

“A Supernova that Sparks in Every Direction”: A Long-Term Assessment of the Research Sprints Faculty Engagement Program

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The Research Sprints program offers faculty partners the opportunity to collaborate intensively and exclusively for one week with a team of librarians to achieve significant progress on research or teaching projects. This longitudinal study extends previous immediate and short-term assessments by interviewing Research Sprints participants at two research-intensive institutions 2–4 years after their concentrated week. The authors evaluate the enduring impact of the program on the participants’ projects, research/teaching practices, and relationships with the library. Participants report achieving project goals, improved skills and student success, and greater awareness and appreciation of librarians’ work.

Introduction

Close collaborations between university faculty and librarians lead to a variety of positive outcomes: improved library services, spaces, and student engagement through course-integrated projects;¹ increased student data and information literacy;² and stronger institutional

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alliances.³ The Research Sprints program is one model for collaboration that places librarians and faculty together for a short burst of dedicated time to make significant and tangible progress on a faculty-led research or teaching project. This intensive, one-week collaboration model was developed at the University of Kansas (KU) in 2016 and adopted at the University of Minnesota (UMN) in 2017. There are two previous publications that describe short-term evaluations of Research Sprints programs. The first evaluation of KU's first iteration of three Research Sprint teams focused largely on the use of project management tools. They found that the three participating faculty were very satisfied and felt that goals were met.⁴ The other study from UMN—a short-term evaluation of 19 Research Sprints over three iterations—found that this model is effective at building social capital, increasing faculty engagement with libraries, and establishing working relationships between faculty and librarians.⁵ Given the immediate successes of these collaborations, a team of researchers from KU and UMN sought to determine the long-term outcomes and impacts of Research Sprints on participants' project progress, effects on their research/teaching practice, relationships with the libraries, and overall experience with the Research Sprints. To accomplish this, the research team conducted semi-structured interviews with faculty participants and employed a thematic analysis approach to determine that Research Sprints positively affected related scholarly and pedagogical outputs, faculty skill sets, and faculty relationships with the libraries and universities.

Research Sprint Structure

An annual Research Sprint cycle begins with a call for proposals. Faculty are invited to submit proposals that are evaluated by the librarian planning committee for feasibility and fit with librarian expertise. The planning committee assembles a sprint team based on project needs and staff capacity and assigns one team member as project manager. A Research Sprint team is typically composed of 3–5 library staff members with diverse skill sets and expertise, in addition to any additional research team members. Project teams have one or more pre-sprint meetings to set goals, prepare a work plan, identify any technology or resource needs, and complete necessary pre-work to ensure that the sprint week is successful and efficient. Team members may be assigned work on a specific component of the project, allowing them to work independently in close proximity or to join the team during scheduled intervals. The entire team meets frequently throughout the sprint to discuss progress and make decisions or adjustments to meet project goals. At the end of the sprint week, each team's progress and accomplishments are celebrated with a showcase or social gathering. A more detailed description of the structure of Research Sprints has been previously reported elsewhere.⁶

Research Sprints were originally scoped to provide support for a wide range of project types and subjects at large research institutions. Both universities are the flagship institutions of their states and hold a Carnegie Classification as an R1 Doctoral University with “very high research activity.” UMN has nearly 50,000 students and over 3,800 staff, and KU has over 27,000 students and 2,600 staff. Examples of previous Research Sprint projects at KU and UMN include: a website and smartphone app that commemorate and teach users about the death of Emmett Till; a digital map of Twin Cities rivers, lakes, streams, and wetlands based on literature and land surveys that date back to pre-1900; and a journalism course redesign and a supplementary open textbook. Descriptions of all past projects, as well as tools and suggestions for implementation, can be found at researchsprints.org.

Origins of Research Sprints

New technology accompanying the advent of the internet has enabled new research methods, open access, and pathways to information which, along with shifting university priorities, have generated user-centered engagement models in libraries where both subject liaisons and functional specialists support faculty research and teaching.⁷ The time-intensive engagement model requires librarians to collaboratively corral their skill sets and to develop new skills, such as those related to digital humanities and data management, to meet evolving faculty research and instruction needs.⁸ Literature suggests librarians primarily connect with faculty through students;⁹ instruction, courses, and curriculum;¹⁰ and library spaces.¹¹ “Embedded librarianship” is one common tactic for building relationships with faculty through teaching, learning, and research, whether in-person or online.¹² Embedding a librarian from the early stages of a research project can ensure librarians efficiently and effectively meet a research group’s needs. However, research projects can last years, and maintaining such a lengthy collaboration is not often feasible or scalable.¹³ Still, they also have the potential to reconfigure traditional models of research support and streamline collaborations.¹⁴

Operating in a consultant model,¹⁵ librarians at KU sought to develop a more sustainable model of embedded librarianship, using insight from two internal studies of faculty and graduate student engagement. In the fall of 2013, a survey of faculty and graduate students revealed that most respondents utilized the library’s research consultation service, but a majority were unaware of unique services available to assist throughout the production and dissemination of research, such as data management, copyright, and scholarly communications services.¹⁶ A subsequent study consisting of a focus group and interviews with faculty further assessed faculty research needs and practices to determine recommended engagement tools and methods. KU faculty expressed frustrations with time limitations that prevented them from developing new skill sets outside the “information silos” of their disciplines.¹⁷ Positively, KU faculty viewed KU Libraries as a key “facilitator of research activity” and a place for dedicated research and gaining needed expertise through collaborations.¹⁸

