

Pedagogical Approaches to Undergraduate Research Experiences in LIS

Hailley M. Fargo, Northern Kentucky University and
Rosalinda Hernandez Linares-Gray, Fort Lewis College

This paper proposes a new role for librarians; a role in which librarians collaborate with undergraduates as partners to pursue library and information science (LIS) research projects. Because student-researchers are partners, they receive hands-on training and experience with the entire research process, from the design, creation and implementation of data collection to the utilization of data analysis tools and software, and even the dissemination of their work through both formal and informal means. This collaboration influences not only the way the librarian approaches the research, but also provides a way for LIS research to involve and impact the community it seeks to study.

This approach differs from most traditional library instruction, where the librarian teaches students information literacy within a certain non-LIS disciplinary context. Following the disciplinary faculty-student undergraduate model, librarians mentor one to two students and develop a true research partnership. The student-librarian team learns about and conducts research within the field of LIS, and broader methods in the social sciences. This work allows the librarian to teach disciplinary research skills and information literacy concepts in an authentic way.

Undergraduate Research & LIS Research

In 2021, the Council on Undergraduate Research (CUR)—a nationwide membership organization with the mission to "support and promote high-quality mentored undergraduate research, scholarship, and creative inquiry"—updated their definition of undergraduate research (UGR). The new definition includes a preamble, highlighting how UGR is a pedagogical approach and moves away from the emphasis on students creating their own original intellectual contribution:

Undergraduate research, scholarship, and creative inquiry is fundamentally a pedagogical approach to teaching and learning. With an emphasis on process, CUR defines undergraduate research as: A mentored investigation or creative inquiry conducted by undergraduates that seeks to make a scholarly or artistic contribution to knowledge. (Council on Undergraduate Research, 2021)

This new definition provides opportunities for librarians to think about their role with undergraduate research. Previous research by Hensley, Shreeves, and Davis-Kahl (2014, 2015) highlight how libraries have played more of a supportive role in undergraduate research. Through library space to work on undergraduate research, one-shot instruction, dissemination support, and collections, librarians were periphery partners. The librarian's contribution usually came at the beginning or end of the research project—to either help students find the right information and settle into their disciplinary area or to preserve the project for future student-researchers to use. The role of the librarian was also dependent on the disciplinary research mentor, who either saw or did not see the value of the librarian in UGR experiences.

It is useful to take a step back and consider the larger LIS field, in which librarians conduct research to advance the disci-

pline, often using social science methods to ground and design their projects. Since the early 2000s, librarians have been viewed through the practitioner-researcher lens (Watson-Boone, 2000). Often a librarian researcher is influenced and informed by their day-to-day work as a practitioner. This is especially crucial for those academic librarians on a tenure track, where their research must often be tied to their daily work. However, unlike other disciplines where research methods are explicitly taught in graduate school, training to conduct research in LIS is scattered. While some MLIS programs require a research methods course, the lack of consistency contributes to uneven scholarship and representation of experiences and perspectives. The field has recognized the need to provide more hands-on, authentic training in order to improve research disseminated in the field and build a research community through formal and informal professional development opportunities (Heinbach et. al, 2019 ; Kennedy & Brancolini, 2018).

Traditional research done in academic libraries is often about the researched community (for example, how students improved their information literacy knowledge through one-shot instruction). In this traditional model, the research is conducted about the student group, without the researched community having a chance to provide insight and input on the research project, methods, and analysis of the results. When the data collected about a research community is analyzed, it is being done from the perspective of the librarian. Having only the librarian perspective limits the ways the data can be interpreted and acted upon. It can also lead to deficit language about the researched community, which can reinforce negative perceptions of that community. The authors would like to propose that collaborating with undergraduate students in LIS research allows for a more inclusive research project. In this collaborative model, the research is done with the researched community. The researched community can provide input on the project design, data gathering, and analysis. This leads to research that responds to the researched community, brings them into the conversation, and allows for the librarian to better understand the lived experiences of their students.

