2016 Library Assessment Conference Abstracts

Concurrent Session 1

Digital Libraries

Measuring the impact of digitizing 24,000 print theses and dissertations at UMass Amherst

Jessica Adamick (University of Massachusetts Amherst)

Purpose: The entire collection of over 24,000 print theses and dissertations at the University of Massachusetts Amherst will be digitized and made open access over the next decade, which will have an enormous effect on the visibility and use of these research products. This paper examines the impact of this project by comparing title-level print circulation and download statistics, including a disciplinary and publication date analysis. It also reviews the rate of author response to project notification letters.

Approach: Departments are selected for digitization each year, and about 2,500 works are digitized annually and uploaded to our institutional repository. The following departments have been selected for digitization so far, representing a diverse set of disciplines: Afro-American Studies, Astronomy, Chinese, Education, History, Polymer Science and Engineering, Philosophy, Political Science, and Psychology. Authors are contacted about the project and given an opportunity to opt in or out of having their thesis or dissertation be made open access, and their responses are recorded. Download counts of the digitized works will be compared to print circulation counts for each title. This sustainable approach leverages data that are automatically generated by our systems, or that are collected as part of the digitization process.

Findings: By the conference date, over two years of the project will be complete, and about 5,000 works will be available for analysis by use and author response. Data will be visualized in Tableau. Preliminary analysis of the author responses indicate that less than 50% of authors responded to the notification letter, but the majority of respondents opt in to open access. Astronomy had the highest opt in rate of 95.24%, and Chinese had the lowest opt-in rate of 66.67%.

The use analysis will be performed by the conference date. Based on the general use statistics of the print and digital thesis and dissertation collections, it is anticipated that the download counts will dwarf the print circulation counts. Our highest circulating print dissertation and thesis have circulated 14 and 21 times, respectively, while the theses and dissertations in the institutional repository are some of the most highly used content in the repository; every single thesis or dissertation has been downloaded, and some have been downloaded thousands of times.

Practical implications/value: Digitizing a thesis and dissertation collection is an enormous undertaking that requires human and financial resources; nearly every department in the UMass–Amherst Libraries has been involved with this project. Having the use data on hand that

demonstrate increased use of these unique research products can effectively legitimize this project. Demonstrating author enthusiasm for open access is also beneficial for supporting this type of project. Early results from the project may help other institutions to decide if digitizing their theses and dissertations would be worthwhile based on use and author engagement. Very few research institutions have embarked on the digitization of print theses and dissertations, and this paper would serve as an excellent case with early use and response results.

Jessica Adamick is the assistant to the associate director for library services at the University of Massachusetts Amherst, working primarily in project management and assessment. Previously, she served as a project manager for two national disciplinary repositories in science and engineering disciplines. She holds an MLS from Indiana University.

Community Efforts to Develop Best Practices in Digital Library Assessment

Joyce Chapman (Duke University Libraries)

In 2013, the Digital Library Federation (DLF) Assessment Interest Group was founded and in 2014 the group began engaging the community in the development of best practices and guidelines around digital library assessment. This presentation will address the progress of the interest group in its first two years. The presentation will provide background information on the DLF Assessment Interest Group and its working groups (including Analytics, Citations, Cost Assessment, Metadata, Quantitative Tools and Techniques, and Users and Usability), outline the collaborative methods used to document common practices and to develop best practices, update the audience on progress made by each group so far, and solicit audience feedback on the group's methodology and results.

Status of our research: the Cost Assessment, Analytics, Citations, and Users and Usability working groups have already completed one year of work, and their products include the beta version of the Digitization Cost Calculator and a white paper for each of the other groups, all of which are publicly available from our website: https://wiki.diglib.org/Assessment. The Metadata and Quantitative Tools and Techniques groups are new this year, with calls for participation going out in January 2016. Based on what our other groups were able to accomplish last year, I have no doubt that the groups that are participating this year will have interesting work to report in October when the Library Assessment Conference and the DLF take place and the deadline for completing work for year one is due.

Joyce Chapman is the assessment coordinator at Duke University Libraries and co-founder and co-leader of the Digital Library Federation's Assessment Interest Group. She previously worked as the consultant for data analysis & communication at the State Library of NC. She holds an MSIS and BAs in Linguistics and German from the University of North Carolina at Chapel Hill.

Research as Design—Design as research: Applying Design Thinking to Data Management Needs Assessment

Cinthya Ippoliti (Oklahoma State University)

Digital scholarship blends subject expertise with technological advances such as data visualization, thereby dramatically expanding our notions of what it means to create, and how these intellectual products are shared and accessed. To that end, the Oklahoma State University Library is conducting a design-thinking based data management needs assessment as part of a new suite of services offered in collaboration with our High Performance Computing Center, University Center for Proposal Development, and the Institute for Teaching and Learning Excellence. We are soliciting feedback from faculty to inform our efforts in supporting data management, analysis, and storage activities, and the data literacy skills of students through the following research questions:

1. What are faculty infrastructure and training needs for research data services and data literacy?
2. What is the library's role in providing these services and resources?
3. How can we establish partnerships to avoid duplication?
4. What training do librarians require in order to function as partners, not simply supporters, for these needs?

Design thinking is a creative process focused on the generation of solutions stemming from end user needs and wants. This process has several stages: define, ideate, prototype, and learn.

For the first step which encourages empathy, we are training interviewers to meet with faculty in teams of two during the course of this semester. Our questions were adapted from the Data Information Literacy Toolkit Faculty Interview Worksheet.

Once the data has been collected, the teams will continue the design thinking process:

- Group findings into categories that represent faculty "problems" and select those to develop further
- Detail each pilot service and resource that provides the "solution"
- Identify potential partners who might be involved if they have not yet been included
- Implement service prototypes, solicit feedback, and measure their impact in preparation for refining them and scaling up

Universities such as Oregon State University and Montana State University have conducted surveys which have revealed clear patterns in the ways faculty approach their data needs, but we only found a handful of examples of qualitative analyses to which this study would add. Among them is the recent article "Assessing Research Data Management Practices of Faculty at Carnegie Mellon University" which addresses both sending a survey and conducting interviews. Another is the article "Determining Data Information Literacy Needs: A Study of Students and Research Faculty" although that is more focused on data literacy. University of Virginia's model highlighted

in the 2013 SPEC Survey on Data Needs Assessment most closely mirrors our own methodology for the interview format and types of questions we ask.

We believe we are the first institution to apply design thinking to data service development. We hope that our results will not only complement the existing literature, but provide a practical guide for those who are interested in this methodology which allows for problem solving while reframing the traditional notion of service development into a learning challenge that encourages iteration and even failure in order to arrive at a more meaningful final result.

Cinthya Ippoliti is associate dean for research and learning services and provides leadership for library liaison, graduate, undergraduate, and research services. Previously, as head of teaching and learning services at University of Maryland, she coordinated the libraries' instruction program in addition to the services and spaces of the Terrapin Learning Commons.

Ithaka:

What Do Faculty Think? National & Local Perspectives from the Ithaka S+R Survey

Christine Wolff (Ithaka)

In 2015, Ithaka S+R fielded the US Faculty Survey, which tracks the evolution of faculty members' research and teaching practices against the backdrop of increasing digital resources and other systemic changes in higher education. This survey has been run triennially since 2000 and has focused on capturing an accurate picture of faculty members' practices, attitudes, and needs since its inception. Administrative and methodological changes for this iteration resulted in a nearly doubled response rate as compared to the 2012 cycle, providing an even more comprehensive dataset for analysis.

