Building a Community of Assessment:
Final Report of the Research Library Impact Framework Pilot Initiative

**ASSOCIATION
OF RESEARCH
LIBRARIES**

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Executive Summary

Introduction and Background

The Association of Research Libraries (ARL) Research Library Impact Framework (RLIF) initiative was established in 2019 as a result of recommendations developed by the Assessment Program Visioning Task Force and support from the Institute of Museum and Library Services (IMLS). This report details the research projects, findings, and lessons learned conducted under the pilot phase of this framework. It also includes information about the framework itself as a means to explore and learn about research library impacts. Finally, the report identifies next steps and potential considerations for any future implementation.

The RLIF provides a structure to examine library services, operations, impact, and alignment with institutional mission and goals across four critical areas: Research and Scholarly Life Cycle; Teaching, Learning, and Student Success; Collections; and Physical Space. The full framework includes 185 potential research questions across these critical areas. However, the framework is also meant to be flexible and modular, allowing for modifications and adjustments based on salient issues facing research libraries. In this way, the framework serves as a tool to organize and prioritize research efforts. Of the original 185 research questions, ARL's Assessment Committee (now called the Research and Analytics Committee) identified 5 questions that several research teams examined in a pilot implementation of the RLIF. These questions reflected extensive engagement and feedback from ARL library directors and assessment practitioners, and were designated as high priority areas of research. The five questions were intended to help ARL members understand and articulate research library impacts through narratives set in their local context.

The RLIF initiative set four goals to guide its strategy and implementation. As illustrated below, the breadth of the goals for the framework extend beyond any research project. Along with research project findings and their ability to inform and shape decision making, the framework also sets out to build capacity and foster an assessment posture throughout ARL institutions.

- Goal 1: Create and foster a culture of assessment through participation in formal, methodologically sound research projects
- Goal 2: Enhance and improve processes for identifying data points for collection and distribution of information that substantiate library impact to institutional decision-makers and within the research and learning ecosystem

- Goal 3: Expand abilities to collaborate and compare data and methods with peers on topics highly relevant to individual libraries and pool research expertise and resources for collective benefit
- Goal 4: Improve the impact of services and programs for users

Research Projects

To address the five research questions across the critical research themes, projects were categorized into one of two types: pilot projects (original research projects) or practice briefs (case studies). A 2018 call for proposals resulted in 11 pilot projects and 7 practice briefs. In total, 78 library staff and members of other campus departments participated in these projects. Table 1 provides a summary of how the research questions were investigated through pilot projects and practice briefs.

Table 1: Pilot Projects and Practice Briefs by Research Question

Research Question	Pilot Projects	Practice Briefs
(How) do library collections play a role in attracting and retaining top researchers and faculty to the institution?	0	1
(How) does the library contribute to equitable student outcomes and an inclusive environment?	1	1
(How) does the library help to increase research productivity and impact?	5	2
(How) do library spaces facilitate innovative research, creative thinking, and problem-solving?	2	2
(How) do library's special collections specifically support and promote teaching, learning, and research?	3	1

Research teams applied various methods to investigate their research question. These included quantitative and qualitative data analysis, interviews (one-on-one, semi-structured), surveys, and unobtrusive observation. Several research teams employed a mixed-methods approach to obtain the information needed for their project.

Among the pilot projects and practice briefs, results and findings included a mix of information. Across the five research questions, some notable findings included:

- Libraries identified gaps in support of researchers to find audiences and communicate the impact of their work. ((How) does the library help to increase research productivity and impact?)
- The breadth of diversity, equity, and inclusion (DEI) resources creates challenges for discoverability, especially if results appear beyond the first set of resources returned from a search. ((How) does the library contribute to equitable outcomes and an inclusive environment?)
- Space design may foster a welcoming environment for certain types of work, but may create challenges for other activities. ((How) do library spaces facilitate innovative research, creative thinking, and problem-solving?)
- Coupling primary-source literacy with community archives in a classroom setting has significant positive impact on student learning. ((How) do library's special collections specifically support and promote teaching, learning, and research?)
- Factors influencing faculty recruitment and retention are personal and multifaceted, and library collections may not play a significant role. ((How) do library collections play a role in attracting and retaining top researchers and faculty to the institution?)

Lessons Learned

The work of RLIF research projects is not the only value this initiative provided. Lessons learned from the RLIF pilot include those from the research studies undertaken by project teams, and others from the RLIF initiative itself. The opportunity and experience gained from being part of RLIF, and provided by the framework's structure, can inform next steps and areas for improvement.

Project teams gained knowledge and experience from the results of their research studies, but also learned about other aspects of conducting research projects. Participants in project teams experimented with new methodologies, gained a better understanding of the complexities of research design, and experienced the labor involved in performing research. Some of the project-based lessons learned included an appreciation of the impact incentives have on survey research responses, the need

to have alternate plans in place in case of a low response rate, and accounting for unexpected delays into project planning. Participants also noted the importance of allowing for flexibility in research design to manage unexpected circumstances effectively.

Conducting an RLIF pilot program allowed for the advisory group to examine feedback about the framework. Through a series of in-depth interviews, a survey of ARL deans/directors, and a team-members survey, several themes emerged. The interviews revealed a positive reaction to the RLIF program, and participants indicated they would look to ARL to provide support for future opportunities for research collaboration. Interview participants praised the dual value of doing the research associated with the five questions, and providing the opportunity to collaborate and learn what the RLIF structure provided. The survey of ARL deans/directors highlighted motivations for participating in the RLIF, and included the opportunity to be a part of an ARL initiative, to work with other ARL institutions, and to further develop a culture of assessment at their institution. Individual deans/directors also indicated that impacts from participating in RLIF included increased visibility that led to other opportunities at their institutions, and using findings from the research projects to create change in programs and processes. Other deans/directors reported improvement in their ability to tell an evidence-based story, cultivating greater adoption of a DEI lens in assessment, and an overall increased focus on assessment at their institutions. Feedback from the team-members survey largely echoed what was captured in the interviews and the deans/directors survey. RLIF team members were generally supportive of the RLIF program. The opportunity to collaborate with other libraries was a big driver of participation. Team members also offered suggestions for issues to explore should RLIF continue. Topical themes for these issues included collaboration with other libraries, DEI, library value, pandemic issues, data and technology, and staff/organization issues.

Collectively, the research projects, methods, results, and lessons learned from the project level and the framework level illustrate that there is value in an ARL research agenda. An agenda set up through a mechanism like RLIF provides a structure to connect research questions to common goals. Through this pilot program, research teams learned that centralized communication was a great benefit and a key to success. It encouraged a culture of accountability and provided opportunities for collaboration. The RLIF program served to build community. This sense of connectedness appeared at many levels from individual research projects through the framework as a whole. It provided a space to share ideas, making the RLIF program more than the sum of its parts.

Next Steps

With the research projects concluded and participant feedback collected, this report will go to ARL's Research and Analytics Committee. The committee plans to review the RLIF pilot and issue recommendations about the future of the RLIF initiative at ARL. While the committee will conduct its own review and deliberations, a few potential questions might be helpful to guide their efforts.

One issue surrounds program viability, and what it would take to sustain an initiative like RLIF at ARL. The pilot program benefited from the support of a grant from the Institute of Museum and Library Services (IMLS). Would future projects under an RLIF-like structure require external funding? How often should research under the RLIF initiative take place?

The committee might also consider the overarching structure of RLIF research projects. Feedback from the pilot program indicated that cross-institutional collaboration was an important part of participation and contributed to the value of the RLIF. The RLIF pilot generally applied an inductive/bottom-up approach to its pilot projects and practice briefs. That is, research projects and their results were relevant to the local contexts in which they were conducted, and it is up to other ARL institutions to determine whether those findings might be generalizable enough to apply in their own context. If emphasizing cross-institutional collaboration and broad application of results is a priority, might a deductive approach to research projects be appropriate? For example, it may be possible for ARL to bring together research teams that pull from multiple institutions to collaborate on research projects that are broader than any one institution's local context. It is unclear if this would provide any more value than the localized approach applied in the pilot program, but the Research and Analytics Committee might weigh these potential options.

The Research and Analytics Committee plans to use this report in their deliberations about next steps for the Research Library Impact Framework initiative. Any future course of action will be in alignment with ARL's Action Plan 2023–2026.

RLIF Initiative

Background

The discussions of the ARL Assessment Program Visioning Task Force (APVTF) formulated the ideas that later became the foundation for the Research Library Impact Framework (RLIF). [The ARL Assessment Program Visioning Task Force Recommendations](), published in December 2017, outline the desire from ARL members for an action research framework to empower research libraries to reveal the impact they have on their communities. The framework utilized institutional priorities as a means by which to display the impact of research libraries within strategic priorities. The APVTF identified four framework themes that represented the macro-level foci of ARL member institutions' goals: Life Cycle of Research & Scholarship; Teaching, Learning & Student Success; Collections; and Physical Space. Underpinning these strategic foci are over 185 research questions and topics that were posited by assessment practitioners, library directors, ARL members, and ARL staff, and identified as fundamental to their institutional goals. Ultimately, communicating the impact research libraries have on their institutions, communities, and users was deemed of utmost importance.

Five Research Questions

The framework was the scaffold for in-depth exploration across multiple library service areas and was designed to be flexible and scalable. From within the four framework themes, 5 of the 185 research questions were selected as a way to pilot the framework through research and assessment projects:

- (How) do library collections play a role in attracting and retaining top researchers and faculty to the institution?
- (How) do library spaces facilitate innovative research, creative thinking, and problem-solving?
- (How) do the library's special collections specifically support and promote teaching, learning, and research?
- (How) does the library contribute to equitable student outcomes and an inclusive learning environment?
- (How) does the library help to increase research productivity and impact?

Table 2 illustrates the connection between institutional goals, the five research questions, and the four themes. In a number of cases, the goals and questions support multiple themes.

Table 2: Addressing Framework Themes with Institutional Goals and Framework Questions

Framework Themes	Institutional Goals Addressing Each Theme	Framework Questions Addressing Each Theme
Research & Scholarship Life Cycle	Enable, foster, and promote relevant and unique research; increase research productivity; enable research collaboration	(How) does the library help to increase research productivity and impact? (Q5)
Teaching, Learning & Student Success	Enable student and faculty success, teaching excellence, and innovation; promote diversity and inclusion	(How) do the library's special collections specifically support and promote teaching, learning, and research? (Q3) (How) does the library contribute to equitable student outcomes and an inclusive learning environment? (Q4)
Collections	Enable and promote access to research collections, open access, and student success; improve global reputation; engage community	(How) do library collections play a role in attracting and retaining top researchers and faculty to the institution? (Q1) (How) does the library contribute to equitable student outcomes and an inclusive learning environment? (Q4)
Physical Space	Enable and enhance student success, innovative and interdisciplinary research, and research collaboration; promote diversity and inclusion	(How) do library spaces facilitate innovative research, creative thinking, and problem-solving? (Q2) (How) does the library contribute to equitable student outcomes and an inclusive learning environment? (Q4)

Each of the five questions responds to one of the four themes. The questions prompted libraries to create actionable research projects that resulted in data illustrative of impact, particularly in regards to how libraries support larger institutional goals. By focusing on questions that can be answered with research projects, the RLIF helped libraries address major areas of concerns in higher education.

The four thematic areas came from the feedback of ARL members, library directors, and other participants in the APVTF report. In all four areas, previously established ARL measures fell short of communicating nuance and iterative growth in a changing research library environment. The five questions sought to quantify how research libraries make an impact in their environments by prompting research projects focused on incremental change, rather than a singular data snapshot. By embracing iterative research projects, research libraries can extend assessment projects to new initiatives. Additionally, iterative research allows research libraries to engage in assessment as a continuum, rather than a single, distinct task unrelated to larger, strategic activities. As a result, quantitative data counts, such as volumes held or instructional sessions taught, become a piece of a larger narrative of change and iterative assessment. Research libraries are empowered to relate a richer, more complex narrative that describes their own evolution. They become the protagonist in a complex story rather than a fable focused on a few disparate data points.

IMLS Grant

After the publication of the Visioning Task Force recommendations, ARL pursued grant funding from the Institute of Museum and Library Services (IMLS) for the 2019 fiscal year. The full proposal, "Research Library Impact: Pilot Models for Scalable and Sustainable Assessment Project," ([LG-18-19-0092](#)) outlines how ARL sought to address gaps in serving ARL members through a macro-level research project focused on communicating impact through assessment and research. Sue Baughman, former ARL deputy executive director and current staff liaison to the initiative, served as the principal investigator, and established the RLIF Advisory Group to advance the framework initiative, and to evaluate the project at its conclusion. Additionally, a data analyst, Kevin Fomalont, and social scientist, Margaret Roller, were engaged as consultants and collaborators to the research teams.

Research Project Types

Research projects for the grant were divided into two categories: practice briefs and pilot projects. Practice briefs were short documents proposed by practitioners who had completed projects or could provide research-based information to support other practitioners seeking to improve their library assessment work. Pilot projects were original research studies that addressed one of the five research questions. Due to their nature, pilot project teams tended to have a longer time from proposal to completion. Potential participants could propose either format. A successful call for proposals in late 2018 resulted in 23 institutions expressing interest, with 11 pilot projects and 7 practice briefs included in the initiative; 78 library staff and members of other campus departments participated.

During the application process, research library teams proposed either an original research project (the pilot project) or a case study (the practice brief). Both formats allowed the 18 participating teams to share qualitative and quantitative research methods and tools. All pilot projects and practice briefs within a research question were assigned a visiting program officer (VPO) to provide support and communication between ARL and participating teams. Each VPO worked closely with pilot project and practice brief teams within a question area, with some VPOs doing double-duty as a team member and VPO. Additionally, VPO Stephanie JH McReynolds provided overall project management support to the team of VPOs and initiative advisory group.

