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Collaborating Externally and Training Internally to Support Research Data Services

Matthew R. Harp and Matt Ogborn

Arizona State University, Tempe, AZ, USA

Abstract

The ASU Library is actively building relationships around and increasing its expertise in research data services. We have established a collaboration with our university's research administration in order to coordinate our distinct areas of expertise in research data services so that both entities can better support researchers all the way through the research data lifecycle. The Library embedded itself into research administration's learning management system and works with their research advancement officers to engage with researchers and staff we have not traditionally reached. Forging this new collaboration increased expectations that the Library will expand existing research data services to more investigators, so we have grown Library professionals' internal competencies by providing research data management training opportunities to meet these demands. In addition, the Library's Research Services Working Group established data competencies, workflows, and trainings so more librarians gain skills necessary to answer and assist patrons with data needs. Greater expertise throughout the Library enables us to authentically and confidently scale our research data services and form new collaborations.

Collaborating Externally and Training Internally to Support Research Data Services

The Arizona State University (ASU) Library is increasing its expertise in research data services in order to better support its community. As more and more academic disciplines work with data, we must provide tools and services that strengthen and sustain efforts across our campuses. The growing interest in data science and the sheer size of our institution require us to expand research data expertise beyond just one or two librarians by developing competencies in multiple librarians. In fact, these concerns require us to reach out to other entities on campus to provide comprehensive support in this area. To put it succinctly, "research data services are a larger-than-library issue" (Vitale, Marshall, and Nurnberger 2015, 26). We are currently establishing an active research data services collaboration with research administration, which adds urgency to our own internal skill building.

The Office of Knowledge Enterprise Development (KED), ASU's research administration, also supports research data services for researchers at ASU. However, while the Library and KED both have a common goal of fostering successful projects from proposal to completion, we each have distinct priorities and expertise and utilize separate vocabularies to describe similar concepts and processes. KED manages several large-scale units in the university, facilitating activities from project planning, to proposal development, to grant applications, to commercialization. It oversees state-of-the-art core facilities equipment and specialized services, focusing on successful proposals, research dollars, compliance, and helping researchers bring their "discoveries and innovations into the marketplace" ("Researcher Support" n.d.). The Library supports research data services regardless of funding, and we typically deal with researchers more interested in publication and open sharing than commercializing outcomes. Regardless of our differences, as a hub for transdisciplinary information management, the Library stands out as a natural partner and collaborator with KED. Working together, we aim to identify sustainable methods to support large-scale university research data services.

In this article, we first discuss how the ASU Library and KED began working together to support research data services and how our collaboration is expanding and growing. Next, we describe the Library's efforts to strengthen the collaboration by working directly through one of KED's systems and with its research advancement officers. The more successful this collaboration becomes, the more demand the Library will see for research data services. Given this, we next discuss how we are building competencies and confidence among library professionals to provide enhanced, transdisciplinary research data services support in a very large university. We follow this with a brief description of how our collaborative model with KED is informing other collaborations. Finally, we discuss how our coordinated plans will enable excellent research data services while also building foundations for further partnerships within the university.

Strengthening an evolving collaboration

While collaboration between libraries and other entities on university campuses to support research data services is not new (Martin 2017; Whitmire, Boock, and Sutton 2015; Wittenberg and Elings 2017), specific collaborations between libraries and research administration have so far been little documented in the literature. According to Cara Bradley, who conducted a content analysis of the library and information science and research administration literature in

2018, "both librarians and research administrators regard themselves as integral to the research mission of the university, but there has been little documented dialogue between the two professions in the literature of either field" (2018, 17). Further, "no RA articles suggested working with or partnering with librarians in a meaningful way, and the LIS literature only infrequently raised the possibility" (Bradley 2018, 27). To some extent, then, ASU Library's active collaboration with research administration has few precedents.

Before the Library and KED could begin collaborating effectively, we had to address our different vocabularies, expectations, and ways of working. KED's vision of the research data lifecycle has an entrepreneurial focus. Their very name reflects their emphasis on the university as a knowledge enterprise, which includes establishing corporate partnerships, designing innovation campuses, advancing entrepreneurship activities, and commercializing research products. Just as they have a vested interest in facilitating and administering large grants at ASU, they are also focused on technology transfer projects that result in patents and licensing that generate profits. The Library is certainly not averse to commercialization, but our focus is on open access, sharing, and the discoverability of scholarship. We are most interested in the research data lifecycle as an ongoing, iterative continuum, with the ends of projects informing and supporting the beginnings of new ones.