Christine Wolff, Ithaka S+R survey administrator, will briefly discuss these improvements as well as explore findings from this cycle on the evolving attitudes and practices of faculty members in the context of substantial environmental change for higher education. Findings will address topics including discovery and access to research literature, research practices including data management, scholarly communications, perceptions of student research skills, and the role of the library.

In addition, nine individual institutions participated in fielding a local version of this national survey on their respective campuses during fall 2015, including both the University of Nevada–Las Vegas (UNLV) and Duke University. Starr Hoffman, head of planning and assessment at UNLV, and Ashley Hernandez-Hall, data analyst at UNLV, will present results of their local version of the survey, as well as on their use of Tableau to analyze this data. Joyce Chapman, assessment coordinator at Duke University Libraries, will speak about the ways in which library staff were engaged in the survey design and analysis process, including the development of a Tableau dashboard to allow staff to explore their data visually.

This was the first time that individual institutions fielded the local survey concurrently with the national survey, allowing them to compare their faculty against national trends in real time. We focus in this session on where the local data converges and diverges from the national sample, and consider what this means for strategic planning and resource allocation.

This session will be valuable for librarians interested in both the national trends and how local findings were used at two universities to enhance understanding of their constituents and positioning.

Christine Wolff is the survey administrator at Ithaka S+R in the Libraries and Scholarly Communication program, where her work focuses on conducting and analyzing findings from national and local surveys of students and faculty members. Christine previously worked as a program coordinator for planning and organizational research for the Rutgers University Libraries.

Lessons from the 2015 UCSC Instance of the Ithaka S+R Student Survey

Greg Careaga (University of California, Santa Cruz)

Purpose: The UC Santa Cruz (UCSC) University Library is preparing to renovate its 24-year-old Science & Engineering Library. In 2015, we offered the Ithaka S+R Student Survey including the new Library Space Planning module to all UCSC Undergraduate Students. The results of the survey have informed space programming for the Science & Engineering project as well as the recently renovated McHenry Library.

Methodology: The Ithaka S+R Student Survey plus the optional Library Space Planning module was offered to all currently enrolled UCSC undergraduate students over a three week period in spring quarter 2015. The survey was administered using Ithaka S+R's Qualtrics software. Student ID numbers were imbedded into customized survey urls and non-anonymized survey data was delivered to the UC Santa Cruz Office of Institutional Research, Assessment, and Policy Studies (IRAPS) at the conclusion of the survey. IRAPS added demographic data such as college affiliation, class standing, major, and campus residency and returned anonymized results to the University Library.

Findings: This paper will examine how different constituencies perceive and use library facilities, collections, and services.

Value: This survey experience was useful for understanding user needs and for identifying how users viewed a twenty-four year old academic library in comparison one just four years after a major renovation.

Implementing the Ithaka Faculty Survey: Engaging Staff and Visualizing Findings

Emily Daly (Duke University Libraries)

Joyce Chapman (Duke University Libraries)

Over the past decade, Duke University Libraries has administered a user survey to both students and faculty once every 2–3 years. Until 2013, LibQUAL+ was used. In 2013, we transitioned to a locally-designed survey, but in the fall of 2015, the libraries decided to use Ithaka S+R's local version of the US Faculty Survey, alongside our newly-designed local survey for graduate and undergraduate students. In part, this decision was driven by the fact that the libraries are undertaking strategic planning in 2015–2016. The Ithaka S+R Faculty Survey gathers feedback on faculty members' research and teaching practices against the backdrop of increasing digital resources and other systemic changes in higher education. In this presentation, we will discuss the process by which we implemented the survey, in particular the ways in which we engaged library staff in the design and analysis process. Library staff were heavily involved in the decision-making process to participate in the survey, as well as in the process of evaluating additional modules and selecting which ones to implement. Department heads in User Services and subject librarians discussed the ways we wanted to analyze findings, and the Assessment & User Experience department collaborated with the Data & Visualization department to design a data dashboard in Tableau that met the needs articulated by staff in different departments. This dashboard allows staff to explore the data visually and facet findings by data such as academic rank, tenure status, school, department, or library discipline group. We will discuss the ways in which the Tableau dashboard assisted various groups within the library in decision making.

Emily Daly is head of assessment & user experience at Duke University Libraries in Durham, NC. She leads Duke Libraries' website team and conducts user research related to the libraries' website, as well as library services, collections, and spaces. Emily also serves as librarian for education and helps coordinate the libraries' Assessment Team and Undergraduate and Graduate Student Advisory Boards. Prior to working at Duke, Emily taught high school English for a short time, served as the teen librarian at Natrona County Public Library in Casper, Wyoming, and worked as a school librarian in Durham's Southern High School. She received her BA in English/secondary education from NC State and her MS in library science from UNC-Chapel Hill. Joyce Chapman is the assessment coordinator at Duke University Libraries and co-founder and co-leader of the Digital Library Federation's Assessment Interest Group. She previously worked as the Consultant for Data Analysis & Communication at the State Library of NC. She holds an MSIS and BAs in Linguistics and German from the University of North Carolina at Chapel Hill.

Investigating the Needs of Religious Studies Scholars: A Multi-Institutional Collaborative Approach

Danielle Cooper (Ithaka S+R)

Researchers' information activities and needs vary by discipline, and—in order to effectively design library spaces and services—these discipline-specific activities and needs must be taken into

account. (Gannon-Leary et al., 2007; Hemminger et al., 2007; Hepworth, 2004; Herman, 2001; Schonfeld and Guthrie, 2007; Spink et al., 2007; Tennant and Cataldo, 2002). While the research support needs of theology students have been explored, the needs of religious and theology studies faculty remain unexamined (Badke, 2011; Lincoln and Lincoln, 2011; Lincoln, 2013). Ithaka S+R, a not-for-profit service that helps the academic community navigate economic and technological change, partnered with the American Theological Library Association (ATLA), Society of Biblical Literature (SBL), American Academy of Religion (AAR), and 18 academic libraries in the U.S. to examine the research needs of religious studies scholars at the faculty level in 2015–2016.

This paper shares the religious studies project's overall methodological approach and final aggregate findings developed by Ithaka S+R from the data collected across the participating institutions. Participating institutions were selected to ensure representation across institution types, religions represented, and approaches to studying religion, including theology. During spring semester 2016, the participating libraries assembled research teams, conducted semi-structured interviews with their faculty, and visually documented faculty information practices through photography (Collier and Collier, 1986; Emerson, Fretz and Shaw, 1995; Hartel and Thomson, 2011). Maximum variation purposive sampling techniques were utilized for determining which scholars to invite to participate as well as towards selecting a sample of data from across the institutions for Ithaka S+R's final report.

The final, aggregate findings, assembled by Ithaka S+R and in hand by summer 2016, address how religious studies scholars develop their research projects, conduct their research, including how they discover, use, and organize primary and secondary sources as well as how they construct their audiences and research outputs. The findings attend especially to emerging digital methods for collaboration and communication and point to how these insights can be utilized towards innovating library services. In addition to the aggregate findings, each participating institution also developed local analysis from their data sets to examine the specific needs of their scholars and consider the implications of those findings for how library services are offered at their institutions. An example of the outputs from the local research teams can be found in Nisa Bakkalbasi and Beth Bidlack's proposed paper (Columbia University), which is designed to be presented on the same panel as this paper.

The religious studies project's model is instructive as an example of how an effective, sustainable, and collaborative multi-institutional library assessment project can be designed. By concurrently providing opportunities for participating institutions to conduct research on the needs of their own scholars while also contributing to aggregate data that provides national benchmarks, the project ensures value for the participating institutions while also providing maximum impact for the research more broadly.