KU librarians, valuing their own expertise and faculty need for dedicated time and space for collaborative research, assessed collaboration models commonly used outside of libraries. Hirotaka Takeuchi and Ikujiro Nonaka developed a framework for collaborative teams to move an idea from inception to prototype, similar to how a rugby scrum moves the ball to score a goal.¹⁹ In the early 1990s-2000s, software developers further developed “scrums” into month-long “Agile” project management “sprints” for product development.²⁰ Google Ventures held a version of a product design scrum sprint that they termed a “research sprint.”²¹ The more direct forebear to Research Sprints comes from academia as the National Endowment for the Humanities-funded One Week | One Tool program at George Mason University’s (GMU) Roy Rosenzweig Center for History and New Media. This program used scrums to produce small web applications in 2010.²² A successful byproduct of One Week | One Tool is its ability to help faculty witness and better appreciate the expertise of their collaborators. Hoping to capture this collaborative appreciation and productivity, KU adapted GMU’s model to fit an academic library in 2016. Founding Research Sprints organizers Pamella Lach and Brian Rosenblum aimed to build upon faculty familiarity and comfort with intermittent library consultations and address frustrations with project time limitations by designing an intensive week-long collaboration to support faculty through a compressed lifecycle of their research and teaching projects. Lach and Rosenblum proposed “a new type of user engagement based on

meaningful, mutually-beneficial” collaborations as discussed by Zsuzsa Koltay, Xin Li, Curtis Lyons, Danielle Mericle, and Gail Steinhart when assessing the lifespan of partnerships.²³ Lach and Rosenblum wanted these partnerships to “demonstrate the value of KU Libraries” and establish long-lasting relationships with faculty.²⁴ In the case study of the three inaugural KU Research Sprints, Lach and Rosenblum postulated that the development and use of project management tools were central to the success of the program.

Evolution of Research Sprints

KU held their first Research Sprints in 2016 and, after news of its initial success, UMN Libraries adopted KU’s sprints model in 2017. To understand the short-term impact of the Research Sprints program locally, UMN librarians administered surveys to faculty and librarian participants at the end of the sprint week. A local analysis of the UMN surveys revealed that sprints are an effective way to build social capital with faculty across campus; that project management strategies must be carefully planned and vigorously applied; and that team dynamics are unpredictable and can impact the success of the week.²⁵

To encourage the development of effective faculty engagement at their own and other institutions, KU and UMN librarians have also shared their program model and assessment findings in a variety of venues. They created a digital toolkit (researchsprints.org) with examples of past projects and resources for others to develop their own Research Sprints and presented the model at national and local conferences. Other institutions have begun to adopt this model too, including the University of Miami, the University of Michigan, the University of Oklahoma, and the University of Virginia.

Since 2017, UMN and KU librarians have continued to report on and assess the Research Sprints model.²⁶ Immediate surveys of participating faculty and librarian sprint experiences have allowed KU and UMN to adjust their project management tools and training, timing of sprints, scheduling, and team-building for each new iteration of sprints. The resources for the Research Sprints initiative requires extensive librarian labor and funding. To address the question of whether the sizable investment is worthwhile, the two institutions designed this exploratory longitudinal study to investigate the long-term impact that participation in Research Sprints has on the research and teaching agenda of faculty awardees.

Methods

Three years of Research Sprint participants are included in this study (Table 1). These faculty sprint participants were a self-selected group that applied to and were accepted for participation in the Research Sprints program at each respective institution.

After receiving Institutional Review Board (IRB) approval at both institutions, all 20 faculty sprint participants at both institutions from 2016–2018 were invited to participate in this study by their own institution’s Research Sprints planning committee, and 19 (95%) accepted on the condition that their responses would be de-identified in accordance with study protocols. Data were collected through semi-structured interviews conducted virtually via Zoom from February to June 2020. In order to minimize bias, KU librarians interviewed UMN participants, and UMN librarians interviewed KU participants.

TABLE 1 Number of Research Sprint Participants			
	2016	2017	2018
KU	3	3	1
UMN	N/A	7	6

The interview questions were developed by the research team and focused on describing the participant's project, recalling their Research Sprints experience, and describing the current state of the project and its relation to their career trajectory (see Appendix). Thus, the data relates to the participant's experience during the week of the sprints, but also focuses on the results of their project, both anticipated and unforeseen, in the months and years after the sprints. Each interviewer conducted one pilot interview with a research assistant from a sprint team included in this study; the pilot interviews were not included in the analysis. The faculty interviews were recorded using Zoom's built-in recording features, and the recordings were transcribed by a professional transcription service with research funding from KU.

The research team used a thematic analysis approach to describe and analyze the interview dataset. This method offered a flexible, yet systematic qualitative approach to organizing and describing a dataset in rich detail.²⁷ Additionally, it allowed the research questions to drive the analysis process, while accounting for all responses to the semi-structured interviews, even those that deviated from or went beyond the initial questions.²⁸ The research team followed the phases outlined by Virginia Braun and Victoria Clarke by having the data transcribed (by a third-party vendor), reading through the data and generating initial codes, creating a codebook, applying codes to the data, examining the coded data for themes, reviewing and describing the themes, and writing a final report.²⁹

A subgroup of four researchers (two from each institution) coded the interview transcripts. The initial codebook contained codes for topics that were expected to arise in the conversation based on the questions. Code definitions were developed and revised iteratively, and new codes were added to the codebook as coders worked through the transcripts. The full research team was given the opportunity to weigh in on the code definitions as coding progressed.