Tables 3 and 4 list the research questions according to practice brief or research project, with the institutions engaged in the initiative and VPOs supporting the teams.

Table 3: Practice Briefs

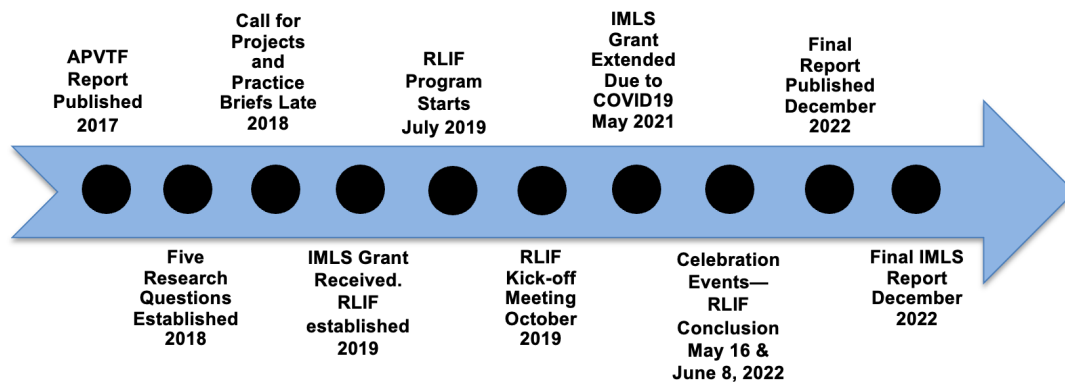| Research Question	Institution	VPOs
(How) do library collections play a role in attracting and retaining top researchers and faculty to the institution?	University of Texas at Austin	Sue Baughman; Stephanie JH McReynolds
(How) does the library contribute to equitable student outcomes and an inclusive environment?	University of Washington	Ava Brillat
(How) does the library help to increase research productivity and impact?	Vanderbilt University; University of Waterloo	Glenn McGuigan (2019–2020); Sue Baughman (2021–2022)
(How) do library spaces facilitate innovative research, creative thinking, and problem-solving?	Temple University; Iowa State University	Greg Davis
(How) do library's special collections specifically support and promote teaching, learning, and research?	Johns Hopkins University	Gordon Daines

Table 4: Pilot Projects

Research Question	Institution	VPOs
(How) does the library contribute to equitable student outcomes and an inclusive environment?	Texas Tech University	Ava Brillat
(How) does the library help to increase research productivity and impact?	University of California, Berkeley; University of Illinois Chicago; University of Manitoba; University of Washington; University of Pittsburgh	Glenn McGuigan (2019–2020); Sue Baughman (2021–2022)
(How) do library spaces facilitate innovative research, creative thinking, and problem-solving?	Syracuse University; University of Florida	Greg Davis
(How) do library's special collections specifically support and promote teaching, learning, and research?	Western University; University of Pittsburgh; University of California, Irvine	Gordon Daines

Timeline

The official kickoff of the initiative took place in October 2019 with an in-person gathering in Washington, DC. A second in-person meeting was scheduled for May 2021, which was planned for the conclusion of the two-year IMLS grant that supported the initiative. With the onset of COVID-19 in March 2020, all in-person activities were changed to virtual and the grant was extended for one more year.

Graph 1: Initiative Timeline

Timeline (top labels):
- APVTF Report Published 2017
- Call for Projects and Practice Briefs Late 2018
- RLIF Program Starts July 2019
- IMLS Grant Extended Due to COVID19 May 2021
- Final Report Published December 2022

Timeline (bottom labels):
- Five Research Questions Established 2018
- IMLS Grant Received. RLIF established 2019
- RLIF Kick-off Meeting October 2019
- Celebration Events—RLIF Conclusion May 16 & June 8, 2022
- Final IMLS Report December 2022

Goals of RLIF Initiative

The RLIF initiative had four goals and a number of strategies were employed to reach them.

Goal 1: Create and foster a culture of assessment through participation in formal, methodologically sound research projects.

A number of strategies were used to create and foster a culture of assessment. Different types of meetings were scheduled as a way to share information and provide support to teams.

These meetings included:

1. The launch of the initiative with an in-person, two-day meeting with team members attending in person or via Zoom. Time was spent addressing expectations, questions, and concerns about the initiative. Teams met to discuss each of the five research questions and their preliminary project goals.
2. Zoom video calls were facilitated by visiting program officers (VPOs) over the course of the initiative with four of the research question groups. The fifth research question only had one team interested in exploring it, so the assigned VPOs regularly checked in with this team.

3. Zoom video calls were held six times over the course of two and a half years of the initiative, with all teams invited to participate. In the early stages, teams discussed their goals and ideas for methodologies. Later meetings engaged teams in providing progress reports on their work, and even later sessions included time for teams to share the results of their research. At each meeting, team members asked questions, shared their own insights and ideas, and gave each other encouragement.
4. The initiative's advisory board members were invited to attend the all-team check-in meetings. They used this time to provide input about projects and express encouragement for the research activities being implemented.
5. The "end of initiative celebration" was held on two days, May 16 and June 8, 2022. Each team was invited to present their final project or practice brief to the ARL community. Ten teams gave real-time presentations, while six teams provided pre-recorded presentations.

Goal 2: Enhance and improve processes for identifying data points for collection and distribution of information that substantiate library impact to institutional decision-makers and within the research and learning ecosystem.

Two consultants, Margaret Roller and Kevin Fomalont, were hired to support the teams. Roller is a social scientist and she helped teams in a variety of ways, including conducting one-on-one and group sessions concerning research methods and design, developing research questions, identifying the best methods to use to meet research objectives, reviewing interview or focus group guides, reviewing survey designs, discussing data collected and the data analysis process, and thinking through the presentation of data and effective reporting techniques. Fomalont is a data analyst who worked one-on-one and in group sessions to provide advice on survey design and data analysis.

When it was discovered mid-initiative that the IMLS grant budget needed to be adjusted to accommodate the changes brought on by COVID-19, the consultants were asked to provide training on qualitative and quantitative research methods. They conducted workshops in these eight topical areas:

1. Qualitative Research Series (Roller)
   a. Focus Group Method
   b. In-Depth Interview Method
   c. Qualitative Data Analysis
   d. Reporting Qualitative Research

2. Quantitative Research Series (Fomalont)
    a. Web Survey Design
    b. Visualization in Tableau
    c. Quantitative Analysis In Survey Research
    d. Survey Reporting and Its Application

In addition to team members attending these workshops, invitations were extended to members of the teams' library staff. A total of 194 team members and library staff attended the workshops.

Two additional training sessions were conducted to share information about the methodologies used in a research project and a practice brief. The University of Florida team conducted three workshops on library space design, with 52 attendees. The Iowa State University team, in conjunction with the Association of College and Research Libraries (ACRL), provided a session on "Getting Started with Project Outcome in Academic Libraries," with 22 attendees.

All teams were required to submit progress reports over the course of the initiative, resulting in five reports per team. Each report asked teams to describe the status of the project, including timeline and progress benchmarks, and any challenges or questions they had about their project or practice brief. The reports were made available to all teams. VPOs reviewed each report for their respective research question in order to identify needed support or issues to be brought to the initiative's advisory board.

Goal 3: Expand abilities to collaborate and compare data and methods with peers on topics highly relevant to individual libraries and pool research expertise and resources for collective benefit.

A valuable benefit from the various meetings described under Goal 2 was the exchange of ideas and strategies. As teams learned from one another, they began to realize that they could share templates for surveys and interviews. A number of teams were able to apply methods employed by other teams to their projects. Through the check-in sessions, teams learned from others' mistakes or challenges, such as strategies for increasing the number of survey respondents.

At the beginning of the initiative, teams were asked to determine whether they could collaborate on their projects within a research question. A total of four teams collaborated on their projects. The University of Pittsburgh and the University of Washington collaborated on the question, "(How) does the library help to increase

research productivity and impact?" The University of Pittsburgh and the University of California, Irvine collaborated on the question, "(How) do library's special collections specifically support and promote teaching, learning, and research?" While each team took different approaches and examined similar but different aspects of the question, they met regularly throughout all stages of their projects to share ideas and feedback.

Goal 4: Improve the impact of services and programs for users.

Eighteen teams completed a pilot project or practice brief that addressed one of the five research questions. The reports provide detailed information about either the research conducted and findings or an accounting of how a library previously carried out a process or research endeavor.

Teams followed templates designed for each type of report (pilot project or practice brief) to ensure similarity in the way the information was presented. With this similarity, a reader is able to easily locate specific components of the reports for comparison purposes or mining of examples. The projects and practice briefs were also intended to be resources in the event a library wanted to replicate a study or implement a process that another library had already tested.

Research Question Summaries

Organized by research question, what follows are summaries of pilot projects and practice briefs, including overviews of the teams' Research; Research Approaches and Report Type; Methods and Tools; Results; and Lessons Learned. Links to the full pilot project and practice brief reports, along with related publications and presentations, are included under Resources.

(How) does the library help to increase research productivity and impact?

Overview

Seven libraries explored the research question, "(How) does the library help to increase research productivity and impact?" Four teams conducted research projects and three teams documented activities underway that illustrated methodologies or best practices in a practice brief.

The University of Pittsburgh and the University of Washington collaborated on two aspects of the research process for STEM and health sciences faculty: discovering published information and understanding and communicating research impact. While these two teams submitted their own research reports, they also provided feedback on their collaborative efforts. The University of California (UC), Berkeley studied faculty views and practices regarding open access publishing. The University of Illinois Chicago focused their research project on faculty publication patterns and their correlation to the library's online collections. The University of Manitoba documented the development of a new research service. The Vanderbilt University Annette and Irwin Eskind Family Biomedical Library and Learning Center team created an online tool for documenting library information services to demonstrate library value. The University of Waterloo developed a detailed process for understanding and supporting the bibliometric data needs of the institution.

Research Approaches and Report Type

The **UC Berkeley** library team's research project had three objectives: (1) to learn more about open access (OA) publishing at UC Berkeley, including how best to quantify it; (2) to study the relationships between faculty's OA attitudes and OA publishing practices, including the roles of funding availability and discipline; and (3) to better understand relationships between OA publishing and cost (to-read and/or to-publish), which can help inform libraries' efforts to support OA publishing. The study examined the relationship between faculty's attitudes toward OA and their OA publishing practices, including the roles of funding availability and discipline.

The **University of Illinois Chicago (UIC)** team studied library impact on faculty productivity and explored how publication patterns of faculty at a public research university changed over time. This research project builds on institutional and library goals of (1) providing researchers access to knowledge and information to explore, innovate, and create new knowledge and (2) expanding integration of the library into UIC faculty and students' research life cycle. The team wanted to demonstrate evidence that the resources provided by the library for research purposes have an influence in terms of use, productivity, and impact.

The **University of Manitoba library (UML)** team provided an overview of lessons learned in developing and deploying a new research services unit for the libraries. The report offers research libraries of comparable size and scope an overview of the UML experience developing three research-support services over a three-year period. The team documents their case study in a practice brief.

The **University of Pittsburgh** team focused on the discovery stage of the research process by exploring the information-seeking behavior of early-career faculty in hard-science fields. The team wanted to learn how faculty discovered published content and if they used library-purchased commercial databases in this process. Additionally, the scope of the project included how much time and effort researchers invested when looking for content and what pain points they experienced. The project team also developed and evaluated a methodology for collecting and analyzing information about the library's role in the research discovery process.

The **Vanderbilt University** team at the Annette and Irwin Eskind Family Biomedical Library (EBL) and Learning Center, documented the various methods and strategies used to compile data and communicate the added value of the library to the education, research, and clinical enterprise at Vanderbilt University (VU) and Vanderbilt University Medical Center (VUMC) in a practice brief. The team wanted to create a clearer picture of the work performed by the Information Services staff, suggest ways to promote the services available to users, identify staffing needs to scale services and projects, and identify new skills for current and future services.

The **University of Washington** team's research project explored faculty and postdoctoral researcher needs for understanding and communicating the impact of their work. The project focused on researchers in science, technology, engineering, and math (STEM) and health sciences fields. It was designed to understand the needs and challenges researchers face in these areas, identify how participants in these fields define and measure impact, and explore their priorities for research-impact support. Additionally, the research team wanted to provide peer research libraries with information regarding where libraries might continue to develop research-impact services to increase the value of their contributions to research productivity.

The **University of Waterloo** library team documented their service model for building awareness and understanding of research productivity and impact at the institutional level in a practice brief. The brief details the steps taken to establish the model, covering issues such as the types of beneficial partnerships, data sources, and the people and technical skills needed. The team provided an extensive list of issues to consider and a plan for creating a similar service model.

Methods and Tools

The **UC Berkeley** library team used results from the library's 2018 Ithaka S+R Faculty Survey as the springboard to add data such as names, email addresses, departments, titles, and research funding, using Scopus and Unpaywall for OA status data. The funding analysis was limited to publications from 2018 to 2019. After the research team established connections between authors' Ithaka S+R Faculty Survey responses

and publications, the data file was scrubbed of all personal information in accordance with UC Berkeley's Institutional Review Board (IRB) requirements.

The **University of Illinois Chicago (UIC)** project examined a variety of usage statistics, including collection size (measured by journal holdings), collection use (measured by number of references in the publications), publications (number of publications by faculty), publication impact (measured by number of citations), number of co-authors, grant funding, page counts, and faculty demographic information. Publication data for faculty, such as number of references used in publications, number of authors, and grant funding, were obtained from Scopus. A list of tenure-system faculty members who had been at UIC for at least five years was received from the University's Office of Institutional Research. This information included rank, college, department, and number of years at UIC. All of the data was added to Excel spreadsheets and subsequently entered and coded into SPSS, which was used to analyze the data.

