

**University of Oregon Libraries Undergraduate Research Awards and Oregon
Undergraduate Research Journal: High impact practices teaching information fluency to
undergraduate scholars.**

Jennifer Pesek
University of Oregon Libraries 2021 Vollstedt Intern for Library Administration
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Abstract

For 20 years the University of Oregon (“UO”) Libraries has sponsored and supervised an undergraduate research journal, and for 17 years it has sponsored undergraduate research awards. As the longtime supervisor of these two programs is retiring, this paper examines the benefits of these two programs, considers their value to the missions and goals of both the University of Oregon and the UO Libraries, and evaluates the effectiveness of their implementation. This paper will also provide recommendations for the future of the programs, as well as areas of inquiry to consider further.

Introduction

University of Oregon (“UO”) is a medium sized Tier 1 research institution with an undergraduate population of just over 19,000 (UO Admissions, 2021). One of the UO’s top priorities is undergraduate success and research (Schill, 2015). UO supports numerous undergraduate research programs and projects including: The Center for Undergraduate Research and Engagement (“CURE”); the Undergraduate Research Opportunity Program (“UROP”); the Undergraduate Research Symposium (“URS”); several journals for undergraduate publication, including the Oregon Undergraduate Research Journal (“OURJ”); and an Undergraduate Research Award (“URA”) (UO CURE, 2021).

The UO Libraries comprises the main library, several branch locations, and several specialized libraries and collections (UO Libraries, 2021). Student success and Research are two the of the UO Libraries’ five strategic goals in the Libraries most recent three-year plan (UO Libraries Strategy Map, 2021). Student learning and research support are also main components of the UO Libraries Mission Statement and Values (UO Libraries, 2021). UO Libraries supports undergraduate research through its services which includes instruction, specialized subject

librarians, research guides and online research, digital scholarship services, publications support, and other research support activities (UO Libraries, 2021). The UO Libraries also promotes and encourages undergraduate research through specific high-impact projects such as co-sponsoring the Undergraduate Research Symposium, and by hosting the Undergraduate Research Awards (“URA”) and the Oregon Undergraduate Research Journal (“OURJ”).

History of the URA at the University of Oregon

The URA were started seventeen years ago at the University of Oregon (B. Jenkins, personal communication, May 13, 2021). Then Dean of the UO Libraries, Deborah Carver, catalyzed donor’s wishes for a project to support undergraduate research and conceived of the awards as a project that would confer high impact and value on undergraduate research (B. Jenkins, personal communication, May 13, 2021). Although the URA were conceptualized as an interdisciplinary award, at the outset only long form single term papers were accepted, which narrowed the number of fields eligible for the award. As the URA grew in visibility and experience, they expanded the types of paper formats accepted, so that more students in diverse fields would be encouraged to apply (B. Jenkins, personal communication, May 13, 2021).

Other changes were made to the application requirements, to deepen the impact of the learning experience; the students were asked to write a reflection paper on their research process and experience; the faculty recommendations were shifted to allow the students more collaboration with faculty; and the decision was made to include research on non-paper forms (such as music composition) (B. Jenkins, personal communication, May 13, 2021). Donors and UO Libraries also worked together to ensure that the monetary award was substantial, not only to encourage students to commit time and energy to learning, but also to confer prestige on the award (B. Jenkins, personal communication, May 13, 2021). The UO Libraries has worked to

promote the award and the number of applicants has risen steadily every year (B. Jenkins, personal communication, May 13, 2021).

History of the OURJ at the University of Oregon

In 2011, one librarian at UO, JQ Johnson, wanted to create a peer-reviewed, open access undergraduate research journal (Johnson, 2011). He enlisted a second librarian, Barbara Jenkins, and they became the backbone of the OURJ project (B. Jenkins, personal communication, May 6, 2021). While the two librarians were enlisting the support of the UO Libraries administration for their project, a group of undergraduate students announced the intention to start an undergraduate journal, and the two projects decided to merge (Johnson, 2011). The strong passions of the undergraduates for the new project were welcomed, as the intention of the journal was not only to highlight open access publications and UO undergraduate research, but also to function as an instructional and practical experience for undergraduate students – helping to scaffold their learning process and train the next generation of scholars (Johnson, 2011).