NVivo was initially used to code the transcripts, but due to issues with collaborating in multiple releases of this software across institutions, NVivo was dropped in favor of applying comments to the transcripts in Microsoft Word. Coders employed a method called *unitizing* to enable a focus on meaning in the text, while also allowing coders to systematically compare their coding and establish a level of agreement.³⁰ In this approach, one researcher codes a transcript alone, and then provides the coded copy to the other coders with the code labels removed. In this way, secondary coders are simply applying labels to pre-coded segments of text. Then coders compare their work to see where their coding choices agree or differ. Following a pilot exercise using two transcripts, the remaining transcripts were coded in pairs. Discrepancies, whether in code labeling or the boundary of the coded text, were resolved by consensus.

Researchers developed themes in small groups before meeting as a large group. The full research group then met periodically to discuss how themes were emerging across research questions. The results of that analysis are reported in the Results section below. The results of this research were shared with faculty participants before public dissemination so they could review the results for accuracy.

Results

Respondents reported a variety of expected and unexpected outcomes of their Research Sprints experiences: accomplishment of project goals, improvements around student success and project management, increasingly positive views of the libraries and greater understanding of librarians' work, development of long-term relationships with librarians, and personal

benefits. They also described their own recommendations for improvements to the sprint model in the future.

The authors found respondents generally reported the sprints positively aided them in meeting project goals. Additionally, the sprints facilitated participants' learning and appreciation of librarians' expertise in research and project management and fostered an environment where team dynamics factored into their perception of a positive or negative experience. Finally, participants reported on their abilities to achieve their project goals, and the long-term impact of the sprints on their projects and relationship with the libraries.

In addition to discussing the outcomes of the sprints, faculty participants noted that the sprint structure itself was impactful: the special atmosphere facilitated by the format and proximity that comes from having all participants together. Faculty spoke to the appreciation for dedicated time afforded by the sprints, noting the importance of having a deadline, the immersive experience, and the unexpected amount of work that can be accomplished by a team in one week. The participants used a variety of energetic terms to describe the experience, such as *kickoff*, *reignition*, *accelerator*, *generator*, *head start*, *launch*, *bones*, *scaffolding*, *foundation*, and *supernova that sparks in every direction*. Even if the value was simple comfort, almost every participant commented on the benefits of the Research Sprints methodology and the value it brought to their immediate and future projects. One participant described it as follows:

That collaborative atmosphere, knowing that I have these experts in their areas, that I could ask questions. And really anything was on the table. If I needed to know about something, I think I was really okay with being very open about my own ignorance, knowing that other people in the room probably had the answer and it was okay to ask. (Transcript 0004)

Scholarly & Pedagogical Outputs

The Research Sprints led to tangible outcomes such as grant funding, scholarly outputs (for example, manuscripts, protocols, or open access resources), and fiscal advancement for several of the projects. Funding for these projects ranged from internal (institutional) funding to large-scale national contracts and a grant for \$750,000. One participant applied data management skills learned during the sprint to create "such a great, detailed data management plan" that it was significant in a funder's award decision. Faculty also reported several other scholarly outputs such as publications, conference presentations, websites, student research outputs or presentations, academic courses, and even national recognition. They felt the experience positively reshaped their anticipated final product: the sprints were a testing ground that ultimately added depth and nuance to their research, mostly through pedagogy and information literacy. As one participant reflected:

And that's not something I would have been exposed to. I took a pedagogy class ...when I was a grad student, but only one. And you're not really taught how to teach as much. You're taught about your discipline, but you're not taught how to teach. And that's not something that I had spent a lot of time focused on, certainly not a solid week with a bunch of experts supporting me. And that is something I wish everybody had the opportunity to do. I mean, it's really been a valuable, valuable experience from that perspective. (Transcript 0005)

Discussion of the sprints' outputs also focused on disseminating information and research, whether that was across departments within the university or more broadly via open access materials. One participant did not anticipate broad interest in the open access website that came out of the sprint, but they were approached by an interested colleague at a conference six months later, and the work has provided the evidence needed to change guidelines at the state level. Remembering these unanticipated outcomes, the participant explained:

I thought "no one's going to care." We find it interesting. We're going to leverage it to do some other stuff, but I've been amazed by how many other researchers around the university do work in [topic]. In particular, there's [a center] here that has a journal about [topic] issues. ... The director of that center, I saw him at a conference like six months after we did the project. And he said, "I saw that [project] you guys did. It's fantastic. We actually use it as the background for all our work we're doing." So, I think it had that sort of positive effect of an awareness thing with other researchers." (Transcript 0008)

Another participant expressed mixed feelings: pride in the international reach of a different open access website that was developed for their sprint and lament that they were personally unable to market it more strategically.

