

High-Impact Collaborative Learning & Student Engagement with Librarian-Led Faculty Research Fellows

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Abstract

Imagine a system in which academic libraries hire, train, and mentor student research assistants to prepare them for long-term faculty research projects and institution-wide advocacy initiatives—at no cost to themselves. What would this model look like, and how would it work? Would it be sustainable? This paper will review a project that sought to add value to the university student experience and to support institutional research by implementing a training and mentoring program: The Student Research Fellows. The goal of this program was to establish a scalable and sustainable partnership with Fellows and their university schools, cultivate a culture of inquiry, and to promote scholarly communication between librarians, faculty, and students. The paper will explore the benefits and challenges involved in implementing this program.

Keywords: research assistants, high-impact practices, student workers

Introduction

National University (NU) is a private, nonprofit university that offers undergraduate, graduate, and certificate programs in an accelerated, four-week term format. Based in San Diego, California, the university serves 30,000 students, a majority of which are adult learners enrolled in online or hybrid programs.

The NU Library's Student Research Fellows (SRF) project hires undergraduate and graduate students to work as research assistants, supporting faculty scholarship. Although the program encourages the development of mentor/mentee relationships between SRFs and faculty, the Fellows are recruited, trained, and supervised by liaison librarians, and work on the library's campus. The positions are funded by Federal Work-Study (FWS) grant monies.

The project was first conceived as a response to institution-wide initiatives to support faculty research activity, and a concurrent effort to create valuable, higher-impact engagement opportunities for students. The library's new strategic plan, finalized and adopted in 2017, established a set of proactive objectives regarding the support of faculty and institutional scholarship and publication. The School of Health and Human Services (SHHS) was the first of the university's six schools to adopt a Center of Excellence (CoE), a program that encourages and promotes faculty scholarship within a set of core research areas, and was therefore the first from which SRFs were recruited.

The program was originally modelled for four or more Fellows, each drawn from a different school within the university system and supervised by their school's liaison librarian. It was hoped that forming a small team of motivated students with diverse research interests would create more opportunities for collaborative learning as schedules overlapped. Due to Federal Work-Study grant payout scheduling and internal restrictions regarding FWS hiring, the program was re-tailored for its first year (2017-2018) to recruit a smaller pool of students from the School of Health and Human Services; ultimately one student was hired and retained. During the 2018-2019 round of the SRF program, two students from the SHHS and School of Business and Management have been hired, and additional Fellows (including students from the School of Engineering and Computing) will be recruited once Work-Study funds become available in the summer. The team hopes to continue expanding the program as buy-in from other library liaisons and interest from faculty increases.

Theory

Student Workers in Academic Libraries & Research Positions

Students often work throughout their time in college in order to pay bills or to build their resumes: amongst undergraduates, about 43% of full-time students and 78% of part-time students were employed in 2015 (National Center for Educational Statistics, 2017). Obtaining a part-time position in their university's library is a common and often desirable option, but some have observed that library student-worker roles are often rote and/or poorly-integrated into the library's wider organization, which may preclude meaningful co-learning, mentoring, or the development of transferable skills (Charles, Lotts, & Todorinova, 2017; Mitola, Rinto, & Pattni,

2018). Project-based work may break down hierarchies and communications silos that exist between student workers, librarians, and other library or university staff (Denda & Hunter, 2016; Dahl, 2011; Wu, 2003).

Likewise, student research assistantships are not uncommon, although during a literature review conducted early in the program planning process, the team found few examples of assistantships based at university libraries or available to undergraduate students, or that provided a formalized training sequence. Some libraries offer training programs or training consultations for research assistants who are employed by school departments. Before drawing up plans for introductory training, the team looked at examples of publicly-available training packets or marketing information for assistants served by, or based at, libraries including the Vassar College Libraries, the H. Laddie Montague, Jr. Law Library at Penn State Law, the SDSU School of Law's Pardee Legal Research Center, the Robert S. Marx Law Library at the University of Cincinnati College of Law, and the William A. Wise Law Library at the University of Colorado Boulder.

