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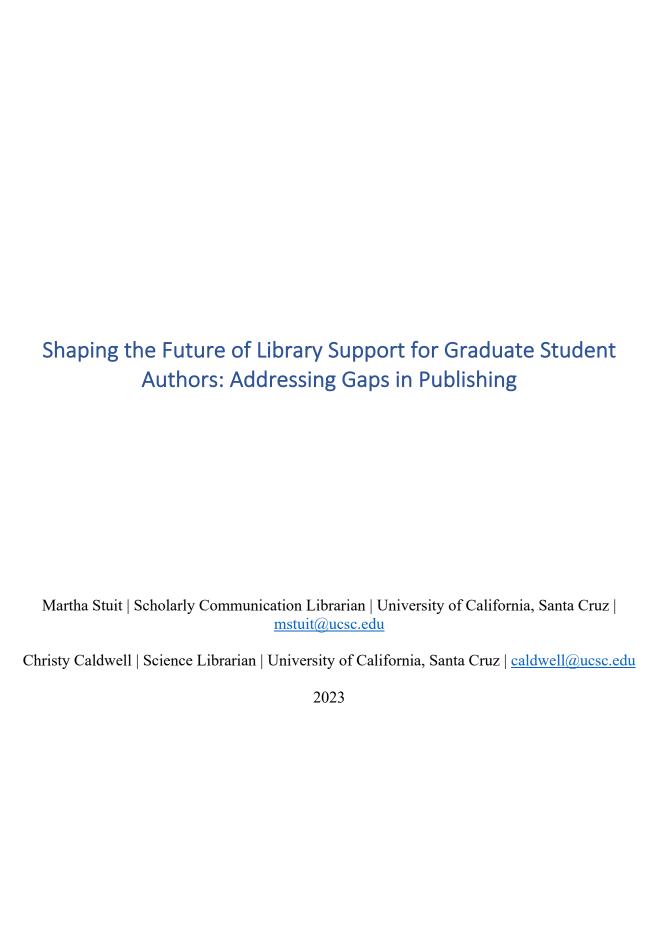
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Publication Date

2023-03-13

Copyright Information

Peer reviewed

Shaping the Future of Library Support for Graduate Student Authors: Addressing Gaps in Publishing

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2023

Abstract

Graduate students report many barriers and challenges to publishing in an increasingly competitive environment. They also face a hidden curriculum around publishing practices, which can disproportionately disadvantage first generation students. In this paper, we present preliminary results from a subset of our one-on-one, peer-to-peer interviews with graduate students representing disciplines across campus. We conducted applied thematic analysis by coding interview transcripts and identifying major themes. We will share what we have learned focusing on what topics libraries can teach that will best guide students in their publishing efforts.

Introduction

Graduate students face an uphill journey in learning how to publish – and getting published – during their graduate programs, and even more so for first generation students. BIPOC authors face further obstacles around representation, diversity, and equity. Faculty advisors mentor students on publishing, but inconsistencies among advisors and disciplines exist. Academic libraries may provide instruction on publishing, often in the form of standalone workshops. The lack of a consistent, scaffolded onboarding to publishing does not set graduate students up for success. Literature has long called for professionalization for graduate students, which encompasses publishing, but there is little clarity on what to teach about publishing. Literature contains many recommendations and case studies for interventions but few research-based findings on what gaps that content would fill. In other words, literature says little on how librarians decide what to cover about publishing beyond the need for support and what others previously covered. We wanted to learn about the mentoring and support, or lack thereof, that graduate students receive around publishing, especially from their advisor, to identify gaps and inform library strategies on contributing to students' success in publishing.

This contributed paper reports four topics about publishing that we would prioritize covering in a workshop with graduate students based on preliminary findings from a subset of our interviews. We define publishing as the point after writing when authors have manuscripts ready to submit and onward. Our focus is on journal articles as the more likely output with which graduate students engage. Our interviewees are PhD students or those pursuing a terminal degree.