Several faculty participants also were pleased with how the Research Sprints impacted student success, whether that was due to a student's role as a part of the sprint team (for example, it helped them to advance their research skills and positively impacted their contributions to future projects) or as a beneficiary of an academic course that was created during the sprints (for example, it pushed instructors to stretch their creative boundaries). One participant reported on a course module created during the sprints that "[t]he students have benefited from our joint shared expertise in ways that they wouldn't have if it had just been me teaching this with what knowledge I had." In addition, one student who participated as a Research Sprint team member went on to develop expertise in systematic reviews and won a research award as a result. In fact, the faculty participant emphasized the importance of student scholars by reporting:

I also have one student who is the team lead on this new systematic review and she's really become an expert in this research methodology because she was awarded an undergraduate research award on her own systematic review. So, she's applying the methodology to this. So, throughout this whole time, we've had presentations and we hope to have more publications using this research methodology that we initially learned and had set up through the Research Sprints. (Transcript 0004)

As with any interdisciplinary project or initiative, teams faced challenges due to different disciplinary approaches to research and an array of specialized experience. In some cases, this had a direct effect on scholarly output and progression of the project beyond the sprints week. When asked about the current status of the project, several faculty participants mentioned not having moved forward due to an overwhelming "deluge of information." An unexpected output was the excess of information gathered, which participants reported as

burdensome. Faculty described a lack of time, money, or energy to continue sorting through all the information collected for their sprint project. While sometimes expressed as a challenge, other times it was labeled as a negative outcome. Reflecting on their sprint experience, a researcher summarized the challenges in this way:

I had been hoping to, with the specialist from each field, with the librarians to actually be able to go a bit into the content of the literature, to not end up with 3,000 titles, but to maybe look at 20 titles or 30 titles, be able to select and then do a snowball and dive deeper into some areas. And be able to actually use their expertise to qualitatively look at the content. That's not what ended up happening. What ended up happening, one of the librarians ended up basically just very mechanically pulling anything that had [topic] in it and putting it in EndNote, and then spending a ton of time attaching the PDFs to it. And she was clearly very, she just wanted to do that. And she wanted to be done with that process, which took four days. So there was no, there wasn't a lot of room to communicate that actually that wasn't so helpful to me. Because now I have an EndNote, I don't know, with 5,000 titles, but what do I do with that? (Transcript 0011)

Moreover, faculty faced factors outside of Research Sprints that delayed their projects moving forward in the years that followed their sprint experience. These factors included stalled university activities due to COVID-19 and loss or lack of funding, time, and project personnel. For instance, one researcher detailed why the project stalled after the initial collaboration in 2017:

And while this database was really big, it wasn't big enough I don't think that it could overcome those kinds of statistical issues. And I think that's where, again maybe if we had somebody that really knew how to deal with the stuff working on it full time, that would have been fine. But we didn't have somebody to do that. (Transcript 0002)

Despite these reported challenges, researchers found the scholarly output from the Research Sprints week to have either directly or indirectly positively impacted their research process or course design.

Skill Building

Many participants mentioned specific technical, disciplinary, or methodological skills necessary for their project, and teaming up with librarians offered a chance for peer professional development in these skills. They repeatedly noted how the educational role librarians played was beneficial to the project and their career.

I mean, again, I didn't know ArcGIS existed. I didn't know any of these things existed. So at least I'm much more knowledgeable and I can draw from that knowledge on even new projects. ... So now when I submit this Fulbright and it has a GIS component, it's like, well, I didn't even know any of that existed before the

sprints. So it's a different project, but the choices that I'm making in my research are different now. They're informed by my Research Sprint. (Transcript 0012)

As evidenced above, new technologies and uses of technology (such as GIS software, advanced Excel techniques, interactive websites, citation management tools, and subscription databases) were frequently lauded as beneficial in the long-term. One participant, who developed a technology protocol for under-resourced institutions, referred to their product as a "socio-technical linkage," emphasizing the potential for large-scale impact.

Faculty participants also developed new skill sets based on the disciplinary knowledge and actions of the librarians on the team. Comments ranged from advancing project management skills to inhabiting the role of a learner. In addition to developing technical and disciplinary skills, participants expressed gratitude for exposure to methodological skills, such as best practices in research data management or, "things that nobody teaches you," as one participant put it.

Oh, the other thing I want to say that was really helpful is that they just also showed me how to organize things, how to just keep track like, "Okay, if you're going to do archival research and you're going to use a finding aid, here's how you track where you found things. Here's how you cite it. Here's how you keep your research organized. Here's a good way to handle your files." I mean I know this sounds really basic but as a social scientist, in humanistic social sciences, no one teaches you that. So really just being taught and having an opportunity to work with people who are, librarians are so meticulous and organized. I'm just not. So, spending time with them and having them help me figure that out was really helpful too. (Transcript 0007)

The synergy between researchers and librarians also led to creativity in cognitive processing: one faculty participant realized during the week that they were a "linear thinker," and the librarians' approach made them realize that it's okay to "get ahead of yourself" as you explore. Another participant "scrapped" what they thought they knew to follow the path that librarians laid out. The think-tank style of working as a team continued to be impactful for faculty participants, one of whom now adopts establishing personal connections as an educational approach, describing the librarians' "let's try this" approach to exploration as "fun! ...like a jazz riff."