High-Impact Practices (HIPs)

The SRF program supports an emerging institutional drive to incorporate High-Impact Practices (HIPs) into Federal Work Study positions across all departments: FWS positions should enrich student intellectual life through challenging and relevant work, and promote career advancement.

HIPs are academic and extracurricular activities that encourage stronger student engagement with their programs, and consequently improve student satisfaction and retention (Kuh, 2008). These activities are drawn from the Association of American Colleges and Universities' (AAC&U) *High-Impact Educational Practices* (2008) report and the research of George Kuh.

Of the ten HIPs identified by Kuh, three are especially relevant to the SRF program:

- opportunities to undertake prolonged research projects at an undergraduate level, in order “to involve students with actively contested questions, empirical observation, cutting-edge technologies, and the sense of excitement that comes from working to answer important questions” (2008, p.10);
- writing-intensive courses, which are linked directly to improved information literacy, critical thinking, and communications skills; and
- participation in learning communities, wherein students work closely with classmates or faculty to engage with substantial research questions beyond a single assignment or class.

In its 2010 report on *The Value of Academic Libraries*, the Association of College and Research Libraries (ACRL) recommends that libraries "integrate their resources and services into any high-impact activities their institutions offer," or communicate how they are already doing this, to promote student engagement and to demonstrate a library's value to stakeholders (p.

120). In their review of the literature, Mitola, Rinto, and Pattni (2018) find that academic libraries employing student workers will often, whether intentionally or not, incorporate HIPs into training, assessment, and supervisory practices: these may include one-on-one mentoring from librarian supervisors, co-learning in some form, and required self-reflection. However, while “libraries and student supervisors might be aligning student employment with High-Impact Practices... as a profession, we are not writing about this as a goal in and of itself;” further, libraries may “[treat] student success as a byproduct” of assigned job duties rather than “a core element,” which may affect student employees’ ability to transfer earned skills into other contexts (p. 11).

By forming a team of Student Research Fellows, providing them with comprehensive information literacy training, assigning writing-intensive tasks, and encouraging them to work together or with faculty to solve research problems and to communicate their findings to a large, real-world audience, the SRF program uses High Impact Practices to provide a small group of motivated students with a potentially transformative university experience. Much of the program’s strength and appeal is drawn from this planned, intentional integration of HIPs.

The ACRL Framework for Information Literacy for Higher Education

Ideally, each Fellow will have opportunities to see research projects through to completion and dissemination, experiencing the full cycle of scholarship first-hand whilst mindfully developing their own authorial voices and professional profiles. This provides Fellows with practical and especially meaningful ways to engage in knowledge practices and cultivate dispositions outlined in the ACRL’s *Framework for Information Literacy for Higher Education* (2015). The Framework was used to design a training program for new Fellows, with assignments, expectations, and learning objectives tied to each Frame (Appendix A).

Whereas Kuh’s HIPs primarily informed the modes in which the Fellows work, the Framework was used to create specific learning objectives and assignments; the team felt that combining these structures created an engaging and comprehensive program.

Methods

Description of Training Program

The SRF training program aims to develop skills in three areas: research (including formulation of research questions, and finding, evaluating, and synthesizing resources); communication of research (including attribution and dissemination methods); and other “soft” skills, such as the ability to work well within teams. The training modules build the Fellows’ confidence and prepare them to work productively with faculty.

Research. At the start of their program, Fellows meet with librarians one-on-one or in small groups for a series of instruction sessions built on the *Framework* foundation. These will introduce research concepts and tools, and can be paced according to each student’s needs. Fellows are then assigned simple tasks to complete collaboratively or alone: assembling bibliographies using a specific citation style, critically reading and annotating an article, or

populating a citation manager with articles related to a specific project. Once they have begun working on faculty projects, SRFs will continue to meet regularly with their supervising librarians to discuss progress, solutions to tricky research issues, and next steps.

Communication of Research. The Fellows are trained to use citation managers, team chat channels, and collaborative writing tools (including the Google Drive and Microsoft OneDrive/Office suites) to manage and share their data, and to discuss and reflect upon their research. Opportunities to speak or write for different audiences may arise; for example, the 2017-2018 SHHS SRF created, maintained, and regularly posted to an outward-facing WordPress blog on behalf of her school.