The journal started off steadily for the first few issues, supported as a small project by the UO Libraries (B. Jenkins, personal communication, May 13, 2021). The untimely passing of JQ Johnson in 2012 precipitated a crisis, as he had been the main organizing force of the journal (B. Jenkins, personal communication, May 6, 2021). The students briefly considered organizing the journal as a student group through the student's union, but the remaining librarian on the project, Barbara Jenkins, was convinced that student-led organization would, through student turnover, result in the journal's attrition and demise (B. Jenkins, personal communication, May 6, 2021). The UO Libraries administration therefore made a renewed effort with support and donor development, and the OURJ was fully centered at the UO Libraries under Jenkins' supervision (B. Jenkins, personal communication, May 6, 2021).

Some challenges remain, including changing digital publishing platforms, handling the work of training student peer reviewers, finding faculty advisory expertise in best research practices for multiple disciplines, and the need to elicit faculty editorials for each issue (B. Jenkins, personal communication, May 6, 2021). A huge breakthrough came early on when donations were found to change the student editor-in-chief position from volunteer to paid, thus giving the student leader support needed for them to devote significant time and energy to leading the student editorial board and creating steady continuity for the journal (B. Jenkins, personal communication, May 6, 2021). The OURJ has grown in prominence and number of submissions rapidly over the years as the OURJ continues to expand its scope and goals (B. Jenkins, personal communication, May 6, 2021).

Methods of evaluating the benefits to the University of Oregon of URA and OURJ

To evaluate the effectiveness and benefit of the URA and OURJ at UO, two established pedagogical and learning methodologies will be consulted for assessment: High Impact Practices and Communities of Practice. High Impact Practices were described by George Kuh over 20 years ago and have been tested and deepened as measuring standards since that point. Communities of Practice were proposed by Etienne Wenger and Jean Lave while studying aspects of apprenticeship. Communities of Practices has been explored and used by numerous social sciences researchers as a model of describing the interactions and interrelationships that develop where newer and more experienced practitioners of a discipline teach each other through collaboration.

To further understand the true value of programs like URAs and URJs, they can be evaluated as curricula in the larger pedagogical mission of academic libraries. In recent years the ACRL has re-examined the role of instructional librarians in the face of the changing world of

digital information access and has conducted both research and analysis on these changes (ACRL, 2013). The ACRL has issued a set of recommendations for academic librarians that provides guidance in the evaluation of the URA and OURJ as programs located in and sponsored by the UO Libraries (ACRL, 2013).

High Impact Practices

High Impact Practices (“HIPs”) are “...widely tested and have been shown to be beneficial for college students from many backgrounds.” (Kuh, 2008). HIPs are positively associated with “...persistence and GPA, deep approaches to learning, higher rates of student/faculty interaction, increases in critical thinking and writing skills, greater appreciation for diversity, higher student engagement overall, and “compensatory effects” (NSSE, 2007). HIPs are effective because they increase rates of student retention and engagement (Kuh, 2008).

HIPs have been analyzed to consider the essential elements of what makes certain educational practices “high impact”. Some important factors have been broken out as follows:

1. Requires students to devote considerable time and energy to purposeful tasks.
2. Requires students to interact with faculty and each other for discussion and creative problem-solving.
3. Allows students to interact with a diversity of people different from themselves.
4. Provides students with meaningful feedback on their work.
5. Gives students the opportunity to integrate, synthesize and apply knowledge they have learned (Kuh, 2008).