Social and Professional Connections

The impact of sprints on participants extended beyond the intensive week into ongoing collaborations. Participants noted a variety of ways in which they continued to work with individuals, their library generally, or with others at the university and beyond. Some mentioned greater comfort with library workers who encouraged them to seek out support and partnership in a way they had not done before. Many participants developed ongoing relationships with library staff in the form of course collaborations, research partnerships, and social connections.

[The sprints team was] partners then and ongoing partners in the project. So both socially and sort of professionally, it was a good sort of bonding experience. (Transcript 0001)

Participants reported that they refer their departmental colleagues to the library for support. It was common for participants to have had existing relationships with one person in the library, but the sprints led to work with additional specialists and a broader network of individuals within the library.

There are a lot of good solid resources and a lot of people in the libraries that have a lot of expertise and are willing to help in a variety of ways. So it definitely gave me more exposure to the structure of the libraries and what librarians are able to assist us with. (Transcript 0001)

Participants often noted the insular nature of their work and how the sprints expanded their social and professional networks at their universities. Overall, they expressed more awareness of university units beyond the library.

I have strengthened my connections to faculty and staff throughout the university that were really helpful for interdisciplinary research design going forward. (Transcript 0007)

Participants appreciated the expertise and collaborative spirit of librarians, with one emphasizing that librarians were more supportive than their own department. These partnerships have often been ongoing and led to new opportunities for the faculty participants. Working closely with librarians also helped to validate the researchers' own research process: hypotheses were confirmed and there was security in "having the same vision come back to the [participant] from other people." One participant shared that "what was important became clear," and another stated that it was as if their research approach had gone through a filter and was validated by the sprints experience.

A somewhat surprising benefit of the sprints in the interviews was the sense of personal benefit and connection to community that the participating faculty felt as a result of the sprint. In some cases, it stemmed from the merging of professional research with personal interests. One participant stated that the experience was "beautiful for me personally and professionally" as it allowed for "truth-telling" and "unearthing new discoveries." A faculty participant provided detailed explanations of how they personally benefited from the sprints:

I mean, one of the things that I thought was actually, it turns out that several of the people involved I have interacted with since then in different ways. Like [a librarian's] kid and my kids go to the same school, and so there's just a sort of familiarity with campus. And I did this sprint in my first year as professor, and so as I'm sure you know, you don't necessarily get out of the office that much when you're doing your science or your work, your research all the time. So this got me out, it got me to different parts of campus. I interacted with people doing all sorts of interesting stuff, and so I learned a lot that way. (Transcript 0002)

Communication Challenges

A few participants commented on communication challenges with their teams. The vast ma-

jority of negative commentary related to expectations and poor communication. The faculty member with the majority of negative comments reported displeasure that they were not given access to a branch librarian and their collections and that their team members were not able to compensate for this loss.

We did not have the correct librarian with us. So we didn't have access to that library, the [branch] library has an entirely different search process. I mean you can't get, you actually I think physically either have to go to the [branch] library or you cannot get access online or if it's online, you have to be online on their computers. (Transcript 0011)

Two participants reported that communication problems encountered during the Research Sprints had a negative effect on their perception of the library. The problem occurred when a library staff member assigned to the sprint team was not engaged or presented a negative attitude toward the sprints. For one participant, the miscommunication made it difficult for some librarians to translate their subject knowledge in a way that would benefit the project.

So some would get on what they know is their subject, and they couldn't get off it. And we would sometimes be like, yeah, we're not going to use that. That's not going to be interesting. And they would continue. (Transcript 0015)

Other participants encountering miscommunication with their team members did not report a negative perception of the library but did offer reasons for their teams' confusion. One faculty member reported a struggle to convey common expectations and commitments for project goals, work, and time outside of the Research Sprints. This disconnect then affected the team's ability to meet the faculty member's expectations for librarian labor beyond the one-week timeframe.

Another participant described how their emotional ties to the project affected their communications about project expectations.

So that initial meeting was a little awkward because I had expectations and they had expectations and mostly it was just they had a better idea of what they knew they could do in a timeframe because they had worked on other projects before. But I think just, when anybody has expectations and they are or not met, you have an emotional response. And so there's just this awkward moment where I was like, "Well, what do you mean you can't do that?" But it was pretty obvious, now looking back at that moment, now that I've done a systematic review, that there's no way we could have done the next few steps. (Transcript 0004)

Another issue related to project goals was the differing approaches to information between librarians and faculty.

So we would take a fact they gave us and then we'd start spinning on it, and then the librarian would get very nervous that we're not being accurate. And we

would say, “Don’t worry, this is all just ideas. None of this is real yet. We have to be able to spin it.” That was fine. It just meant there was a lot of calming them down sometimes. It felt like: “You don’t have to worry how we apply this, you don’t have to worry, it’s going to be okay. But I understand that.” They’re precious with their facts and I love that about them. [Subject area] is looking at a lot of emotional truth too. It’s not just looking at facts. So anyway, I felt maybe like the one that had to kind of slightly monitor all that a little, but I don’t think it’s any different than [my usual work], frankly. (Transcript 0015)

While reporting negative experiences during the Research Sprints program, the faculty member who made the majority of negative comments has continued their instructional relationships with two librarians, though they have not encouraged their colleagues to apply for a sprint.