The **University of Manitoba (UML)** library team used quantitative data drawn primarily from the UML repository systems and qualitative data derived from team members' personal files, team and vendor correspondence, and project documents.

The **University of Pittsburgh** team used elements of the grounded theory approach to collect data through 12 semi-structured in-person interviews. The recordings of the interviews were transcribed, coded, and then distilled into a document of common themes and observations. The themes that emerged included: (a) nature of research; (b) discovery and staying current; (c) time and effort invested in discovery; (d) diffusion of information sources; (e) subscription content fulfillment; (f) barriers and pain points; and (g) opportunities for libraries.

Vanderbilt University developed a survey using REDCap to collect data about the various projects library stakeholders were involved in and the library's role in those projects. The data set consisted of demographic and transactional data and focused on library staff support as opposed to collections usage. The survey included a comment box for additional feedback.

Based on the data collected, the team revised the survey to add a question about the respondent's department, expanded the status categories, and changed the date of publication or presentation from a drop-down to a fill-in box. The types of resources or assistance used by respondents were made more granular by offering additional response options using branching logic. The survey was posted on the library's homepage, advertised in library communications, mentioned in instructional and orientation sessions, and included in the informationists' email signatures. Follow-up reminders were also sent to potential survey respondents.

The **University of Washington (UW)** used a mixed-methods approach with both quantitative and quantitative data. In Phase One of their research, the team developed a survey to capture high-level trends in faculty and postdoc research needs, including in the area of research impact. The survey was designed to assess user satisfaction, importance, priorities, experiences with and perceptions of open-access publishing, and the impact of UW Libraries' contribution to research. Phase Two of the project involved 18 semi-structured interviews with faculty and postdoctoral researchers in health sciences and STEM fields. The interview questions built upon the survey data to explore in depth some of the trends identified in Phase One.

The **University of Waterloo** subscribed to several data sources supporting bibliometric data needs, including: InCites (Clarivate Analytics), SciVal (Elsevier), Scopus (Elsevier), and Web of Science (Clarivate Analytics). The team suggested a number of indicators that could be explored for the institution as a whole, benchmarked against peer or aspirational institutions, or examined within a specific subject area. These include:

- Publication-based indicators: total publications, volume of international collaborations, volume of industry collaborations, etc.
- Citation-based indicators: total citations, percentage of works cited, average number of citations, discipline normalized citation impact, top citation percentiles (1 percent, 10 percent, etc.), h-
- index, etc.
- Journal-level indicators: journal normalized citation impact, journal impact factor (JIF), etc.
- Altmetric data indicators: volume of news outlets acknowledging research output, volume of Facebook likes, Tweets, blog postings, etc.

Results

The **UC Berkeley** team learned methods to quantify OA publishing at UC Berkeley and gained insight into the relationships between faculty's OA attitudes and OA publishing practices, including disciplinary differences. Additionally, the team reached a better understanding of relationships between OA publishing and cost (to read and/or to publish).

The **University of Illinois Chicago** research project report highlights results in notable areas: publications and references, article data, and grant funding. As the number of journals available increased, so did the number of publications written by faculty per year and the number of references included in the publications. Significant correlations were found in three areas: (1) the number of references included in an article and the number of citations an article later receives; (2) the number of

references included in an article and the number of authors on a publication; and (3) the number of citations an article receives and the number of authors. With regard to grant-funded articles, the study showed that they include more references than non-grant-funded articles, are cited more than non-grant-funded articles, and have more co-authors than non-grant-funded articles.

The **University of Manitoba** team refined the library's research data management (RDM) and digitization programs as part of their overall research services.

The **University of Pittsburgh** project results highlighted an opportunity to review the library's current educational outreach to graduate students and the role lab leaders may play in helping library staff align their efforts more closely with the needs of student research teams. The project team plans to share their findings with other research-support services on campus to consider providing more integrated approaches. The project team also learned that researchers rely on institutional subscriptions for seamless and timely access to full-text materials. When materials are not available, researchers are more likely to use their own networks of contacts to access the full text (including SciHub) rather than rely on the library's interlibrary loan service, which they perceive as too slow. These findings will allow the library to redirect resources to better support full-text access, develop improvements for more seamless paths to access, and supplement resource-sharing services.

Vanderbilt University improved upon the methods used to collect and disseminate data about the biomedical library's value to its users, library administration, and university administration.

The **University of Washington** research project showed that early-career researchers in particular are interested in assistance not only in identifying metrics to demonstrate impact, but assistance with interpreting and contextualizing these metrics for promotion-and-tenure packages and funding applications. Researchers were also attempting to reach a variety of audiences (both scholarly and public) and faced challenges in reaching different audiences and understanding their wider impact. There are gaps in support for researchers in this area, and many opportunities exist for helping researchers understand and communicate how their work makes a difference not only to scholarship in their fields, but also to policy, clinical practice, and wider public understanding of scientific and health issues.

The **University of Waterloo** refined and updated their bibliometric-data service model. Based on the partnerships created, the library is considered a strong partner in understanding productivity and research impact.

Lessons Learned

The project teams learned a number of valuable lessons including:

- Studying OA is more complicated than it originally appeared. In the literature there was a lack of consistency in definitions of OA, sources of OA data, and methods for calculating levels of OA. Not only does an article's OA status shift over time, but tools like Scopus change in what data they provide and how to access it.
- It is important to question data and not just take it at face value when something appears off. Pausing and thinking critically about what might influence data is critical to not making incorrect conclusions about what is observed and knowing when certain parts of the data collected may be flawed.
- Scopus's reporting of grant-funded articles is influenced by journal and funder expectations to reveal the data. Also acknowledging that Scopus's grant data in general may have inaccuracies is important in interpreting data and its potential flaws.
- Collecting the data by hand was the better way to ensure accuracy rather than relying on the API. In addition, the research illustrated the multiple variables that influence publication patterns, and how challenging it can be to demonstrate the impact of the library on faculty productivity.
- Institutions looking to offer research data management (RDM), digitization, or research-impact services, should be aware that researchers will often not see or realize the value of these services until external factors—for lack of a better word—force them to.
- In addition to more traditional library outreach (such as presentations and education sessions), regular interactions and work with principal investigators of research projects and senior university administrators have resulted in those individuals taking the work the library does to support research more seriously.
- Libraries are critical to the success of the institution's research objectives and are major partners in research projects across all academic disciplines.
- True research support provided by the libraries involves an incredible amount of human labor by highly skilled academic librarians and archivists, as well as support staff, over months (and sometimes years) with any given research project.
- Communication is essential throughout any research process.
- Despite survey testing, there were one or two questions that seemed to confuse many respondents.
- The bibliometric service model should continue to be library-led. Determine appropriate staffing capacity within the library, including key contact point(s), programming support, and the role of liaison librarians; also determine the appropriate level of training for library staff, depending on their support role.

- Continue to actively monitor the evolution of other tools specializing in bibliometric data.

Resources

Pilot Project Reports and Practice Briefs

Aghassibake, Negeen, Lynly Beard, Jackie Belanger, Diana Louden, and Robin Chin Roemer, with additional support from Steve Hiller and Maggie Faber. *Library Impact Research Report: Understanding and Communicating Research Impact: The Needs of STEM and Health Sciences Faculty and Postdoctoral Researchers.* Washington, DC: Association of Research Libraries, November 19, 2021. https://doi.org/10.29242/report.uwashington2021.

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Brink, Judith, Fern Brody, Anne Koenig, and Berenika M. Webster. "Discovery Practices of Early Career Life Sciences and Engineering Faculty: a Qualitative Approach." *Collections Development* (forthcoming).

Li, Chan, Becky Miller, and Mohamed Hamed. "Open Access Publishing: A Study of UC Berkeley Faculty Views and Practices, with Implications for Library Support." In *Proceedings of the 2020–2021 Library Assessment Conference: Building Effective, Sustainable, Practical Assessment, October 29, 2020–March 17, 2021*, edited by Sue Baughman, Jackie Belanger, Emery Durnan, Elizabeth Edwards, Martha Kyrillidou, Klara Maidenberg, Angela Pappalardo, and Maurini Strub. Washington, DC: Association of Research Libraries, 2021. https://www.libraryassessment.org/2020-proceedings/.

Miller, Becky, and Chan Li. "Relationship between Life Sciences Faculty's Views on Open Access and Their Open Access Publishing Practices." Presented at United States Agricultural Information Network (USAIN) 17th Biennial Conference, online, July 2020.

Walker, Philip, Heather Laferriere, Rachel L. Walden, and Camille Ivey. "The Never-Ending Evolutionary Saga of Assessing and Demonstrating the Value of Information Services in a Biomedical Library." *Medical Reference Services Quarterly* 40, no. 4 (2021): 369–82. https://doi.org/10.1080/02763869.2021.1987775.

(How) does the library contribute to equitable student outcomes and an inclusive learning environment?

Overview

Three teams focused on the Research Library Impact Framework question of "(How) does the library contribute to equitable student outcomes and an inclusive learning environment?" Unsurprisingly, larger social and global events had a lasting impact on all three research teams. One team, composed of the University of Houston and the University of California, Riverside, withdrew completely, due to staffing and adverse impacts from the global COVID-19 pandemic. The two remaining teams completed reports: a practice brief by the University of Washington and a pilot project by Texas Tech University.

The national discourse on racial justice changed rapidly over the course of the three-year grant, particularly after the Black Lives Matter demonstrations during the summer of 2020. The impact of the combination of the pandemic and social justice movements is still evolving, especially in universities. While teams in the DEI question were drawn to this research focus before the 2020 Black Lives Matter demonstrations, the rapid growth of public discourse on racial justice will be reflected in the continued evolution of DEI research, as it should. According to the 2021 Student Voice Survey conducted by *Inside Higher Ed* and Kaplan, the majority of college and university students believe that higher education "has a role to play in racial justice and equality."[1] Research in the areas of diversity, equity, and inclusion must continue to grow in order to meet these changing needs.

Research Approaches and Report Type

Both teams focused on the impact university libraries can have on minoritized student and faculty experiences, albeit from a variety of approaches. The **University of Washington** used the practice brief as an opportunity to reflect on their Outreach Assessment Toolkit, particularly regarding how they create and implement new programs and tools. The **Texas Tech University** pilot project focused on the experience of minoritized faculty from the perspective of how well their collections support their research, particularly if their research focused on DEI topics.

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[1] Melissa Ezarik, "More Discussion Than Action: Racial Justice on Campus," *Inside Higher Ed*, May 6, 2021, https://www.insidehighered.com/news/2021/05/06/what-students-think-about-racial-justice-efforts-campus.

Additionally, Texas Tech University sought to evaluate the needs and skills of their students regarding DEI research.

Methods and Tools

The **University of Washington** completed a practice brief outlining the iterative, critical assessment practices incorporated into library outreach practices, specifically as applied to the openly accessible [Outreach Assessment Toolkit](#). The University of Washington practice brief recounts a number of results that reveal the importance of reflective assessment practices. The University of Washington outlined three objectives as the foundation of their practice brief:

3. Demonstrate the value of library outreach to partners and stakeholders using an evidence-based approach
4. Set goals and evaluate all new programs and outreach through the lens of making strategic, sustainable, and scalable decisions
5. Incorporate reflective practice into the outreach planning and assessment cycle

The University of Washington used a mixed-methods research approach that incorporated design thinking, participatory design, and a number of qualitative and quantitative measures. Critical self-reflective practices were layered into the objectives of measuring and assessing library outreach efforts in order to provide a model for iterative growth and reflection that is accessible for other libraries.

Texas Tech University developed a mixed-methods research approach, combining quantitative measures for collection development, interlibrary loan, document delivery, metadata and cataloging, with qualitative measures for Alma/OneSearch queries and demonstrated search behavior to determine how well their library met the teaching and learning needs in the areas of diversity, equity, and inclusion. Initial data-collection methods included surveying faculty who focused on DEI topics. Complications from the COVID-19 pandemic amplified the challenges of survey research, and data collection had to be reconfigured as a result. Texas Tech University underwent a different process than the University of Washington by proposing, implementing, and analyzing the results of a pilot project. Since pilot projects are time-limited, primary research investigations, the planning, implementation, and analysis stages differ from practice briefs. The Texas Tech University Libraries undertook a two-part project that combined surveys, focused interviews, and data collection to incorporate user needs and behavior, collection usage, and cataloging and discoverability, with the goal of capturing how well they meet the DEI research needs on campus. Phase one of the research process entailed capturing collections data by comparing the availability of owned materials to awards lists, usage reports,

and faculty requests. The research team scanned course syllabi to identify how many courses and instructors included DEI topics. The syllabi scan resulted in identifying DEI courses as well as required resources.

Results

The **University of Washington** used the practice brief as an opportunity to assess the impact of the Outreach Assessment Toolkit they created in order to create iterative best practices. The overarching result of their reflective work revealed that the Outreach Assessment Toolkit, due to its critical self-reflective practices, encouraged regular evaluation. This regular reflective practice led to iterative change when designing library outreach and instructional sessions by encouraging participatory design measures and centering the student experience as the focus of all activities. As a result, library outreach programs deepened campus partnerships, and resulted in new initiatives that are iteratively aligned with student success programs across campus. True to the nature of self-reflection, the University of Washington practice brief highlighted the need for continual growth and encouraged other libraries to continue to build upon their work.