Literature Review

The literature agrees that graduate students need professionalization alongside their research and teaching in graduate school to be successful and prepare for their careers.[1] Specifically, guidance on publishing is needed to acculturate graduate students to the publishing landscape and decisions they will make as the next generation of authors, such as whether to publish open access, which shapes the publishing ecosystem.[2] Horta & Santos' study reveals that publishing during the PhD results in more productivity, citations, autonomy, and international collaboration in their career.[3]

Importance of DEIA

Professionalization, mentoring, and library instruction need to address diversity, equity, inclusion, and accessibility (DEIA) in scholarly publishing.[4] While publishing already has many hurdles and opaque processes, BIPOC authors furthermore encounter a lack of representation in their fields,[5] lack of diversity in editorial boards and peer reviewer pools,[6] inequitable systems that are not inclusive,[7] and hidden rules in graduate school such as how to manage the workload.[8] The Coalition for Diversity & Inclusion in Scholarly Communication (C4DISC) advocates for diversity in scholarly communication to bring "a wide range of skill sets and viewpoints."[9] Gelfand & Palmer call for incorporating scholarly communication into information literacy instruction to prepare graduate students to navigate the global audience and reach of scholarly communication and open access.[10] Roh advocates for systematic changes to include marginalized voices and for scholarly communication education addressing economics and diversity, including an example of a brown bag for early career scholars in underrepresented groups.[11]

What Needs Surveys Have Unearthed

Some surveys gauge overall professionalization needs, such as Fong et al.'s study of topics for workshops that graduate students would attend[12] and Owens & Manolovitz's study on baseline knowledge and interest in scholarly communication topics.[13] Both of those examples find that scholars highly rank their interest in learning about publishing but only describe publishing in general terms among other scholarly communication and research topics. Such surveys also inquire about training preferences, including format, time, and promotional methods.[14]

Models for Learning Publishing

Articles discuss ways to address the need for publishing training and often focus on both writing and publishing via courses, journal involvement, writing groups, or rather ad hoc mentoring. Regarding courses or instruction, Mullen proposes a curricular writing model largely about writing but with a mention of journal selection and review that counsels students to revise their work to best position it for acceptance.[15] Belcher's 12-week course guides students up to submission.[16] Costello et al.'s course-integrated publishing necessitates student involvement beyond course owing to the long time it takes to publish.[17] Wells & Söderlund find a need for "explicit instruction in how to review and be reviewed."[18] Another immersive way to learn publishing is via student-run journals that provide graduate students with peer review and editorial experience, as well as mentoring, with many examples such as Arsenault et al.,[19] Otero et al.,[20] and Visek.[21] Regarding writing groups, Gannon-Leary & Bent recommend a community of writers to address isolation.[22] Bridging writing groups and mentoring, Lee & Kamler encourage a less sporadic approach to pedagogy on writing and publishing via case studies, one of which describes the outcomes of participating in a writing group and the other of which depicts the support of close mentoring throughout peer review.[23] Perini & Calcagno represent a mentoring relationship between librarians and graduate students for publishing and presenting.[24]

Faculty Advisors

Faculty advisors may guide students on publishing, but their mentoring is perceived as occurring but inconsistent.[25] O'Hara et al. find that, for faculty advisors to advise students on publishing, the perennial issue is time, as well as their invisible and unrewarded labor.[26]

Inversely, a one-time discussion is not sufficient to help graduate students become new authors, and mentoring needs to occur from composition to dissemination.[27] Belcher observes that faculty mentoring about some topics in publishing may be infrequent, and "Some professors seem actively invested in mystifying the whole experience."[28]

What Students Are Told — Or Not Told

Libraries engage with guiding faculty and graduate students in publishing, which can help faculty with this need. While libraries are a natural partner for faculty in supporting student publishing, O'Hara et al.'s recommendations for publishing support – one-on-one mentoring, inclusion in the curriculum, or interdisciplinary workshops on publishing – do not mention the library, which raises questions on whether and how much faculty or students turn to the library for publishing support.[29] Since Buehler & Zald note that, "Librarians need to complement, not intervene, where there are productive mentor-protégé relationships among faculty and students,"[30] a clearer understanding of what faculty communicate and what students understand about publishing is needed to develop effective strategies for support.