By identifying these underlying elements, researchers can begin to identify which existing educational activities are likely to be HIPs. Additionally, having a list of elements helps educators to create new activities as HIPs.

To build on the data of HIP analysis, Kuh and other researchers have run longitudinal studies to assess which educational activities elicit higher levels of student engagement and retention, and which activities have positive correlations with student performance (Kuh, 2008).

During this phase of research on HIPs, Kuh created a list of 10 specific educational practices that had been identified during the longitudinal study as producing high levels of student engagement and success (Kuh, 2008). One of these 10 practices are undergraduate research activities. “The goal is 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.” (Kuh, 2008).

Communities of Practice

Communities of Practice (“CoP”) are “groups of people who share a concern or a passion about something they do and learn how to do it better as they interact regularly.” (Wenger, 1998). Wenger describes three elements that characterize a CoP: joint enterprise, mutuality, shared repertoire (Wenger, 1998). Joint enterprise refers to communities which progress the level of their disciplinary field by identifying knowledge and skill gaps and pushing the community to develop. Mutuality references a community in which there is enough trust to give and receive advice and help, and to pursue a common goal. A shared repertoire describes a community that has developed its own language, culture, tools, or perspectives which allows for self-reflection and continuity (Wenger, 1998).

These communities are centered around the growth and development of an art, skill, knowledge, or science, and form a continuous learning culture. (Wenger, 1998). “By participating in these communities, we define with each other what constitutes competence in a given context...” (Wenger, 2000). CoP serve as “...important social units of learning, even in the context of much larger systems.” (Wenger, 2000). Some recent studies have provided positive correlation between CoP and learning outcomes (Mavri et al, 2021) and CoP have also been correlated with providing continuity and leadership to learning projects (Wenger, 2000).

Undergraduate Research Journals and Undergraduate Research Awards as examples of HIPs

Undergraduate research journals utilize several elements of HIPs, and both the undergraduates who submit work to the journal and the undergraduates who review and edit the journals benefit (Hare, 2019). Referring to Kuh's 2008 list of HIP elements: journals require undergraduates to work closely with faculty (either in crafting the original work, in working with the faculty for recommendations, or in working with faculty on the review committee); journals require students to devote significant work either to writing or reviewing; journals also allow students to integrate, synthesize and apply their research skills through writing or reviewing (Kuh, 2008).

Undergraduate journals also perform as high impact activities for specific library functions, such as information literacy instruction. "By partnering in the publication of undergraduate journals, libraries can further strategic goals related to information literacy and establish a connection between library publishing and student success" (Weiner & Watkinson, 2014). "Library publishing programs that support student journals... train the next generation of scholars by providing guidance on both the mechanical and conceptual issues related to publishing" (Hare, 2019). Wesleyan university conducted a study of undergraduates who participated in an undergraduate economics journal that was co-managed by the Wesleyan Library. Most respondents strongly agreed that work on the editorial board had deepened their understanding of the research process, made them more aware of their own research work, exposed them to a larger diversity of research models and helped them develop their analytical skills (Leekley et al, 2013).

Undergraduate research awards (“URA”) also create incentives and encouragement for undergraduates to participate in challenging and transformative research work. Like journals, URA also contain elements from Kuh’s 2008 list identifying them as HIPs, such as requiring time-intensive meaningful work, interacting with faculty to produce such work, and asking students to further deepen their engagement through application of learning to research (Kuh, 2008). Awards requiring written undergraduates to write an essay outlining their research process and experience creates opportunities for the students to synthesize and reflect on their work (Jones, 2009). Lastly, the award of money itself serves as a signifier of the importance of the task as well as positive feedback (B. Jenkins, personal communication, May 13, 2021).

