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Engaging With Research And Publication As An Early Career Librarian: A Survey Of Confidence And Contributing Factors

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Engaging With Research And Publication As An Early Career Librarian: A Survey Of Confidence And
Contributing Factors

Abstract

The authors examine the engagement of early career librarians with research and publication via an online

survey, in which participants rated factors that influence their research and publication and their

confidence in those activities. Top positive influencing factors are of a technical and interpersonal nature:

access to scholarly resources; access to technology; and collaborator support. Of the qualified responses

($n = 255$), the majority reported a lack of confidence in their skills but a desire to publish. These results

can inform the education, workplace support, and professional development opportunities for early career

librarians as they get started with research and publication.

Introduction

Engaging in research and publication is a valuable but challenging endeavor for any librarian.

These practices inform the library profession and can advance a librarian's career. Research and

publication may also be a requirement for a librarian's continuing appointment, promotion, or tenure. But,

as Sassen and Wahl note, "many academic librarians are not prepared to fulfill the research and

publication requirements for promotion and tenure criteria."[1] Additionally, preparation and support for

these practices are inconsistent across academic libraries and Master's of Library Science and Information

(MLIS) programs or equivalent. While research and publication practices of librarians have been studied

for many years, literature does not focus on early career librarians. This study seeks to fill that gap.

Despite the rewards and requirements of generating library-centric research and publications, doing so

can be intimidating and unclear for early career librarians. While they may have learned about research

during their graduate education, they may not have practical experience with conducting research and/or

writing for publication in the library and information science (LIS) profession. Additionally, the lengthy

nature of research and publication, from initial planning to final manuscript edits, is hard to scope when

librarians have not done so previously. They also often have to fit it in amongst regular duties or be

willing to pursue these activities outside of work. Since early career librarians are simultaneously familiarizing themselves with their jobs, undertaking research and publication can be especially difficult. This study investigates factors that influence early career librarians' practice of research and publication and their confidence in their skills. For the purposes of this study, early career librarians are individuals who have worked in the library profession for five years or less following their last graduate degree. From the survey data, we identify recommendations for academic libraries, LIS curricula, and professional development opportunities to more fully support this demographic's engagement with research and publication.

Literature Review

Experiences of Early Career Librarians
Learning independently on the job is a significant component of work for early career librarians.[2] A survey by Oud revealed that new academic librarians' initial expectations of workload ("busier/heavier workload") and training ("lack of training and time to learn."), among other areas, did not match reality.[3] Only 40% received any sort of formal training or orientation.[4] Similarly, 12 novice academic librarians reported their thoughts that a "large degree of academic librarianship is learned on-the-job as a solitary, sink-or-swim process" during interviews by Sare, Bales, and Neville.[5] In addition to learning the ropes, starting out in a new profession and position can create affective and practical stressors for early career librarians, such as imposter syndrome, self-expectation, an unfamiliar location, a new work culture, and more advanced colleagues.[6] New academic librarians, then, may find a greater adjustment to working in academic libraries for which their education cannot fully prepare them.

Specific to research and publication, literature on early career librarians shows a "widespread acknowledgement that new academic librarians need assistance in acclimating to the scholarly demands of their positions."[7] In a survey of 54 entry-level librarians about how they learned to perform their job duties (through library school education, training by their hiring institution, or self-instruction), DeVinney and Tegler found that respondents most often learned research skills through self-instruction.[8] Sare, Bales

and Neville furthermore found that participants expressed confusion and ambivalence about conducting original research and publication. One participant blamed these feelings on both a "lack of guidance in [graduate] school and on the job."[9]

To address the concerns stated above, the academic library community has developed some professional development and mentoring opportunities around research and publication for early career librarians, two of which are mentioned here. The American Library Association's (ALA) New Members Round Table offers its own scholarly journal, *Endnotes*, which has the goal of "work[ing] with new authors to produce quality scholarly articles."[10] In addition, the College Libraries Section of the Association of College and Research Libraries (ACRL) has a 'Your Research Coach' program that pairs a librarian who wants to pursue research and publication with an experienced academic librarian 'coach.'[11]

Research and Publication Practices of Librarians
A broader body of scholarship on research and publication efforts by academic librarians as a whole offers insights into engagement with those practices, though without the granularity of the early career librarian demographic.

Research on these practices has been approached in two ways. The "journal-based" approach involves analyzing articles published within LIS journals.[12] Scholars have studied publications for author demographics, productivity, research methodology, and other factors.[13] The "individual-based" approach involves surveying the research and publication practices of individual librarians.[14] As these two approaches are not "directly comparable"[15], this literature review focuses solely on the latter. Benefits of librarians engaging with research and publication are numerous. At the individual level, academic librarians enjoy a sense of accomplishment and contribution to the profession; increased understanding of and ability to participate in the research of the faculty and students they serve; career advancement; and greater awareness of the latest library research, to name a few.[16] At an organizational level, librarians' research and publication can help justify staffing, space, and budget; apply best practices to services for patrons; and raise the library's profile amongst the campus community.[17] For librarianship

as a whole, research and publication advance the profession and raise the profile of the LIS discipline within academia.[18]

While benefits are many, research and publication demand time, funding, mentorship, research skills, motivation, and/or confidence, all of which may be lacking.[19] However, the requirement to publish in academic libraries appears to be on the rise.[20] Sassen and Wahl found that from 1980 to 2011, the percentage of libraries within Association of Research Libraries requiring publication for promotion or continuing appointment increased by 45.5% and 34.7%, respectively.[21] They also found that support measures for research (internal funding, mentoring programs, etc.) increased in the same time period.[22] The contradiction between requirements and needs may not create an environment conducive to research and publication.