Library Publishing Literacy Instruction

Librarians have responded to the need for publishing professionalization for graduate student by developing instruction on the publishing process and scholarly communication issues.[31] As Buehler & Zald diagnoses the "unevenness of faculty mentoring in this arena"[32] and the students' gap in knowledge,[33] the literature identifies an opening for information literacy instruction on publishing from librarians,[34] which could be discipline-specific or interdisciplinary.[35] The Association of College & Research Libraries (ACRL) *Framework for Information Literacy for Higher Education* also connects to publishing topics.[36] Library approaches to teach publishing include Alvarez et al.'s "Publish, not Perish" workshop series,[37] Buehler & Zald's "Scholarship of Writing" one and a half hour seminar,[38] Craft & Harlow's "Share Your Scholarship, Raise Your Scholarly Profile" multiple hybrid recorded modules and LibGuide,[39] Fong's "Boot Camps for Graduate Student Success" with one on writing and publishing skills,[40] Grote et al.'s "Publishing Academy" with five sessions in five weeks,[41] Hurrell et al.'s "Academic Publishing Demystified" LibGuide with videos,[42] McClellan et al.'s five-session semester-long "Publishing Academy,"[43] Knievel's "Publish Not Perish: The Art and Craft of Publishing in Scholarly Journals" online tutorial,[44] and Schultz et al.'s day-long "Manuscript Accepted!" set of panels and workshops.[45] Most commonly, these case studies covered the following topics to varying depths and not necessarily in every aforementioned program: open access, choosing a journal, peer review, copyright and permissions, research metrics, dissertation publishing as it relates to articles and/or books, and time management. Less commonly mentioned topics taught, often with few details provided, were: diversity, equity, and inclusion issues in scholarly publishing,[46] mental health,[47] types of publications,[48] what to expect in publishing,[49] research agendas,[50] publishing plans,[51] and co-authors.[52] The aforementioned case studies have interdisciplinary attendance, with the exception of Alvarez et al. that offered introductory workshops in the series specifically for the broad areas of humanities, social sciences, and science.[53] These case studies review the literature but do not discuss in depth how they decide what to cover or base content on research on publishing, though Hurrell et al.'s focus groups consider what is difficult to learn and teach about publishing and what gaps remain.[54]

Methods

This paper reports the findings of a preliminary analysis of a subset of graduate student interviews. These student interviews are the second phase of an exploratory sequential mixed methods study that also includes the first phase of faculty interviews and the upcoming third phase of a survey. We chose this method so that the qualitative interviews may inform the survey instrument(s) that will help identify needs and disciplinary differences quantitatively.[55] Research questions informing this study are:

- What publishing topics do faculty guide graduate students on within and across disciplines?
- What questions about and/or needs in the publishing process do graduate students express?
- What are the gaps between faculty mentorship and graduate students' needs in the publishing process?

The interview phases are certified as exempt from review by the University of California, Santa Cruz (UCSC) Institutional Review Board (HS-FY2021-21).

Interview Team

Graduate student assistants on the research team conducted the interviews of graduate students at UCSC. One-on-one, peer-to-peer conversations reduced possible power dynamics and created space for candid discussions. The assistants interviewed students within their own division/school (Engineering, Physical and Biological Sciences, and Social Sciences), with one student covering two divisions (Arts and Humanities). The researchers trained the assistants on publishing and interview protocol in April 2022. The assistants conducted interviews from May to July 2022.

Interview Protocol Design

Topics covered by our semi-structured interviews were: publishing experiences, disciplinary norms, open access, advisor support and advice, other resources for help, journal selection, publishing challenges, and what would help students publish. Initial questions varied based on whether the student was already published or planned to publish. The interview protocol is included as Appendix A.

Prior to interviews, participants signed informed consent forms via DocuSign. The informed consent form is included as Appendix B. The interviews were conducted virtually using Zoom, which automatically transferred the recording to Yuja for transcription. DocuSign, Zoom, and Yuja were institutional subscriptions. The interviewer verbalized and also shared the questions with the interviewee via a view-only Google Document. Interviews ranged from 13 to 34 minutes with an average length of 21 and a half minutes.

Following the interviews, the auto-generated transcripts required clean up before data analysis. Since the student employees conducted the interviews, they did a preliminary sweep of the transcripts to differentiate who was speaking and fix transcription errors. The researchers also went over the transcripts to further improve incorrect words and punctuation for clarity.

Study Recruitment

Participants were recruited by email and expressed interest in participating via a form. We used purposive sampling with a total target sample size of five to 10 interviewees per division. Inclusion criteria consisted of prioritizing graduate students in PhD or terminal degree programs as they are more likely to publish than master's students. Students were in any year of their program and must have been published or planning to publish during their graduate career.

Sample

The following preliminary results contain findings from a subset of 20 graduate student interviews out of 32 total. We selected this number to exceed Guest et al.'s rule of thumb for 12 interviews to "understand common perceptions and experiences."[56] Within this subset, there are four interviews per each of the five divisions at UCSC, and the interviews are in unique departments. Still, until we analyze the full dataset, we are not as confident in understanding our findings as they differ by division as we are with them as a whole, and we will investigate further when we analyze all interviews.