Undergraduate Research Programs at the intersection of information literacy and scholarly communications

During the period that the ACRL was discussing and working on the new Framework for Information Literacy, many conversations were progressing in the ACRL regarding the ways that digital information was changing the profession of Librarianship (ACRL, 2013). One conversation prompted the ACRL to commission a study of the intersection of information literacy and scholarly communication (ACRL, 2013). As the Framework highlighted, the advent of easy web-based digital publication was rapidly allowing more people to join the process of publishing and disseminating information, thus shifting students (including undergraduate students) from mainly consumers of information to simultaneous consumers and producers of information (ACRL, 2013). The ACRL recognized that Librarians have a unique role in helping to train and prepare students as effective and ethical producers of information (ACRL, 2013). Therefore the study sought to investigate programs that librarians could engage in that would

specifically assist students in learning the wider domain of information fluency, which encompasses not only information production, but also knowledge of the legal, critical, and technical issues surrounding information literacy and production (ACRL, 2013).

As information fluency learning requires higher levels of cognitive engagement from students, the ACRL paper recommends learning activities based in effective pedagogical approaches, including, specifically, HIPs (ACRL, 2013). It also recommends that librarians look for education models that will create collaborations with faculty and campus-wide programs such as undergraduate research centers (ACRL, 2013). The *Wesleyan Undergraduate Economics Journal* (co-sponsored and managed by the Wesleyan Library and Economics Faculty) was cited as a model of effective, collaborative, and innovative library programs (ACRL, 2013). The ACRL paper noted that the Wesleyan Library contributed to the undergraduate students' information fluency and development in scholarly communication through several different teaching objectives (ACRL, 2013). Not only did the library help guide the research and writing of the articles, they also provided primers and discussions on copyright and publication rights, the scholarly communications process, and Open Access issues (ACRL, 2013). The ACRL recognized that a Library-led undergraduate research journal was an example of “[e]mbracing effective and appropriate technologies and teaching techniques for scholarly communication issues ... essential in the current changing digital information environment in which our students and faculty operate. (ACRL, 2013).”

Effectiveness of the URA and OURJ at UO Libraries

The URA and OURJ at UO Libraries tracks closely in structure with the elements of HIPs, CoP, and the ACRL recommended information fluency model programs. The URA and OURJ express several elements of HIPs by: requiring students to devote significant time and

energy to a meaningful task which requires higher levels of analysis and problem-solving; allowing students to work with diverse student and faculty colleagues; and by creating opportunities for students to work closely with both librarians and faculty as they craft their research, seek recommendations, and engage in the editorial process (B. Jenkins, personal communication, May 6, 2021).

Additionally, the undergraduate student review board of the OURJ forms an interdisciplinary CoP which includes the UO Libraries and departmental faculty in its community. As the review board community works to grow and improve the journal and to learn, improve and pass on research review skills to its members, it engages in a shared project of joint enterprise, mutuality, and shared repertoire. This community can persist and pass on its culture of learning through the permanent librarian advisor, the experience of the rotating faculty advisors, and through the OURJ practice of choosing a student editor-in-chief who has at least one year experience with the journal and who can lead and pass on knowledge to the other students (B. Jenkins, personal communication, May 13, 2021). CoP are effective structures in academic settings as they are highly efficient in limited resource environments, multiplying resources beyond a traditional one-to-one supervisory teacher-student to leverage community-wide learning and teaching. (Bennet and Male, 2017).

The ACRL cited best practice program (Wesleyan University's UER) is extremely close in structure to the UO Libraries' OURJ program in that it involves librarian expertise to teach research review skills, faculty to advise on the research from a subject matter standpoint, and student editors to provide the research review and editing (B. Jenkins, personal communication, May 6, 2021). The only difference in the programs is that the UER covers only a single discipline, rather than being multi-disciplinary (Leekley et al, 2013). URJs represent the core

strategies that the ACRL recommends libraries employ in the face of changing librarian roles in that they widen the information literacy mission to the information fluency model, engage evidence-based effective pedagogical approaches, and provide opportunities for campus collaboration (ACRL, 2013).