Librarians' perceptions of their skills with research and publication impact their engagement with these practices. Kennedy and Brancolini surveyed more than 800 librarians about their attitudes, involvement, and perceived capabilities relating to their research and publishing practices. They found that "confidence in performing the discrete steps in a research project may be useful as a predictor for whether or not an academic librarian conducts research."[23] These results informed the development of a week-long continuing education workshop in research design, called the Institute for Research Design in Librarianship (IRDL).[24] IRDL's goal is "to increase the number of academic librarians with specific skills in conducting and disseminating the results of research in an environment designed to increase self-efficacy."[25] This research included librarians in all stages of their career but provides a model for assessing librarians' attitudes, involvement and perceived capabilities on which we drew for this study. Scholars have only looked at early career librarians' engagement with and feelings about research and publication at a cursory level or not at all. There is a need to study these practices within this specific demographic at a much deeper level in order to consider how to involve them in these practices.

Research Questions

The following research questions motivated this study:

1. What are the research and publication practices of early career librarians?

2. What factors influence research and publication by early career librarians?

3. How confident are early career librarians in their ability to conduct research and publish?

In this article, "publication" refers to librarians' work of engaging in the publication process, including submitting articles to publication venues for review. The use of this term is not meant to imply that librarians do the publishing.

Methods

Data for this study was collected via an online Qualtrics survey. Questions covered respondents' current research and publishing practices, factors that influenced these practices, measures of confidence in their ability to conduct research and publish, and general demographic information about themselves and their current institutions (see Appendix A for survey instrument). The inclusion criteria were twofold: participants must currently work in an academic library (full or part time), and they must have worked in an academic library for five years or less after completing their most recent graduate degree. An MLIS degree was not required to participate in this survey, but current library school students were not eligible to participate. The authors sought feedback on the survey's design prior to dissemination. The Oakland University Institutional Review Board (IRB) approved this research project.

This survey used a purposive sampling method by posting calls for participation on six professional listservs affiliated with ALA (see Appendix B for survey recruitment email). The listservs used were the:

- ACRL New Members Discussion Group (acr-dgnewmbrs@lists.ala.org)

- College Libraries Section (collib-l@lists.ala.org)

- Information Literacy Instruction Discussion List (ili-l@lists.ala.org)

- New Members Round Table Discussion List (nmrt-l@lists.ala.org)

- Reference and User Services Association List (rusa-l@lists.ala.org)

- University Libraries Section List (uls-l@lists.ala.org)

These listservs were targeted to reach a broad audience of early career librarians.

The online survey was open from January 22, 2018, to March 16, 2018. The initial invitations were sent to each listserv on January 22, 2018, and a reminder email was sent after five weeks. The sample population was self-selecting and therefore does not represent a probability sample. A total of 345 participants responded to the survey. Individuals who either did not fit the inclusion criteria ($n = 54$) or only contained answers to the demographic questions ($n = 36$) were removed, and a total of 255 remained.

Results

These results include the analysis of several variables–MLIS courses covering research and publication; factors that influence research and publication; and confidence in research and publication–in the research and publication practices of early career librarians. We also analyzed confidence by respondents who had previously been published, were required to publish, and had an additional graduate degree.

Demographics
Respondents were employed in 40 states ($n = 243$), Washington, D.C. ($n = 2$), and some locations outside the United States ($n = 9$). Ages of respondents ($n = 255$) were 3% ($n = 7$) between 18 to 24; 66% ($n = 168$) between 25 and 34; 21% ($n = 54$) between 35 and 44; 8% ($n = 21$) between 45 to 54 ($n = 21$); and 2% ($n = 5$) between 55 to 64.

Employment Status
Respondents identified the classification of institution where they worked, full or part time status, job status, and job title. Institutions' Carnegie classifications were mostly Doctoral ($n = 129$, 51%), followed by Master's ($n = 68$, 27%), with Baccalaureate ($n = 28$, 11%) and Associate's ($n = 27$, 11%) almost equal; one respondent was employed at a Tribal College.

Most respondents held full-time positions of 30 or more hours a week ($n = 242$, 95%), but some were employed in part-time positions ($n = 12$, 5%). Due to the small number of part time librarians that participated in this study, further analysis of this demographic is not included. We recognize that part-time librarians have a valuable voice in the profession and that they are a worthy area of future study.

The breakdown of respondents' academic status was two-thirds faculty ($n = 162$, 64%), one third staff ($n = 82$, 32%), and few "Other" ($n = 11$, 4%). Job titles of respondents ($n = 248$) represented all major areas in academic libraries, such as reference, digital services, and liaison roles (see Table 1 in Appendix C).

Education
All respondents ($n = 255$) had an MLIS degree, though this degree was not required to take this survey. Respondents' ($n = 247$) degrees were from 50 institutions (see Table 2 in Appendix C for these institutions). Many attended their LIS program in person ($n = 102$, 40%); those who completed hybrid ($n = 78$, 31%) and online ($n = 75$, 29%) programs were almost equal. About a third have at least one additional graduate degree(s) ($n = 91$, 36%). Additional earned degrees and certifications identified by respondents ($n = 88$) cover the sciences, social sciences, and humanities, with the majority in the arts and humanities ($n = 69$, 70%).

A graduate-level research methods course would likely be respondents' greatest exposure to research and publication practices. Respondents shared whether they took such a course, if their MLIS program included one, other courses that covered those topics, and what they thought their education lacked. Ninety percent of respondents ($n = 162$, of 181 who answered this question) did receive instruction on research methods in their MLIS program, either as a standalone course or as part of another course. Respondents reported that the majority of MLIS programs offered a standalone research methods course ($n = 155$, 61%), but 13% ($n = 34$) did not. In other instances, research methods were part of another course for 10% of respondents ($n = 26$); 16% ($n = 40$) were not sure. Other than research methods, 49 respondents listed 71 courses that covered the scholarly publishing process (identified as the 'scholarly publishing process' in the survey and phrased similarly in results here). Those courses fit into 16 categories, from reference ($n = 10$) to government documents ($n = 1$) (see Table 3 in Appendix C for these categorizations). Respondents provided additional comments on instruction in scholarly publishing in their MLIS programs, which fell into two themes: a desire to have learned more about scholarly

publishing; and a lack of coverage of scholarly publishing in their research methods course. Selected quotes illustrate these themes:

- "I often wished for one [a course that covered scholarly publishing]!"