Danielle Cooper is an analyst at Ithaka S+R in the Libraries and Scholarly Communication program where she utilizes her combined expertise as a professional librarian and library ethnographer towards helping organizations understand and improve their information-based spaces and services. Her research is featured in a variety of publications including: Archival Science, GLQ: A Journal of Gay and Lesbian Studies, Feminist and Queer Information Studies Reader, and Left History.

Library as Research Site: The Local Value of Participating in a National Research Project

Jenifer Gundry (Princeton Theological Seminary Library)

Virginia Dearborn (Princeton Theological Seminary Library)

Ithaka S+R's innovative studies of research practices in the fields of art history, chemistry, and history have been powerful tools for libraries planning support services to scholars. As Ithaka expands its slate of discipline-based studies, it is also evolving its methodology. Academic libraries can now partner with Ithaka as research sites for the discipline-based research studies.

The purpose of this lightning talk is to illustrate the local value that Princeton Theological Seminary Library (PTSL) received from its participation as a research site in Ithaka S+R's 2016 study that looked into the research practices and support needs in the fields of Religious Studies.

The Library appointed a team of three librarians to attend regional training in ethnographic research methods (February 2016), hosted by Ithaka S+R., In July 2016, local libraries gathered qualitative data at their institution and prepared a summary analysis to Ithaka.. Ithaka will compile findings and publish a national report by the end of the year. Locally, PTSL will analyze the institution-level data about faculty research practices and support needs to identify strengths and weaknesses in library services and resources (September 2016).

Anticipated findings into the local value of library participation in national research projects of this type include: 1) the value of having library staff formally trained in ethnographic research methods, including plans for the library to extend this knowledge to other library staff; and 2) the value of developing a detailed local portrait into faculty research practices to both evaluate the effectiveness of current library services and resources, and to lay the groundwork for regularized updates into research practices locally and discipline-wide.

Practical implications to be explored in the talk include how libraries can link to, customize, and repurpose large scale national and discipline-wide research projects in the context of their own assessment work locally; the collaborative and communicative opportunities that arise from localizing national research projects, including opportunities to engage with faculty on their needs in relation to discipline-wide norms and with stakeholders about resource requirements in a competitive academic marketplace; and the potential for collaborative ongoing work in assessment at the discipline level, including with other libraries, scholarly societies, and related organizations that provide services and resources to a specific discipline.

Jenifer Gundry (PhD, MLIS) is the director of collections, preservation, and assessment at Princeton Theological Seminary Library, Princeton, New Jersey. Her research interests include history of the book and print culture, publishing models, archives and special collections, and assessing library impact. Virginia Dearborn (MLS) is the discovery and web services librarian at Princeton Theological Seminary Library, Princeton, New Jersey.

Visualizing Local Data: The Ithaka S+R Survey at UNLV

Starr Hoffman (University Libraries, University of Nevada-Las Vegas)

Ashley Hernandez-Hall (University Libraries, University of Nevada-Las Vegas)

The University of Nevada–Las Vegas (UNLV) University Libraries has administered a user survey once every three years since 2004. In past years, LibQUAL+ or a locally-designed survey was used, but in the fall of 2015, the libraries decided to use Ithaka S+R's local version of the US Faculty Survey, as well as their newly-designed local surveys for graduate and undergraduate students. In part, this decision was driven by a desire to learn more about faculty and student research practices and needs in support of UNLV's "Top Tier" initiative to become one of the nation's top public research universities.

Response rates for UNLV's local Ithaka surveys were significantly higher than for past library user surveys. Initial findings include a lack of faculty awareness of how to negotiate copyright terms with publishers. Graduate students choosing a topic for their dissertation or thesis were motivated by their perception of gaps in the existing research, indicating the importance of information literacy, particularly the library's role in helping students learn to effectively search scholarly literature.

In addition to Ithaka S+R's initial analysis, we grouped survey questions into common themes and visualized it using the Tableau application. By incorporating various filter options (such as faculty rank and academic department), results were more digestible for the library faculty and staff, particularly for areas with specific goals. Themed Tableau dashboards were distributed not only to library faculty and staff but also to other interested campus parties. The resulting information helped the UNLV Libraries make decisions about how to support faculty research activities, a key part of the university's Top Tier research initiative, as well as explore emerging service areas.

Two related sessions will expand on this topic; Christine Wolff of Ithaka S+R will present on improvements to the Faculty Survey, results from the national version of the survey, and how these compare to local results. Joyce Chapman, assessment coordinator at Duke University Libraries, will speak about Duke's experience with the local survey and their results.

This session will show use of a local version of the Ithaka S+R Faculty Survey and their new student surveys. It will also demonstrate how those results are being used at a large public research institution and how to compare local and national data. Finally, this presentation will illustrate how to utilize different analyses, including using Tableau to create data visualizations with advanced filter options.

Starr Hoffman (PhD, MLA, MA) is the head of planning and assessment at the University Libraries, University of Nevada–Las Vegas (UNLV). Prior to joining UNLV, she was head of the journalism library at Columbia University in New York. Her research interests include data visualization, academic library leadership, and strategic planning processes. Ashley Hernandez-Hall (MSW) is the library data analyst at the University Libraries, University of Nevada–Las Vegas (UNLV). Prior to

joining UNLV, Ashley was an analyst for Clark County NV, focused on analyzing data pertaining to the homeless population. Ashley is currently pursuing her PhD in Public Affairs with an emphasis on policy evaluation. Her skills and interests are currently focused on data analysis and visualization.

Survey Administration Best Practices: Lessons Learned from the 2015 Ithaka S+R Faculty Survey

Christine Wolff (Ithaka)

Since 2000, Ithaka S+R has fielded the US Faculty Survey, which tracks the evolution of faculty members' research and teaching practices against the backdrop of increasing digital resources and other systemic changes in higher education, on a triennial basis. In 2012, we saw the response rate to the survey decline, and so we employed a variety of strategies to stop this downward trend with the 2015 iteration. The strategies worked; the rate of response nearly doubled.

In this session, Christine Wolff will share these strategies used to improve the survey administration process that can be applied for other surveying in higher education. Drawing on the success of this national survey and 70+ local surveys of students and faculty members fielded at individual institutions, Christine will walk through the "do's and don'ts" of the survey administration process, describing opportunities to encourage participants to complete the survey as well as elements that can potentially derail participants.

Christine Wolff is the survey administrator at Ithaka S+R in the Libraries and Scholarly Communication program, where her work focuses on conducting and analyzing findings from national and local surveys of students and faculty members. Christine previously worked as a program coordinator for planning and organizational research for the Rutgers University Libraries.

Space 1:

Reading Library Spaces: Using Mobile Assessment to Complete Your Library's Story

Camille Andrews (Cornell University)

Tobi Hines (Cornell University)

Sara E. Wright (Cornell University)

More and more, building space on many college and university campuses is at a premium, and libraries are expected to show their value not only in terms of the services they provide, but as a physical location as well. But are traditional library metrics providing us with a complete picture of how patrons are using the library? Do they tell the whole story? To inform space redesigns and evaluate those that have recently been implemented, our library's learning technologies team began using Suma, an open-source mobile web application. Over the past two academic years, we've gathered valuable data on the use of our spaces, technology and furniture, cross-referencing with other data such as gate counts and circulation statistics, for a holistic view of what is happening in the library. We've also collaborated with students and faculty conducting their own

assessments of the library to deepen our understanding of student study space preferences. We'll share a selection of data from our most recent year of Suma use, discuss the initiatives we've developed, and show the changes we've made or are in the process of making that may help others who are considering utilizing this versatile tool. Attendees will learn the potential applications for Suma, as well as methods for improving an open-source assessment tool to enable easy data collection. Finally, they will learn how this information, coupled with other library data and external assessments, can be used to inform space and service decisions.

