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Goals of the Project

We proposed a *Quantitative Research Institute for Libraries* to better prepare librarians and library staff to make informed decisions about their services, to make arguments for funding and support, and to reach marginalized communities. Throughout this quantitative research institute, we hoped that librarians would learn to collect data, select appropriate statistical methodology, and interpret their results. By providing training in SPSS and other quantitative tools, we hoped to provide librarians with the skills needed to create quality reports, visualizations, and scholarly publications. This institute was created for public and academic librarians as well as library staff who want to understand more about how to find and collect data, design quantitative research and create new knowledge for both other library staff and those external to the library. Additionally, these skills can be used to complete library assessment or learning assessment, conduct peer-reviewed research, and/or participate in community-engaged research.

At the time that we thought of this project, we were two librarians at Duquesne University. Cathryn was the Social Sciences Librarian, with an extensive background in statistics and statistics teaching. Marcia was the Instruction Librarian, who used quantitative methods in her doctoral program. We found that there was a need for an institute focusing on statistics; in our research we did not see much evidence of MLIS programs that require coursework in quantitative research methods. Additionally, while some paid opportunities for quantitative training exist, they are not necessarily library focused (eg ICPSR). We wanted to provide a free, two-day institute that would be accessible to librarians in institutions that do not provide much professional development support. All libraries could use quantitative research methods in some way, and so we wanted to provide training and support that could enable more effective collection and analysis of data.

Process

One of the first steps we took was developing learning objectives for the Quantitative Institute for Libraries (QUIL), which allowed us to organize the Institute. We stressed the importance of understanding and identifying quantitative research methodologies. We then focused on beginning to develop data analysis skills that include running statistical analyses, and interpreting and communicating results. The emphasis was also on incorporating examples from library and information science and guiding participants through analyzing a real data set. Once we had an outline of the content, we divided instructional duties that best suited our individual expertise.

We sought guest instructors and panelists to participate in the institute as well. Our guest instructor was Dr. Emma Slayton, whose expertise in data visualization stressed the importance of creating visualizations that tell a story and she was key to providing attendees with a sense of visualization best practices. We also invited relatively local experts in library assessment to participate in a panel. While there was some difficulty in identifying those who could participate, because we reached out to possible panelists early in the academic year, we were able to establish a panel without too much trouble.

Additionally, one of our early efforts was to consider marketing. We asked Duquesne University's Marketing and Communication unit to create our logo. We looked at different possible

designs and decided on the one seen here (Figure 1). We also gave input on the registration flyer, which gave some brief information about QUIL and told individuals where to go to register.

Figure 1: QUIL Branding



Simultaneously, we began to design the LibGuide so that interested parties would have a landing page for learning a little bit more about the institute, as well as having a link to registration.

Before individuals registered, we confirmed with Duquesne Residence Life that we would be able to house attendees in on-campus residence halls. We wanted to make QUIL as affordable as possible, and were able to do that with support from the Lyrasis Catalyst grant. With the support of Lyrasis covering the cost of the educational sessions, meals, lodging, and parking, attendees were only responsible for their transportation to Duquesne University.

We shared the flyer with registration information over the Lyrasis listserv, followed by a Western Pennsylvania / West Virginia listserv. If we were to conduct QUIL again, we would send the registration information over a variety of listservs because our audience was skewed toward academic libraries. Registration filled up quickly, and we had to shut down the registration link within four days of it opening.

We used Google Forms for the registration, but we believe there might be more appropriate tools. A tool that would allow individuals to edit their responses after their initial registration would be very useful. We contacted the individuals who were registered and let them know if they had housing on campus or not (we were able to offer housing to all individuals who wanted on-campus housing). We also contacted those on the waitlist to let them know that we unfortunately did not have room for them.

We also offered three stipends to support travel, and had three applicants for that, so we were able to offer stipends to support their travel. The application process was a statement on why the stipend was necessary to support their travel, as well as information about how far they'd have to travel to get to Duquesne University.