- "No courses covered the scholarly publishing process -- Even my action research course did not cover publishing"

- "The research methods course I took was about statistical analysis, not publishing."

Responses show a clear gap in MLIS education. When asked what MLIS programs should teach about scholarly publishing, responses ranged from 'nothing' to 'whole scholarly publishing process.' The vast majority of respondents thought that MLIS programs should be teaching at least the basics of scholarly publication. One respondent suggested that graduate education in librarianship should cover the:

"IRB process, how to create surveys and other tools to conduct research, explain different types of publications (beyond peer review journals), impact factor, finding appropriate places to publish, data analysis techniques, discussing the peer review process and time it takes, open access options, negotiating copyright. Although learning how to do research is important so is the publishing process which I think is missed in many LIS programs."

Furthermore, several respondents mentioned that they would like MLIS programs to have a *standalone* scholarly publishing course that students would take following a research methods course. Topics specifically mentioned for inclusion in this course were: journal selection, open access, authors rights, predatory journals, data analysis and statistics, and scholarly writing. Respondents also mentioned more nuanced topics, such as social justice in scholarship, politics of publishing, and peer review processes. Another common suggestion was to require students to submit a professional writing piece while in graduate school. One individual summed these feelings up by saying:

> "I was never taught anything about publishing my own work... I think my LIS program could've done a better job encouraging us to publish/do scholarly research. The focus always seemed to be on helping others find scholarly research, but not how to do that research and publishing ourselves."

Overall, respondents agree that MLIS programs need to cover research methods and publication to a greater extent.

Publishing Requirement
Whether respondents were required to engage in research and publication was inconsistent across respondents. In fact, as shown in Figure 1, more respondents were *not* required to publish in their jobs ($n = 172, 68\%$) than those who were ($n = 80, 31\%$); a few respondents were uncertain ($n = 3, 1\%$).

[Figure 1]

The publishing requirement had further variance by Carnegie Classification. Respondents at Master's-granting institutions had the highest likelihood of a publication requirement ($n = 29, 42\%$), followed by those at Doctoral ($n = 48, 37\%$), Baccalaureate ($n = 2, 7\%$), and Associate's ($n = 1, 4\%$) granting institutions.

Previous Publication
Participants who had been previously published as an author for any type of publication ($n = 135, 53\%$), and those who had not ($n = 120, 47\%$), were similar in frequency. Individuals indicated they had previously written for a range of publication types, and 135 respondents identified the type(s) of publication(s) that they have published (see Figure 2).

[Figure 2]

Factors that Influence Research and Publication
Respondents rated structural and interpersonal factors that may influence their research and publication on a Likert Scale from strong negative to strong positive influence (see Table 4). For all following results, respondents' ratings of positive or strong positive and negative or strong negative are combined to indicate positive or negative influence.

[Table 4]

The three most positive influencing factors were:

1. Convenience of accessing scholarly resources ($n = 206$, 86%)

2. Access to necessary technology ($n = 203$, 84%)

3. Collaborator support and/or presence ($n = 189$, 78%)

Furthermore, more than 60% of respondents indicated that the following factors had a positive influence on their research and publishing practices:

- Dedicated time to conduct research and/or write

- Colleague support and/or presence

- Presence of supervisor support

- Presence of mentor support

- Culture at my academic library

Interestingly, many of these highly-rated factors were interpersonal.

The three most negative influencing factors were:

1. Absence of supervisor support ($n = 117$, 48%)

2. Absence of mentor support ($n = 116$, 48%)

3. Culture at my academic library ($n = 47$, 19%)

The factor with the most 'not applicable' responses was sabbaticals or formal research leaves ($n = 97$, 40%).

Respondents also wrote additional factors that influenced their research and publishing practices. Six other factors were identified by at least two respondents each. These factors, with selected quotations, were:

1. Self-motivation (presence or absence)

○ "My own interest in publishing. I enjoy research and writing and it provides me with a feeling of empowerment and fulfillment, so my own motivation drives me."

○ "I'm not particularly interested in publishing."

2. View of librarianship (positive or negative)

○ "General pessimism about librarianship, [and] career prospects"

○ "The professional culture has a strong positive influence on my publishing. Blogs like Library Parlor and keeping up with other new professionals via Twitter push me to want to publish and present more."

3. Lack of confidence

○ "Imposter syndrome."

○ "My responses should communicate that I like to write, but my confidence is low. "

4. Personal life

○ "Personal relationship support (for things like childcare)."

5. Access to conferences

○ "Access to conferences and places were scholarly conversations are taking place, both formally and informally"

6. Career advancement

○ "I knew it would be required before I applied for jobs, so I prepared for it by publishing before the interview process started."

○ "I know that in order to promote [sic], I will probably have to look for a job outside of my current institution. I will need publications on my CV when I apply elsewhere."

Respondents also frequently reiterated two factors in their free-text additions -- the culture at an academic library, and dedicated time to conduct research and/or publish -- which were factors already included in the Likert scale ratings. Selected quotes are shown below:

● Dedicated time to conduct research and/or publish:

○ "I am not in a tenure-track position, although I am considered faculty. I am also very new to my position, which means that I have very little vacation... It is extremely hard to fulfill the needs of my

position as an instruction librarian, creating personalized classes for many different fields, and publish at the same time, especially because I have so little time off."

● Culture at an academic library:

○ "I wish that we were allowed to work remotely or have a flexible schedule to be able to write and research at times that are natural to each unique researcher."

This emphasis of dedicated time as a positive factor and of culture at an academic library as a negative factor bear attention.