Texas Tech University's first phase of the pilot project revealed a number of insights. The syllabi scan resulted in identifying DEI courses as well as required resources. The research team found that 70 percent of resources identified in the syllabi scan were in the Texas Tech University collections. Online surveys were then distributed to discover how instructors were using library resources for class assignments. Low responses to online surveys did not reveal significant findings, but the process of design, implementation, and analysis did reveal potential improvements for future survey design. Additionally, some of the responses in the open-response questions indicated that faculty may not have considered the importance of DEI resources in the library as having an impact on research.

The collection analysis revealed that it is more difficult to analyze DEI resources, since the parameters of DEI research are not limited to a call number range or subject heading. Similarly, it was difficult to filter interlibrary loan data, due to the same constraints. Using faculty requests and e-book usage data resulted in fruitful discovery of DEI collaborators within the Texas Tech University who may be able to provide insight and feedback on future collection development efforts. Additionally, comparing DEI awards lists to item holdings allowed the research team to review cataloging records in order to improve discoverability. Faculty requests also revealed that faculty are interested in DEI topics, and there is strong research and instructional need in these areas. Examining the subject headings in faculty requests uncovered major topic areas that could be used for targeted future collection development.

Phase two combined user surveys with structured interviews to capture user satisfaction and measure the difficulty of discovering DEI resources. Structured interviews and keyword searches in the discovery service identified issues with discoverability. One finding, that students may miss up to 68 percent of DEI resources if they do not load beyond the initial results, is particularly indicative of hurdles to discoverability.

The Texas Tech University pilot project brief shares award lists, subject headings, and other resources that provide other university and college libraries with a discrete starting point for examining DEI support in their collections. The translatable nature of the work Texas Tech University underwent allows other libraries to take an actionable first (or second) step into exploring how supportive their collections are of DEI-focused research and courses.

Both the practice brief and pilot project focus on complementary aspects of DEI. The impetus behind the creation of the Outreach Assessment Toolkit was in service of creating effective outreach to specific student populations, such as first-year, international, transfer, underrepresented minority students, and first-generation students. *Cultural Proficiencies for Racial Equity: A Framework,*[2] developed by the American Library Association (ALA) and the Association of Research Libraries (ARL), outlines the connections between outreach efforts and racial justice in the Accountability, Assessment, and Implementation frame by surfacing that racial equity can only be realized when power differentials between BIPOC and white individuals are equalized. Outreach to minoritized communities is an effort to address information inequalities, as well as the unique needs of the lived experiences of transfer, international, and first-generation students, among others. The pilot project conducted by Texas Tech University focused on the teaching and research needs of DEI faculty. Through the process of their research, they revealed a need for instructional sessions focused on constructing DEI-centered search strategies, as a result of their collections analysis. While each team approached DEI from a different perspective, both centered on connecting students and faculty with resources.

One of the unique challenges of DEI research is the changing cultural context in which it takes place. As public discourse on racial equity and inclusion continues to evolve, so too must research libraries continue to engage in iterative research to

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[2] Joint ALA/ARL Building Cultural Proficiencies for Racial Equity Framework Task Force, *Cultural Proficiencies for Racial Equity: A Framework* (Chicago and Washington, DC: American Library Association, Association of College & Research Libraries, Association of Research Libraries, and Public Library Association, August 23, 2022), https://www.arl.org/resources/cultural-proficiencies-for-racial-equity-a-framework/.

ensure their outreach and collections continuously transform to meet the changing needs of teachers and learners. The University of Washington practice brief outlines how reflective practice can be incorporated into outreach efforts, and the Texas Tech University pilot project provides strong examples of how to use collection analysis, surveys, and focused interviews to measure where and how library resources are supporting DEI research and learning on campus.

Lessons Learned

Both teams related a number of lessons learned that can be applied to many assessment situations. The project teams learned a number of valuable lessons including:

- Incentives for survey research result in a higher response.
- Consider having alternate plans in the case of low or no response.
- Plan on potential adjustments to research plans and questions.
- Library intervention for increased DEI support can happen in a number of areas, from cataloging to instruction.
- Syllabus review can help identify collection needs that may not be communicated directly to libraries.
- Faculty with research foci in DEI may be reluctant or unable to contact the libraries, and may require more proactive outreach.
- The IRB process can include unexpected delays.
- Reflecting on past outreach efforts can result in more effective future outreach plans.
- Partnerships are essential for relevant student success programming and outreach.
- Reflective practices can help libraries remain accountable to student communities.
- Clear, measurable goals are necessary to aid effective assessment.
- Regularly communicate the results of assessment to partners and administration.
- Consider the labor involved in regular assessment.

Resources

Pilot Project Reports and Practice Brief

Hornby, Amanda, and Emilie Vrbancic. *Library Impact Practice Brief: Library Outreach Assessment*. Washington, DC: Association of Research Libraries, September 17, 2021. https://doi.org/10.29242/brief.uwashington2021.

Sappington, Jayne, Esther De León, Sara Schumacher, Kimberly Vardeman, Donell Callender, Marina Oliver, Hillary Veeder, and Laura Heinz. *Library Impact Research Report: Educating and Empowering a Diverse Student Body: Supporting Diversity, Equity, and Inclusion Research through Library Collections*. Washington, DC: Association of Research Libraries, July 28, 2022. https://doi.org/10.29242/report.texastech2022.

Other Publications and Presentations by Teams

Sappington, Jayne, Esther De León, Sara Schumacher, Kimberly Vardeman, and Donell Callender. "A Mixed-Methods Approach to Assessing Diversity, Equity, and Inclusion in Library Collections." Washington, DC: Library Assessment Conference, November 2, 2022. https://www.libraryassessment.org/wp-content/uploads/2022/10/144-Sappington-A-Mixed-Methods-Approach.pdf.

(How) do library spaces facilitate innovative research, creative thinking, and problem-solving?

Overview

Four teams completed research projects investigating the research question "(How) do library spaces facilitate innovative research, creative thinking, and problem-solving?" as part of the Research Library Impact Framework initiative. The University of Florida and Syracuse University conducted research pilot projects, and Temple University and Iowa State University created practice briefs. All four research projects were similar in their desire to better understand the impact that library spaces can have related to library strategic and operational goals. Each of the projects created research tools and utilized methodologies that can be replicated by other institutions who are exploring changes and improvements to their own library spaces.

Research Approaches and Report Type

The **Temple University** project was associated with their planned move into a new building. The move involved relocating staff from a traditional library space (browsing stacks, hundreds of study carrels, hardwired computers, private offices for staff, etc.) to a library space with open offices for staff, an automated retrieval storage system, makerspaces including high-end computers for specialized work, a virtual reality lab, and collaboration study spaces. Temple researchers were interested to learn how library space impacts staff work, what opportunities their new spaces provided patrons, and what challenges and changes for staff were created by the move to the new space. The Temple project's final report was provided in the form of a practice brief.

At the **University of Florida, the Marston Science Library (MSL)** had recently renovated three of five floors. As a result of the renovation, traffic in these library spaces increased substantially (more than 40 percent). As the Florida design team began to consider renovations on the remaining two floors, they decided to dive deeper into understanding how their renovations would support innovation, creative thinking, and problem-solving in the student population. To aid their investigation, they developed a research project based on four research questions: (1) How do research libraries facilitate innovation, creativity, and problem-solving competencies among their patrons?; (2) What are students' ideal space needs for specific floors (1st–5th) and their unique study environments (silent, quiet, collaborative, etc.)?; (3) How do the current MSL floors compare to the students' ideal?; and (4) How might MSL better support the different study dimensions (together vs. individual and public vs.

private) to identify building capabilities? The Florida project was conducted as a pilot project.

The **Syracuse University** research team explored the impact of embedding three "distinct academic learning communities" in Syracuse University's Bird Library. These communities were: (1) The Blackstone LaunchPad; (2) The Center for Learning and Student Success; and (3) The Syracuse Office of Undergraduate Research and Creative Engagement. These communities all had established track records of increasing student participation in innovative research, creative thinking, and/or problem-solving. The communities all were fostering student academic success and engagement. The Syracuse RLIF project was designed to explore how housing these types of communities in their library impacted the programs and the library. The Syracuse team hoped to identify these reciprocal effects and share them with other ARL libraries who provide spaces to academic learning communities and programs. The Syracuse project was conducted as a pilot project.

An overarching goal of the ARL RLIF initiative was to identify ways ARL libraries might partner or collaborate on academic library research. In support of this goal, the **Iowa State University (ISU)** Library's project used a research toolset provided by the Association of College & Research Libraries (ACRL) called Project Outcome. The Project Outcome research toolset is available at no cost for all ARL libraries to use. The primary research question for the ISU project was: What outcome trends and findings can be observed over the course of the project's timeline related to library study rooms? Prior to the start of the ARL RLIF project, the ISU library had already begun the process of submitting data to the Project Outcome database related to library study room usage. Throughout the RLIF project the ISU project continued to collect, analyze, and contribute study room space related data to Project Outcome. The project's final report was provided in the form of a practice brief.

Methods and Tools

All four projects used research methodologies that can be replicated at other ARL libraries.

The **Temple** project was conducted across three phases, and primarily used one-on-one as well as semi-structured interviews to collect data. In Phase One 29 interviews with staff were conducted. Six months later, in Phase Two another 29 interviews were conducted. Then, 12 months later, Phase Three of the project conducted 28 interviews.

At the **University of Florida**, the research process spanned four phases. In the first phase, the research team reviewed relevant literature and developed a codebook for the project, which was used in the qualitative analysis parts of follow-on phases. In the second phase, the study team conducted an unobtrusive observation of the students' use of the existing library spaces. This spatial analysis of the existing work environment enabled the study team to document the (pre-pandemic) use of the current library space. In phase three a survey in the form of an online questionnaire was distributed to the entire student population. The survey collected student preferences related to 4 use categories, 14 space categories, and 3 system-wide diversity factors. Students were asked to define existing spaces using a place-based semantic differential (PBSD). Additional open-ended questions were used to solicit the user's perceptions of library spaces. In the final phase, five focus groups were conducted, one for library staff, and two each for undergraduates and graduate students. Data collected from the focus groups were analyzed with NVivo 11 software using the codebook developed by the research team in Phase One.

The **Syracuse** project took a mixed-methods approach to their study using both surveys and interviews. Three surveys were conducted: (1) a survey targeting peer perceptions regarding "traditionally non-library units or other campus units" located in their libraries; (2) a survey of both current students and recent alums to gain insight into perception and use of community space; and (3) a survey of library employees to gauge their perception of and interaction with the communities. In addition to the surveys, five online semi-structured interviews were conducted with the community directors and (separately) the dean of Syracuse University Libraries.

The **Iowa State** project primarily used quantitative analysis methods. Over the course of the RLIF initiative, each semester the research team issued Project Outcome surveys to students that had reserved library study rooms. Data from the surveys was uploaded into the Project Outcome database, where a data dashboard was used to review trends in the data and also compare the Iowa State results with other institutions using Project Outcome.

Results

At **Temple**, research results indicated staff have different attitudes towards the new spaces they are working in. The spaces make it easier to do some kinds of work (instruction is an example, with more robust technology equipment), but other work (for example, working at the public service desk) is more difficult. Staff tended to agree workspace-related changes are difficult and stressful. It was hard for staff to adjust to different work spaces and simultaneously provide library services. The Temple project recognized that the pandemic-driven shift to remote work for some staff may have changed or eliminated pre-pandemic concerns identified in the project.

The Temple research team identified exploring the impact of remote work on library space as an area for future research.

In the **Florida** project, their spatial analysis revealed users preferred studying or working individually in both spaces designed for individual work and in spaces designed for group study. A high percentage of their student users reported using the library for individual study. These students reported they found the spaces pleasant, relaxing, and calming. Results from the project's focus group work discovered there was: (1) a desire for more natural elements, including colors, lighting, and plants; (2) a desire for control of the space, including light and noise control as well as moveable seating; (3) spaces should provide various levels of stimulation depending on the task the student is engaged in; (4) spaces should provide both comfort and safety; (5) outdoor seating options should be provided; and (6) ample access to technology should be provided in whatever space they need to use.

The **Syracuse** project found that community directors and students considered their library-housed community space to be adequate and conducive to their activities. There was also feedback indicating communities could benefit from space improvements. Results also indicated discussing and addressing the space needs of library staff impacts the library staff's perception of academic learning communities. Open communication and discussion with library employees about the communities was found to be beneficial. When considering the potential of offering space to additional learning communities, consideration should be given to the following factors: mission alignment, the need for central academic space, funding, and the impact on student study and staff spaces.

The **Iowa State University** Library's work related to Project Outcome found the Project Outcome research toolkit easy to use. While there were recognized limitations with the study's methods (for example, the use of survey convenience samples based on the users who reserved study rooms rather than all users who used study rooms), the ISU research team reported examples of how Project Outcome–related information that was gathered was useful to support library decision-making. For example, Project Outcome data captured as part of the RLIF work was used to successfully support library renovation funding requests. These contributions to library decision-making resulted in a greater awareness and buy-in to overall assessment activities in the Iowa State University Library.

Lessons Learned

The project teams learned a number of valuable lessons including:

- Libraries should include expertise from related academic units whenever possible.
- Assessment teams should allow for flexibility (agility) in the research design.
- Libraries who engage in research projects should spend adequate time up front to fully clarify their research aims and objectives as early as possible.
- Research team expertise should be carefully considered before embarking on a research project.
- If a library or team would like to explore a qualitative research method new to them, consider trying just one method at a time on a smaller project to gain experience.
- Conducting even basic qualitative research involves significant time investment and is notably different from the survey research and quantitative methods that libraries tend to depend upon.
- In many cases it appears graduate and undergraduate students want many of the same elements in an ideal library space.
- Students look for a natural feel in the library space, and also for spaces that feel and are safe.
- Using mixed methods can amplify the power of academic library spaces research.
- It can be challenging to turn qualitative research into direct actions, as experiences of staff are often mixed.
- Research toolkits, such as ACRL's Project Outcome, can be easy to use and provide a good entry point for academic libraries interested in conducting research in support of library decision-making.