Camille Andrews is user engagement librarian at Albert R. Mann Library at Cornell University Library where she works on outreach, instruction, and assessment for learning outcomes, technologies, services, and spaces. Since 2004, Camille has been involved in information literacy, learning technology, user studies, and space design initiatives in libraries.Tobi Hines is the user services & multimedia librarian at Cornell University Library's Albert R. Mann Library, and is responsible for overseeing all access services functions, as well as assisting with user studies, learning spaces initiatives, and space/technology/service assessment. Sara E. Wright is currently head of user services & engagement for Albert R. Mann Library, an area that includes oversight of access services, computing services and facilities, emerging technologies, and the development of library and learning spaces so that they best meet our user needs.

Evidence-Based Decision Making Using New Library Data

Heather Scalf (University of Texas Arlington)

Purpose: Evidence-based decision making is becoming more and more important across the academy and in libraries. UT Arlington has used the implementation of card swipe access to the Central Library as an opportunity to combine new data with other university data to make data driven decisions about services and partnerships.

Design: The project has gathered data from library access points and the University and combined them into a single secure database. Library entries and exits was linked to student information such as major and classification, de-identified, and then shared for analysis with the research team as a structured dataset. The dataset was analyzed and visualized using Tableau to provide a snapshot of facility usage by user type, program, discipline, and school or college.

Findings and Value: Analysis has provided interesting insights into user behavior in the Central Library and has contributed to changes in operations at several service points in the libraries. Understanding not only the pattern of entries but also the duration of visits allowed the libraries to host services during hours that would better support students during the late night hours. While the data revealed the expected decrease in entries and use of mediated services, this new understanding was critical in making the decision to shift other services. These findings have continuing implications in our decision making around resource allocation. By creating, collecting, and combining data in new ways, the libraries at UT Arlington are providing evidence to administrators for decision making, and upcoming investigation into academic data will provide us with a richer story about our impact on student success.

Heather joined the UT Arlington Libraries in 2005 and has served in various leadership roles within the organization. She earned her MLIS at the University of North Texas. As the Director of Assessment, she is heavily involved in budget planning, data gathering, strategic planning, and benchmarking activities. Prior to coming to UT Arlington, she has had a diverse career in academic libraries, retail distribution, and the United States Army. Consistent themes in all of these roles have been leadership and the use of data to make decisions. Her professional interests include library leadership and management, data visualization, and strategic planning.

Driving the BUS: A Multimodal Building Use Study and Needs Assessment

Mandy Shannon (Wright State University)

In response to the library's strategic plan, the assessment team at a mid-sized public midwestern university library recently completed a long-term, multimodal building use study and needs assessment. The assessment team used a combination of an open-source tablet-based software program, photographs, questionnaires, and preference-based voting to capture information about physical space use, building user perceptions, and user needs. In the second phase of the study, librarians worked in collaboration with the Office of Institutional Research to develop a needs-assessment survey that was developed with special attention to the themes raised in the first phase.

In this session, the assessment coordinator will discuss why the team chose to use multiple methods to collect data, their experiences with the project, their approaches to analyzing the data, and how the results have been and will be used to implement change within the library and to advocate for changes at the university level.

Mandy Shannon is the coordinator of library instruction and assessment at Wright State University.

Mixing Measures: How We Used Quantitative and Qualitative Techniques to Assess Teaching and Learning in a New High-Tech Classroom

Laura Rose Taylor (Northern Arizona University)

Suzanne Pieper (Northern Arizona University)

In fall 2014, the Cline Library at Northern Arizona University opened its new Learning Studio, a highly configurable, advanced technology classroom space in an environment designed to be seamless and intuitive to use. At the request of NAU's provost, we launched a year-long assessment project to better understand the experience of students and faculty in the room. Our first challenge: determining a mix of measures with the potential to capture information related to the Learning Studio goals and provide insight from a variety of angles—from the technology to the pedagogy, from the student perspective to the faculty perspective, and from student learning held in traditional space versus the new classroom space. We'll share what measures we selected, how we implemented them, challenges for our assessment project, and some lessons learned. This will be especially helpful for attendees looking for the "how to" of assessing a high-tech classroom

space. It will also be of interest to attendees who want to learn more about assessment of spaces, learning and the user experience, and those opening new or repurposed spaces.

Laura Rose Taylor is an assistant dean at Cline Library. Her current areas of focus include assessment, advocacy, planning, and personnel, and she writes and edits Cline Library's internal communications. Taylor, who joined the Cline Library staff in 2001, enjoys geeky conversations about assessment findings, information graphics, funding streams, higher education, and other topics that put most people to sleep.Suzanne Pieper is assessment coordinator of NAU's Office of Curriculum, Learning Design and Academic Assessment. Pieper helps faculty in units across the university design and implement a wide range of assessment tools and strategies that help them understand and improve the student learning experience. She is so passionate about higher education assessment that she received a PhD in Assessment and Measurement from James Madison University.

Don't Dismiss Directional: Analyzing Reference Desk Interactions to Develop an Evidence-Based Content Strategy for a Digital Wayfinding System

Christine Tobias (Michigan State University Libraries)

In 2015, the Michigan State University (MSU) Libraries pursued implementation of a digital wayfinding system in the Main Library. As an informal and intentional learning space, the Main Library has an average of 4,500 visitors each day. Approximately 40% of the questions asked at the Reference Desk, located between the building's two entrances, are classified as "Directional." Many of the questions pertain to locating books by call number location (i.e., wing and floor) or service points including—but not limited to—the Copy Center, Digital & Multimedia Center, Collaborative Technology Labs, Special Collections, and other academic support services such as the Economics Help Room and the Writing Center.

The initial intent of the MSU Libraries for pursuing the implementation of a digital wayfinding system was to reduce the need for librarians to respond to directional questions, thus allowing more time for reference and research interactions to occur. It was understood that the primary benefits of this system would include enhancing the current physical inventory of wayfinding tools and signage available, highlighting frequently-visited service points or collections, providing in-building directional assistance at the visitors' points of need, and communicating campus news and emergency alerts in real time. However, in parallel to the libraries' effort, MSU was developing an initiative to standardize policies surrounding digital signage at the institutional level to ensure compliance with accessibility requirements and promote a more consistent user experience in wayfinding across campus.

As plans for local implementation progressed, involvement in the campus-wide wayfinding initiative increased, and the MSU Libraries became a prominent stakeholder as the MSU Digital Signage Policy was enacted. As the inaugural unit for the successful implementation of the overarching policy, it was crucial for the MSU Libraries to act collaboratively and comply, but at the same time, protect the unique identity of the main library as a central hub of activity for the campus. To meet this need, the Wayfinding Implementation Team at the main library started early

in the planning process to develop a content strategy that would meet the required elements of the MSU Digital Signage Policy and meet the needs of library users. Quantitative analysis of directional questions received at the reference desk and recorded in DeskTracker during the past two academic years provided a solid basis for developing a strategic and sound content strategy for the digital wayfinding system. Through the application of evidence from reference transactions and successful collaboration with campus partners, the MSU Libraries is emerging as a leader, performing a significant role in the campus-wide wayfinding initiative to enhance user experience for the teaching, learning, and research community at MSU.

Christine Tobias is the head of user experience at Michigan State University Libraries. In addition to managing and participating in user experience and assessment projects, Christine is also an administrator of LibGuides and works with campus partners on wayfinding solutions. Her previous publication and presentation topics include: LibGuides (LGv1 and LGv2), virtual reference, distance library services, organizational management, and library assessment. Her research interests include library assessment, wayfinding, and space studies with a focus on user behavior in intentional, informal learning spaces.