Although the Library first began meeting with KED to discuss research data services in 2015, our early efforts at collaboration were unproductive. KED's initial outreach to the Library focused on their immediate concerns, such as data security and ensuring that large, restricted data networks used by researchers were compliant with federal guidelines. These issues were central to their vision of data management, while we were more interested in preserving data and ensuring that future researchers have access to data generated by ASU researchers. Nancy McGovern suggests that effective collaboration requires "coming together across disparate, but engaged, domains in ways that are often unfamiliar or possibly uncomfortable to member organizations and individuals in order to identify and solve problems together, to achieve more together than we could separately" (2018, 6). Our collaboration could not really take root until administrators in each organization decided that the collaboration was truly important and began to dedicate time and resources to it. Earlier efforts at collaboration failed largely because of a lack of this kind of support. The Library is now working with KED and other affiliated organizations, such as the University Technology Office, to define our respective roles and responsibilities in research data services. We are considering research data terms from each of our perspectives and determining at which points in the data management process each entity is best-suited to provide support.

One recent outcome of the Library's collaboration with KED that demonstrates that we have not yet entirely integrated our different views of research data services is the Library's input on a KED-driven researcher support guide. Currently, the guide shows five stages of a research lifecycle, which ends with "Commercialize your work" ("Researcher Support" n.d.). However, commercialization is not relevant for many researchers at ASU. The Library is advocating that commercialization should be merely one option in a "sharing" stage that could also include open access and the publication process. We hope that this more inclusive view of the fifth stage of the research lifecycle will be reflected in the next version of the guide. Our collaboration with KED is still very much a work in progress, and as our partnership develops, integrating our perspectives will require ongoing negotiation and compromise.

Library outreach to KED

In our earliest and most direct collaboration with KED, we integrated library research best practices and support tutorials into KED's Research Academy learning management system (LMS). Built by ASU's Research Technology Office, the LMS acts as both an event management system and a traditional e-learning environment. Some of KED's tutorials in its "Craft Your Proposal" series, which is targeted towards early career researchers and those new to the university, include "The Proposal Narrative/Project Description" and "Budget & Budget Justification," to which the Library added "Data Management Tools" and information that was integrated into a new "Proposal Writing Toolbox" tutorial. These tutorials familiarize Research Academy users, primarily faculty, researchers, and staff at ASU, with the Library's role in research data services. The Library's increased presence in the Research Academy has resulted in more research data services questions and consultation requests and has become the foundation of ongoing collaborative efforts.

Users must authenticate before they can access modules in the Research Academy, which tailors the availability of resources based on each person's unique affiliation but also limits access to content based on this affiliation. We do not want to send ASU researchers to Research Academy resources if they may be unable to access them, and we believe that even if access to some of the modules themselves is ultimately restricted, information about what modules and resources are in Research Academy should be open to all. Nonetheless, the Library is using Research Academy, which provides tagging, integrated campus maps, and two-way communications with participants, to schedule workshops, register participants, and target faculty and research support staff. It also alerts users to the Library's expertise in research data services when learning about university procedures. We benefit from direct association with other enterprise-wide events, using the system to target audiences by affiliations and as a direct line of communication with Research Technology staff, which allows us to collaborate with their marketing and program strategists. We continue experimenting with the system, providing feedback on some of the shortcomings of the platform to KED and advocating for an open, accessible, shared system that enables the uses desired by both KED and the Library.

Shortly after the integration of Library resources into the Research Academy, the Library began working directly with research advancement officers (RAs), who are trusted members of research project teams deployed throughout the university. KED hires RAs, trains them using a research staff pipeline approach, and then transfers them into schools and colleges, where they become staff. RAs are embedded to work directly with researchers for the entirety of specific projects. KED also maintains a handful of direct RAs, who facilitate proposal development and project support for units that do not maintain their own advancement officers. Together, they form an enterprise-wide network of experts with a shared set of practices and administrative approval.

Working with the RAs is an indirect and sustained means for us to connect with researchers, but most RAs were unaware of the Library's expertise and capabilities. To improve our relationship, librarians now train RAs on library resources, reinforce our expertise in the research process, and build familiarity. For instance, we have presented sessions on the Data Management Planning Tool and how to access social sciences data from the Inter-University Consortium for Political and Social Research (ICPSR). Changing the RA culture will take time,

but each time we present information to these staffers is an opportunity to remind them that we are here to help.

