

Two Librarians Discuss their Experiences with the DSCPE Capstone Program

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Introduction

Data librarianship is a relatively new field that covers activities from teaching research data management skills and data science areas such as coding or cleaning data, to curating and archiving datasets. It includes traditional areas of librarian expertise such as organizing and describing information while overlapping with data and computer science. The need for data librarians has come swiftly and is ever-increasing with new federal data mandates and more data being generated than ever before. The needs and priorities of an academic library and its research community may not be in sync with the skills and abilities of working librarians.¹ Many library and information schools have begun offering classes in data librarianship, but more often librarians who are already in the profession may require a re-tooling of skills. Unfortunately, many libraries experience shrinking or stagnant financial campus support and cannot create a data services department or even add a new position. This means that data librarians may be solo practitioners, or that data responsibilities are added on to a librarian's existing duties. Educational opportunities are plentiful but may involve travel to conferences or membership in professional organizations, which costs time and money. Training may be online and asynchronous, which does not allow for questions or interactions with experts. Furthermore, while these various educational opportunities cover a wide range of topics, they come from many different sources and are not necessarily experienced in a logically ordered fashion. Thus, learning may be a lonely, time-consuming, piecemeal, and possibly expensive effort.

The Data Services Continuing Professional Education (DSCPE) program has stepped in to fill the critical education gap for data librarians.² It is a ten-week, virtual, intensive learning experience that enables early- and mid-career librarians to gain skills in data



services. This program was created to provide professional development for working librarians in a timely, affordable way. It includes the online learning modules from the Research Data Management Librarian Academy (RDMLA), synchronous sessions with content experts, a cohort of students, and a capstone project with a mentor.³

Literature Review

Research Data Management (RDM) services in libraries started appearing in earnest around 2010, resulting from the release of the National Science Foundation's Research Data Management Plan requirement.⁴ However, staffing these services often required new skills and ways of thinking. By 2015, Elaine Martin issued a "call to action" that libraries and librarians not be sidelined in research data opportunities by computer science and other informatic disciplines. She urged libraries and other institutions to see the value that librarians are uniquely qualified to add to RDM services.⁵ Even those in data science recognize the value of librarians as big data becomes ubiquitous in everyday work and life. Librarians need not become data scientists but can incorporate their existing abilities in organization and management of knowledge.⁶ This is easier said than done. The Data Science in Libraries project, funded by the Institute for Museum and Library Services, reported a significant skills gap. They wrote, "librarians lack the technical skills to be effective in a data-rich research environment." They also noted a 'management gap' to describe re-skilling challenges: "The ability of librarians to take advantage of ad hoc, informal, or short-term training and education programs is limited because they operate outside of traditional institutional support structures, professional development, and incentive systems."⁷

Eclevia et al. analyzed job descriptions of data librarians and found that common desirable qualifications include the terms: data management planning, data management, data visualization tools, data science, and data curation, among other skills that may be considered nontraditional in the field of librarianship.⁸ Some research points towards the development of two paths, a "data generalist" who works with a broad range of skills across disciplines, and a "subject specialist data librarian" who works at a greater depth with a single or similar disciplines.⁹ Regardless, all of this points to a wide variety of knowledge and abilities needed to fill these roles. These skills must come either from either new graduates in the field or from retraining those already working in librarianship. Library and information schools have been increasing the breadth and range of courses offered in data curation and data science. In a recent study, researchers discovered that ALA accredited schools were offering more classes than previously, and the classes tended to cover the entire data lifecycle.¹⁰ For librarians already in the field, many learning opportunities exist through professional organizations, data institutions, discussion lists, and conferences.¹¹

The Research Data Management Librarian Academy (RDMLA) fills gaps in librarians' knowledge as they learn the concepts needed to effectively provide Research Data Services (RDS).¹² In 2019, Rong Tang and Zhan Hu found that academic librarians worldwide hoped for more RDM training but felt that their libraries lacked capacity in that area.¹³ The RDMLA is a comprehensive, freely available resource to provide that needed training.¹⁴ The Data Services Continuing Professional Education (DSCPE) is a



ten-week virtual program that partners working librarians with data librarian mentors to provide RDMLA training with a capstone project.¹⁵ The DSCPE has been held in the fall annually since 2022.

The DSCPE Program

DSCPE was formed in 2021, and their third and largest cohort finished in November 2024. The selection process for applicants is rigorous and includes both an application and an interview. If selected, participants are not required to pay to attend as DSCPE is funded through a gift from Elsevier, Inc. and the Countway Library of Medicine. Founders Rong Tang of Simmons University and Elaine Martin of Harvard Medical School designed the program for early- and mid-career librarians with the knowledge that most new data librarians would be coming from the existing workforce to meet the demand.