Data Analysis

The authors conducted applied thematic analysis by applying codes to the interview transcripts using MaxQDA and identifying major themes in the data. We created deductive codes for characteristics that we expected to see (e.g., whether the student had been published) or thought we might see (e.g., peer review comments). Then we added codes inductively while analyzing the transcripts. We developed a shared codebook with codes and code definitions for consistency.[57]

Findings

These findings are from a sample of our peer-to-peer graduate student interview transcripts. Therefore they are more narrowly focused to provide evidence for our publishing topics discussed in the next section. In this sample, 12 students published previously, three had papers in process, and five interviewees had not yet published.

Student Ideas for Publishing Support

The students shared what would help them get their next article published. Thirty percent of the interviewees suggested providing a list of journals that would either be a good publishing target for their discipline or were common journals for publishing in their department. A second idea that surfaced was a strong desire to get advice about publishing from experts other than their advisor and committee. They asked for more editing support, and opportunities to discuss the logistical side of the publication process, such as open access options. As one student explained, "…the hardest part is getting someone to give you feedback that's not your advisor." The third recommendation had to do with resources: reading a book on publishing by Wendy Belcher, taking a class that might culminate in a publishable paper, and getting help distinguishing between writing for courses versus for publication. Fourth, students expressed the need for help knowing when a paper is ready to submit. Two students talked about submission in terms of avoiding perfectionism. One mentioned that they were never sure when they had done enough work for the literature review, while another student spoke of a peer who submitted essentially rough drafts as a publishing tactic. One student experienced a meeting held by the organizers for

a special issue of a journal where they covered how to format an argument. Another said they discovered how important writing cover letters or pre-submission inquiries to editors are when submitting manuscripts, and they wanted a way to uncover these secret steps sooner.

General Feelings about Learning to Publish

Almost half the students expressed strong feelings about the steps in publishing and how many of them were unexpected. Students voiced frustrations with the time and labor it takes to learn how to publish, and to publish in general, plus the challenge of balancing the time it takes amidst research and teaching. There were concerns around having the confidence to publish, finding allies or support, and being scooped. At least two students described it as managing their own expectations around the quality of the papers and submitting a paper before it is perfect. One student noted that it takes their entire graduate career to learn to publish, just when their funding ends, saying, "But there's not a lot of financial support while we're actually trying to wrap things up. Which is interesting … this is the time that we start to publish."

Publishing Expectations

Many interesting findings were statements volunteered by interviewees without being directly asked. One of these was the interviewees' perception of publishing expectations by their departments or advisors. Out of our 20-interview sample, 14 students thought their advisors' or departments' publishing expectations were unclear. Two students thought they were somewhat clear, although one used the word "unspoken" to describe that their department did not note a publishing expectation in the graduation requirements. Only four students thought the publishing expected of them was clearly communicated.

Journal Selection

Out of the 59 transcript segments coded for journal selection, there were few criteria that students employed to know where to publish their work. Most students relied overwhelmingly on where the papers they read were published. Almost half mentioned journal prestige, but we suspect students were socialized by advisors and mentors to know which journals are prestigious. No one mentioned journal metrics. Students described their efforts to identify journals as the "single biggest challenge" and their methods as "throwing darts." Selecting a journal appears to be a learning-by-doing exercise, but in publishing, that can take many years which can be costly in an academic career.

Rejections

Half of the sample transcripts mentioned article rejection from a journal, whether a desk rejection or from peer review. Interviewees discussed rejections in strong emotional terms. One used the word "devastated" to describe the feeling of getting a paper rejected. When it happened with what one student thought was an especially strong paper, the emotions were intense. Others talked about lowered self-esteem and feeling like an imposter. Some interviewees thought they had learned valuable lessons from article rejections. A few said that the journal editors made suggestions to them for other publishing venues or changes to the paper that made it stronger for the next submission. Another said that with improvements to the paper, it could be published in a higher-tier journal than had originally rejected it. One student with publishing experience offered the following sage advice: "[Accept] that your paper is flawed. It probably isn't amazing.

Amazing things are rare. And then just submitting it anyway, even though you know it might get rejected."

Open Access

Three of the students interviewed indicated that publishing open access in a journal was very important to them, with one person describing their open access views as "militant". The other 17 transcripts noted their preferences for open access publishing, but expressed that preference among other criteria they use to choose where to publish.