Resources

Pilot Project Reports and Practice Briefs

Davis, Greg, Katie Wampole, and Linda Anderson. *Library Impact Practice Brief: Supporting Library Spaces Research in the Iowa State University Library with Project Outcome*. Washington, DC: Association of Research Libraries, September 27, 2022. https://doi.org/10.29242/report.iowastateu2022.

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———. "Facilitating Innovation, Creativity & Problem-Solving in Library Spaces: A Scalable Research Framework." Presented at ACRL 2021 Conference: Ascending into an Open Future, online, April 13, 2021.

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(How) do the library's special collections specifically support and promote teaching, learning, and research?

Overview

Four project teams engaged with the research question "(How) do the library's special collections specifically support and promote teaching, learning, and research?" as part of the Research Library Impact Framework initiative. The University of California, Irvine (UCI) and the University of Pittsburgh initially partnered on a research project but eventually completed separate project reports, Western University engaged in a research project, and Johns Hopkins University produced a practice brief. The research projects were connected by a desire to understand the impact that teaching primary-source literacy skills to undergraduate students has on those students. Each of the projects developed tools and utilized methodologies that can be replicated by other institutions interested in better understanding the impact of teaching primary-source literacy skills on their campuses.

Research Approaches and Report Type

The University of California, Irvine (UCI) and the University of Pittsburgh initially partnered as a project team to examine effective methods of teaching primary-source literacy, including the use of workshops and the RBMS/SAA *Guidelines for Primary Source Literacy*.[3] They used a logic model framework to identify potential outcomes and then applied that model to programs offered at their institutions. Difficulties related to the different academic schedules of the institutions caused them to finish their projects individually and to submit separate project reports. However, they also created a joint report discussing their work as partners that identified strengths and weaknesses of having two institutions at remote locations partnering on a single research project.

UCI applied what they had learned from the development of the logic model to their Humanities Core program, a year-long undergraduate freshman course introducing students to scholarly research through the use of primary and secondary resources. Team members offered two workshops teaching primary-source literacy—one

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[3] ACRL RBMS-SAA Joint Task Force, *Guidelines for Primary Source Literacy*, approved by the ACRL Board of Directors February 2018, approved by the SAA Council June 2018, https://www2.archivists.org/sites/all/files/Guidelines%20for%20Primary%20Souce%20Literacy_AsApproved062018_1.pdf.

incorporated the principles and practices of community-centered archives and the other did not. The community-centered archives workshops worked to provide students with access to primary-source materials that reflected their own identities. The other workshops provided students with primary-source materials selected by the curators and may or may not have reflected the students' identities. The use of the paired workshops enabled team members to test the efficacy of the *Guidelines for Primary Source Literacy* and it demonstrated the value of incorporating more inclusive histories in order to more deeply engage students.

The **University of Pittsburgh** used what they learned from the development of the logic model to create a robust assessment toolkit that included a rubric and assessment tools that aligned with the SAA/RBMS *Guidelines for Primary Source Literacy*. They tested the rubric with the Archival Scholars Research Awards (ASRA) and later adapted it for classroom use. This enabled team members to gain a deeper understanding of the impact that teaching with primary sources was having on their students.

Western Archives and Special Collections, Western Libraries, examined the use of archival special collections by Western University's History Department at both the undergraduate and graduate levels, as well as its use by faculty and post-doctoral researchers. The project team wanted to understand the impact of archival holdings and services on Western University's History Department and to identify opportunities to better serve non-users of the archives. They discovered that they were not as connected to the History Department as they had thought they were and that they needed to take a more proactive approach to engagement in order to demonstrate the value that teaching with primary sources could have for the History Department.

Johns Hopkins University's practice brief reported on an assessment project undertaken to understand how their Freshman Fellows program impacted the fellows' studies and co-curricular activities at the university. The Freshman Fellows were paired with a mentor familiar with primary-source literacy and worked on a project based on special collections materials. Team members discovered that early engagement with primary-source literacy skills had a strong impact on later academic success of the students.

Methods and Tools

Project teams used a variety of methodologies and tools to accomplish their research projects. UCI used entrance and exit surveys to assess the impact of their primary-source literacy workshops. The University of Pittsburgh used surveys and interviews to assess the validity of the rubric and assessment tools that they developed. Western

University used interviews and surveys as well as operational data to assess their impact on the History Department. Johns Hopkins University utilized a primary research rubric, program guidelines, and interviews to evaluate the Freshman Fellows program. Project teams used a variety of tools to gather and evaluate data. These tools included Microsoft Excel, R, survey software (such as Qualtrics), Zoom (for interviews and to facilitate team meetings), and Google Docs.

Results

The **University of California, Irvine** discovered that coupling primary-source literacy with community archives in a classroom setting has a significant positive impact on student learning. They found that incorporating principles of community archives into their primary-source literacy workshops enabled students to think critically about power dynamics in archives and to understand the significance of archives as sources shaping historical narratives. It also enabled students to see themselves in history.

The **University of Pittsburgh** discovered that the ASRA program had a positive impact on students' ability to develop initial and intermediate primary-source literacy. The Pittsburgh team also identified areas where the program could be strengthened, including better helping students utilize library databases and comply with copyright laws. They discovered that using the rubric and assessment tools in a classroom setting underscored the value that faculty see in teaching with primary sources and the role that curators play in primary-source literacy instruction.

Western University discovered that the services and resources they made available for students and faculty in the History Department were not well utilized. There was a disconnect between the value that curators thought they provided and what was actually occurring.

Johns Hopkins University learned that their Freshman Fellows program was having a significant impact on student achievement at the university. They also discovered that the program would benefit from a structured review of the fellows' final projects and led to the development of an assessment rubric based, in part, on the SAA/RBMS *Guidelines for Primary Source Literacy*.

Lessons Learned

The project teams learned a number of valuable lessons including:

- Collections used in primary-source literacy instruction need to reflect the students being taught.
- Expanding the time of classes would be beneficial to allow students enough time to engage with materials.
- Judicious use of the Guidelines for Primary Source Literacy is important.
- Collaboration with teaching faculty in developing appropriate lesson plans is important.
- Engagement with faculty and students is crucial (cautionary tale of lack of active engagement).
- Involving freshman with primary sources gives them a boost scholastically and tells them that they belong.
- Providing mentors for students so that they are successful is important.
- Use of the rubric and assessment tools improved the ability of students to develop primary-source literacy skills.
- There is a need to collect better quality data.
- There is a need for better survey design, and offering rewards has the potential to boost survey participation.

Resources

Pilot Project Reports and Practice Briefs

Belton, Tom, Amanda Jamieson, Amanda Oliver, and Anne Quirk. *Library Impact Research Report: Impact of Archival Collections and Services on the Western University Department of History*. Washington, DC: Association of Research Libraries, June 23, 2022. https://doi.org/10.29242/report.westernuni2022.

Burri, Margaret, Joshua Everett, Heidi Herr, and Jessica Keyes. *Library Impact Practice Brief: Freshman Fellows: Implementing and Assessing a First-Year Primary-Source Research Program*. Washington, DC: Association of Research Libraries, July 15, 2021. https://doi.org/10.29242/brief.jhu2021.

Tribbett, Krystal, Derek Quezada, and Jimmy Zavala. *Library Impact Research Report: Improving Primary Source Literacy Learning Outcomes through a Community-Centered Archives Approach*. Washington, DC: Association of Research Libraries, January 13, 2023. https://doi.org/10.29242/report.ucirvine2023.

Withers, Clare, Diana Dill, Jeanann Haas, Kathy Haines, and Berenika Webster. *Library Impact Research Report: A Toolkit for Demonstrating and Measuring Impact of Primary Sources in Teaching and Learning.* Washington, DC: Association of Research Libraries, December 9, 2022. https://doi.org/10.29242/report.pitt2022b.

(How) do the library's collections play a role in attracting and retaining top researchers and faculty to the institution?

Overview

A research team from the University of Texas (UT) at Austin Libraries conducted a study to explore the question of "(How) do the library's collections play a role in attracting and retaining top researchers and faculty to the institution?" The UT Austin team was the only team exploring this question.

Research Approach and Report Type

The **UT Austin** team was guided by two objectives: (1) assess whether library collections factor into faculty decision-making processes at the time of both recruitment and retention; and (2) examine the UT Austin context-specific nuances of faculty decisions about coming to and staying at the university in relation to their perceptions of UT Libraries' collections. The team's final report was provided in the form of a practice brief.

Methods and Tools

The team distributed an online survey to all **UT Austin** faculty members hired or promoted within the past five years. They then conducted one-on-one semi-structured interviews with recently hired or promoted faculty members across disciplines and rank, without overlap in departments. Team members independently and then collaboratively analyzed the quantitative and qualitative data. An open-coding, grounded-theory approach was utilized for qualitative data analysis. The research team noted using a variety of tools to conduct their research, including Zoom, Box file sharing, Qualtrics, Excel, Word, audio recorders, and on-site transcription services.

Results

Four overarching themes emerged from the data analysis: (1) access to collections is a priority; (2) assumptions about collections are widespread; (3) local special collections are deeply impactful to certain faculty; and (4) factors that influence recruitment and retention are generally personal and multifaceted.

As noted in the report, faculty expect and prefer instant and unmediated access to print and online information. If the library cannot provide efficient access, faculty will access the materials elsewhere. The majority of faculty surveyed had not considered library collections during recruitment, instead assuming that libraries are similar across R1 institutions and that the library would have what they need. Likewise, most faculty who had previously considered leaving UT Austin had not factored library collections into their decision-making process. However, a slight majority of faculty who were actively seeking a position elsewhere reported that the quality of library collections would be a factor in their decision.

Although not in the majority, a significant percentage of faculty indicated that UT Libraries' collections were a driver in their decision to work at UT Austin. Many faculty described UT Libraries' collections as being important to their research and teaching. Some faculty noted a direct link between the university's investment in UT Libraries' collections and the university's overall research and teaching mission. Additionally, among faculty who regularly use special and archival collections, a few noted those collections as being a major reason for choosing to work at UT Austin. Arts and humanities faculty most clearly articulated the impact of archival and special collections, as well as foreign-language materials, on their teaching and research.

Lessons Learned

The **UT Austin** team shared a number of lessons learned and recommendations for teams conducting similar research or using similar research methods, including:

- Start the institutional review board (IRB) application process as early as possible and anticipate IRB approval delays by factoring in a time buffer to help keep the research project on track.
- Carefully consider the sequencing of data-gathering activities, as qualitative and quantitative methods can inform each other.
- More closely match up survey and interview categories when writing the questions for each to obtain both quantitative and qualitative data for all sections.
- Prepare multiple solicitation strategies.
- Carefully consider when is the best time to conduct the study for faculty.

- Anticipate recruiting faculty for interviews to take longer than expected.

As a closing recommendation, the research team urged the library community to value in-depth localized studies that are not comparative by design and encourage similar localized studies at other institutions.

Resources

Practice Brief

Chiochios, Maria, Janelle Hedstrom, Katie Pierce Meyer, and Mary Rader. *Library Impact Practice Brief: Relationship between Library Collections and the Recruitment and Retention of Faculty at UT Austin.* Washington, DC: Association of Research Libraries, August 6, 2021. https://doi.org/10.29242/brief.utaustin2021.

Other Publications and Presentation by Team

Chiochios, Maria, Janelle Hedstrom, Katie Pierce Meyer, and Mary Rader. *Relationship between Library Collections and the Recruitment and Retention of Faculty at UT Austin.* Austin, TX: University of Texas at Austin, June 2020. http://dx.doi.org/10.26153/tsw/9030.

———. *Relationship between Library Collections and the Recruitment and Retention of Faculty at UT Austin.* Texas Data Repository, V1, June 30, 2020. https://doi.org/10.18738/T8/EAKPUD.

———. "Impact of Library Collections on Faculty and Researcher Recruitment and Retention Decisions." In *Proceedings of the 2020–2021 Library Assessment Conference: Building Effective, Sustainable, Practical Assessment, October 29, 2020–March 17, 2021*, edited by Sue Baughman, Jackie Belanger, Emery Durnan, Elizabeth Edwards, Martha Kyrillidou, Klara Maidenberg, Angela Pappalardo, and Maurini Strub. Washington, DC: Association of Research Libraries, 2021. https://www.libraryassessment.org/2020-proceedings/.

Engagement in Initiative

Two methods were used to collect participant feedback about their motivations for engagement in the RLIF initiative, the level of support received from ARL and the VPO team, experiences in completing a project or practice brief, and recommendations for future initiatives and issues ARL should explore. Social science consultant Margaret Roller conducted in-depth interviews with one or two members of each pilot project or practice brief team. The VPO team designed two surveys, one to collect feedback from deans and directors whose libraries had teams participating in the initiative and another survey directed at all team members.

In-Depth Interviews with Team Members

A total of 26 in-depth interviews were conducted from May 19, 2021, to August 30, 2022, among team members. In most cases, individual interviews were conducted with 2 members of each team, although 8 of the 26 interviews were conducted with just 1 member of a team (typically the research lead). All five RLIF research questions are represented by the 26 interview participants. The length of each interview ranged from 60 to 75 minutes. All interviews were conducted on the Zoom platform and, with each participant's permission, audio recorded.

An analysis of the entirety of data within and across all 26 interviews leads to three broad categorical areas—ARL support, collaboration, and the RLIF structure. These three aspects of the RLIF initiative help in understanding what was learned from these interviews.