Confidence in Research and Publication Skills
For all following results, respondents' ratings of somewhat or strongly (not) confident are combined to indicate feeling confident or not confident.

The majority of respondents ($n =$ 206, 81%) were confident in their research skills as a whole, and 12% ($n = 30$) of respondents were not confident. The results were more mixed for confidence in publication: slightly more than half of respondents were confident in their ability to publish scholarly, peer-reviewed publications ($n = 138$, 55%) and about a third of respondents were not confident ($n = 76$, 30%).

In individual components of the research and publication process, confidence outweighed lack of confidence (see Table 5), too. The top three areas of confidence were:

1. Writing a literature review, including research and synthesis ($n = 201$, 79%)

2. Formulating a hypothesis ($n = 187$, 74%)

3. Following ethical guidelines (Institutional Review Board (IRB), informed consent, etc.) ($n = 179$, 70%

Conversely, the top three areas in which respondents lacked confidence were:

1. Analyzing data ($n = 89$, 35%)

2. Writing the publication ($n = 86$, 34%)

3. Selecting appropriate research method or design ($n = 82$, 32%)

[Table 5]

Confidence by Previous Publication, Requirement to Publish, and Education

To better understand who expressed confidence, the authors analyzed confidence in publication by whether respondents had previously published and whether they were required to publish. They also analyzed confidence in both research and publication by whether respondents held an additional graduate degree and for those who took a standalone research methods course. Again, respondents' ratings of somewhat or strongly (not) confident are combined to indicate feeling confident or not confident. The majority of respondents who had previously published their work (any type of publication) expressed confidence in their ability to publish scholarly, peer-reviewed articles ($n = 89$, 67%) (see Table 6 in Appendix C). Respondents who had *not* previously published were split in their confidence in publishing scholarly, peer-reviewed articles: 41% felt confident ($n = 48$), and 36% did not feel confident ($n = 43$). When the requirement to publish scholarly, peer-reviewed articles was present, respondents showed greater confidence in accomplishing this task. Of respondents who were required to publish ($n = 80$, 32%), 70% ($n = 56$) were confident in their ability to publish scholarly, peer-reviewed articles, while 18% ($n = 15$) were not confident. Of respondents who were *not* required to publish ($n = 170$, 67%), 47% ($n = 80$) were confident in their ability to publish scholarly, peer-reviewed articles, while 35% ($n = 60$) respondents were are not confident.

There were similar levels of confidence in research skills between individuals who held an additional graduate degree and those who did not: 78% ($n = 128$) versus 81% ($n = 74$), respectively (see Table 7 in Appendix C). However, there was a difference in respondents who were confident in their ability to publish scholarly, peer-reviewed publications: 66% who held an additional graduate degree versus 48% who did not (see Table 8 in Appendix C).

Elevated confidence also appeared in respondents who took research methods as a standalone course, or part of another course, during their MLIS program: 83% ($n = 135$) were confident in their research skills. Still, only 57% ($n = 91$) were confident in their ability to publish scholarly, peer-reviewed articles.

Interest in Future Research and Publication

Despite any negative factors or lack of confidence, respondents overwhelmingly indicated their desire to author more publications in the future ($n = 232$, 94%). The top three factors that would help them publish more in the future were (see Figure 3 for others):

1. Dedicated time to conduct research ($n = 199$)

2. Supervisor support ($n = 128$)

3. Collaborator support ($n = 128$)

(Percentages are not included because respondents could select all possible influencing factors.) One of these factors (collaborator support) is in the top three of positive influencing factors, and none is in the top three negative influencing factors.

[Figure 3]

Other Comments

Finally, respondents had the option to share any other comments about research and publication. The 86 responses included several recurring topics, the most common of which were (including selected comments):

●   Time: "Research and scholarship requires a lot of personal initiative. Finding time to stay on track with scholarship projects can be a challenge."

●   Culture at my institution:

○   "i [sic] wish i had more time to research and publish but it's almost impossible to do while working at a community college because it's not built into your workload and into the tenure review process."

○   "When senior managers or department heads view research as coming at the expense of other job duties, it makes it very difficult to do this kind of work. [...] Scholarship and research in ANY discipline makes us better librarians and better able to support our library users in their own work."

●   Support of or collaboration with colleagues:

○ "Most of the publishing I have been able to do in the first few years of my career have been due to veteran librarians (especially those who have already achieved tenure) bringing me into projects and allowing me to collaborate with them on designing, researching, writing, and publishing."

○ "Eager and willing, but extremely limited time/support."

● Quality of LIS literature: "I feel like the LIS literature as a whole is not great, and I am worried that I am contributing to the mediocrity but am not really sure how to change it."

● Views of scholarly publishing: "While the peer-review process of journals is in important one to keep around, it has it's [sic] major problems with access and point of view, especially considering who is profiting and publishing. Until academic libraries are actually divesting from corporations, I will only be doing very intentional and select scholarly publishing."

● Professional development: "I have applied in the past for IRDL (athough [sic] I haven't made the cut yet). I feel like professional development opportunities such as that would be really helpful in allowing me to conduct publishable research."

● Education: "My memory of instruction relating to research when getting my degree was either about helping others to do their research, archiving and providing access to research, or doing little surveys in your own library related to programming, services, etc. There was minimal discussion of doing our own research with the intention of publishing about the greater library field."

● Personal feelings: "It's scary."

Discussion

Survey results provide a wealth of data about early career librarians' engagement with research and publication. This section will focus on early career librarians' perceptions of the profession and their integration into it by considering the implications of the following results: top influencing factors; influencing factors that surfaced or were repeated in comments; and what might affect confidence in research and publication.