The problem of paying for open access fees was mentioned by a third of our sample interviewees. The language used when describing the need for open access funding indicated that they consider the costs exorbitant and do not know where the funding might come from if not from their advisor or collaborators, however only two of 20 transcripts reported that their advisor or collaborator paid an open access fee. One student summed up the challenge: "I didn't expect [money to be an issue] the first time that I was publishing. It's a little ridiculous actually, because especially here in the UC system, we can barely afford to live and to pay rent. And so now we're also expected to pay thousands of dollars to publish."

Misconceptions about Open Access

The transcripts revealed a lack of understanding about open access details, such as the difference between open access journals versus hybrid journals (one student asked "most journals aren't open access, right?"), being asked to choose a Creative Commons license, and an unawareness of university green open access policies and transformative agreements. These issues caused students to make potentially erroneous decisions about journal selection. At least one student did not know some costs can be covered, preemptively eliminating journals from consideration, perhaps needlessly.

Economics of Publishing

Related to funding for open access, a quarter of our sample mentioned issues of the unpaid labor of editors, peer reviewers, and authors; the costs of open access and other publishing charges; and the sometimes high publisher profits. Students with more publishing experience reflected on the publishing industry, noting that there is more to the process than just writing an article and expressing a desire for more transparency in the process around unpaid labor and economics. They described the culture as one where the authors are at the mercy of a publishing machine, with one student stating, "They're taking advantage of the scientific community and … the academic culture as well, which is publish or perish."

Preprint Publishing

While all students had some awareness of open access journals, this awareness was much lower for preprint platforms, and there was no uniform opinion on them. Some were hesitant to post preprints due to perceived quality issues of preprints or fear of being scooped. Others regularly posted preprints, with one student wondering, "I know that one of our journals that we published in we paid, like, an open access fee, which I thought was kind of strange, like, why would I have an open access fee? I'm just gonna give someone an arXiv link if they want to see the paper."

Perceived Support from Advisors

Grad students reported that they receive a range of support for publishing from advisors. Three quarters of our sample said they feel supported by advisors and seek their assistance. The areas of assistance that came up the most for students included help with editing manuscripts, composing responses to peer reviewers, selecting a journal, and forwarding calls for proposals. None of the students reported conversations about copyright with their advisors. About 30% of interviewees shared that they had received extra assistance due to the professional relationships of their advisors, including knowing the editors, knowing inside information about the publisher, or holding editorial positions and recruiting the students to be peer reviewers.

However, that leaves a quarter of interviewees that said they feel unsupported with publishing by their advisors and/or departments. Reasons for this provided by the interviewees included having different areas of expertise from their advisors and/or publishing not being emphasized, such as for MFA students who are often project- or capstone-based rather than writing, but may have personal goals about publishing.

Discussion

Workshop Topics to Cover

Our findings surfaced graduate students' needs for publishing guidance based on their publishing experiences and advisors' support. Given that this paper is a preliminary analysis of a subset of our student interviews, we are focusing on the most actionable point, which is: if we were to teach a workshop on publishing to graduate students informed by this research, what would we cover?

We envision the following four topics to cover with graduate students as being taught earlier on in their programs. Delivered earlier, guidance on major issues and what to expect going into publishing will help alleviate some of the labor to learn how to publish and shed light on the historically learn-as-you-go process that we heard about from students. This lack of clarity and structure around learning to publish overburdens students amidst their already laborious research, teaching, and personal load. Our data show that students better understand publishing and are poised to grow as authors at the end of their programs, but they do not have a chance to practice what they stumbled through learning about publishing while still in graduate school. Graduate students need an onramp so that they know what to expect in the process and can use graduate school as a runway to practice publishing. Yet, there is a lack of a coherent onboarding to the publishing process, and each student has a different experience owing to variations among advisors, departments, disciplines, publication timelines, or other factors. Any graduate student could come to this publishing workshop, but recruiting attendees who are earlier in their programs is important for making their upcoming publishing activities more transparent to them. Teaching these topics as a one-shot workshop does not address the lack of scaffolding on publishing but does address the topics on which we heard students most need support.

Teaching these topics also positions the library as a resource on publishing. Students then know they can turn to the library for author services to answer questions and talk through

individual circumstances. Services may include open access, copyright, and more depending on the library's service model.

Furthermore, the extreme emotions surfaced in our interviews also indicate the need for better preparation for publishing. When we know that publishing will be a part of their work while in graduate school, universities and libraries have a responsibility to provide guidance and address pain points in publishing. While students bring their own skills and experience to their publishing endeavors, our data revealing that students did not know about certain publishing steps beforehand and felt discouraged by parts of the process led us to these four topics to prioritize.