Shh Stats: Mining the Library's Chat Transcripts to Identify Patterns in Noise Complaints

Jason Vance (Middle Tennessee State University)

Library patrons at a large public university regularly submit anonymous noise complaints about their fellow students via the library's online instant message reference service. These virtual tattle-tales help build a data set of chat transcripts that allow librarians to analyze library use, traffic flow, and students' study patterns. This paper describes how one library's analysis of those chat transcripts was used to quantify the noise problem in relation to gate count numbers, identify patterns in noise complaints, and evaluate the effectiveness of designated quiet study zones. Using one academic year of the anonymous chat transcripts, the library was able to code each complaint by day of the week, time of day, week of semester, and floor of the library. Furthermore, most online noise complainants were asked by the reference librarian to physically describe their specific location (for follow-up face-to-face shushing). This allowed the library to plot each complaint on a library floor map for further analysis and space planning considerations. This analysis has proven useful for addressing the competing student needs for quiet study space and collaborative learning areas. The library has also used the data in its considerations of quiet zone enforcement, signage, furniture placement and configuration, and the use of group study rooms within the library building.

Jason Vance is an associate professor and information literacy librarian at Middle Tennessee State University's James E. Walker Library. Mr. Vance earned his Bachelor of Arts from Western Kentucky University and his Masters of Science in Library and Information Science from Simmons College in Boston, MA.

After the Ribbon Cutting: Creating and Executing an Efficient Assessment Plan for a Large-Scale Learning Space Project

Krystal Wyatt-Baxter (University of Texas at Austin)

Michele Ostrow (University of Texas at Austin)

In the fall of 2015, the University of Texas Libraries opened a Learning Commons in the main library. As part of the planning process, we conducted a user needs assessment to determine what services, spaces, and technology should be in the Learning Commons. From needs assessment to opening day, almost two years passed. In our first semester open, we wanted to find out the following:

- How are our patrons using the Learning Commons?
- What aspects are working?
- What aspects need improvement?

In advance of opening, we developed an assessment plan for the first semester that took a mixed-methods approach to answering our questions. We relied on some basic metrics, such as logins and gate counts, to tell us the level of use. We conducted a variety of surveys and focus groups with both users and staff to find out what was working and what could be improved. We also did a "kindness audit" to determine how usable the space was.

Our findings included some expected successes. The spaces were heavily used by library staff, Writing Center staff, and other campus partners for teaching. When not in use for classes, these spaces were heavily used by undergraduates for collaborative study. The Media Lab was heavily used by students working on class and personal projects. We were heartened to learn that our users love the Learning Commons.

We also discovered areas for improvement. Our kindness audit revealed wayfinding issues and ambiguity about space availability and intended use. Our Media Lab staff and teaching staff focus groups revealed problems with addressing technology issues and reservations, but overall staff were excited about working and teaching in the Learning Commons.

This project provides an example of how to efficiently assess a large-scale project in order to make fast improvements and report initial successes to users and stakeholders. While the literature includes numerous examples of assessing learning spaces, there is a gap in examples of quick, actionable assessment plans that can be executed without months of data gathering and analysis.

Creating and executing an overarching assessment plan provides a holistic view of this large-scale project and the opportunity to draw a fuller picture by looking at data in conversation with each other. By using mixed-methods, we gained a more nuanced understanding of how successfully patrons and staff were using the spaces.

By creating this plan in advance of opening day, we were able to easily incorporate assessment into our new workflows and choose methods that answered actionable questions rather than simply

questions easy to answer. In addition, advance planning allowed us to make sure our plan would answer stakeholder questions. Involving stakeholders at an early stage provided us with built in accountability to ensure we closed the loop.

Finally, although we conducted needs assessment and built what our users asked for, this plan allowed us to assess how well our implementation met those user needs and will help us to continue meeting their needs as they evolve.

Krystal Wyatt-Baxter is the assessment coordinator for the University of Texas Libraries in Austin, Texas. She is responsible for spaces and services assessment, among her other duties. Michele Ostrow is the head of teaching & learning services for the University of Texas Libraries in Austin, Texas. Among other duties, she manages the Learning Commons in the main library.

Using Non-Library Student Collaboration to Inform the Design of a Library Family Room

Holt Zaugg (Brigham Young University)

Jeff Belliston (Brigham Young University)

A segment of the academic library patrons includes those with children. Accessing library resources with small children in tow can be a daunting and difficult task at the best of times. This paper is a case study discussing how the Harold B. Lee Library collaborated with an advanced qualitative methods class in sociology and graduate student to assess the needs of students and faculty with children to create a plan for a library family room. The assessment also included partnerships with public libraries with family-based programs and academic libraries with family rooms to design a family room space for the Harold B. Lee Library. The final results of the assessment will also be presented.

This session would be of interest to academic and public libraries who are considering the creation of a family room catered to the specific needs of their patrons.

Holt Zaugg completed his PhD in Educational Inquiry, Measurement, and Evaluation from BYU. He has extensive experience in design, instruction, teacher PD, and training. Holt is the assessment librarian at the Harold B. Lee Library at BYU where he consults on and conducts a variety evaluations of library services.

Concurrent Session 2

Learning 1:

Building CORA, the Community of Online Research Assignments

Susan Gardner Archambault (Loyola Marymount University)

Lindsey McLean (Loyola Marymount University)

Purpose: This lightning talk will chronicle the evolution of CORA (Community of Online Research Assignments), a pilot open access educational resource developed for faculty and librarians in higher education. CORA was developed through a Statewide California Electronic Library Consortium (SCELC) Project Initiatives Fund grant. The grant proposed to expand upon an internal information literacy assignment collection by using the "cooking" metaphor to envision the assignments as recipes that could be tweaked or easily adapted to fit into any information literacy curriculum. The project outlined in the grant proposal sought to create a collection of research assignments designed to be extended and enriched by its users—eventually building a community of faculty and librarians sharing their knowledge of pedagogy, information literacy, research, and writing within the landscape of higher education. The design is intended to promote and encourage the sharing of success and lessons learned so the entire community can benefit from a rich corpus of best practices. This session will cover the timeline of events during the first two years of development.

Design/Methodology: Two faculty focus groups were run by the presenters to gather input on the characteristics of effective research assignments and the desired features in a searchable, open access repository. A draft prototype was developed based on this input. An outside company was then contracted to build and host a live prototype of CORA using Drupal, an open source content management platform. CORA was further tweaked through biweekly online check-in meetings and an online ticketing system. A "CORA Development Group" was formed with over ten librarians to provide additional feedback, improve the site functionality and design, and reevaluate CORA's usefulness and scope.

Potential Findings: Recurring themes from the faculty focus groups were used to inform the original draft prototype of CORA, including the importance of modeling, scaffolding, and peer learning. Furthermore, a planned "ratings" system for the assignments was abandoned, and a revised marketing strategy was created based on the ideological perceptions of "intellectual property." Feedback from the CORA Development Group is still being considered and incorporated.

Practical Implications/Value: CORA cultivates an open space for the sharing and discussion of information literacy assignments, lesson plans, and activities. All teaching resources contributed to this collection are released under an intellectual property license that permits free use and repurposing by other educators. The community-building features allow contributors to comment

on and generate discussions with other contributors surrounding individual contributions. The current collection of research assignments and teaching resources will be enriched over time by additional user feedback, eventually turning into a reliable and reproducible collection.

Susan Gardner Archambault is head of reference & instruction services in the William H. Hannon Library at Loyola Marymount University in Los Angeles.

Lindsey McLean is instructional design librarian in the William H. Hannon Library at Loyola Marymount University in Los Angeles.