Assessment Tools

To assess information literacy levels at the start of the program, Fellows are given a lengthy pre-test. This was modelled after an exam administered to undergraduate NU students wishing to test out of a required information literacy course. It broadly covers both tool-based and conceptual content: the use of the library's catalog and subscription databases, including Boolean operators and search limiters; brainstorming keywords; evaluating sources; understanding charts and graphs; and producing APA-style bibliographies in Microsoft Word. The librarians can then tailor training modules to fill gaps in the Fellows' knowledge.

The Fellows are also required to spend 10-20 minutes at the end of each shift to write short, reflective blog posts about their day's work. The program uses Slack, a cloud-based discussion and file-sharing tool, as its blogging platform; the librarians and fellow SRFs are able (and encouraged) to read and react to each post, but no-one outside of the team has access to this content. This allows the Fellows to speak candidly about their experiences, so that the team can gauge each student's comfort with concepts, tools, and faculty projects, and respond appropriately. Regular reflective blogging and Slack-based chatting is a means of maintaining a lively learning community— one of Kuh's HIPs— whether or not Fellows share work schedules.

Takeaways

The wider goals of this program are to cultivate a culture of inquiry in and beyond the university library, to promote scholarly communication between librarians, faculty, and students, and to ensure that these efforts are scalable and sustainable. The program has and continues to demonstrate success in reaching these goals. Since the pilot's inception in 2016, the team has noted several takeaways from this experience in student learning and engagement and faculty and staff collaboration.

Student Achievement

The project provides students with direct experience in a work setting— in this case, working directly in research capacities that relate to their career interests— and supervision and coaching from professional scholars and researchers in the field. Their experiences culminate in projects that the students see through to completion, and which yield in some scholarly

dissemination whether it be via co-authorship in a peer-reviewed publication or presentation to a professional organization. Students paired with faculty researchers have been able to take part in and contribute to collaborative presentations at University faculty retreats, posters for University symposiums, panel presentations at professional conferences, and co-authorship in book chapters or peer-reviewed publications. With their library-alignment and closer school connections, SRFs have been able to take part in library outreach events, hold leadership positions in student government, and facilitate and promote the use of library space to hold group events.

Daily Reflective Blogging

The pre-assessment established computer and information literacy benchmarks, and the team regarded a Fellow's ability to successfully produce and disseminate work with faculty partners a form of post-assessment. However, the best "tell" of student learning was the students' daily reflective blog posts in Slack: these revealed areas where training was successful, and areas where the program required fine-tuning.

Making Connections. The blogs made clear what students found valuable about their projects with faculty, and the SRF program. Students liked being able to work in different learning environments throughout a term: from learning in a classroom, to working behind the scenes in a library, to sitting in meetings with a research team. Moving through these environments and learning modes required looking at, thinking about, and using resources in different ways. Students were effectively making connections between library research work and daily living and working.

New Factors to Consider. The Fellows were candid about their frustrations and stumbling blocks in the program. Most juggled family responsibilities and other jobs with their school work and SRF tasks. They needed variety in research assignments to keep their workloads engaging, particularly as, according to one SRF blog post, "research can be dry and boring," and students found it oftentimes difficult to stay focused on a single task for far too long. Early stages of research required close supervision and frequent intervention because students had not typically come into the program knowing how to frame research questions, search, or understand study design, methodology, or manuscript writing. Time-sensitive projects were difficult to assign due to the fluctuating and busy nature of the students' schedules, and because many assignments required additional planning to ensure student readiness. The students desired frequent feedback, both positive and negative, which placed significant demands on the supervising librarians' time and attention.

Conclusion

The success and sustainability of this program are contingent upon faculty and librarian buy-in: faculty must be willing to work with student assistants, and librarians must have the time and desire to hire, train, and supervise students. The benefits to participants are significant, and thus far have more than justified the program's continuity and growth.

For faculty, the SRF program provides a convenient and rewarding form of support:

well-trained research assistants whom they do not need to hire, train, or supervise, and who are available for projects whether or not independent grant funding has been secured.