Suggested Improvements

Faculty members offered some insights into areas of improvement for the program. First, participants offered suggestions for communication and developing and aligning a common understanding of project goals and expectations of team members. Suggestions for improving communication began with putting more emphasis on the planning stage, mostly to help faculty understand the expertise of the assembled team and coordinate expectations. An additional communication suggestion was having a check-in during the sprint week to address issues and figure out what was not working.

Faculty participants specifically proposed solutions to the communication or unspecified challenges to participating in or accessing the program. Faculty members suggested “remedial” pre-sprints for individuals who might need lower-level support for similar types of projects, such as staggering such preparatory sessions throughout the year or offering shorter sprints.

More of them. I know that it’s intensive and good in summer, but I wonder if there couldn’t be one offered, maybe a small one or a shortened, foreshortened version offered maybe even over winter break. In terms of that, I mean, I really like the immersive nature and the nature that every sprint is different based on what the needs of the project are. The adaptability of the librarians was great. (Transcript 0005)

Faculty also recognized that suggestions to expand the sprints were troubled by the cost and staffing of the program.

More people, more people get offered this opportunity. But I don’t know how they would do that because there’s only so many of them, right? And they’re taking out a whole week of their time. (Transcript 0009)

Discussion

As previously reported in a short-term evaluation study, Research Sprints require a great deal of librarian time, effort, and labor, yet some librarians feel as if Research Sprint activities un-

derutilized their professional skills and experience.³¹ Additionally, informal conversations at both institutions raise concerns from librarians who are opposed to hosting Research Sprints altogether. These complexities beg the question: is it worth it? The findings from this study suggest specific considerations for developing or adapting a Research Sprints program that does indeed justify the effort.

Research Sprints Deepen Personal and Campus Connections

Faculty who participated in the sprints developed cross-disciplinary relationships with librarians, peer faculty, and other support units on campus that lasted, oftentimes years, after the sprint week. The “bonding experience” raised awareness of other campus units and led to the use of social connection as an educational approach to research practices—a refreshing pivot away from the often insular nature of faculty research. The value that participants placed on relationship-building points to a possible gap in the relationship between the university and the faculty members, especially new hires.

Junior faculty often have feelings of loneliness³² and report a desire for connection with senior faculty as well as “experienced colleagues.” This could happen within departments or across the institution.³³ Structured networking, mentorship, and orientations have been shown to provide encouragement, a sense of collegiality, and research assistance.³⁴ And intensive, tailored, small-group faculty development opportunities advance independence for early-career researchers.³⁵ While Research Sprints are not marketed as “faculty development opportunities” and the relationship between Research Sprint activities and mentorship should not be overstated, development and mentoring activities overlap with Research Sprints activities in many ways. Thus, Research Sprints might be sponsored and held in partnership with specific departments to advance the careers of new faculty. For example, Anne L. Harrison and Deborah G. Kelly reported that new faculty orientations were lacking in research opportunities, teaching skills, textbook access, copyright, and media materials:³⁶ all areas addressed by past Research Sprints. Additionally, Research Sprints have shown to increase social capital, individual and unit social connections that improve networks and trust³⁷—the absence of which was a call to action for improved faculty mentoring and networking.³⁸ Research Sprints might advance social capital for new faculty, but also for faculty that feel isolated due to citizenship status and racial identity.³⁹ Using the sprints to build social capital for new or marginalized faculty members builds social capital for librarians as well by expanding their professional networks.

Scope and Scale Require Careful Consideration

Targeting new and marginalized faculty could also be an effective method for limiting the scale of Research Sprints, making them more feasible for new adaptors by putting less demand on librarians. Research Sprints are not designed to scale to the point that all faculty are offered the same opportunity. By their nature, the objective of the sprints is to create deep, meaningful, long-lasting interpersonal relationships and professional partnerships with a limited number of faculty. However, libraries should not be put off by the potential scale of the sprints model—the scale of the effort is less relevant than the sustainability of the relationship. In fact, due to the COVID-19 pandemic and related labor instability, as well as overall burnout in libraries,⁴⁰ smaller scale efforts might be the best way moving forward. A small-scale program with just one or two sprint projects could give a handful of librarians a

change from their daily pace of work without overextending anyone, and the deep relationships that can be built might be invigorating during this time when many feel burnt out.

The sprint structure can also be easily adapted to fit institutional needs, the demands of faculty participants, and the availability of library staff. The formats used by the two institutions represented in this study are illustrations of two different forms these can take. In terms of work environment, at UMN, the sprint projects form one large cohort with teams working in physical proximity and some library team members moving from one project to another depending on needs, while the KU teams typically operate in separate areas with discrete teams. In spring 2021 while most people were still working remotely, KU hosted its Research Sprints program entirely online. This option was more viable because the three project teams had similar goals and used similar methods, which allowed for large multi-project learning and discussion sessions, combined with dedicated working time within each team. Communication and collaboration for these sessions was facilitated by using Zoom and Microsoft Teams. While completely remote teamwork will likely not become the norm, this case illustrates the potential to adapt to varying circumstances.

Each institution has modeled this adaptability by hosting sprint spinoffs. KU has held “Hurdles” for smaller-scale projects with fewer library team members for applications not selected for a sprint week. Smaller scale models, like Hurdles, are a way to ensure that all faculty who applied for a sprint get library support. Hurdles or other connections with a librarian are a positive outcome that ensure faculty still have a chance to develop a relationship with the library and get project help. Alternatively, UMN has supported university-wide strategic team projects, as well as cross-unit “Teaching Sprints,” with campus units like technology support, disability services, and educational innovation. These sprint offshoots demonstrate that the model can be adapted for both scale and scope to fit the unique needs at each institution.