We began to work out the details of the institute itself, including hospitality, parking, video-recording support for the institute, and locations for all events. This required coordination with several units at Duquesne, and much back and forth. Fortunately, we began this process relatively early, and so everything ran fairly smoothly during the Institute.

We sent out a survey to see what swag materials attendees would want most, and the most common response was a cotton grocery bag. We purchased the bags, branded folders, nametags, USBs, and notepads for attendees. These gave attendees useful materials and also helped to create an identity for QUIL.

During this time, we were also creating the curriculum. We met several times to coordinate our instruction and go over what we wanted to convey during each lesson. We shared ideas and feedback with each other. Before the institute, we did a more thorough run through of our content, which provided much needed practice.

Once the institute drew nearer, we sent a follow up email to attendees letting them know logistics like parking, housing, locations, and the schedule. While we did have some follow-up questions from these emails, we tried to provide as much relevant information as possible in this email. We also made sure to follow up with our panelists so that they had the questions we would ask them and could prepare for those.

We sent final numbers for housing, catering, parking passes, and meal tickets close to the beginning of QUIL. This enabled us to have a (mostly) accurate count and kept us from overestimating our costs. This also allowed us to revisit the budget and determine what would be the best way of spending the last of the grant monies.

We created a folder with relevant materials for QUIL attendees to be given out at registration. This included a map, a list of attendees, the schedule, and handouts for the sessions. They also received a USB that included the PowerPoint slides and the data sets used in the session.

The night before QUIL we had a welcome dinner. This was a way to let people introduce themselves in an informal setting, and to make some connections with the facilitators and other attendees. While not everyone attended, the experience was a positive one for those who did and allowed some ice-breaking before the more intellectually-taxing experience began.

We worked with Duquesne's Office of Classroom Technology to set up recording during the institute. They came throughout the day to change microphone batteries and to make sure the technology was working. Student library workers and staff filled in many hours to make sure the camera was recording. Unfortunately, there was an audio issue the first morning, but the Office of Classroom Technology was able to make the recording usable.

QUIL itself ran for two days. Cathryn Miller and Marcia Rapchak led most of the sessions, which covered an introduction to quantitative research, how to gather quantitative data, how to find existing data, statistical analysis, how to interpret results, and telling a story with data. A guest speaker, Dr. Emma Slayton, presented on data visualization, and then QUIL ended with a guest panel, which included two speakers from academic libraries and one from a special library. Dr. Berenika Webster, Director of Assessment and Quality Assurance at the University of Pittsburgh Library System; Theresa Arndt, Associate Director for Library Resources & Administration at Waidner-Spahr Library at Dickinson College; and Debra Pfeifer, Electronic Research Services Librarian at Reed Smith spoke about why they collect

data and how they've used statistics in their work. While we had sought a speaker from a public library, we were unable to secure one.

We ended QUIL with an assessment for attendees to complete. While we received lots of positive verbal feedback throughout the institute, we wanted to make sure that we had the data to back up our impression of a very successful experience. The schedule for QUIL is below:

Figure 2: QUIL Schedule

Wednesday, May 15th:

Welcome Dinner at Duquesne University Student Union, Africa Room

Thursday, May 16th:

8:15-9:00 - Check-in at Gumberg Library

8:30-9:00 - Breakfast

9:00-9:30 - Welcome and Orientation

9:30-10:30 - Introduction to Quantitative Methodology

10:30-10:45 - Break

10:45-12:15 - Gathering Data

12:15-1:15 - Lunch

1:15-2:15 - Finding Existing Data

2:15-2:45 - Preparing to Test Your Hypothesis

2:45-3:00 - Break with snacks

3:00-4:30 - Analyzing Data

Friday, May 17th:

9:00-11:30 - Analyzing Data

11:30-11:45 - Break

11:45-12:15 - Interpreting Your Results: Telling a Story

12:15-1:15 - Lunch

1:15-2:15 - Data Visualization

2:15-2:30 - Break with snacks

2:30-4:00 - Guest Panel

4:00-4:15 - Closing and Institute Evaluation

Accomplishments

Our most important accomplishment was creating an Institute that resonated with the needs of libraries. We had to close registration within four days of opening it because we hit our max number of attendees (thirty-five) within two days of opening registration and in the following two days we closed registration as the waitlist climbed into the double digits.