What is the best way to guide students on publishing? We chose to describe our recommendations in terms of topics to teach in a workshop as a tangible takeaway, though workshops may or may not be the best way to reach students. Our experience is that a small percentage of graduate students register, and we are lucky if half of the registrants attend the workshop. Recording such a workshop for later viewing is not conducive to open discussion. Yet, the students who do attend workshops tend to be interested and ask questions, as in our sample of only 20, students mentioned unprompted that they found library workshops helpful and returned for help from librarians. These publishing topics could also be covered in other methods, such as embedded in divisional or departmental support.

We believe that the large majority of graduate students need guidance on publishing, ideally in a transparent and scaffolded way. We present the following four topics in ways that build on each other and can be used in a variety of instructional methods. For the most part, we are not discussing how to teach these topics but rather what to cover. For each topic, we offer a learning outcome and connection to the *Framework for Information Literacy for Higher Education.*[58]

Publishing Strategy

Since graduate students have been learning publishing as they go and encountering emotional setbacks, introducing them to developing a publishing strategy will equip them to plan their efforts and needs during their programs and perhaps beyond. Considering that the publishing process takes a long time for multiple reasons, mapping out their goals and the general steps to achieve them will help aspiring authors plan an intentional, individual path to publishing.

The goal of covering this topic is to introduce the idea of creating a publishing strategy that can be adjusted as they go but has intentionality. We would ask questions, such as "In the next few years as a graduate student, which parts of your research/scholarship might you publish as papers?" "When do you intend/need/want to publish each output?" "Where will you publish articles?" and "What are your second and third choice journals?" Leading with this topic encourages students to map out and consider how long it might take to publish an article, how to regroup when something goes awry, what is next for them, and what they want to achieve, while also laying the foundation for the subsequent three topics. A publishing strategy would take some of the uncertainty out of the process. Also, this topic attunes students to thinking like a faculty member who has multiple articles in the pipeline at once and is considering what the best

home to publish them is. The goal of this exercise is not to add one more thing to the graduate students' plates but rather to offer a way to structure and make the most of their publishing experience during their graduate student career and alongside their other responsibilities. Furthermore, developing a publishing strategy could perhaps also address perfectionistic tendencies or uncertainty when an article is ready to be published that we heard from students because graduate students would set their plan and target milestones, whether that is aiming for a particular journal, conference, or deadline, while also reassessing where they are as they go along. Finally, we see this topic as an antidote to our data that show students want a list of journals for where to publish in their field. A list of journals does not teach students to evaluate whether a publication venue reaches the desired audience or deals with relevant subject matter for their work. Guiding students through developing a publication strategy, however, would pinpoint the need to choose a publication venue and ask students to think about when and how they would do so. While budding authors may be uncertain about their publishing strategy, we would guide students through considerations and factors without pressure to have all the answers immediately.

Our learning outcome for "Publishing Strategy" is that students will be able to create and apply a publishing strategy to their publishing endeavors. This topic aligns with the "Information Creation as a Process" frame of the *Framework for Information Literacy for Higher Education*.

Rejection

Starting to think about a publishing strategy raises the issue of the wrench in the publishing gears for authors: rejection. While rejection is a common outcome in attempting to get published for any author, the emotions that come with it are brutal. The library can help better prepare students for this possibility by covering rejection, the points in the process when it can happen, and a discussion of ways to regroup. Alongside this topic of rejection, we would cover addressing harsh peer reviewer comments, handling outcomes like revise and resubmit, receiving contradictory feedback, and communicating with the editor. Discussing the agency that authors have in the process, such as deciding how to respond to the peer review feedback and using the process to strengthen their scholarship where possible, would also be valuable. The goal in covering this topic is to show how rejection is a common, expected occurrence and discuss ways that students can take it in stride. While the language around rejection and peer review sound negative, students would go into the publishing process knowing that it could happen and having options for responding. We would also use this topic as an opportunity to talk about what happens at the steps of the publishing process (e.g., signing the contract, copyediting/typesetting, deciding about open access, etc.). In light of the first publishing topic, we would suggest that rejection is a time to revisit their publishing strategy, too.

Our learning outcome about "Rejection" is that students will be able to weigh how to respond to publication decisions and consider how to use what they learn from peer review and rejection to grow as an author. This topic aligns with the "Authority Is Constructed and Contextual" frame of the *Framework for Information Literacy for Higher Education*.