Is It working? Assessing the Effectiveness of Community College Information Literacy Instruction: Creating Developmentally Appropriate Outcomes and Improving Instruction using the "Framework" as a Guide

Heather Gillanders (Tacoma Community College)

Purpose: In fall 2014, the librarians at Tacoma Community College (TCC) conducted an assessment project for the Library Science 101 (LS 101) Introduction to Research course led by the assessment coordinator for the library. The goal for the project was to measure how well students were meeting the course learning outcomes, to identify areas for improvement, and to determine if any of the course learning outcomes needed to be refined/changed.

Methodology: A 30-question pretest and posttest were collaboratively developed by four TCC librarians using SurveyMonkey. The questions for both were the same and were developed specifically to address all seven course learning outcomes for LS 101. The pretest was administered at the beginning of fall 2014, the posttest at the end of fall 2014, and results were collected by SurveyMonkey. Data analysis was performed by the assessment coordinator for the library. The goal was for 80% of students to demonstrate attainment of each of the course learning outcomes by correctly answering each of the questions in the posttest.

Findings: There were a total of 33 respondents among all three fall quarter classes (one hybrid, two full online). The total enrollment for these three classes was 64, so over 50% of students participated. Ultimately, students had varied success with the course learning outcomes. In some instances, students not only met but exceeded the 80% benchmark. In other instances however, students fell far short of the 80% benchmark.

Discussion/changes implemented: Based upon the findings, the assessment coordinator then mapped the LS 101 course learning outcomes to Bloom's Revised Taxonomy (2001) in order to determine if they were at the appropriate developmental level for a 100-level introductory course. The two outcomes on which students were least successful were indeed at the creating level (the highest level) of Bloom's, indicating a need to revise both. Other outcomes with which students struggled, however, were written at the appropriate level, indicating that the gap in achievement had more to do with librarians' approach to teaching those concepts. To revise the course learning outcomes and course curriculum, Bloom's Revised Taxonomy and the ACRL "Framework for Information Literacy" (2015) were consulted. The "Framework," in particular, has helped us to

respond to the findings and has guided us to shift the focus of our instruction program to threshold concepts in information literacy and away from a prescriptive set of skills. Our new course outcomes all map to appropriate levels of Bloom's with nothing exceeding the applying level. In addition, the new outcomes touch on all 6 of the threshold concepts in the "Framework."

Practical implications/value: This paper will be useful to librarians in the creation or revision of learning outcomes. In particular, it offers guidance on developing outcomes that are developmentally appropriate and on effectively utilizing the ACRL "Framework for Information Literacy" to respond to assessment data and to revise or create learning outcomes.

Heather Gillanders is a faculty librarian and the assessment coordinator at Tacoma Community College in Washington State. Her interests include the assessment of learning outcomes and online learning. In addition to her MLIS in Library and Information Science, Gillanders holds an MFA in Print Media from Cranbrook Academy of Art.

Adventures in Framework Assessment

Anne Grant (Clemson University)

Camille Cooper (Clemson University)

Establishing a relationship between library instruction and student success is tricky at best. This paper will present findings from librarians who created student learning outcomes based on the ACRL Framework along with assessment instruments that sought to show the positive relationship between library instruction and student success in particular classes. These librarians were not experts in assessment but were determined to learn how to best show this relationship and also to improve sessions in which professors had invited them to teach source evaluation and resource awareness. In this paper, the librarians will describe the faculty contact made and how classes were designed based on the request using the Framework as a guide. It will also include details about the assessment instruments that were designed and implemented as well as the results that indicate a positive relationship between the library instruction session and the students' perceived ability to apply what they learned to their class project or assignment. Specifically covered will be an English class in which librarians led students through separate sessions at two-week intervals. The first session saw students defining basic concepts such as research, primary sources, and secondary sources, as well as giving them hands-on exposure to different databases. Subsequent sessions were designed to help them learn search techniques within the databases and to address any research skill deficiencies gleaned from their feedback on the previous session. The other class discussed will be a geography class in which the librarian led students through an activity designed to help them learn how to evaluate sources and recognize different sources of information. These results will be useful to other librarians as they will learn the steps these librarians took to apply the ACRL Framework and how the results of the class assessment helped them to both show their positive impact on students as well as feedback on how to improve future sessions.

Anne Grant is the instruction coordinator at Clemson University Libraries. She obtained her MLIS from the University of Alabama via their online program in 2007 and has presented at many state and

national conferences about innovation and challenges in library instruction. Camille Cooper is a reference, collection development, and instruction librarian at Clemson University Libraries, with subject responsibilities in English, Performing Arts, and Digital Humanities. She holds an MA in English from the University of Georgia and an MLIS from the University of Texas at Austin.

Implementing ACRL's Assessment in Action Program at UNCG Libraries to Meet the Information Literacy Needs of Incoming Transfer Students

Karen Stanley Grigg (University of North Carolina at Greensboro)

Lea Leininger (University of North Carolina at Greensboro)

Jenny Dale (University of North Carolina at Greensboro)

In the fall of 2014, a team of librarians at University of North Carolina at Greensboro (UNCG) Libraries surveyed incoming transfer students to determine their information literacy skills and needs. Based on the results of this study, members of the UNCG Transfer Student Research Project submitted a proposal for further research on incoming transfer students, their information needs, and their information literacy skills to the Association of College & Research Libraries (ACRL)'s Assessment in Action: Academic Libraries and Student Success program. This 14-month long program, funded by a National Leadership Demonstration Grant, "supports the design, implementation and evaluation of a program to strengthen the competencies of librarians in campus leadership and data-informed advocacy." The primary investigator was required to assemble a team of key stakeholders both internal and across campus, who would participate in this research project. Additionally, those whose were accepted into the program work in cohort teams, attend all ALA conferences, participate in online forums and programming, and give a presentation at ALA at the end of the program. UNCG's proposal was accepted, and two research projects are underway. The first project is a pre-test, intervention, and post-test assessment in Foundations for Learning (FFL) 250, a course taken by incoming adult students. The second project is a survey of second year transfer students that will assess information literacy skills and compare those students who have had librarian interventions with those who have not. It will also compare the skills of students from a variety of transfer institutions, different majors, age ranges, and time lapse between their last institution and UNCG. This presentation will describe the Assessment in Action program and how research and assessment skills are imparted, as well as describing the results of all of the studies done at UNCG for these research projects.

Karen Stanley Grigg has an MS in Library Science from the University of North Carolina at Chapel Hill. In 2013, she became the science liaison librarian at UNCG University Libraries. In this role, she provides information literacy instruction, reference services, and collection development services to science departments on campus, as well as to the Department of Psychology. Prior to this position, she was the collection development services librarian at Duke Medical Center Library for 8 years, and started her career as the life sciences reference librarian and the textiles and engineering services librarian at the NCSU Libraries. Her current area of research is on assessing the Information Literacy Skills and Needs of Transfer Students and Adult Learners.

Lea Leininger has an MLIS from the University of Texas at Austin. As the health sciences liaison librarian at the UNCG University Libraries, she teaches information literacy sessions and provides research consultations and collection management services for students and faculty in Nursing, Kinesiology, Nutrition, Public Health Education, Communication Sciences and Disorders, and Genetic Counseling. Her current research interests include open educational resources, online instruction, and systematic review practices.

Jenny Dale has an MS in Library Science from the University of North Carolina at Chapel Hill. As the coordinator of first-year programs at UNCG University Libraries, she teaches research workshops for first-year courses and works with campus partners to integrate information literacy into the first-year experience. She is the liaison to Communication Studies, English, Media Studies, and Women's and Gender Studies. Her current research is focused on pedagogy— including critical and feminist pedagogy— for teaching librarians.