They also recognized that participants would be coming in with different experiences and needs, so the program “adopts a Competency-Based Education/Training (CBE/CBT) approach. This non-traditional approach to education meets learners where they are and allows them to advance at their own pace. CBE/CBT promotes equity and empowers learners to master learning outcomes in a flexible environment (FTNT).”

DSCPE includes eight of the RDMLA modules, with six being required (Foundations of Research Management; Navigating Research Culture; Advocating for Research Data Management Services; Launching Data Services; Data Copyright, Licensing, and Privacy; and Data Curation and Archiving) and two that are optional (Project Management and Assessment; and Data Analysis, Visualization, and Platform Tools). It also includes three special topic modules, Research Methods, Collaboration and Leadership, and for the Canadian participants, RDM in the Canadian Context. Each module includes a series of videos on the topic, readings and other supporting material, quizzes, and activities. All of the required modules and the first two special topic modules are paired with a mandatory online meeting in which content experts presented additional information and context for that week’s subject. Participants also have the opportunity to ask questions or present current problems from their own professional contexts.

The program includes a fifty-hour capstone project. The cohort participants are matched with a mentor institution and project that closely aligns with their skills and interests. These projects benefit both mentors and mentees: the mentee learns or hones skills and the mentor’s institution gains extra staff expertise. Recent examples of capstone projects include integrating CARE (collective benefit, authority to control, responsibility, and ethics) principles into an institutional repository, exploring and comparing optical character recognition (OCR) tools used in special collections, and building a research data catalog. The capstone provides a chance to interact more closely with the mentor than typical networking opportunities provide. For example, the data librarian sphere offers many opportunities to meet and interact with others at conferences, specialized meetings, and workshops. Some may even decide to work together on a new endeavor or a research project. However, this capstone allows for a librarian to work and interact with someone who has more skill, as well as offering a safe environment to ask questions.

Recently, 2024 DSCPE cohort mentee Marianne Stowell Bracke, Research Data Management Librarian at Wayne State University and mentor Stacy Winchester, Research



Data Librarian at the University of South Carolina (USC), sat down virtually after the program's conclusion to discuss their motivation for participating and the outcomes of their experiences. The project plan included several parts. They worked to revise a research data survey—given to funded researchers every 5 years at USC—to fit the needs of Wayne State Researchers, and to customize Wayne State's DMPTool, the online tool to assist in creating data management plans. The mentee attended some of the mentor's virtual workshops to help her create workshop content of her own, and the mentee provided potential improvements for one of the mentor's LibGuides, which needed a refresh. The following conversation, edited for clarity, presents the responses from each author to the following questions:

1. Why did you decide to get involved in the DSCPE Capstone Program?
2. What were the best and worst parts of the program?
3. How did the program benefit each of us and our institutions?
4. Would I participate again?
5. What is the most valuable thing I took away from the program?

Reasons for Program Involvement

Marianne:

I was hired as the Research Data Librarian at Wayne State University (WSU) in the fall of 2023. The position had been vacant since before the NIH mandate went into effect, and there were no library data services in place for researchers. WSU is an R1 university in Detroit, MI. Most of its research funding comes from medicine and the health sciences, accounting for about 70 percent of the research dollars that enter the university. WSU was undergoing a lot of turnover at the top levels of administration, including a new president and a new vice president (VP) for research. Both the president and the VP made increasing grant funding a priority for their positions. All of this meant there was an immediate need for library data services and a lot of energy and support in the library and at the campus level to ramp up support.

I had research data experience from a previous position, but it had been a few years, and I had never created an entire service. I knew that I needed more training and guidance. There were lots of training opportunities out there, but I also wanted to build a network and learn in an environment with more human interaction. DSCPE offered frequent webinars with knowledge experts, a cohort experience, a capstone project with a mentor, as well as meetings with the program's creators, Elaine Martin and Rong Tang.

Stacy:

I arrived at my institution in 2014 as a liaison librarian to several sciences departments on campus. I soon realized that we weren't offering any of the services to support researchers with their data that I saw at some other academic libraries. Frankly, I didn't know very much about data management, open science, or funding agency requirements, but I saw the situation as an opportunity to grow professionally and to help my university. Little did I realize how much I had to learn! I spent several years taking advantage of every type of opportunity I could get my hands on. I read books and articles, watched webinars, and was fortunate to have the opportunity to take coursework online through



the University of North Texas's Graduate Academic Certificate program in digital curation and data management. It was a fantastic experience. I made site visits to other universities already offering services and met peers at conferences. In 2019, my library formally launched a suite of new digital scholarship services, and I became the research data librarian.

Now that I have a few years' experience under my belt, I am excited to have the opportunity to help other emerging data librarians establish services at their institutions. When I learned in 2023 that the DSCPE Capstone program was looking for mentors, I signed up right away. This year's capstone program was my second.