The element of scale is important to consider not only during the sprint week itself, but also for the long-term relationships that are a key goal of the program. Each program should have a plan for how to cultivate and use those relationships in a way that benefits the faculty participant, library staff, and the institutional goals of the library and the university. Some faculty participants and library administrators have expressed reservations regarding the expectations of the long-term commitment of the librarian(s) to a project or relationship that is difficult to maintain given competing interests and demands.

It is vital that planning committees transparently communicate project scope and scale with participants, both in writing and verbally. An acceptance letter can serve as a formal notification of terms, laying out expectations for each party’s commitment as part of the program. KU’s Research Sprints website includes a list of areas of commitments for each party that set expectations for participation in the program (<https://lib.ku.edu/sprints/apply>). The decision to create a formal agreement and the form it takes depends on the existence (or lack of) financial incentive (a stipend), each library and librarian’s ongoing commitments, protocols recommended by university counsel, and the institution’s comfort and familiarity with formal documentation of each party’s commitments. At the same time, a formal acceptance letter that helps set boundaries might also feel inhibiting to some participants. Overall, boundaries should be carefully considered and discussed by library administrators and library staff who will be implementing the sprints to ensure common understanding and agreement as well as reasonable expectations for both short- and long-term work.

The terms of the formal acceptance letter can be verbally reiterated during pre-sprints planning meetings and throughout the sprint to facilitate faculty understanding of librarian approach, methods, and skills. The need for effective verbal communication is apparent in one faculty member's recollection of their initial meeting with librarians as "a little awkward" because the librarians explained they would not be able to meet the faculty member's expectations. It is clear the initial discussion with librarians and subsequent sprint was a learning opportunity for the faculty member. Having completed the project, when pursuing another collaboration with the lead librarian, the faculty member now understands there was "no way" the team could have achieved what they had initially expected. Transparently communicating modifications and cross-training during the sprint allowed librarians to educate the faculty member about proper methods, develop effective team communication, and accomplish common goals. It is important to note, however, that librarians may not be able to completely mitigate misunderstandings or negative feelings.

Team Building is Critical to Success

Cohesive team dynamics are fundamental to a participant's sprint experience. While the team's ability to produce a tangible product is the incentive for faculty participants and a key appeal for library administrators,⁴¹ this study indicated a faculty member's long-term perception of their team's success in accomplishing project goals was largely conditioned on their ability to work together. Alternatively, when team dynamics fell flat, there was the possibility of preventing faculty members from progressing in their project and establishing a long-term relationship with the library. This study revealed one team with reported dysfunctional dynamics: the faculty member expressed disappointment that subject expertise would not be available for the week, and one librarian team member worked independently to harvest unneeded research. Despite years gone by, the faculty member readily recalled the emotional toll of feeling out of sync with their team.

While it is not always possible to determine the exact origins of a negative experience or challenging team dynamics, it is apparent the Research Sprints can be a breeding ground for "group emotional contagion."⁴² That is, if one team member lacks enthusiasm or energy for a project, their negative attitude can spread to other team members and reduce productivity.⁴³ This long-term evaluation builds on previous findings by identifying the ways in which faculty satisfaction was impacted by team dynamics. Initially, the planning committees believed project management skills, knowledge of tools, and subject expertise⁴⁴ would enable participants to race through Bruce W. Tuckman's four stages of team development—forming, storming, norming, and performing⁴⁵—and accomplish their common goals. But building successful teams was a learning experience for the planning committees, who developed their organizational knowledge and understanding of necessary skill sets largely through trial and error. Building a team of relevant subject liaisons or experts with strong support by library administrations did not allow space for less interested librarians to decline working on a sprint team. This situation can set the tone for potential conflict. Finally, team dynamics initially did not factor into planning because the planning teams were largely led by newly hired librarians who did not know all of their colleagues or institutional context. To better anticipate such conditions, both KU and UMN modified their committees to include representatives from other library units and well-established librarians. Research Sprints planning committees should also consult with administrators or mentors with deep institutional knowledge.

Developing a person-centered approach to managing sprint teams is integral to the success of the sprints. Planning committees refocused their efforts to include professional development opportunities as well as institutional context and work histories. First, considering sprints as a vehicle for professional development pushed planning committees to select projects that would allow librarians to develop and immediately apply new skills to their work. Often this fostered new services and broadened participants' perceptions of librarians' abilities. It also enticed many busy librarians to join sprint projects. Other times the sprint served as a test project to help the library administration determine if a service was sustainable. In one instance, a determination of unsustainability may have contributed to the stalling of one project reviewed here. In another instance, it proved a testing ground for a librarian to continue to cross-train colleagues and develop a full systematic review service.