Score! Using Competitive Assessment Approaches to Chart Growth in Critical Thinking and Information Literacy with Incoming Freshman Athletes

Colleen Mullally (Pepperdine University)

John Watson (Pepperdine University)

Teaming up to teach a cohort of incoming freshman athletes during the fall 2015 semester, a librarian and a faculty member designed a research study to examine the short and long term effects of embedded librarianship on incoming student athletes' GPA, information literacy skills, and perceptions of research. In this non-credit Life Skills course required for all incoming athletes, the librarian was charged with infusing critical thinking and information literacy in the context of the weekly topics. Both formative and summative assessments were conducted in order to chart student learning. In-class exercises were designed to teach students to approach problems and gaps in their knowledge like researchers. Frequent checks for learning with formal and informal assessments were used in nearly each class. This paper will not discuss the larger research project but instead will detail the sustainability, practicality, and effectiveness of attempting to measure student learning in the weekly classroom activities.

Prior to the start of fall 2015, the faculty member and librarian outlined the topics and mapped out learning outcomes, exercises, and assessment methods to be used throughout the course of the semester. Active learning activities using an inquiry-based approach to information literacy allowed students opportunities to practice thinking critically when approaching, searching for, and engaging with different sources of information. Because this was a new teaching approach to Pepperdine's well-established Life Skills class, in-class assessments were essential in evaluating whether the format and structure of the different lessons were effective. Assessments were designed to provide a baseline for determining whether students grasped certain concepts or whether future classes would need restructuring to continue to develop students' understanding.

Despite having an outline for the class fully developed prior to the start of the semester, the librarian and faculty member changed and adapted upcoming lessons in response to results of the

in-class activities. As longitudinal data is not yet available, this paper will be limited to a discussion of the data collected in the first semester class which was used in evaluating the growth of the student athletes. The effectiveness and issues in using SAILS as an information literacy test for measurement of student growth and identification of student weaknesses will be detailed. This paper will also highlight some of the assessment artifacts most useful in formally measuring learning and others that proved more effective as a dialogue for modifying the remaining weeks' lesson plans.

This paper illustrates ways that assessment can provide immediate, actionable evidence to make changes within the classroom setting. The discussion will be of value for librarians interested in applying assessment principles to in-class activities and applying backward instruction design approaches with the ACRL Framework for Information Literacy.

Colleen Mullally, assessment librarian for Pepperdine University Libraries, directs and coordinates assessment projects related to resources, services, and spaces. She works to provide evidence that demonstrates the value and impact of the libraries and identify avenues to improve library usage and engagement with the university community.

Dream of a Common Language: Developing a Shared Understanding of Information Literacy Concepts

Deborah A. Murphy (University of California, Santa Cruz)

Purpose: Describes the critical process of establishing a mutually shared foundation of information literacy concepts for successful assessment projects involving diverse campus stakeholders.

Design: The University of California, Santa Cruz Library's Undergraduate Experience Team (UET), Writing Program Faculty, and the Institutional Research, Assessment, and Policy Studies (IRAPS) Department submitted a proposal accepted by ACRL's "Assessment in Action: Academic Libraries and Student Success" (AiA) Project to evaluate a library online tutorial in terms of its scope and effectiveness in helping lower-division students satisfy course research skills learning outcomes.

The project team included UET librarians, writing faculty, and a campus assessment expert. The project timing coincided with a campuswide re-envisioning of undergraduate learning outcomes, particularly information literacy. We used this as an opportunity to enhance our project by adding a more qualitative pre- and post- self administered student survey evaluating student learning.

Creating this survey and a scoring rubric involved challenges, the most critical of which was identifying and articulating a shared understanding of what we were assessing. With our differing disciplines and terminology, it was often difficult to effectively communicate opinions and viewpoints. We needed a foundation of mutually understood definitions and concepts to create clear, specific, and measurable assessment objectives.

Working through comparisons of information literacy accreditation standards, concepts, and Writing Program objectives, we created a "Rosetta Stone" of shared language. With this we developed a matrix correlating IL standards with specific learning outcomes appropriate to the UCSC Writing Program.

Findings: Using these mutually understood concepts, writing faculty took the lead on creating the survey and our IRAPS team member used the matrix to help improve survey design. Once the team reached consensus on the final survey version, librarians took on development of a scoring rubric. We analyzed participating writing instructors' assignments to identify research requirements held in common among all classes to use as performance criteria and created a rubric describing evaluative criteria, definitions for criteria at particular levels of achievement, and scoring strategy.

Establishing a common language and understanding of each team member's perspective was key to working effectively together and the ultimate success of this assessment project. The matrix of common concepts was the touchstone we used as we developed our survey and rubric and resulted in a more productive work environment and potentially richer assessment result than we had initially envisioned. This successful collaboration has led to an invitation to the library from the writing program to provide input in developing new information literacy learning outcomes and has the potential to allow the library to align with the writing program in a way that could provide a trajectory that goes well beyond this collaborative project.

Value: This will be a useful model for other librarians who need to establish a common language around information literacy to work effectively in developing learning outcomes with faculty and campus stakeholders.

Deborah A. Murphy provides support, assessment, and development of learning technologies for undergraduates at the University of California, Santa Cruz. Her current activities include Ithaka S+R Undergraduate Student Survey and Cognitive Interview Project and ACRL's "Assessment in Action: Academic Libraries and Student Success" (AiA). She has developed nationally recognized instructional resources and presented at LITA, ACRL, LOEX and ACM on user experience, web design, and instructional technology.

Student Instructional Histories: An Approach to Assessing the Reach of an Information Literacy Program

Erica Schattle (Tufts University)

Megan Bresnahan (Tufts University)

Josh Quan (Tufts University)

Purpose: In order to fulfill the requirements of accrediting bodies and professional organizations, information literacy programs traditionally report seat counts and the number of workshops offered. This library-centric data portrays a somewhat limited picture of the pedagogical and curricular impact of information literacy instruction. The metrics neglect to represent the

educational experience of the student and the institutional context in which the instruction occurs. To more accurately represent the reach and complexity of information literacy programming, a more nuanced and data-rich understanding of student pathways through the curriculum and their exposure to the library along the way is beneficial. This project integrates the methodology of curriculum mapping with data from student course registration and information literacy instruction to develop an expanded portrait of how students gain information literacy competencies as undergraduate and graduate students.

Design/Methodology/Approach: To pilot this programmatic assessment approach, this project combined and analyzed data from three sources: informational literacy program data, student course registration data, and curriculum maps representing degree requirements and course offerings. Specifically, librarians examined three years of data for one graduate department, Urban & Environmental Policy and Planning, and one undergraduate general education program, First-Year Writing, using unique student and course identifiers. By connecting these data, librarians were able to create profiles of selected campus populations to illustrate how students encounter information literacy instruction as they move through programs and majors. The approach aims to reveal whether all, some, or no students in a course section had prior information literacy instruction and examine patterns of instructional reach for different populations.

Potential Findings: The results of this analysis represent the complexity of student instructional histories and have directly impacted library instruction at both the classroom and program level. In the classroom, librarians can tailor learning outcomes according to the instructional histories of students. Librarians can also build on previous student learning outcomes and acknowledge when populations of students have had no prior information literacy interventions. This evidence can be used to communicate with faculty members about the library experiences of students in their courses. Analysis of the course registration data exposed courses with a high number of previously underserved students for which a library presence proves to be strategically impactful. This information has driven program-level improvements across majors and programs.