Influencing Factors

Factors that positively and negatively influence research and publication offer insight into what would help early career librarians engage in these practices. The top positive influencing factor, the convenience of accessing scholarly resources, could be perplexing from a library standpoint, where librarians presumably can get or know how to obtain resources. One of the authors has personal insight as to why this might be. As a librarian at a community college, she found the lack of ready access to LIS literature and the delay of interlibrary loan to impede her own research. While the majority of respondents indicated access to scholarly resources as a positive influence, respondents could have selected it as positive when lacking access, indicating a wish for access. This may be the case for all of respondents' ratings of influencing factors. Interestingly, two of the three top negative influencing factors (analyzing data and selecting appropriate research method or design) appear in Kennedy and Brancolini's results as the abilities that respondents are least confident in.[26] Overall, none of the influencing factors exist in a vacuum; they are most likely deeply intertwined with one another. An area of future research would be to conduct a more targeted investigation of the practical application of and relationships between these factors.

Dedicated time repeatedly appeared in this study as well as previous studies.[27] It is not surprising that time is considered valuable because librarians of course cannot engage with research and publication without it. However, early career librarians may struggle more to plan for those activities, which are not readily built into schedules. Sassen and Wahl write that, "they may find that they are facing much more work than can fit in a 40-hour workweek."[28] Supervisors and more advanced librarians could consider working with early career librarians to block out time for research and publication, rather than leaving it up to their newer colleagues when they may be uncertain of workplace expectations or norms.

Three personal factors about feelings and lifestyle surfaced when respondents listed additional factors that positively or negatively affect their research and publication. Comments indicated that personal feelings -- presence or absence of self-motivation and overall confidence in one's self -- could either spur or hinder one's research and publication. Several respondents indicate personal life matters as influencing factors,

such as access to child care. These results show that personal factors outside of the library need to be considered in future research on this topic, as well as in academic libraries and professional development opportunities as they seek to support librarians' research and publication.

Especially interesting were reasons not to engage in research and publication. Doubt about the future of librarianship and quality of LIS literature was one concern expressed in comments. The authors recall discussions of the lack of quality of some LIS research during their graduate courses, including research methods. Consequently, librarians as authors have the opportunity to improve LIS literature through their work. This point supports comprehensive coverage of research and publication in MLIS programs to best prepare librarians to conduct rigorous research and compose publications of high quality. Also noted was that uncertainty about career prospects could prompt librarians to not engage in research and publication if it would not be professionally fruitful. Another reason not to engage in these activities was concern about the publishing industry structure. Librarians understand the issues in the traditional publishing model well. However, there are many ways that librarians can engage with research and publication that are outside of this traditional model. These areas are outside the scope of this study.

The finding that collaborator, colleague, supervisor, and mentor support are influencing factors is both unsurprising and extremely important for libraries to consider in supporting early career librarians. These colleagues can provide support to early career librarians in a variety of ways: providing encouragement and inspiration, collaborating on research projects, suggesting research directions, recommending topics, sharing publishing opportunities, offering advice on how to balance research with other job responsibilities, and editing manuscripts.[29] Librarians in libraries with few colleagues have the additional challenge of taking initiative to find collaborators, colleagues, and mentors at other institutions and through professional organizations.

Confidence
Confidence may be subjective, but the nature of research and publication processes could lead to insights into in which parts of those activities early career librarians might need more support, both in their MLIS

programs and academic libraries. The finding of higher confidence in research skills than publication

skills could indicate that research methods, which follow established processes, might be more concrete

and actionable than steps leading to publication (i.e. composing an article, finding a publication venue,

etc.), which require more independent judgement and creativity. Writing can also be intimidating and

cause anxiety.

Given that the MLIS degree is a professional program and terminal degree for most librarians, librarians

may not have the opportunity to gain experience with conducting research in their MLIS program. In

contrast, other disciplines often are focused on research, including writing a thesis or dissertation to earn

master's or doctorate degrees. Even if librarians take a research methods course, it is not the same as

being fully immersed in research, as graduate students in other programs are. This experience gap can

create a disconnect between education in MLIS programs and ability to conduct research as a professional

librarian. This disconnect could lead to lower confidence. Respondents report that more support with

research and publication, both in their degree program and place of employment, is needed.

Furthermore, a research methods course does not imply that graduates are fully prepared to research and

publish. The authors' experiences also support this point; they both took a research methods course but

still felt uncertain when conducting original research the first time. Their one-semester course introduced,

but did not allow time to apply, methods that they might use professionally. Kennedy and Brancolini also

found that participants "believe their LIS master's degree training adequately prepared them to read and

understand research but did not prepare them to conduct it."[30] The ALA's Core Competencies for

Librarianship (2009), which "defines the basic knowledge to be possessed by all persons graduating from

an ALA-accredited master's program in library and information studies," includes "research" in Section

6.[31] An additional advanced research methods course, a course devoted to scholarly publishing, or

opportunity to conduct research, as well as see other research methods in practice, would be a valuable

addition to MLIS curriculum.

Notably, respondents required to publish by their institution expressed more confidence in their ability to

publish scholarly, peer-reviewed articles. It is unclear what characteristics of those participants, such as

education, interests, prior experience, or other preparation, made them more confident. Whether they deliberately sought a position that requires them to publish and if there specific institutional factors (supervisor, mentor, technology resources, etc.) that contribute to their confidence are additional questions. These questions are areas for future research to inform the ways in which students might select courses and jobs based on their professional goals.

Similarly, findings indicated that any type of previous publication could boost the confidence of librarians, which would support respondents' expressed desire to have submitting a piece of professional writing be part of the MLIS curriculum. The act of writing a piece and having it be successfully published could inspire confidence for doing so again.

Limitations

The survey participants were self-selecting so it cannot be determined if the sample is representative of early career librarians. Therefore, these results are not generalizable, and the validity of their survey answers cannot be checked.

While participants rated influencing factors, the results do not include if they currently have them, had utilized them previously, or desire or would appreciate them if they had them. However, confidence (or lack thereof) could be directly tied to past experiences with these factors or the availability of them at the respondent's institution.

Finally, these survey data are a snapshot in time of early career librarians who participated. A future area of study could be a longitudinal study that seeks to understand how their beliefs and opinions about research and publication change over time.