Shift in Instructional Role

Librarians have been in instructional roles in academic libraries for the better part of a century. In 1949, Helen M. Brown, a librarian at Skidmore College, wrote in *College and Research Libraries* about the need for librarians to take their roles as teachers seriously (Brown, 1949). Many of her observations hold true to the present, including the various levels of need for instruction around libraries that students bring to the classroom, how partnerships with faculty influence learning, the timing of library instruction, and the merits of one-shot vs. course-length instruction. In more recent years, librarians have turned their gaze inward to interrogate the role of instruction in the profession as well as the development of the teacher-librarian identity with its attendant anxieties (Davis, 2006 ; Walter, 2008;). Following this vein of the literature, questions that librarians who teach frequently ask themselves are not just about how or what to teach, but also who they are - a librarian, a teacher, and most often both.

How do librarians develop a teacher identity and what impacts and influences that identity? According to Nichols Hess (2020), unsurprisingly, years spent in the field, and more specifically, experience with library instruction, is a strong factor in how librarians see themselves as educators. Newer librarians tend to focus on feedback from their peers and colleagues within librarianship as paramount in seeing themselves as educators. More experienced teacher-librarians see relationships across campus with disciplinary faculty, administrators, and even students, along with participation in teaching-related but not library-related professional opportunities as the way forward for continuing to develop their teaching identities.

When librarians take on new roles as teachers outside of information literacy instruction, such as the work of guiding students through an undergraduate research experience in LIS, these new roles can impact how they see themselves as teachers. As discussed above, in order to fulfill this new instructional role in UGR, librarians not only need training and support in the development of disciplinary research praxis, but also need to be able to see themselves as teachers and researchers.

As Hensley, Shreeves, Davis-Kahl (2014, 2015) point out, librarians traditionally play a supportive role in UGR experiences. By serving in a primary role in UGR, librarians as teacher-researchers have the opportunity to guide students through the entire research process, from locating domains of inquiry all the way to putting research design into practice. By doing so, librarians can leverage their expertise in information literacy to help students make real connections between the literature of those inquiry domains and knowledge production as a social, collaborative act. Librarians can also delve into the idea of choice in the design process and interrogate alongside students the subjectivity of knowledge production that aligns with constructivist and critical approaches to both pedagogy and research. Lastly, librarians are not just passively observing students settling into disciplinary spaces (Hensley, Shreeves, and Davis-Kahl 2014, 2015) but rather, by producing knowledge in collaboration with students, they better understand barriers that students experience in their disciplinary journeys, whether they be processual or conceptual.

Nuts & Bolts

Pedagogy in Practice

The authors met at the Institute for Research Design in Librarianship (IRDL), a grant funded continuing education program focused on improving the research skills and confidence of academic librarians and researchers. At IRDL, the authors developed and ran collaborative undergraduate research experiences that focused on qualitative methods in LIS at their respective institutions. What follows is a short description of their programs.

Rosalinda developed a social science internship in Summer 2019 that is open to self-identified students of color with an interest in social science research. It is a 3-credit, paid opportunity that students can repeat once, and it also meets disciplinary elective requirements so that students can also receive credit towards their major. While Rosalinda's program is designed for a one-on-one experience, Hailley has worked with one student, as well as a cohort model for her semester-long paid internship program. Both authors design their curriculum in similar ways, inspired by the IRDL curriculum, focusing on orienting students to the library and information science field

through readings of qualitative LIS research, IRB training, and hands-on experience with the research design process.

Principles

For those interested in creating these types of high-impact, meaningful, and collaborative undergraduate research experiences, the authors of this paper would like to share some guiding principles and questions to consider.