Cost

With students' viewpoint that publishing is an expensive endeavor and their misconceptions around open access, we would address cost. Given that students talked about this

issue in terms of "cost," "funds," "money," "pay," and "financial support" – *not* open access – we would call this topic or section of the workshop one of those terms to catch students' eye and use their language as a way to cover open access. Students need to know what options and resources exist for paying the open access fees early on, ideally before publishing, so that they can go into publishing able to make informed decisions about open access options available to them. Admittedly, the open access landscape – publishers, repositories, resources, and support mechanisms – varies greatly, making it a confusing arena to navigate while also learning the publishing process and doing the labor alongside other demands. Further, options to cover the costs, such as transformative agreements and discounts, differ in their terms, so students need to know where to find information and how to get clarification. We would cover how publication costs work, when and why publishing costs are charged, and what open access funding is available at our institution. The goal is that having the information about what costs are or are not covered would help students make publishing decisions and also would inform their publishing strategy. Additionally, we would give guidelines about identifying predatory journals that promise quick publication for a fee. An accelerated publishing timeline may be alluring in the long game of scholarly publishing, especially after having discussed the long trajectory of article publishing as it relates to publishing strategy, but it is not worth having an article appear in a predatory, less reputable venue. Cost is also an opportunity to talk about the larger economics of publishing beyond individual articles. By guiding students to develop a nuanced understanding of publishing costs, we hope that misconceptions perpetuated by faculty or others can be ameliorated.

Our learning outcome on "Cost" is that students will be able to remember how to find what support there is for publishing costs and consider it in deciding how to publish. This topic aligns with the "Information Has Value" frame of the *Framework for Information Literacy for Higher Education*.

What to Talk about with an Advisor

The mentoring relationship between students and advisors does not have a roadmap. We would cover how students can be proactive and intentional in discussing publishing topics with their advisor, which is hard to do when you are new to publishing and do not know what you do not know. Plus, some disciplines publish more in graduate school, so the topic comes up naturally, while other disciplines may not focus on publishing and miss out on crucial onboarding with a faculty advisor. Advisors have firsthand knowledge of publishing in the same discipline (to varying degrees depending on how closely aligned their work is with that of their students) but limited time and bandwidth, yet students wanted more time with them. Our suggestions of what to ask their advisor would help the pairs use their time effectively and efficiently. We would provide suggestions for areas that are within a faculty advisor's wheelhouse in contrast to other resources like the library and librarians. Advisors have expertise in discipline-specific areas like writing style and editing, in what journals to read and/or publish in, in writing a cover letter to submit an article, and more. Students can leverage this relationship as part of their publishing strategy and initiate discussions with their advisor about:
- writing and editing help, including determining when an article is ready to send to a journal for review,
- authorship decisions,
- where to publish, including help with cover letters and pre-submission inquiries, and

- how to respond to peer review comments, including deciding which feedback to follow.

There is overlap in this list in topics that the advisor and library or other resources may cover, but each may offer unique or disciplinary-specific points. Plus, it is better to overlap support than for them to not hear about it at all. Areas that are best paired with both the advisors' and library's help are journal selection and open access because advisors will have disciplinary expertise, while the library can discuss journal credibility and dispel misconceptions around open access. Copyright and licensing are generally more likely best covered by the library.

Our learning outcome for "What to Talk about with an Advisor" is that students will be able to discuss publishing more with their faculty advisor and identify when to reach out to the library. This topic aligns with the "Scholarship as Conversation" frame of the *Framework for Information Literacy for Higher Education*.

Conclusion

From our preliminary analysis of a subset of our interviews, we identified four topics about publishing to prioritize teaching graduate students early in their programs: publishing strategy, rejection, cost, and what to talk about with an advisor. Our findings show that graduate students need and want more guidance on publishing. Without this guidance, learning about publishing is a slow, unequal, compartmentalized, and non-transparent process that is an emotional experience for students. Absent a structured, scaffolded publishing curriculum in graduate school, the library can contribute to the professionalization of graduate students by starting with covering these four topics and thus uncovering at least some of the hidden curriculum in publishing that disadvantages first generation students. While we discuss topics to cover, we have not made recommendations about how to communicate this information. A next step is considering whether a workshop or another method is the best way to reach this generation of graduate students and how to reach more graduate students at the point of need. We look forward to supplementing our preliminary findings with further analysis and other phases of our study.

