provision for academic freedom
	Kudos	
	Lack supervisor	No support from a supervisor
	Supervisor	Support from a supervisor

Additional Comments

Category	Code	Notes
Institutional —Resource- related	Lack of time	No time to do research; includes understaffing, workload issues, lack of paid time for this activity
Institutional— Structural	Change coming	Predicts additional support at the institution
	Would like	Would like to engage in this activity, but…

Personal	Lack of motivation	Includes lack of interest, and the onus is on the individual
	My topic	Barriers to researching my topics of interest; includes that institutional interest is only in topics focused on institutional advancement
	No expertise	Lack of skill or knowledge; includes lack of confidence, lack of support, lack of training opportunities
	Outside pd	Includes pursuing a degree to increase expertise
	Pers sat	Personal satisfaction is an important motivator
	Profession	Ability to improve the profession is an important motivator
Relational	Attitudes	Negative attitudes: apathy, disrespect, problematic culture, no provision for academic freedom
	Lack supervisor	No support from a supervisor

Notes

1. "Fast Facts 2021," American Association of Community Colleges, https://www.aacc.nche.edu/research-trends/fast-facts/

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3. Jennifer Arnold, "The Community College Conundrum: Workforce Issues in Community College Libraries," *Library Trends* 59, no. 1 (2010): 233.

4. Carolyn E. Poole, "Importance of Research and Publication by Community College Librarians," *College & Research Libraries* 61, no. 6 (2000): 488.

5. See, for example, Selinda Adelle Berg, Heidi L. M. Jacobs, and Dayna Cornwall, "Academic Librarians and Research: A Study of Canadian Library Administrator Perspectives," *College & Research Libraries* 74, no. 6 (2013): 560–72; Joseph Fennewald, "Research Productivity among Librarians: Factors Leading to Publications at Penn State," *College & Research Libraries* 69, no. 2 (2008): 104–16; David Fox, "Finding Time for Scholarship: A Survey of Canadian Research University Librarians," *portal: Libraries and the Academy* 7, no. 4 (2007): 451–62; W. Bede Mitchell and Mary Reichel, "Publish or Perish: A Dilemma for Academic Librarians?," *College and Research Libraries* 60, no. 3 (1999): 232–43; Richard Sapon-White, Valery King, and Anne Christie, "Supporting a Culture of Scholarship for Academic Librarians," *portal: Libraries and the Academy* 4, no. 3 (2004): 407–21; Alvin M. Schrader, Ali Shiri, and Vicki Williamson, "Assessment of the Research Learning Needs of University of Saskatchewan Librarians: A Case Study," *College & Research Libraries* 73, no. 2 (2012): 147–63; Elizabeth M. Smigielski, Melissa A. Laning, and Caroline M. Daniels, "Funding, Time, and Mentoring: A Study of Research and Publication Support Practices of ARL Member Libraries," *Journal of Library Administration* 54, no. 4 (2014): 261–76; Cassidy R. Sugimoto, Andrew Tsou, Sara Naslund, Alexandra Hauser, Melissa Brandon, Danielle Winter, Cody Behles, and S. Craig Finlay, "Beyond Gatekeepers of Knowledge: Scholarly Communication Practices of Academic Librarians and Archivists at ARL Institutions," *College & Research Libraries* 75, no. 2 (2014): 145–61; Vicki Whitmell, "Building Research Competencies in Canadian Academic Libraries: The CARL Librarians' Research Institute," *International Information & Library Review* 49, no. 3 (2017): 230–36.

6. See, for example, Erin Ackerman, Jennifer Hunter, and Zara T. Wilkinson, "The Availability and Effectiveness of Research Supports for Early Career Academic Librarians," *The Journal of Academic Librarianship* 44, no. 5 (2018): 553–68; Camielle Crampsie, Tina Neville, and Deborah Henry, "Academic Librarian Publishing Productivity: An Analysis of Skills and Behaviors Leading to Success," *College & Research Libraries* 81, no. 2 (2020): 248–271; Kristin Hoffmann, Selinda Berg, and Denise Koufogiannakis, "Understanding Factors That Encourage Research Productivity in Academic Librarians," *Evidence Based Library and Information Practice* 12, no. 4 (2017): 102–29.

7. Deborah B. Henry and Tina M. Neville, "Research, Publication, and Service Patterns of Florida Academic Librarians," *The Journal of Academic Librarianship* 30, no. 6 (2004): 435–51.

8. Christopher V. Hollister, "An Exploratory Study of Post-Tenure Research Productivity among Academic Librarians," *The Journal of Academic Librarianship* 42, no. 4 (2016): 368–81.

9. Marie R. Kennedy and Kristine R. Brancolini, "Academic Librarian Research: A Survey of Attitudes, Involvement, and Perceived Capabilities," *College & Research Libraries* 73, no. 5 (2012): 431–48.