The Fellows have opportunities to establish a professional network, to produce an impressive portfolio of publications, conference presentations, and similar outputs, and to cultivate transferable, job-ready skills. They enjoy a much richer and intellectually-fulfilling student experience, particularly if their schedules, online class modes, or the university's accelerated course format have left them feeling ungrounded or without community.

In turn, the library benefits from the program's optics: the Fellows are able to speak for the library and for the benefits of information literacy training to faculty and university administration (often at school or other committee meetings), and to other students (in class, via marketing campaigns, or within student organizations). Working closely with Fellows gives both librarians and faculty opportunities to gather informed and frank feedback on student-facing initiatives; due to the pace and format of NU's programs and the nature of the student body, the student voice can be difficult to capture. Furthermore, the relationships developed between faculty mentors, Fellows, and liaison librarians creates more opportunities for sustained collaboration and information sharing beyond the original scope of this project, potentially informing collection development, outreach, and instruction practices.

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Appendix 1

Frame	Learning Objectives	Student Outcomes
<i>Research as Inquiry</i>	<ul style="list-style-type: none"> • Formulate research questions based on curiosity and gaps in information or data available • Develop a PICO (research) question in order to develop an effective database search 	<ul style="list-style-type: none"> • Fellows write an annotated bibliography that analyzes studies in greater depth. • Fellows populate a research matrix to identify key components of a published study, including the study’s purpose and results.
<i>Searching as Strategic Exploration</i>	<ul style="list-style-type: none"> • Identify keywords from a given topic and use appropriate search commands • Identify key concepts and related terms to locate relevant sources for their respective projects • Determine if retrieved information satisfies needs and refine search if necessary 	<ul style="list-style-type: none"> • Fellows document search processes in research logs including revisions they have made to their strategies • Fellows research possible publication outlets for their working manuscripts—requiring them to investigate publications, their editorial boards, and their manuscript submission guidelines.
<i>Scholarship as Conversation</i>	<ul style="list-style-type: none"> • Examine the bibliographies, footnotes, and reference sections of sources they find to locate additional sources of information • Understand citation chaining (reference mining, citation mapping) in order to evaluate the impact of a work (and find more information on the topic) 	<ul style="list-style-type: none"> • Fellows will contribute to the scholarly conversation at an appropriate level, through the lens of becoming a creator/critic • Fellows will cite sources and learn bibliographic management software (ex. Mendeley) as a means of communicating their research findings within a larger audience • Fellows will hand select articles through citation chaining as appropriate to their manuscript at hand

<p><i>Information Creation as a Process</i></p>	<ul style="list-style-type: none"> • Articulate the purposes of various types of information as well as their distinguishing characteristics • Identify which types of information best meets particular information needs • Evaluate information with set criteria 	<ul style="list-style-type: none"> • Fellows will participate first-hand in the experiential process of research from question development to project dissemination • Fellows will learn the process of writing and editing a peer-reviewed publication or develop research ideas into a meaningful presentation.
<p><i>Information Has Value</i></p>	<ul style="list-style-type: none"> • Cite a source correctly and understand the reason for doing so • Identify scholarly publication practices and their related implications for access to scholarly information 	<ul style="list-style-type: none"> • Fellows evaluate sources for relevance and currency to determine which resources are appropriate for a variety of academic projects based on established criteria • Fellows read a selected research article and read the articles cited by it to explain the source's relevance to the article in question and differentiate what different purposes the citations serve.
<p><i>Authority is Constructed and Contextual</i></p>	<ul style="list-style-type: none"> • Recognize that credibility may vary by context and information need • Understand the importance of critically assessing a source's credibility • Identify how a credible source could be used for a particular need 	<ul style="list-style-type: none"> • Fellows explore the career of their faculty mentors by locating biographical information, preparing a bibliography of the scholar's writings, and analyzing the reaction of the scholarly community to the researcher's works • Fellows brainstorm evaluation criteria for resources selected and communicate those findings with faculty in a shared space: email, OneDrive, Google Drive, Dropbox, Mendeley etc.