Appendix A

Graduate student interview questions

1. What is your department and concentration?

2. What stage are you in terms of publishing an article? *Never published (move to section 2), have published (continue to section 1)*

3. What are your priorities or concerns in publishing work in open access journals, or preprint publishing platforms?

4. Did your funding source influence where and how you publish your work?

5. Thinking back to your last refereed journal article, how long did the process take? Any hiccups?

6. What disciplinary norms in publishing (e.g., publishing certain outputs and sharing them) are important for you? Why?

7. What do you wish that you'd known sooner about publishing your work?
    a. What helped you the most: advice from your advisor/others, going through the process for the first time, or something else?

Section 1B (subject hasn't published before)

8. What are your publishing plans? Timeline, type of publication (dissertation etc.)

9. What are your priorities or concerns in publishing work in open access journals, or preprint publishing platforms?

10. What (other) questions do you have about the publishing process?

Section 2 (Mentoring etc.)

11. Has your advisor spoken with you about the need to publish your work?

12. What advice did your advisor give?
    a. Specifically in regard to identifying a journal

        b. Retaining your copyright
        c. Weighing journal prestige
        d. Open access
        e. Peer review (both experiencing and providing it)

13. For you, what is the most difficult aspect of getting mentoring from your advisor about publishing?

14. Are there other people who have helped you with questions about publishing? Committee member, other grads, department or lab staff? What have you heard from them? Or are there resources you've found helpful?

15. What do you think is the biggest challenge with publishing for grad students?

16. In an ideal world, what do you think would help you better prepare to get your first or next article published?

17. Is there anything else you'd like to say about publishing?

18. Both grads & faculty: do you know how to find a journal for your article? What steps do you take? What do you think you need to do to find a suitable journal?

Appendix B

Statement of Informed Consent HS-FY2021-21

Introduction

You are invited to take part in a research study conducted by librarians Martha Stuit, Christy Caldwell, Lucia Orlando, and graduate student co-investigators from the University Library at the University of California, Santa Cruz (UCSC). Please read this form and ask questions if there is anything that you do not understand before you agree to participate by signing this form. There will be up to 40 graduate student participants in this study.

Purpose of this Study

We are interviewing graduate students about their knowledge and experience with the publishing process to inform library support services. By "publishing process," we mean the process that you go through once you have a manuscript ready to publish (not research or writing). We want to hear your perspective as a graduate student and new author. *You do not need to have published an article to participate.*

What You Will Do in this Study

You will participate in a 30 minute interview with a member of the study team. In the interview, you will be asked about publishing, both that of yourself if applicable and your advisor.

Risks

There is a risk that your identifiable information could be accidentally disclosed; however, the researchers are taking measures to protect your data.

Benefits

You will receive $25 for your participation in the study. Following the interview, we will email you instructions for collecting the incentive.

What we learn from this study will contribute to library support of publishing on campus and what services we offer.

Your Rights as a Participant

Your participation in this study is completely voluntary.

- You may withdraw from participating at any time.
- You may take a break at any time.
- You may ask questions at any time.
- Your answers are kept confidential.
- You may skip any questions that you do not wish to answer.

Whatever you decide will in no way affect your interaction with the library or result in loss of benefits or services to which you are otherwise entitled.

Information We Will Collect

The information that you give in the study will be handled confidentially. Identifiable research data will be password protected. Because of the nature of the study information being collected it may be possible for someone to deduce your identity. However, there will be no attempt to do so and your information will be reported in a way that will not identify you. You will not be identified in any report or publication of this study.

Recording Permission

To help us analyze the data that we collect, we would like your consent to record this session as a video using the Zoom recording tool. This is primarily so that the facilitator can concentrate on talking with you rather than on taking notes. The recordings may also be watched and/or the transcript will be read by the team of investigators IRB # HS-FY2021-21 at the University Library for analysis. The recording will not be viewed by anyone else. We may use it for quotes which will not be associated with your name. Recordings will not be retained after the study is finished. You have the right to request that the recording be stopped or erased in full or in part at any time. In any use of the recording, you will not be identified by name.

You do not need to turn on your video if you prefer. You may also set your display name to "Participant" in the Zoom meeting if you'd like.

Future Research

Your information will not be used or distributed for future research studies.

Questions

If you have questions about this research study, please contact Martha Stuit, Principle Investigator, [emails redacted]. If you have any questions regarding your rights as a research participant, please contact the University of California Santa Cruz, Office of Research Compliance Administration at [emails redacted].

Your Agreement

To take part in the study, you must sign this form showing that you consent to us collecting these data, being recorded during this session, and confirming that you are age 18 or older.

Your name:	Date:
Signature:	

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