The key elements that define each of these areas are listed in Table 5:

Table 5: Aspects of RLIF Initiative

ARL Support	Collaboration	RLIF Structure
● Communication ● Training ● Responsiveness ● Online support	● Feeling connected ● "Being part of a larger picture" ● Learning from others ● Pairing with another institution	● Layers, goal, scope ● Time commitment ● Research questions

The themes derived from one or more of these categories, and respective key elements, explain and give meaning to team members' motivations, expectations, and experiences with the initiative, as well as their attitudes associated with future ARL initiatives.

The evaluation interviews conducted with RLIF team members exposed a great deal of enthusiasm for ARL, the RLIF initiative, and the prospect for ARL future initiatives. These participants appreciate the opportunity that the initiative structure offers "to do the work we should be doing" but, as importantly, the opportunity to meet and collaborate with librarians from other institutions. Moving forward, ARL is encouraged to build on the positive support provided to RLIF team members—by way of communication, training, responsiveness, and online support—by maximizing the opportunities to bring participants together, thereby enabling them to share and contribute to one another's work. The overarching theme from these 26 interviews is that participants are looking for ARL support that fully embraces the other two areas that are important to initiative involvement—collaboration and the initiative structure.

See the Appendix for the full report on the interviews with team members.

ARL Deans and Directors Survey

Sixteen ARL deans and directors from RLIF institutions were invited to comment on five areas, including (1) the library's motivation for participating in the initiative; (2) what changes resulted from their team's project; (3) how the library's involvement in the initiative impacted assessment practices; (4) examples of the impact; and (5) three issues that research libraries should explore in the near future. Six (38 percent) of the deans or directors responded.

All respondents indicated that the opportunity to participate in an ARL initiative was a motivator for participation, with one respondent noting the opportunity to work closely and collaborate with other ARL institutions as a motivator. Two respondents indicated that the opportunity to further develop a culture of assessment in the library was a motivator for participation. One respondent indicated that the motivation to participate in the initiative was the opportunity to respond to an issue they were confronting. One respondent stated that the initiative gave their library the opportunity to develop a project that impacted their campus users and supported community outreach. Another respondent shared that the initiative allowed their library team to examine a question of importance at the local level and share with ARL colleagues information about a specific program.

Regarding outcomes of participating in the RLIF initiative, one respondent indicated that their library gained higher visibility through participation, resulting in being included more in other institutional initiatives. One respondent noted that revisions have been made in their instruction program to be more oriented towards marginalized community histories. Another respondent stated that the "pandemic closures" resulted in the library prioritizing the digitization of collections to elevate the online user experience for faculty. A couple of respondents stated that their participation in the initiative provided a "strong rationale" for increasing their focus on staffing and organizational issues or engaging in assessment. Better understanding has been reached regarding the human capacity needed to maintain and support new services as a result of one team's project.

When asked how participation in the initiative impacted the library's assessment practices, five respondents indicated "some impact" while one respondent indicated a "high impact." Examples shared by respondents included (1) improved ability to tell an evidenced-based story of collaboration and library impact; (2) adoption and incorporation of a diversity, equity, inclusion, and accessibility (DEIA) lens in assessment practices; (3) more colleagues are familiar with and engaged in assessment; (4) willingness to do more studies with an internal organizational focus; and (5) increased ability to assess whether the library is accomplishing what it has set out to do.

The respondents listed issues they thought research libraries should explore in the near future. Six themes emerged from the listed issues. Table 6 reflects the issues listed organized into six theme areas and in descending order of the number of mentions.

Table 6: Library Dean/Director Suggested Issues to Explore in Six Themes

Collaboration with Other Libraries	Value
- The ARL Investment Index re-imagined for the 22nd century & aligned with ARL membership criteria - Collaborate to solve issues "at scale" (for example, libraries' role in combating misinformation) - Effectiveness in engaging institutional leadership	- Developing evidence-based measures for assessing the value of library research and digital scholarship services in the academy (beyond descriptive data-gathering and reporting) - Assessing the value of research libraries to student success and social mobility

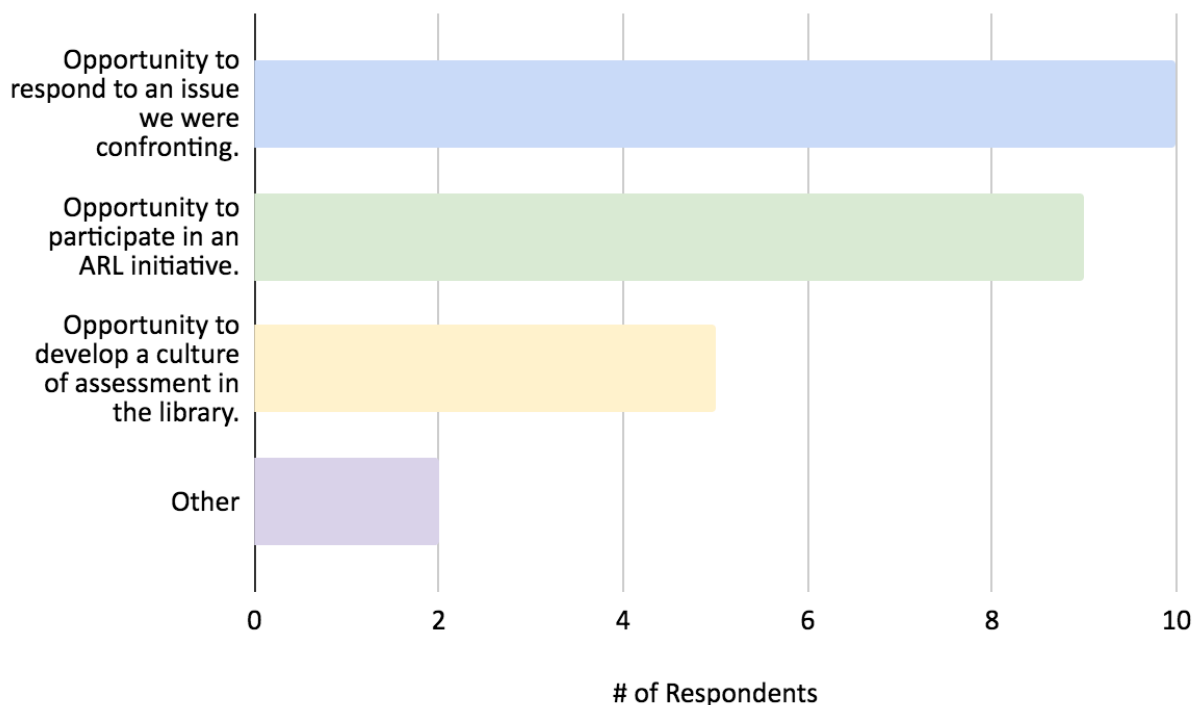| Collaboration with Other Libraries, Continued	Value, Continued
- Re-thinking library uses and users: moving beyond gate and occupancy counts - Sustainable open access implementation - Advance open scholarship	- Research support impact - Effectiveness of strategies for communicating the value of research libraries to stakeholders
Data / Technology - Prioritize data as "collection" - Data security, especially with use of our resources - AI use in libraries	**Pandemic** - Impact of COVID-19 pandemic on research libraries - Staffing and organizational issues in the post-pandemic campus environment
Diversity, Equity, Inclusion, and Accessibility - Effectiveness of library's internal and public-facing DEIA-related initiatives - Respectful terminology in our descriptions and systems	**Staff / Organization** New competencies for research library professionals

Team-Members Survey

All 78 members of the RLIF project and practice brief teams were invited to complete a nine-question survey that addressed the following: (1) research question studied; (2) the team member and library's motivation for participating in the initiative; (3) the level of support received from ARL, the VPO, and the library; (4) three issues that research libraries should explore in the near future; (5) recommendations if the Research & Analytics Committee decided to continue the RLIF initiative in some way; (6) interest in participating in a similar initiative; (7) factors contributing to their decision to participate (or not participate) in a similar initiative; (8) likelihood of continuing or expanding their project whether or not they participate in an ARL initiative similar to the RLIF; and (9) ways in which they will use the skills and knowledge gained through the RLIF initiative. Thirteen (17 percent) of the team members responded.

Four out of the five research questions were represented by the respondents:

- 1 response: (How) do library spaces facilitate innovative research, creative thinking, and problem-solving?
- 3 responses: (How) do the library's special collections specifically support and promote teaching, learning, and research?
- 4 responses: (How) does the library contribute to equitable student outcomes and an inclusive learning environment?
- 5 responses: (How) does the library help to increase research productivity and impact?

Respondents were given several options to choose from for the reasons why the team or the library got involved in the initiative (see Chart 1).

Chart 1: Reasons for Involvement in Initiative

One respondent added, "We thought it would be fun and interesting!" Another respondent noted that this was an "opportunity to share with others our experience and what we've learned from it."

When asked whether the team members received the right level of support from ARL, their VPO, or their library, all respondents indicated that support from ARL was "just right." Eight indicated "just right" from the VPO and the library. Three respondents noted that they did not receive enough support from the VPO and/or the library.
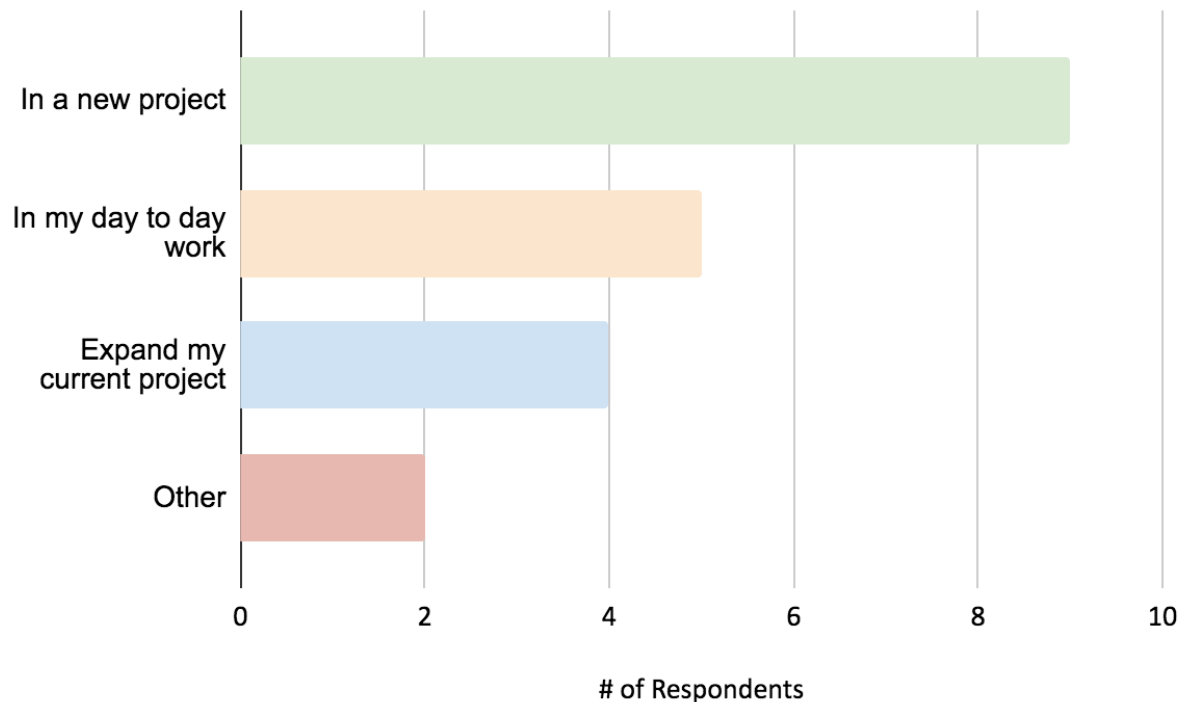
The question, "What would you like to see happen if the Research and Analytics Committee decides to continue the RLIF initiative in some way?," elicited several suggestions to encourage more collaborative opportunities among libraries. Continuing to build a community of assessment was mentioned as well as a focus on the tools and approaches that can be used for projects. One respondent recommended stronger support to implement ideas and strategies for issues related to DEI and BIPOC communities.

The VPO team sought feedback regarding interest in a similar initiative and the factors that would contribute to the decision to participate. Five respondents indicated "yes," while eight respondents indicated "maybe." One respondent shared that the RLIF was an "incredible experience" and they learned a lot from all of the project teams. Several respondents shared that the collaborative nature of projects would be a draw as well as financial support for research activities. The types of questions or topics that ARL would promote would also be an important factor in deciding to participate again.

The survey asked respondents to indicate whether they would continue or expand their project whether or not they participated in a future similar ARL initiative. Seven respondents indicated "maybe" and six indicated "yes."

Respondents were also asked whether they would continue to use the skills and knowledge they gained through the initiative, and were given several options to choose from to indicate the ways in which they would continue to use what they learned (see Chart 2).

Chart 2: Continued Use of Skills and Knowledge Gained in Initiative

One respondent added that they would use their new skills and knowledge to "keep fighting for spaces, collections, and programming" and another respondent stated they will use their skills and knowledge in "other projects and an updated version of the same project if the library decided to collect new data in a new faculty/graduate survey."

The respondents listed issues they thought research libraries should explore in the near future. In Table 7, the suggested issues are organized into the same six themes that emerged from the library dean/director survey and in descending order of the number of mentions among team members.