Conclusion

Early career librarians' engagement with research and publication has the opportunity to improve the quality of LIS literature, advance the profession, and sustain LIS research. Education via their MLIS programs, academic libraries, and professional development will support them in contributing to LIS literature and advancing the field of librarianship.

Lifelong learning is an outcome of research and publication and a hallmark of the library profession. Professional organizations, academic libraries, and MLIS programs can all support early career librarians by providing professional development and curricula that reflect the research and publication demands of academic librarianship. Specifically, respondents requested more education opportunities in the area of scholarly publishing, such as an entire course during an MLIS program. Respondents also expressed deeply personal feelings and issues relating the research and publication. Previous publication and mentorship generate confidence in research and publication. There is also a need to more deliberately build in structured time, a valuable commodity, to engage with these processes. Addressing these areas has the potential to contribute to the quality and continuation of research and publication on librarianship.

Acknowledgements

Notes

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FIGURES

FIGURE 1
Requirement to Publish Scholarly, Peer-Reviewed Articles

FIGURE 2
Types of Publications Previously Authored by Respondents

TABLE 4
Ratings for Influencing Factors of Research and Publication

Factor	Strong negative influence	Negative influence	Neutral	Positive influence	Strong positive influence	Not applicable
Presence of supervisor support	1	4	44	95	73	29
Absence of supervisor support	55	62	63	6	0	60
Presence of mentor support	2	3	35	97	55	53
Absence of mentor support	45	71	65	5	0	57

Collaborator support and/or presence	3	7	27	99	90	16
Colleague support and	4	5	46	118	52	18
Dedicated time to conduct research and/or write	11	12	17	67	101	36
Convenience of accessing scholarly resources needed for your research	1	5	21	96	110	8
Access to necessary technology	0	3	25	116	87	12
Culture at my university	11	27	67	96	34	7
Culture at my academic library	16	31	43	89	57	7
Sabbaticals or formal research leaves	6	5	66	42	26	97
Data analysis support	9	19	54	65	46	49
Writing/editing support	7	9	71	89	37	30
IRB training, support, or resources	4	13	72	89	36	28

TABLE 5

Rating of Confidence in Parts of the Research Process

Part of the Research Process	Very Unconfident	Unconfident	Neutral	Confident	Very Confident	Not Applicable
Identifying a problem or a gap in the literature	11	31	37	137	39	0
Forming a hypothesis	2	18	45	144	43	2
Selecting appropriate research method or design	19	63	60	93	19	0
Writing a literature review, including research and synthesis	5	25	22	121	80	0
Writing a research proposal	15	42	61	94	38	4
Following ethical guidelines	12	33	29	106	73	1
Conducting the research	8	35	48	116	47	0
Analyzing data	30	59	51	73	39	2
Writing the publication	20	66	51	80	34	2

FIGURE 3
Ratings of Influencing Factors for Future Publication

APPENDICES

Appendix A. Survey Instrument

Q1 Information Sheet for a Research Study
Publishing Practices of Early Career Librarians

Introduction
You are being asked to be in a research study that is being done by Oakland University and Delta College researchers. This study is being done by Joanna Thielen, Assistant Professor, Oakland University Libraries and Martha Stuit, Reference Librarian, Delta College Library.

This form describes the study and what you will be asked to do. The researcher(s) can answer any questions you may have so you can make an informed decision. You can talk with your friends and family about this research study before making your decision. When your questions have been answered, you can decide if you want to be in this study. This process is called "informed consent." If you decide to participate, your participation will indicate that you have read this information sheet and that you understand what it says. After reading this Information Sheet, if you would like to participate, click the red arrow button at the bottom of this page. You should print this form for your records.

What is the purpose of this study?
The purpose of this research study is to elucidate the factors that influence the publishing practices of early career librarians.

Who can participate in this study?
You are being asked to participate in the study because you are currently working in an academic library and have done so for five years or less after completing graduate school.

Where will this study take place?
This study will take place online.

What do I have to do?
If you are in this research study, you will be asked to complete this online survey.

How long will I be in the study?
This study will take approximately 15 minutes to complete. Participation in this study will not require extra time beyond completing the survey.

Are there any risks to me? Research studies may involve different kinds and levels of risks or discomforts. These could be physical, emotional, social, economic or legal risks. For this study, the potential risks and discomforts that we know about are described below.

Identification of a participant through deductive disclosure: The likelihood of this risk is very low but could be serious. If this type of disclosure occurs, it could be damaging to your reputation. To minimize this risk, survey results will be stored in a password protected storage server and only aggregate data will be shared outside of the research team.

With many research studies, there is a risk of breach of confidentiality. A breach of confidentiality means that it is possible that someone who is not part of this research may accidentally see your personal information. We will try to make sure that this does not happen by keeping your research records as confidential as possible. However, no researcher can guarantee complete confidentiality.

To minimize the risk of a breach of confidentiality, we will not be collecting any direct personally identifiable information. Access to the survey results will be limited to the researchers and research team. We will also use a secure file storage server online and use password protected computers. Please note that Qualtrics (the software used to administer this survey) has specific privacy policies of its own. If you have concerns, you should consult Qualtrics directly at https://www.qualtrics.com/privacy-statement/.

There may also be risks involved from taking part in this study that we do not know about at this time.

Are there any benefits to me?
Although there may be no direct benefits to you, the results of this study may benefit others in the future. What are the alternatives to participation in this study? You may choose not to participate in this study.

How much will it cost me to participate in the study?
There is no cost to you for participating in this study.

Will I receive anything for participating?
You will not receive anything for participating in this study.

Who could see my information?
The researcher/research team will have access to your information. Information about your research participation may be shared with others if required by law (for example, child or elder abuse and/or neglect).

Your research records may be reviewed by the following groups:
● Representatives of the Oakland University Institutional Review Board and/or other regulatory compliance staff, whose job is to protect people who are in research studies.