Our guest panel was particularly successful. The panelists provided important information, and also mentioned that they learned a lot from each other. Having panelists from different libraries and types of libraries allowed them to highlight their similarities and differences, and provide some takeaways that would most likely be relevant to any type of library.

Assessment information showed that attendees who completed the survey (n=23) found the institute to be effective overall. The survey contained thirteen questions on a five-point Likert scale. The highest rated item was “The instructors were well prepared” (4.96) and the lowest rated was “The activities in this institute gave me sufficient practice and feedback” (3.92). The means for each question are included in the table below.

Table 1: Assessment of QUIL

Question	Mean
I was well-informed about the objectives of this institute.	4.71
This institute lived up to my expectations.	4.67
The content is relevant to my job.	4.50
The institute objectives were clear to me.	4.50
The institute activities stimulated my learning.	4.79
The activities in this institute gave me sufficient practice and feedback.	3.91
The difficulty level of this institute was appropriate.	4.17
The pace of this institute was appropriate.	4.21
The instructors were well prepared.	4.96
The instructors were helpful.	4.92
I accomplished the objectives of this institute.	4.4

I will be able to use what I learned in this institute.	4.5
The institute was a good way for me to learn this content.	4.67

Lessons Learned

The project had many moving parts, and balancing all these parts was difficult. We had a running Google Doc that became rather confusing. Later in the project, we started using Trello, a project management website, which allowed us to organize deadlines and see what was in progress and what still needed to be accomplished much easier. Still, having a dedicated project manager would have been useful.

Fortunately, we did have assistance at Duquesne University. Having support on the business and administrative side was essential. There was much to coordinate with different units at Duquesne. We had the help of Maggie Cowburn, Assistant to the University Librarian, and Cathy Mellick, Director of Business and Administration at Gumberg Library who helped in scheduling, remitting payment, and ordering food and supplies.

Even though we had technical support during the Institute, we still had last minute technical difficulties. The most major of these was audio issues for video recording. The Duquesne Office of Classroom Technologies had other tasks to attend to that day, so if we were to do QUIL again, we would prioritize funding for dedicated recording equipment.

We did have some individuals who made last-minute changes to their status regarding needing housing or even attending the institute at all. It is possible that the fact that the institute was no cost to attendees made them feel like changes/cancellations would be acceptable. Not only did this impact our budget, but this impacted planning. While we were able to fill the spots of those individuals who cancelled their registration early, this was not the case for individuals who cancelled last minute. In the future, a registration fee may cut down on cancellations. Additionally, having a system whereby attendees manage their own registration details and can make changes within the system itself (up to a deadline) would mean less for the organizers to oversee.

We also learned that the pace of the institute may have been too rigorous, as several attendees mentioned that we should slow down the pace of the institute and/or allot more time for the Institute. We anticipated that this might be the case, as we covered a lot of ground during QUIL. Possible future iterations of QUIL may need to be split up or lengthened to have more chance for practice and feedback on performance.

Next Steps

Our intention was for the institute to not only have an impact on attendees, but a broader impact on any LYRASIS member and any librarian, for that matter. The content has been shared and is designed to be scalable. We shared curriculum materials by distributing flash drives and handouts at the session, and also by creating a LibGuide where handouts, supplemental material, the curriculum, and video recordings live. This will be shared over the LYRASIS listserv.

There is no reason why QUIL cannot be a series run locally by librarians in their regions. We believe that the need for quantitative support for libraries far exceeds our capacity to provide such support, so we hope to see future iterations of QUIL offered, perhaps with various foci (academic, school, public, special, etc.).

For those who want more information, our LibGuide contains all the relevant materials. It can be found at www.duq.edu/quil. It has our schedule, information about guest speakers, and all the PowerPoints and recordings from the institute.

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