Table 7: Team Member Suggested Issues to Explore in Six Themes

Collaboration with Other Libraries	Diversity, Equity, and Inclusion
- Integrating critical information skills into coursework and pedagogy - What is/isn't a culture of assessment? - Emerging literacies - How effective and sustainable have the new research library services (RDM, digital scholarship, etc.) been? - How research libraries engage successfully in community engagement - Countering misinformation and disinformation - Open access, fighting the commodification of information - Some of the issues from the last RLIF could be repeated or reframed slightly—there are so many ways they could be interpreted. - The rise of STEM vs. other disciplines - Libraries as places - Collaborative collecting	- What DEIJ-related initiatives are most important for academic libraries to support in order for them to fully support all students (LGBTQ+, Black, international, etc.)? - Confronting bias and algorithmic influence in library information systems - Library impact in terms of diversity, equity, inclusion, accessibility, and anti-racism initiatives (including developing indicators of success in library DEI work) - Implementation of DEI initiatives, including collections - What DEIB means for collections and services - How to successfully create welcoming services to all - Tackling imposter syndrome in conjunction with BIPOC and other communities - Garnering support for library initiatives (DEI, social justice, etc.)—not just money
Value	**Pandemic**
(How) does storytelling in communications contribute to institutional understanding of library value? - Decline in use of academic libraries	- Post-pandemic library management - How do libraries support communication and information sharing in our new post-pandemic team environment?

Value, Continued	Pandemic, Continued
● Helping research libraries tell the story of how they facilitate connections and collaborations across their institutions (libraries/librarians as crucial connectors on campuses)	● The changing nature of library services, resources, and spaces in the wake of the pandemic, including exploration of the ways in which student and faculty needs/expectations may have changed as a result of remote teaching, learning, research, etc.
Data and Technology ● Research data management ● Digital preservation	**Staff / Organization** ● Perhaps something to do with staff/librarian morale, understaffing, retention, etc.—restructuring / re-envisioning in times of tight budgets ● Library resources & services beyond physical formats and interactions

Team members were provided an open comment space to share their final thoughts. Several respondents noted their appreciation and thanks for the initiative support and experience. Many found the instructions and follow-up emails and meetings to be very helpful. One respondent made note of the opportunities to talk with others about their work.

One respondent offered constructive feedback for any future program:

- The program was too long as a result of the pandemic.
- The training on research methods would have been more helpful earlier in the program.
- Due to changes in one team, when the team lead left the organization, the collaboration with another team faltered.

Lessons Learned

The Research Library Impact Framework (RLIF) initiative was a valuable learning opportunity. Several of the key lessons learned during the project related specifically to particular research questions and those lessons learned are detailed in the summary reports on the research questions. There were also valuable lessons learned at the RLIF initiative level that are detailed below:

- There is value to developing a research agenda at an organization/association level. That research agenda helps to ground and connect various research questions. The research questions function in the same way. They ground individual research projects and allow for them to influence each other. Having a common goal (set by the agenda) ensures that individual research projects are targeted and impactful.
- Centralized communication fostered a culture of accountability and an eagerness to report on the progress of various projects. Check-in meetings held by the visiting program officers (VPOs) allowed project teams to receive needed support and provided a venue for testing ideas. Communication can be facilitated in a variety of ways including via email lists as well as video calls. Communication is crucial to creating a space for collaboration.
- Cross-project collaboration allowed for the dissemination of ideas and methodologies and sparked a sense of wonder at what was happening throughout the initiative. Collaboration was critical to the development of a supportive research community.
- Successful projects are embedded in supportive communities. These communities can be as granular as the team itself and as large as an organization like ARL. Community is built through both large and small actions. Project-wide celebrations of the successful completion of various projects provided momentum for other projects and nudged them towards the finish line. Participation in a community fostered a desire to share information about various research projects.
- Participation in a research community enabled participants on various projects to work collaboratively to determine what methodologies to use for their individual projects. Matching the appropriate qualitative, quantitative, or other methodologies to a research project is critical. Having an organization like ARL provide training on these methodologies ensured that each project would be successful. Providing methodological training at the beginning of the initiative would have been extremely beneficial.

- A clearly developed communication plan for disseminating information about project results is critical. The communication plan needs to detail who the target audience is and how information will be communicated to that audience. Audiences can range from specific campus officials to the wider professional community and communication avenues can range from individual conversations to conference presentations.

Conclusion

The RLIF initiative has come to the end of the first cycle of projects, however, the framework is intended to be a living document. For library deans and directors, the framework is meant to provide the visioning underpinnings needed to create a unified narrative of the impact their research libraries have in their environments. By providing scaffolding for assessment teams to engage with discrete research questions that connect to a larger narrative, both library directors and assessment professionals can use the framework to focus research and communicate strategic connections and impact to users.

The first cycle of pilot projects and practice briefs have resulted in methods, resources, and lessons learned that can enable libraries to take a first step into assessment, or embolden libraries to make iterative tweaks to current assessment projects. There are as many successful models for assessment as there are research libraries. The framework is an attempt to surface the variety of forms assessment can take while providing grounding ideas for effective communication. While research libraries wrestle with common pressures to provide evidence of their impact on strategic goals, the process and means by which libraries engage in this work must be malleable enough to fit their needs. The Research Library Impact Framework attempts to embolden research libraries by enabling them to engage effectively with their current users in order to reveal successes and areas of growth so that research libraries may continue to evolve for future users.

The Research Library Impact Framework pilot projects and practice briefs resulted in a number of collective experiences with insights that are applicable to research libraries across the globe. Most teams learned through the course of their assessment work that the research process, particularly for pilot projects, often includes a number of setbacks or necessary readjustments in order to continue forward. Planning for alternate pathways or building in support for creative problem-solving into the research plan can help teams maintain forward momentum, even in the face of unexpected circumstances.

Each research question encompassed a number of unique challenges specific to the area of focus. Within the research question on productivity, the complicated nature of open access and tools related to measuring citation were major factors in research efforts. Although technology continues to improve, there are still some areas of research where collecting data by hand may still be the most effective and accurate process. Additionally, the labor-intensive role of libraries involved in an institution's research goals is a major factor in how and when libraries engage with research teams. Diversity, equity, and inclusion research is highly contextual, and requires a deep knowledge of the communities being served. Thoughtful outreach to minoritized learners and researchers requires reflective practices, continuous assessment, and targeted approaches to ensure the best outcomes. Library spaces represent an area where the expertise of libraries is better served when augmented with the expertise of design experts. Additionally, the use of library spaces by learners will continue to evolve as learner needs evolve. As a constant moving target, research in library spaces continues to require the study of long-term variables over time, using such tools as Project Outcome to map and describe how learner needs and perceptions change. Within the areas of distinctive collections, effective engagement with special collections requires thoughtful collaboration with faculty, as well as instructional design, in order to ensure learners have the time and skills practice needed to engage effectively with primary-source materials. Continued development of measurements and tools specific to special collections remains a persistent need. Finally, the role of the library in attracting and retaining top faculty researchers requires careful collection of experiential data to reveal the values and challenges faculty face. Focusing on the experiences of faculty from an extremely localized and in-depth vantage point yields the best insight into where and how libraries can work to attract and retain researchers at their institutions.

Additionally, each area of research yielded a number of universal truths. For example, in most cases, collaboration within the library and with campus partners ensures a more enriching research experience and outcomes. Communication and planning remain key to guiding longer and more complicated projects to completion. Finally, research libraries can have lasting impact on their communities through planned early and sustained long-term engagement with their learners and faculty. While the practices, implementation, and assessment of these engagement exercises will vary greatly between universities and in response to user groups, it is vital that research libraries continue to engage, and work to maintain engagement over time.

In a constantly changing environment, data that clearly demonstrates value and impact remain critical to the continued evolution of research libraries. The RLIF initiative provides an organized approach to engaging with research by providing themes related to big-picture goals, targeted research questions that result in captured instances of impact, and a collegial network to provide support, guidance, and

resources to research libraries worldwide. Research libraries must continue to engage in research projects focused on demonstrating impact in order to communicate their work and value, both to their users, and to their decision-makers. As disruptions, such as global health and economic crises, continue to impact budgetary decisions, the need for clear, data-driven insights into the impact research libraries have on their communities will only increase. In order for research libraries to uncover proven, evidence-based practices, sustained engagement in the Research Library Impact Framework is necessary, both to continue to nurture the research library community, and to empower research libraries to clearly and confidently communicate the evolving narrative of their impact to their users and decision-makers.

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- Seventy-eight library employees who were members of eighteen participating teams along with their deans and directors
- Visiting program officers (VPOs): Ava Brillat, Gordon Daines, Greg Davis, and Stephanie JH McReynolds, who served 2019–2022, and Glenn McGuigan, who served 2019–2020

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Appendices

Appendix 1: Research Library Impact Framework Initiative, Evaluation In-Depth Interviews with Pilot Project & Practice Brief Teams

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I. Introduction

I.A. Background & Objectives

The Association of Research Libraries (ARL) is a nonprofit group of member organizations representing libraries and archives in public and private universities, federal agencies, and public institutions in the US and Canada. The ARL Research and Analytics program conducts research associated with research libraries' role in "scholarly and scientific production, learning facilitation and learner success, and knowledge access and sustainability," while also supporting librarians' interests in library assessment, evaluation, and improvement.

In 2019, ARL created the grant-funded Research Library Impact Framework (RLIF) initiative. The purpose of the RLIF initiative was "aimed at aligning the research and analytics work of the Association with the goals and needs of members." This initiative embraced four goals: (1) create a culture of assessment through methodologically sound research projects, (2) improve processes for identifying data points for collection and distribution of information that substantiate library impact, (3) expand abilities to collaborate and compare data and methods with peers, and (4) improve the impact of services and programs for users.

The RLIF initiative brought together 18 ARL university library teams to address, independently or collaboratively, five high-priority research questions:

1. (How) does the library help to increase **research productivity and impact**?
2. (How) do **library spaces** facilitate innovative research, creative thinking, and problem-solving?
3. (How) does the library contribute to **equitable student outcomes and an inclusive learning environment**?
4. (How) do the library's **special collections** specifically support and promote teaching, learning, and research?
5. (How) do the library's **collections** play a role in attracting and retaining top researchers and faculty to the institution?

Each of the 18 teams conducted either a pilot project (PP) or a practice brief (PB) focused on one of the five RLIF research questions. Each team was supported by ARL staff and VPOs assigned to each research question.

Research Question	Number of Teams	PP	PB
Research productivity and impact	7	5	2
Library spaces	4	2	2
Equitable student outcomes and an inclusive learning environment	2	1	1
Special collections	4	3	1
Collections	1	-	1
Total	18	11	7

The primary objective of the evaluation in-depth interviews summarized in this report was to gain insights into **team members' motivations, expectations, and experiences with the RLIF initiative**, and thereby **provide ARL with information that is necessary to assist in the planning of future initiatives**. More specifically, these interviews asked participating team members who had completed their respective projects or practice briefs to discuss their:

A. Motivation for getting involved with the RLIF initiative, their expectations, and their experiences being involved with the initiative
B. Project or practice brief, such as the process, use and sharing of the data, and the stakeholders
C. Experiences working in a team and the characteristics of a "successful" team
D. Recommendations to ARL should it decide to embark on another initiative similar to RLIF and their level of interest in participating in such an initiative in the future

See Appendix 2 for the interview guide.

I.B. Research Design

A total of 26 in-depth interviews were conducted from May 19, 2021, to August 30, 2022, among team members. In most cases, individual interviews were conducted with two members of each team, although 8 of the 26 interviews were conducted with just one member of a team (typically, the research lead). All five RLIF research questions are represented by the 26 interview participants.

Research Question	Number of Interviews
Research productivity and impact	10
Library spaces	6
Equitable student outcomes and an inclusive learning environment	4
Special collections	4
Collections	2
Total	26

The length of each interview ranged from 60 to 75 minutes. All interviews were conducted on the Zoom platform and, with each participant's permission, audio recorded. Interviewees were asked for their candid opinions and promised anonymity.

Margaret Roller, the ARL social scientist consultant on the RLIF initiative grant project, conducted all the interviews, the analysis, and completed this report.

I.C. Preface

This report highlights the key results and themes uncovered in the research and emphasizes overall tendencies in the responding.

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II. Results

An analysis of the entirety of data within and across all 26 interviews leads to three broad categorical areas—ARL support, collaboration, and the RLIF structure. These three aspects of the RLIF initiative help to orient what was learned from these interviews related to the primary objectives. The key elements that define each of these categorical areas are as follows:

ARL Support	Collaboration	RLIF Structure
- Communication - Training - Responsiveness - Online support	- Feeling connected "Being part of a larger picture" - Learning from others - Paired with another institution	- Layers, goal, scope - Time commitment - Research questions

The themes derived from one or more of these categories, and respective key elements, explain what was learned from the 26 interviews concerning the stated objectives, i.e., team members' motivations, expectations, and experiences with the initiative, and their attitudes associated with future ARL initiatives.

II. A. Motivations & Expectations

The **motivation** to get involved with the RLIF initiative revolved around three key considerations: (1) the **research question** corresponded with a topic area that the interview participant was already investigating, (2) the "prestige" associated with **ARL** and the opportunity to "do good work for ARL," and/or (3) the perceived importance of the research questions and the **potential impact** on the local and broader community—

The questions do get at things that do matter to those in power.

We were doing a lot of things that were newer for our library system at the time [and] we felt it was important to demonstrate the impact, not only to the partners we work with but, to our library [so they would] say 'we need to support this work'.

We wanted to go out and say what was not being said.

If our libraries are trying to be responsive to our user communities, it helps to have their voice to show that we respond to them.

To a lesser degree, the opportunity to gain new research skills was a motivation, as well as an expectation, for a few of the interview participants.

We wanted to activate our colleagues into the research process and get some education.

The overwhelming **expectation** was that the initiative would result in **"collaborative conversations"** and **"relationships we haven't had before."** It was with enthusiasm that these participants entered into the initiative in the belief that it presented an opportunity to meet new people and share experiences and perspectives with a broader audience. This enthusiasm carries over to those who anticipated they would be paired with another institution to collaborate on similar projects.