From these three evaluative standpoints, the UO Libraries implementation of the URA and OURJ are highly effective and efficient teaching activities, involve complex and deep applications of the skills needed to promote undergraduate student research successfully, and engage students in projects that undergraduate students have highly rated as contributing to their confidence, practical experience, and skills that they value (Leekley et al, 2013).

Benefits of the URA and OURJ to the UO Libraries

Besides providing benefits as an effective educational project to the undergraduate students, the URA and OURJ provide positive benefits to the UO Libraries itself. The URA and the OURJ are promoted both within the campus community and outside the community, providing prestige and awareness of the UO Libraries value (B. Jenkins, personal communication, May 6, 2021). Both URAs and URJs are cited in the scholarly and professional literature as innovate, model programs, and either project has the potential to become a signature effort for UO, drawing new students, faculty, and donors. The close collaboration with departmental faculty builds community ties between the library and the larger UO campus and demonstrates the specific expertise librarians bring to the research and educational missions of the campus (B. Jenkins, personal communication, May 6, 2021). Projects that promote undergraduate research demonstrate the unique value and capabilities of the library, as well as building more competent and involved scholars (ACRL, 2013).

As the social and learning environment changes, “librarians must accelerate the transition to a more open system of scholarship and transform student learning, pedagogy, and instructional practices through creative and innovative collaborations” (ACRL, 2013). Programs such as the URA and OURJ facilitates an academic library’s integration of existing information literacy and scholarly communication work, enhancing both and creating a transformational environment visible to and engaged with the entire campus community (ACRL, 2013).

Recommendations

Both the URA and OURJ are highly effective programs devoted to key elements of both the UO Libraries’ and UO campus’ mission and values: undergraduate research and student success. As such they are both highly beneficial to the UO Libraries as both HIPs and as tools to promote the UO Libraries’ value and deepen ties with the greater campus. As both programs require unique library expertise and also promote the library, it is to the library’s benefit that they remain as library-led programs.

While further development of these programs is warranted, some questions should be explored to not only enhance but also efficiently implement the programs. In the past a single librarian position headed these projects. The projects, however, have been growing in scope and prominence at a rapid rate and have already grown beyond the scope of a “side project” for a single librarian. It should be considered whether it is more efficient to keep the projects together or split them between two positions. Another question is where to locate the programs; do they belong with instruction, or scholarly communication, or even digital scholarly services? Or should they reside simply with the librarian with the most appropriate skillset?

Library donors have already proven an interest in these projects, and it can be assumed that other sources (private, grant and governmental) could be leveraged for further development.

Because the heavy lifting of development of the program is completed, other co-sponsors on campus might be sought for an already successful and prestigious program. Collaboration with faculty is key to both projects, so co-sponsorship is valuable and helpful partners could be found in any campus department, or with such entities as the campus research center or research symposia.

Further promotion or cross-collaboration could also enhance the long-term stability and strength of the program. The UO Library might consider allocation of a permanent display space to showcase visible aspects of either programs such as award winner biographies, tangible research artifacts, or posters. The Library might consider collaboration with novel and innovative partners, such as community college undergraduates, which would extend the boundaries of the URA or URJ form and showcase the unique environment of UO. CoP are efficient and stable structures for inter-institutional collaborations, allowing for the work and responsibility to be shared among staff and faculty at different locations. Another possible consideration is further synergy with Scholar's Bank or other digital repositories, to promote UO scholarship.

Conclusion

The UO Libraries have already created and grown highly effective student research teaching and promotional tools in the URA and OURJ. These teaching tools also function as exceptional demonstrations of the library's value on campus and promotion of the UO beyond the campus. Continuing with these programs not only benefits the library but provides it with a model program through which UO Libraries can become a leader in the new roles of librarianship engendered by the digital revolution. Both the benefits and potential for funding support are significant for the URA and OURJ, and either might develop into a signature project for the UO. Therefore further development of these programs is warranted.

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