Library strategies to meet increasing demands

In order to support the relationship that the Library is building with KED, we also collaborate internally to enable successful implementation of research data services. Library administration created a cross-functional research data services group called the Research Services Working Group (RSWG), which is comprised of rotating representatives from collections, technology, and engagement. The group supports liaisons and research project programming by ensuring that outreach and training activities are properly resourced and in line with the Library's strategic priorities.

RSWG has developed research data management competencies in librarians, including teaching best data practices, reviewing proposals, and making appropriate service referrals both within the library and to the larger university community. It has also established workflows that enable responsible and open research data services and has focused on growing research data expertise to more broadly support the relationships we build with KED and other university service points. Instead of having one or two individuals with expertise in research data services, which is frankly unsustainable in an institution the size of ASU, we are building capacity so that more librarians can answer and assist patrons with data needs, leaving only the most complicated questions to those librarians with the greatest data expertise. Increased competencies ultimately support the deployment of new services in a sustainable manner.

In 2018, RSWG sent out calls for Library professionals to attend out-of-state data training events, asking those applying to submit simple statements describing their interest in the opportunities and how they would disseminate what they learned upon their return. The opportunity to travel and attend conferences and events is an appealing incentive, and those chosen for these opportunities can network and learn new data skills to incorporate into their day-to-day work and share with their colleagues. Participants increase both their own expertise and the expertise of the Library in general. The Library pays for these trips with administrative funding, which demonstrates buy-in from our Library's administrators, who recognize that more research data services expertise within the Library will enable more outreach.

Since May of 2018, eight Library professionals have attended four data-related training opportunities. In each case, participants presented what they learned upon returning. After attending a one-day ACRL Roadshow on research data management in Reno, Nevada, one librarian enrolled in two National Library of Medicine data management courses, which in turn led to her holding a workshop for graduate students called "Data Management Plans for Successful Grant Proposals." She has since become a research data services expert in health science-related research and grant projects. After attending a five-day ICPSR workshop in Ann Arbor, Michigan, one librarian became ASU's ICPSR Designated Representative and began networking and collaborating with other individuals and entities on campus who are actively involved with ICPSR data. Both librarians who attended the ICPSR workshop have begun offering social science data workshops to graduate students on multiple campuses. One of the main impacts of these internal training opportunities has been the Library's ability to more directly support data-related projects, including workshops, events, and consultations.

Future directions

As we begin to see dividends from our efforts at competency building within the Library and the new relationship that we're establishing with KED, we are thinking about ways to expand our services. Connecting with RAs, developing internal training and competency programs, and regularly engaging with KED are strategic components of a combined effort to include the Library in an enterprise-wide researcher service providers (RSP) team that will coordinate events and produce shared marketing collateral. The RSP team's first deliverable is the aforementioned researcher support guide based on the project lifecycle, which directs researchers to the entities on campus that are the experts in each stage of the research process. The Library's contributions include our research data services, author consultations, and how our maker services tie into prototyping and product development. The RSP has also begun to host events for new faculty and researchers at ASU.

Building upon our success collaborating with KED, we are looking to establish other relationships that will support good research data practices on campus. The Library's new graduate student workshop series includes instruction on research data services. The Library is working with both the campus Writing Centers to differentiate the expertise and perspective of each entity in supporting graduate students and the Graduate College to identify what research data services ASU graduate students need to further their academic careers. In both of these cases, the key to supporting good, integrated research data services is relationship building that will ultimately benefit our researchers and students.

Conclusion

The Library and KED's ongoing collaboration has not been without some difficulties. Both organizations had to wait until the right administrators were in place to explore and begin to understand the different ways that we have historically approached research data services. When it comes to diverse actors like librarians and research administrators, there is often a "lack of common ground between professional services, as well as the gap with researchers' own conceptions" (Cox and Verbaan 2016, 324). The Library and KED have both experienced this lack of common ground, but we have persisted in meeting with one another in an effort to provide high-quality research data services to our constituents. Our collaboration is still fairly new, but the Library has already seen an increase in research data services questions and requests for data consultations, which will only grow as we continue to work closely with KED. Both organizations believe that our collaboration amplifies and expands the types of research data services that we provide for the ASU community. As our collaboration continues, we plan to reach out to other entities on campus to improve and enrich our research data services.

Disclosures

The substance of this article is based upon a lightning talk given at RDAP Summit 2019: "A Case Study in Collaborative Open Research Training" available at https://osf.io/u6pdg.

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