Best and Worst Parts of the Program

Stacy:

For me, the best part of the DSCPE is working on a project with a new colleague. Marianne is really knowledgeable and was in a great position within her university to make big changes and improve data services.

It's a bit harder for me to provide a "worst part." I found the experience fun and rewarding. It goes by quickly. Having even more time to work on the project would have been valuable. With that said, Marianne and I have continued to work together outside of the DSCPE program. We've continued to discuss her progress, and we will be presenting at a conference as well.

Marianne:

The best parts of the program were the webinars and the capstone. Most weeks we had one of the online RDMLA modules to complete, which was capped off with a webinar from the presenter from the module. The speakers were always very helpful, humble, and gave the cohort the chance to start a dialogue about that week's topic. I felt comfortable asking "basic" questions that I wouldn't in other professional settings. One presenter was beginning to work with a newer repository, Vivli, and he was able to explain the nuts and bolts of starting to partner with a new service.

The capstone, though, was the best experience. Stacy had suggested two possible capstone projects, but in our first meeting we realized our professional situations were similar. She had developed into her position as a data librarian from an original position as a science librarian, a very common occurrence in the field, and created services along the way. Her institution (and work) was about five years ahead of where I felt my library and campus needed to be. Stacy suggested a revised capstone project that would help me develop my library's RDM services. I would work on a modified version of a data needs survey Stacy had used twice before, modify my campus' version of the DMPTool, and create a series of research data LibGuides. I cannot stress how critical this support and structure was in developing services for my library. It can be overwhelming to do this all on your own, and flounder as you struggle to create the right services as quickly as you can. The capstone project helped me target discrete pieces of the RDM program to begin moving forward. I will also add that my capstone project was an outlier, in that it directly benefited me to build my services as opposed to working on a project for my mentor and her organization. I would have been eager to work on that type of project



also, but I appreciated Stacy's generosity in re-thinking the capstone project. DSCPE is intended for early- and mid-career librarians, and being well into my own mid-career, I valued the ability to build on my existing skills.

I do wish the program was just a few weeks longer, as the ten weeks seems short when you are in the middle of the capstone project. That might also allow for interaction with the other participants in the cohort during the project. Though we were together in webinars and learned about one another's capstone projects, it would have been useful to get to know them more as individuals.

Program Benefits

Marianne:

The program, and particularly the capstone project, helped me develop and launch research data services in my library. I am much further along than I would have been just doing everything on my own. I, along with our campus IT department, modified the university data needs survey and sent it to all researchers who have applied for grant funding over the last five years. Our DMPTool is customized to include a request for review that is sent to me. Statistics revealed that this tool was underused so I have made outreach a priority. This effort has included workshops and highlights on LibGuides. I have created a suite of research data LibGuides that have become the main source of RDM-related information on campus. This has had the added benefit of deepening my relationship with the people in our research office.

Stacy:

Marianne reviewed my Research Data Management LibGuide, which is heavily used by researchers at my organization, but could use some updating and a review from a set of fresh eyes. She looked at similar guides from other institutions and provided input that I will be incorporating. The DSCPE has also provided an honorarium to capstone-hosting sites, which is really generous and provides added flexibility when I need to make purchases. Moreover, DSCPE has benefitted me personally by offering the opportunity to give back to the data librarian community.

Would I participate again?

Marianne:

Yes, I would love to come back in a few years as a mentor to new participants. It would be a way to give back to the profession, and to stay fully involved with the community that the DSCPE program is building.

Stacy:

Yes, I hope to participate again! The 2024 cohort was my second time participating in the program. I hope that I will continue to be able to mentor data librarians through a capstone project.



Program Value

Marianne:

I really valued the opportunity to be exposed to so many people working in research data and especially getting to learn from Stacy. I appreciated that she was willing to make the project so practical. The collegial back-and-forth on data issues made me feel like I was part of a team and not just a solo practitioner. My confidence in my abilities skyrocketed, and I have a data services program to show for it.

Stacy:

For me, the most valuable takeaway from the DSCPE is my new relationship with Marianne. She is now a member of my professional network. It was a pleasure working with her and I hope that, although our institutions are in different parts of the country, we will continue to have opportunities to work together in the coming years.

Conclusion

The benefits of the DSCPE program generally, and the capstone experience specifically, are a way to build skills and abilities, professional networks, and make deep and lasting connections with colleagues. Networking is important and can build relationships of varying depths. In this instance, participants built links among members of the cohort, the program organizers, and the content-expert presenters. However, the capstone allowed for a different kind of relationship, a more durable partnership, to connect the mentor and the mentee. As both were mid-career librarians they had, and knew how to develop, networks. The capstone allowed the mentee a rare opportunity at her stage in her career—she could be vulnerable and ask for help in areas that were new to her. The mentor was able to share her experiences, get help with a project, and add a new and trusted colleague to her network.

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Notes

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