10. Marie R. Kennedy and Kristine R. Brancolini, "Academic Librarian Research: An Update to a Survey of

Attitudes, Involvement, and Perceived Capabilities," *College & Research Libraries* 79, no. 6 (2018): 822.

11. See, for example: Kristine R. Brancolini and Marie R. Kennedy, "The Development and Use of a Research Self-efficacy Scale to Assess the Effectiveness of a Research Training Program for Academic Librarians," *Library and Information Research* 41, no. 124 (2017): 44–84; Marie R. Kennedy, Kristine R. Brancolini, and David P. Kennedy, "An Exploratory Study of Accomplished Librarian-Researchers," *Evidence Based Library and Information Practice* 15, no. 1 (2020): 179–217; and Selinda Adelle Berg, Kristin Hoffmann, Kristine R. Brancolini, and Marie R. Kennedy, "'I mean, pandemic': How COVID-19 Has Disrupted Librarians' Research." *College & Research Libraries News* 82, no. 6 (2021): 272–73.

12. William K. Black and Joan M. Leysen, "Scholarship and the Academic Librarian," *College & Research Libraries* 55, no. 3 (1994): 229–41.

13. Fennewald, "Research Productivity," 111.

14. Schrader, Shiri, and Williamson, "Assessment."

15. Kristin Hoffmann, Selinda Adelle Berg, and Denise Koufogiannakis, "Examining Success: Identifying Factors That Contribute to Research Productivity across Librarianship and Other Disciplines," *Library and Information Research* 38, no. 119 (2014): 13–28.

16. Hoffmann, Berg, and Koufogiannakis, "Understanding."

17. Ackerman, Hunter, and Wilkinson, "The Availability," 562.

18. "Librarians' Research Institute," Canadian Association of Research Libraries, https://www.carl-abrc.ca/strengthening-capacity/workshops-and-training/librarians-research-institute/

19. Whitmell, "Building," 236.

20. For the purposes of this study, community colleges are defined as two-year, post-secondary educational institutions that offer associate's degrees or certifications.

21. One weakness in the survey design became apparent in the initial review of data because seventeen respondents said they had done no research at all in the previous five years but had participated in "publication related to research" during that time. The authors assume that these individuals either published research during that time period (which had been carried out in prior years), or participated as coauthors of research reports for projects where they did not serve as researchers/investigators. The authors elected to retain the publication-related data for these respondents.

22. Ackerman, Hunter, and Wilkinson, "The Availability," 556. Their research population was primarily made up of librarians working in doctoral, masters, or baccalaureate institutions, but may have included just a few community college librarians within the 3 percent "other" category.

23. Gary W. White, "The Professional Development of Reference Librarians: Implications of Research, Publication, and Service," *The Reference Librarian* 35, no. 73 (2001): 345.

24. The "non-library academic departments" option was not offered in the question focused on collaborations with investigators from other, non-higher-education institutions. In that case the options were "within the library" or "other."

25. For example, see Ackerman, Hunter, and Wilkinson, "The Availability and Effectiveness," 556; Amrita J. Burdick, C. A. Doms, C. C. Doty, and L. A. Kinzie, "Research Activities among Health Sciences Librarians: A Survey," *Bulletin of the Medical Library Association* 78, no. 4 (1990): 400; Beth Clewis, "Scholarship and the Community College Librarian," *Journal of Academic Librarianship* 17, no. 4 (1991): 222; Fennewald, "Research Productivity," 110; Theophilus Fiawotoafor, Perpetua S. Dadzie, and Musah Adams, "Publication Output of Professional Librarians in Public University Libraries in Ghana," *Library Philosophy and Practice* (2019): 14; Terry O'Brien and Kieran Cronin, "Research Output of Academic Librarians from Irish Higher Education Institutions 2000–15: Findings from a Review, Analysis, and Survey," *New Review of Academic Librarianship* 22, no. 2–3 (2016): 215; Gay Helen Perkins and Amy J. W. Slowik, "The Value of Research in Academic Libraries," *College & Research Libraries* 74, no. 2 (2013): 151; Catherine Sassen and Diane Wahl, "Fostering Research and Publication in Academic Libraries," *College & Research Libraries* 75, no. 4 (2014): 459.

26. Smigielski, Laning, and Daniels, "Funding," 268.

27. Fox, "Finding Time," 451. At the same time, Fox found that few of these participants reported taking advantage of the leave or sabbatical benefits that were made available to them.

28. The Assessment in Action program (AiA) was a three-year, grant-funded program from ACRL, established to prepare academic librarians to carry out assessment projects at their campuses, with extended professional development for approximately 300 librarians taking place between 2013–16 (see https://www.ala.org/acrl/AiA).

29. Crampsie, Neville, and Henry, "Academic Librarian Publishing"; Kennedy and Brancolini, "Academic Librarian Research: A Survey"; Kennedy and Brancolini, "Academic Librarian Research: An Update"; Burdick, Doms, Doty, and Kinzie, "Research Activities."

30. Ackerman, Hunter, and Wilkinson, "The Availability," 556.