1. **Relationship & Direction:** Treat students as full collaborators in research. Make decisions regarding the direction of research collaboratively.
2. **Compensation & Attribution:** Pay students for their time and efforts, and give them coauthorship or other appropriate attribution on all publications and presentations derived from the collaborative research.
3. **Responsibility & Discipline:** The librarian is responsible for developing a curriculum to support student-collaborators' learning throughout the research project, so they learn how to conduct LIS research.
4. **Timeline & Flexibility:** As much as possible, student-collaborators should be involved from the start of the research project. The librarian acknowledges the project direction might change as part of this collaboration and in light of student-collaborators' own experiences and expertise.
5. **Contributions & Value:** Enable student-collaborators to meaningfully contribute to the project design. Ultimately, libraries must value and support this work to sustain collaborations over time. (Fargo & Linares-Gray, 2022)

With these principles in mind, the reader should consider how involved in the project they would like their student-researcher to be, what type of opportunity they would like to offer to the student, and how they will design the curriculum to support the learning of the student. Reflecting on and deciding the depth of the student involvement before you identify a student will ensure the experience is well-built and meaningful for the student. This pre-work also ensures that you have enough time to put together the experience and can share those expectations with the student.

Guiding Questions

A first question to consider is how involved you'll want the student to be in the research project. There is a spectrum of involvement, from the student and their interests driving the research question and project design, to the student coming into the experience with a research question predetermined and project design sketched out. Knowing the depth of involvement also allows you to know when you'll need to hire the student. For students taking part in the development of research questions and project design, you'll want to hire them early and provide time for them to work through a curriculum and understand the bounds of this research. For students you bring into projects with predetermined questions, you can bring the student on closer to the project's anticipated start. As you consider the depth of the involvement, you should also consider the length of the opportunity. Will this research go for a full academic year or be bounded within a single semester? Part of this determination will be informed by the type of opportunity you create, which the authors will expand on in the next paragraph.

Once the depth of involvement is identified, you'll want to think through the opportunity type for the student. Will this be

an opportunity to complete an internship or will this be a part of a credit-bearing course? Or will this experience be outside of the curricular space and advertised as a job opportunity? Deciding on the opportunity type will depend on your position within the library and institution. If you have the ability to create a course or provide an internship to help satisfy a graduation requirement, this might be a better route than student employment. In considering the opportunity, you should also reflect on the type of student you wish to have as a research-collaborator. This could be a type of discipline you'd like the student to come from, or a type of co-curricular experience that you think would provide the perspective you're hoping to add to the research. Regardless of how the opportunity is created, the authors of this paper believe every student-researcher should be paid for their time and energy in this work. The authors encourage you to identify how the student will be paid for their labor before advertising the position to your stakeholders.

Finally, once you have established the level of involvement and the type of opportunity, you'll want to begin to design the curriculum. Ideally, this should be mostly completed before the student is hired, in order to allow both you and the student to actively dive into the research. As you consider the curriculum, we encourage you to think about what you want the student to learn, and how their background and lived experiences will inform their thinking. The authors have learned that since most students will not have a lot of experience with LIS scholarship, curriculum at the start of their work should be designed to help them learn about the field and be exposed to the variety of ways LIS researchers share their work. Similar to getting the student familiar with LIS scholarship, if your project touches on other disciplines or areas of study, you'll want to make sure there is a scaffolded way for the student to enter that scholarly conversation. Doing this curriculum preparation ahead of time also gives you the space to identify some potential research methods you could use and reflect critically on your familiarity and comfort with these methods and tools. There might be additional work you'll need to do in order to be ready to teach and engage with the student in a specific method or tool.

Conclusion

Undergraduate research experiences in LIS allow librarians to shift away from a simply supportive role and instead help students see librarians as researchers. Together, the team shares power and expertise in order to design LIS research that responds to the researched community. This leverages the lived experience of the student researcher while giving them transferable research skills. The authors believe this type of collaboration can be a way for librarians to be leaders in intentional and impactful undergraduate research experiences.

Doing this type of collaboration not only benefits the librarian, but also the students and the library. Students expand their understanding of an academic library, gain research experience through a mentored relationship, and ultimately, help inform, influence, and impact LIS scholarship. Libraries who welcome and foster these collaborations help to play an active role in high impact practices on their campus and show a commitment to listening and amplifying student voices and experiences in the scholarship they produce. The authors hope this paper has demonstrated the advantages of bringing undergraduate students into LIS research, as well as the nuts and bolts of designing and implementing these projects. They hope this type of research continues to grow in the future.

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