● Regulatory authorities who oversee research (Office for Human Research Protections, or other federal, state, or international regulatory agencies).

When the results of this research are published or discussed in conferences, no information will be included that personally identifies you.

What are my rights if I participate in this study?
Your decision to participate in this study is voluntary. You do not have to be in this study. There is no penalty or loss of benefits if you don't want to participate or if you stop participating. Your decision will not affect your present or future relationship with Oakland University or Delta College, the researchers, or the Oakland University Libraries. If you are a student or employee at Oakland University or Delta College, your decision about participation will not affect your grades or employment status.

If you want to stop participating, close your browser at any time. If you complete the survey, it will not be possible to stop participating.

Who do I contact if I have questions about this study or my rights as a research participant?
For questions about the study you may contact: Joanna Thielen, jthielen@oakland.edu, 248-370-2477 or Martha Stuit, marthastuit@delta.edu, 989-686-9874.

For questions regarding your rights as a participant in human subject research, you may contact the Oakland University Institutional Review Board, 248-370-4898.
Protocol ID: IRBNet#: 1153646
Consent Version Date: 1/2/2018

Do you currently work in an academic library?
o   Yes
o   No

How many years total have you worked in academic libraries (not including library work as an undergraduate or graduate student)?
o   0-5 years
o   5+ years

Are you currently enrolled in a library and information science Master's program?
o   Yes
o   No

What is your current age?
o   Under 18
o   18 - 24
o   25 - 34
o   35 - 44
o   45 - 54

o   55 - 64
o   65 - 74
o   75 - 84
o   85 or older
o   Prefer not to answer

Do you have an MLIS degree (or equivalent)?
o   Yes
o   No
o   Not completed yet

From which university did you earn your MLIS degree (or equivalent)? [Free text]

Was your MLIS program (or equivalent) online or in person?
o   In person
o   Online
o   A mix of both in person and online

Did your MLIS program (or equivalent) have a standalone course on research methods?
o   Yes, there was a standalone course
o   No, research methods was part of a course or courses, but was not a standalone course
o   No, there was not a standalone course
o   Not sure

In your MLIS program (or equivalent), did you take a course that covered research methods (either as a standalone course or as part of a course)?
o   Yes
o   No
o   Not sure

During your MLIS program (or equivalent), what courses, other than research methods courses, covered the scholarly publishing process? [Free text]

Do you have an additional graduate degree or credentials (other than your MLIS or equivalent)?
o   Yes
o   No

Please describe your additional graduate degree or credentials, including degree obtained (Master's, Ph.D., certificate, etc.) and the subject area/specialization. [Free text]

Please answer the following questions based on the academic library where you are currently employed.

Q14 In which state are you currently employed? If outside of the United States, select 'Other'. [Drop down menu]

What Carnegie Classification does your current institution hold? (You can look up your institution on this webpage: http://carnegieclassifications.iu.edu/lookup/lookup.php).
o   Doctoral
o   Master's
o   Baccalaureate
o   Associate's
o   Tribal

What is your status at your institution?
o   Faculty (tenure-track or non-tenure track)
o   Staff
o   Other _____

What is your current position title? [Free text]

Is your current position full time or part time?
o   Full time (greater than or equal to 30 hours per week)
o   Part time (less than 30 hours per week)

Research is a vital part of the process for publishing scholarly, peer-reviewed articles. Please answer the following questions about your research skills and the scholarly publishing process.

I feel confident in my research skills.
o   Strongly agree
o   Somewhat agree
o   Neutral
o   Somewhat disagree
o   Strongly disagree
o   Not applicable

I feel confident in my ability to publish scholarly, peer-reviewed publications.
o   Strongly agree
o   Somewhat agree
o   Neutral
o   Somewhat disagree
o   Strongly disagree
o   Not applicable

How do you rank your confidence in these parts of the research and scholarly publishing process?

	Very unconfident	Unconfident	Neutral	Confident	Very confident	Not applicable
Identifying a problem or a gap in the literature						
Forming a hypothesis						
Selecting appropriate research method or design (e.g. survey techniques, case studies, mixed methods, etc.)						
Writing a literature review, including research and synthesis						
Writing a research proposal						

Following ethical guidelines (Institutional Review Board (IRB), informed consent, etc.)					
Conducting the research					
Analyzing data					
Writing the publication (finding a publication venue, querying an editor, copyright, etc.)					

Have you previously been published as an author?

o   Yes
o   No

What type of work have you published? Select all that apply.
▫   Peer-reviewed article
▫   Professional article (not peer-reviewed)
▫   Blog post on a professional blog (yours or that of a professional organization/publication)
▫   Professional newsletter
▫   Book chapter
▫   Book
▫   Conference proceeding or paper
▫   Bibliography
▫   Reviews (of books, technology, media, etc.)
▫   Editorial
▫   Other _____

For your current position, are you required to publish scholarly, peer-reviewed articles?

o   Yes
o   No
o   Not sure

At your current institution, are scholarly, peer-reviewed articles considered for promotion?
o   Yes
o   No
o   Not sure

How do the following factors influence your publishing practices?