All of our expectations were that we would find a parallel university who was going through the same thing with the same services. It was definitely a selling feature of the initiative that we'd be matched with an appropriate institution.

It should be noted that **the October 2019 in-person meeting in DC contributed greatly** to team members' excitement for their involvement with the RLIF initiative.

I was really energized by the trip that we took to DC.

I really enjoy hearing what people at other institutions are doing and I like seeing what we are doing being part of a larger picture.

Looking back at the three broad categorical areas from the analysis, participants' motivation to be involved with the initiative primarily centers on the relevance and potential impact of the RLIF research questions, while expectations generally focus on the prospects for collaboration.

	ARL Support	Collaboration	RLIF Structure
Motivation	- Communication - Training - Responsiveness - Online support	- Feeling connected "Being part of a larger picture" - Learning from others - Paired with another institution	- Layers, goal, scope - Time commitment **Research questions**
Expectation	- Communication - Training - Responsiveness - Online support	**Feeling connected** **"Being part of a larger picture"** **Learning from others** **Paired with another institution**	- Layers, goal, scope - Time commitment - Research questions

II.B. Experiences

Team members' **positive experiences** as participants in the RLIF initiative revolve around the broad **area of support**. A key element in the area of support is "communication" which includes **inter-team communication** by way of scheduling and conducting team meetings. Given participants' enthusiasm for connecting and collaborating with librarians from other institutions, it is no surprise that the support ARL provided by way of meetings enhanced their experience with the initiative. Team members were particularly "energized" by the in-person meeting in DC.

We absolutely loved that meeting in-person...We were forced to go into that room and talk about what we wanted to do, [unlike a conference which is] more of a fleeting relationship.

[The DC meeting was] a great experience. It helped me feel more connected to ARL.

As much as participants appreciated the in-person meeting in DC, they were also appreciative of ARL's "flexibility" in adapting to the realities associated with the COVID-19 pandemic by scheduling a series of meetings on Zoom—*We appreciated that it was not all or nothing.*

Another element of support that added to team members' positive experiences is the training workshops, in the areas of qualitative methods and working with Tableau, which were described as *really, really helpful & very well done.*

The **responsiveness and aid** that ARL leadership gave to the teams throughout the initiative also contributed to participants' favorable experiences. In particular, interview participants pointed to Sue Baughman and the VPOs.

> *The fact that Sue communicated with us all the time was terrific...she was the bond with us for this project. She was very accessible and listened to what our needs were and helped us navigate certain issues.*

> *[The VPO was] wonderful...very patient and thorough and responsive.*

> *[The VPO] support was fantastic.*

To a lesser extent, participants' positive involvement with the initiative was driven by the grant **funds** made available to support their research efforts, and the **online support** provided by ARL, including access to documents on Google Drive, the templates, and the ARL website.

> *I love the website. I wasn't expecting that behind our work.*

The broad category of support is the primary contributor to team members' positive experiences; however, **working with the RLIF question**, doing the research, and gaining "interesting" results were also an important positive takeaway for some of the participants.

The interviewer asked participants to comment on any **concerns or "challenges"** they experienced, or how their involvement with the initiative might have been a better experience. In response, team members generally focused on the areas of collaboration and the RLIF structure. **Collaboration** as an area of disappointment is important because it was a key expectation harbored by the participants when they entered into the initiative. The opportunity to connect with other teams and share by way of "collaborative conversations," including the chance to be paired with another institution and be part of "a larger picture," was a perceived value of participation. This aspect should be considered closely as ARL embarks on similar initiatives in the future.

> *We didn't collaborate as much as we thought we would, so we didn't really have that much contact with the other teams.*

> *It didn't feel like we were connected to this larger project...I thought the nuances would be interesting...to see how the research needs would be the*

same or different than other institutions...to see if there are any parallels...and I don't feel like I got that. There was never a point when it all came together.

Team members are appreciative of ARL's flexibility during the pandemic and its move to Zoom meetings; however, members missed the *excitement, chemistry, and brainstorming* derived from in-person meetings.

With respect to the RLIF **structure**, team members expressed confusion about fundamental aspects of the initiative such as the organizational layers, goals, and the time frame.

It felt a little confusing for the first six months of the project. I didn't fully understand the project briefs versus the actual projects, the parameters of the projects, what was expected. We spent a significant amount of time at the start just trying to figure out what was going on.

That was some of the confusion early on, What does ARL want out of this?

Confusing. We were put into this group with these other teams and people were at really different stages. We wondered, What are we really going to be doing? What are we getting out of working with these other groups? What are we going to get out of the group part of this? That part was a little bit hard to wrap my head around.

Do we actually have a deadline? We had to decide for ourselves.
[I was] confused about the expectations.

It should be noted that participants' emphasis on goals and structure is consistent with the process they used in their PP/PB work, which began with establishing clear, "strong" goals at the outset along with identifying key stakeholders (typically, library staff, faculty, students, dean, and directors). This emphasis on goals and structure also carries over to how they characterized a "successful" research team; that is, as a team that sets clear goals and deadlines at the beginning and identifies a role for each team member, as well as practices two-way communication and is an interdisciplinary team embracing diversity and expertise.

There were also comments about the necessary **time commitment**, with participants emphasizing the point that involvement with the initiative is *not the type of thing you can do quickly,* that it is *a big time commitment,* and *a lot of work.*

From the standpoint of the three broad categorical areas, team members' positive experiences primarily stemmed from the support they received from ARL. Their concerns or the challenges they experienced while involved in the initiative were the lower-than-expected levels of collaboration as well as the organizational aspects, including the time commitment, associated with the RLIF structure.

	ARL Support	Collaboration	RLIF Structure
Positive Experience	• Communication • Training • Responsiveness • Online support	• Feeling connected • "Being part of a larger picture" • Learning from others • Paired with another institution	• Layers, goal, scope • Time commitment • Research questions
Concerns or Challenges	• Communication • Training • Responsiveness • Online support	• Feeling connected • "Being part of a larger picture" • Learning from others • Paired with another institution	• Layers, goal, scope • Time commitment • Research questions

II.C. Lessons Learned—Interest In & Recommendations for Future Similar Initiatives

Each of the 26 interviews concluded with questions pertaining to team members' interest in participating again in an initiative similar to RLIF and their recommendations to ARL "to ensure success."

As far as their interest in future opportunities to participate in a similar initiative, the resounding response from nearly all team members was "yes." In fact, many were unequivocal in their enthusiasm.

I definitely would participate.

Absolutely…an incredible experience. I would participate 100%.

Absolutely. It was an incredibly valuable experience. We got a lot out of it.

Of course! Excited. We are eager to participate. It is a privilege to be selected.

It might be expected that participants' interest in future ARL initiatives would correspond with the perceived impact of their RLIF PP/PB research—that is, the greater the perceived impact of their research efforts, the greater interest in being involved in future initiatives. These interviews, however, indicate that a team member who is "definitely" interested in future initiative opportunities with ARL may also be the same person who stated that the impact of their work was "pretty disappointing." Similarly, the limited sharing of their research results outside the library community and the uncertainty of whether their research will be repeated do not dampen team members' interest in future opportunities. Although this may seem counterintuitive, team members understand that value and impact of their research take time; thereby shifting their priorities and focus to the "tangible" realities of participating in an initiative.

The primary reasons for team members' **interest in participating in a future similar ARL initiative** are not unlike their expectations for the RLIF initiative (see Section II.A above), i.e., the opportunity to collaborate, with the addition of the perceived benefits of a structural framework in which to do the research. It is noteworthy that, although participants in the RLIF initiative expressed challenges with the RLIF structure (see Section II.B above), the idea of a structured approach is appealing.

- **Opportunity to collaborate**
    - *[By engaging with other institutions,] I was able to be exposed to more topics and content than I would at a traditional conference.*
    - *Opportunity to share work with a wider audience*
    - *Being paired with another institution*

- **Structured approach**
    - *[The structured format is] a huge incentive to do this work...to think about a project in a professional way.*
    - *We need that structure to encourage us to do the work we should be doing.*
    - *It is a great way to educate the workforce.*
    - *[It is] definitely a learning experience. I learned a lot [and it gave] me confidence.*

Team members' **recommendations** to ARL concerning a future initiative similar to RLIF revolve around the three categorical areas discussed throughout this report: collaboration, initiative structure, and ARL support.

Collaboration

- More **meetings**, more interactive meetings to discuss research approaches and participants' questions

- ○ *It's just very useful to learn from each other.*
  - ○ *One little regret that I have is that we weren't really able to really collaborate with people along every step of the way in terms of methodology or the kinds of questions that might apply across institutions.*
- More **in-person meetings**, especially at the beginning/start of the initiative
  - ○ *What I really would have loved is to get together again as a group in-person to share our findings. It was such an exciting meeting the first time and such a nice group of people, colleagues that we probably would have built stronger relationships had we been able to continue to meet [in-person].*

- Facilitate **networking** across teams—*I felt kind of isolated here.*
- **Pair** with parallel institutions
- Help in the **development of a more inclusive team**
  - ○ *[Bringing in users] to be involved in the project and help shape the project, [then] user feedback while you're doing it, would be so helpful...that would be amazing.*

Initiative Structure

- Strengthen **VPO role**
  - ○ *Make that VPO role really robust in providing project management support, communication, expertise...that would be really key.*
  - ○ The VPO should act as a *coach or mentor.*
  - ○ *I think [the VPO] is critical in the sense that they are not in this bubble and they would be able to see things we can't.*
  - ○ The VPO role should be to *keep the teams on track.*
  - ○ More check-in meetings to ask *What do you need? Did you think of this?*
- Shorten the **timeline**
  - ○ *We lost focus or lost interest...you would forget what you were doing...and it made our data look so old in the end.*
  - ○ Break the questions into smaller questions, making the research more doable, faster, and smaller in scope
- Conduct **introductory sessions** to provide a "roadmap" and give early guidance
  - ○ ARL's "vision" of *where it wants research libraries to go in terms of assessment, impact work*
  - ○ Goals specific to the initiative
  - ○ Initiative structure features, including PP/PB parameters, use of templates

ARL Support

- More **meetings** (see Collaboration)
- **Training/workshops**
  - ○ In the beginning/start of the initiative
    - ■ *When we are still trying to figure out our methods*
  - ○ Best practices

- - - Team building
    - How to engage stakeholders early in the process
      - *Strategic communication. [For example] being able to make the pitch. How to really talk to the dean and to the chair.*
    - How to approach the research design
    - Participatory research
    - Analysis training
  - Design/types of training based on teams' input on their needs
- **Funding**
  - An opportunity to gain some amount of funds upfront to support participants' research efforts

III. Concluding Remarks

The evaluation interviews conducted with RLIF team members exposed a great deal of enthusiasm for ARL, the RLIF initiative, and the prospect for ARL future initiatives. These participants appreciate the opportunity that the initiative structure offers *to do the work we should be doing* but, as importantly, the opportunity to meet and collaborate with librarians from other institutions. Moving forward, ARL is encouraged to build on the positive support provided to RLIF team members—by way of communication, training, responsiveness, and online support—which brought participants together, enabling them to share and contribute to each other's work. The overarching theme for the future is that participants are looking for ARL support that fully embraces the other two areas that are important to initiative involvement—collaboration and the initiative structure.

Appendix 2: Interview Guide

Concluding Evaluative Interviews with Teams

A.   Getting Involved and Participating in the Initiative
1.   Describe why your team/library wanted to get involved in the framework initiative.
a.   What were your expectations when you entered into the initiative, e.g., What did you hope to get out of your engagement and what did you hope to learn?
2.   Thinking back on your involvement, how would you describe your experience in this ARL project?
a.   To what extent has your experience met or not met your expectations?
3.   What was most surprising or interesting about being involved with this project? What did you appreciate the most about your project experience?
4.   What were some challenges you faced? Were you equipped to handle them? If not, what sort of support would have been helpful to you?

B.   Practice Brief or Research Project Work
1.   Briefly describe your research process. What are the key steps that need to be paid attention to in order to successfully replicate your work?
a.   What adjustments to the project overall and research process in particular, if any, were made due to issues related to the COVID-19 pandemic?
b.   What opportunities or challenges did these adjustments present for you or the team?
c.   What advice would you offer to other ARL libraries that develop their own assessments based on your project?
2.   How did or will you use the data that you gathered from your assessment project?
3.   Who were your most important stakeholders for your project?
a.   How did you identify them?
b.   How were they involved in the research project?
4.   What is the most effective way to share what you've learned with other stakeholders? What worked well or what would you do to improve?
5.   Do you plan to repeat or expand on this specific project in the future? If so, what will be your next set of research questions?

C. Teams
1. Did you work with a team within your library and/or a team located at another library?
   a. What worked well?
   b. What would you recommend doing differently?
   c. Did you have transitions within the team or did a team drop out? If so,
      i. How were these managed?
      ii. What were the repercussions?
2. As you reflect over the time the team spent working on the project, describe the characteristics of the team that made the team and the project a success.
   a. Are there particular "lessons learned" that we could share with other teams and for future projects like the Research Library Impact Framework?
      i. **[AS APPROPRIATE]** For instance, was the geographic distance between your team and the other library team a challenge? How so?

D. Concluding Questions
1. Now, turning our attention to ARL, what recommendations would you give ARL? If ARL were to embark on a similar type of initiative (i.e., multiple projects, teams, etc.), what recommendations would you give to ARL to ensure success?
2. Thinking back to everything we have discussed today, if you had the opportunity to participate in a similar initiative or research project, would you? If so, what would you do differently, if anything?
3. Before I let you go, what other comments or feedback would you like to share with me today?