The planning committees also strove to foster more positive team dynamics in subsequent iterations by balancing subject or functional expertise with personalities and work history. This sensitive aspect of team building required planning committees to remain respectful and confidential of colleagues' wishes. For example, after the first iteration, the KU planning committee expanded to be composed of members from various library units who might be better able to speak to subject and functional expertise as well as potential histories of conflict or comradery. Representative committee members also made themselves available to answer prospective team members' questions and to communicate concerns to the planning committee. In relation to applicants, KU encouraged faculty to specifically name librarians with whom they had established working relationships or believed would benefit their work. This allowed the committee to further support existing faculty-librarian partnerships and to clearly communicate respect for a librarian's efforts in developing the relationship and project. KU's planning committee came to value the sprints work environment and chemistry so much that the issue of camaraderie occasionally became the deciding factor between equally good projects. When initiating Research Sprints, planning committees and library administrators should be aware and mindful of the work environment and history in balance with the professional strengths of team members. Establishing a positive working environment will not only benefit the productivity of the project team but also contribute to building a long-term relationship with participating faculty. Of course, not all aspects of personality and teamwork are predictable, but this study found a relationship between team dynamics and greater faculty satisfaction.

Research Sprints Elevate Faculty Perception of Librarians

The Research Sprints program addresses a question in the library literature around how faculty perceive librarians and strategies for improving that perception. In the Ithaka S + R 2018 Faculty Survey, faculty have consistently considered the library's role as a "buyer" to be the most important function of the library, while "research support" is one of the lowest ranked functions.⁴⁶ This perception has been long-standing; a majority of faculty view librarians as "professionals," rather than faculty who are equal to teaching faculty.⁴⁷ Faculty who participated in the sprints were often pleasantly surprised to learn about library science and skills that librarians can bring to a research project, and perhaps for the first time, recognized library and information science as its own field of research.

Previous research on the short-term outcomes of Research Sprints found that the close-working relationship between librarians and faculty built social capital.⁴⁸ This longitudinal follow up confirms that faculty reported they gained trust and respect for librarians, in part due to

many new research skills and tools to which they were introduced. The truly significant finding in the current study is the peer professional development that led to some faculty changing how they conduct research. Some reported a change in thought-processes and the use of relationship-building as a research tool. This goes beyond social capital; these long-term effects fundamentally change the way those faculty see librarians, as innovative peers, rather than “buyers.”

Thus, Research Sprints might be one successful way to embed librarians into an institution’s core research mission by way of faculty advocacy for librarians as fellow research collaborators. In their 2020 study on how librarian faculty status impacts faculty perceptions of librarians, Cathy Weng and David C. Murray pose an intriguing proposition for future research: “new ways should be found to integrate librarians into academic processes ... future studies could undertake to discover the precise circumstances under which librarians’ considerable expertise might be brought to bear in innovative ways on core missions.”⁴⁹ Faculty might champion librarians in inner circles such as faculty senates and committees, ultimately leading to librarians’ embedded participation in campus research activities.

Conclusion

As described in the literature review, one of Lach and Rosenblum’s goals for the Research Sprints was for faculty to develop deeper relationships with librarians and to gain a better understanding of the value of libraries.⁵⁰ Lach and Rosenblum and other prior reporting of results of the Research Sprints⁵¹ showed that the sprints were successful in the short term; faculty walked away with overall positive experiences and the original goals of the sprints appeared fulfilled in the immediate wake of the event. While these prior studies focused on survey results collected at the end of the sprint weeks, this analysis examined responses from 2–4 years after the sprint, thereby collecting information about faculty perceptions significantly later and after faculty had time to continue their work beyond the goals of the sprint week. The results show that in the long-term, too, the Research Sprint is overall an effective and impactful means for creating and deepening faculty-librarian relationships and developing faculty understanding of librarian expertise and contributions.

Overall, the Research Sprints made a lasting impact on the faculty members who participated in them at KU and UMN. While the faculty participants’ comments showed that the sprints model is not perfect, the lasting impression that most came away with was that the sprints were a spark of energy for their research. The Research Sprint model deepens personal and campus connections, opening the door for new recruitment strategies such as marketing sprints to new, junior, or marginalized faculty. They can be scaled up (for example, UMN’s cross-departmental teaching sprints) or scaled down (for example, KU’s Hurdles) based on capacity and are flexible enough to be adapted to an online environment. Scope should be formalized, by laying out parameters in written and verbal agreements. The main ingredient for a successful sprint is the thoughtful creation of a person-centered, well-balanced team. Research Sprints also elevate faculty perception of librarians, offering one possible avenue for integrating librarians into academic processes if executed well.

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Appendix. Interview Questions

1. Can you walk us through your Research Sprints experience?
2. Can you walk us through some of the major developments with your project since the sprints?
 - a. Follow up with questions about when major highlights took place
 - b. What has been the greatest success with this project?
 - c. What has been your greatest struggle with this project?
3. What do you see as the biggest benefit of the sprints for you?
 - a. Were there tools, skills, or relationships that you gained as a result of the sprints that you still use/maintain?
 - b. How do you see the sprints as having affected your work/career?
 - c. How do you see the sprints as having affected your research/instruction practice?
4. How did the intense and immersive nature of the sprints impact your project?
 - a. How did the four days in a row experience impact your project?
 - b. How did the close proximity to collaborators impact your project?
5. How could we improve the sprints?
6. How has your participation in the sprints affected your perception of/relationship with the Libraries?
 - a. In what ways have you continued to engage with the Libraries?
7. How have you shared your experience in the Research Sprints with others?
8. Is there anything else you'd like to tell us about your experience with the Research Sprints?

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