	Strong negative influence	Negative influence	Neutral	Positive influence	Strong positive influence	Not applicable
Presence of supervisor support						
Absence of supervisor support						
Presence of mentor support (at your institution or professional organization)						
Absence of mentor support (at your institution or professional organization)						
Collaborator support and/or presence (at same or different institution)						

Colleague (outside the research project) support and/or presence (at same or different institution)					
Dedicated time to conduct research and/or write					
Convenience of accessing scholarly resources needed for your research					
Access to necessary technology					
Culture at my university					
Culture at my academic library					
Sabbaticals or formal research leaves					
Data analysis support					
Writing/editing support (either through colleagues, writing group with peers in your library, or a university service					

such as a Writing Center)					
IRB training, support, or resources					

Are there any other factors that influence your publishing? If so, please explain below. [Free text]

In the future, would you like to author more publications?
o   Yes
o   No
o   Not sure

In the future, which factors would help you to publish more? Select all that apply.
▢   Supervisor support
▢   Mentor support
▢   Collaborator support
▢   Colleague support
▢   Dedicated time to conduct research and/or write
▢   Convenience of accessing scholarly resources needed for your research
▢   Access to necessary technology
▢   Culture at my university
▢   Culture at my academic library
▢   Sabbaticals or formal research leaves
▢   Data analysis support
▢   Writing/editing support (either through colleagues, writing group with peers, or a university service such as a Writing Center)
▢   IRB training, support, or resources

What do you think LIS programs should teach students about publishing? [Free text]

Please share any other comments about your research and publishing activities. [Free text]

Appendix B. Survey Recruitment Email

Subject of email: Invitation to participate in a research study: Publishing Practices of Early Career Librarians

Body of email:
** Apologies for cross postings **

Research Project Title: Publishing Practices of Early Career Librarians

While the publishing practices of academic librarians as a whole have been studied for many years, we seek to understand the factors that affect the publishing practices of early career librarians via an online survey. This project has been approved by Oakland University's Institutional Review Board (Project # 1153646).

To participate in this survey, you must:
● Currently work in an academic library (full time or part time)
● Have worked in an academic library for five years or less after graduate school
An MLS/MLIS/MSI degree is not required to participate in this survey, but current library school students are not eligible to participate. Please consider forwarding this survey to early career librarians at your institution.

This survey should take approximately 15 minutes. Participation in this survey is voluntary. Participants may opt out at any time. All survey responses are anonymous.

The survey can be accessed via this URL:
https://oakland.az1.qualtrics.com/jfe/form/SV_exPcx3IhAuYgXYx

If you have any questions about this survey or your rights as a participant, please contact the researchers, Joanna Thielen (jthielen@oakland.edu, 248-370-2477) or Martha Stuit (marthastuit@delta.edu, 989-686-9874).

Appendix C. Additional Tables

TABLE 1
Respondents' Job Title Categories

Job Title Category	# of responses	Percent
Access Services	4	2%
Administrative position	5	2%
Archives	3	1%
Collections	9	4%
Digital Services	16	6%
Faculty Services	2	1%
Instruction	74	30%

Information Technology	2	1%
Outreach and User Interaction	14	6%
Reference	34	14%
Subject or Liaison	40	16%
Technical Services	9	4%
Undergraduate-focused	6	2%
Other	30	12%
Total	248	100%

TABLE 2
Respondents' MLIS Program Institution

Institution Name	# of responses
Catholic University of America	2
Clarion University of Pennsylvania	4
Dominican University	5
Drexel University	4
Emporia State University	2
Florida State University	8
Indiana University Bloomington	8
Indiana University Purdue University Indianapolis	2
Kent State University	5
Long Island University	5
Louisiana State University	7
McGill University	2

North Carolina Central University	2
University of North Texas	11
Pratt Institute	4
Queens College of the City University of New York	4
Rutgers University	10
San Jose State University	17
Simmons College	13
St Catherine University	2
SUNY Buffalo	5
Syracuse University	3
Texas Woman's University	5
University of Alabama	4
University of Arizona	3
University of Western Ontario	2
University of British Columbia	3
University of California Los Angeles	4
University of Illinois Urbana Champaign	23
University of Maryland	7
University of North Carolina Chapel Hill	10
University of North Carolina Greensboro	3
University of Alberta	1
University of Denver	3
University of Hawai'i at Manoa	2
University of Iowa	1

University of Kentucky	2
University of Michigan	5
University of Missouri	1
University of Pittsburgh	3
University of Rhode Island	3
University of South Florida	5
University of Southern Mississippi	1
University of Texas at Austin	1
University of Washington	11
University of Wisconsin Milwaukee	5
University of Wisconsin Madison	2
Valdosta State University	3
Wayne State University	7
Western University	2

TABLE 3

Courses Covering Research Methods

Name of Course	# of responses
Academic Libraries	21
Scholarly Communication	14
Reference	10
Introduction to Libraries	6
Collection Development	5

Legal Issues	4
Independent Study	3
Information Seeking Behavior	3
Instruction/Information Literacy	2
Assessment	1
Children and Young Adult Media	1
Digital Humanities	1
Government Documents	1
Research Data Management	1
Social Science Librarianship	1
Science Librarianship	1

TABLE 6
Type of Previous Publication and Confidence in Ability to Publish Scholarly, Peer-Reviewed

Articles

Type of Publication that Respondents have Previously Published	I feel confident in my ability to publish scholarly, peer-reviewed articles (strongly agree + agree)	I feel confident in my ability to publish scholarly, peer-reviewed articles (strongly disagree + disagree)
Peer-reviewed article	78%	15%
Book chapter	75%	16%
Professional article	70%	23%
Blog post, professional	72%	25%
Conference proceeding or paper	74%	17%

Reviews	67%	27%
Professional newsletter	58%	29%
Bibliography	67%	11%
Book	100%	0%
Editorial	100%	0%

TABLE 7

Additional Graduate Degree and Confidence in Research Skills

	I feel confident in my research skills.					
Do you have an additional graduate degree or credential (other than your MLIS or equivalent)?	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree	Not applicable
Yes ($n = 91$)	1%	8%	10%	54%	27%	0%
No ($n = 164$)	2%	9%	10%	50%	28%	1%

TABLE 8

Additional Graduate Degree and Confidence in Ability to Publish Scholarly, Peer-Reviewed Articles

	I feel confident in my ability to publish scholarly, peer-reviewed articles.

Do you have an additional graduate degree or credential (other than your MLIS or equivalent)?	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree	Not applicable
Yes (*n* = 91)	9%	14%	11%	44%	22%	0%
No (*n* = 162)	9%	25%	17%	41%	7%	1%