Practical Implications/Value: Using curriculum mapping and course registration data, this student-centered approach to assessing an information literacy program accounts for frequency, timing, and depth of library instruction. This project advances the conversation about developing meaningful and comparable library metrics for information literacy programs. The approach can be adapted to suit the available student data streams and assessment needs of information literacy programs at other colleges and universities. Attendees will take away strategies for identifying these student data sources and approaching potential campus partners in order to collaborate on student instructional history projects at their own institution.

Erica Schattle is the Outreach & Assessment Librarian at Tisch Library, Tufts University. She holds degrees from Wellesley College and the University of Michigan School of Information. Her research interests include student learning, data-driven outreach, and program evaluation.

Understanding Research: Assessing Library Impact on Academic Performance through an Online Courseware Pilot

Karen Dearing (Middle Tennessee State University)

Ashley Shealy (Middle Tennessee State University)

In spring/summer 2015, instruction librarians at Middle Tennessee State University's Walker Library designed and implemented a pilot research study that involved supplementing traditional, face-to-face library instruction with online information literacy courseware. The underlying purpose of the pilot study was to investigate the feasibility of using online courseware within a specific course as an extension of Walker Library's instruction program, thereby providing information literacy instruction for any class taught at the university. Instruction librarians hypothesized that this method of supplemental instruction and outreach could be sustainable over the long term and would produce measurable data to illustrate the library's impact on overall student academic success.

Instruction librarians began the study by selecting a focus for the pilot: a required, research-heavy undergraduate course with a notable drop/fail/withdraw rate. After mining the course syllabi for learning outcomes and core concepts, instruction librarians created an online courseware package entitled "Understanding Research," designed specifically to align with and support the textbook and various in-class assignments. As an added bonus, the courseware design included built-in assessment components that would allow librarians and instructors to evaluate student performance over the course of the semester, while also collecting valuable data on academic achievement, concept mastery, and online instruction. Librarians established a partnership with a willing faculty member and officially launched the pilot study within five sections of a communications course in fall 2015.

This short paper will discuss the results and findings of the Understanding Research pilot study, primarily focusing on courseware design, student academic performance data, survey data and feedback from pilot participants, library instruction assessment data, and the implications of the study, both at the library and university levels.

Karen Dearing is an assistant professor/reference & instruction librarian at Middle Tennessee State University. She holds a Master of Library & Information Science degree from the University of Alabama. Ashley Shealy is an assistant professor/reference & instruction librarian at Middle Tennessee State University. She holds a BA in English from Appalachian State University, an MA in English from Clemson University, and an MLS from the University of North Carolina at Chapel Hill.

Academic Libraries' Impact on Community College Student Success

Katy Mathuews (Ohio University)

Brad Pulcini (Central Ohio Technical College)

While research has been conducted regarding the impact of library expenditures and collections on student success at 4-year colleges and universities, little has been done to examine library impact on student success at community colleges. It is very important to examine the value of libraries in community colleges, where many students are classified as first-generation students or are academically underprepared. Further, the 4-year colleges and universities studied thus far often have admissions standards that confound the measurement of student success. This short paper/lightning talk presents the findings of a study focusing on the impact of library expenditures and collections on the graduation rates of students at community colleges in the United States. Using data from the Integrated Postsecondary Education Data System (IPEDS) and the Academic Library Survey, this study uses inferential statistics to analyze the impact of library expenditures and collections on the graduation rates of community colleges in the United States. This work is invaluable for helping academic libraries at community colleges demonstrate value and impact to campus administrators.

Katy Mathuews is the collections assessment and stacks management librarian at Ohio University Libraries and a doctoral student in higher education administration at Ohio University. Formerly the learning and outreach librarian and the associate director of institutional effectiveness at Shawnee State University, Katy's research interests include outcomes-based library assessment, higher education funding models, and support to at-risk students. Brad Pulcini is the director of gateway operations at Central Ohio Technical College (OH), where he oversees the enrollment functions for the college to include; admissions, advising & retention, and students records & registration. Brad earned a BSEd and MSEd degree from Duquesne University (PA), and is currently a doctoral student, pursuing his PhD in higher education administration at Ohio University (OH).

Collections/Digital:

Do We Approve? New Models for Assessing Approval Plans

Sarah Tudesco (Yale University)

Julie Linden (Yale University)

Daniel Dollar (Yale University)

Approval plans are a well-established method of acquiring library materials whereby a vendor selects material for a library based on profiles determined by the library. At Yale University, a significant percentage of the collections budget is allocated to approval plans for monographs. While some academic libraries have reduced or eliminated book approval plans in favor of new acquisition models, such as demand-driven or evidence-based acquisitions, others, including Yale, continue to rely heavily on approval plans for collection development.

Our work builds on the existing research literature to extend approval plan assessment into new contexts, to develop models that can be regularly refreshed with current data, and to bring together formerly disparate data sources. Some of our models are now well-established, while

others are works in progress. Our goal is to create a viable model for ongoing assessment of our approval programs in the context of our overall collection development strategy.

Using fifteen years of Yale Library acquisitions and circulation data, we have developed models that allow for approval plan assessment by various facets, such as language, publication year, publisher, and approval vendor. We compare use of approval plan books, patron-requested purchases, and titles individually selected by librarians. We examine use of approval plan books within resource sharing networks. We also analyze approval plan acquisitions in the context of our growing collection of e-books, including licensed subscription models (Ebrary, Overdrive) and perpetual access e-book packages (e.g., Springer, Project Muse/UPCC).

Once we formulated the questions and collected the data, we began the process of building a collections assessment dashboard. Constructing the model and the dashboard in tandem helped us better understand the data and construct a template that would be accessible to Yale librarians with collection development responsibilities.

Our findings have led to changes in Yale's approval plan profiles and have informed decisions about e-book acquisitions. Like all good analytics projects, the data also led us to ask more questions about community engagement with collections.

Throughout, our findings led us to further refine our assessment models, to incorporate additional data sources, and to better understand and communicate the role of approval plan acquisitions in our overall collection development program.

Sarah Tudesco is the assessment librarian for Yale University Library. Over the past 10 years, Sarah has been helping organizations using assessment and data to help tell their story. She is currently focused on exploring library data using data visualization techniques. Julie Linden is associate director of collection development at Yale University Library. Over the past 15 years, Julie has developed expertise in building and managing library collections that support emerging as well as established areas of scholarship. Daniel Dollar is the director of collection development for the Yale University Library. As the library's chief collection development officer, Daniel leads and coordinates collection activities in all formats and has responsibility for the collection development budget. In addition, he represents the Yale University Library as a participating partner on the Research4Life Executive Council.

Mind the Gap: Using Patron Actions to Identify Holes in a Library's Collection

Qiana Johnson (Northwestern University Library)

If you ask users about what collection resources they need for their research, often they seem to need access to everything. But is this a case of shooting for the moon or is there a demonstrable need for access to everything? Even if libraries wanted to, limited financial and space resources keep them from supplying every resource users may need. Libraries have done significant work to assess their collections based on the materials they have purchased or licensed. But how do libraries know what they don't have? Can the use of indirect observation methods determine users'

most critical unmet collection needs? This lightening talk will discuss the pros and cons of various techniques for identifying unmet needs including interlibrary loan statistics, library catalog or discovery system searches, and turnaway statistics, among others.

Qiana Johnson is the collection and organizational data analysis librarian at Northwestern University. There she works to provide subject specialists and library administration with information about use of the library's print and electronic collections. She worked previously as a reference and instruction librarian as well as a distance learning librarian. She has a BA in English from the University of Chicago and an MLIS from Dominican University.

Developing a Sustainable Collection Assessment Strategy

Michelle Leonard (University of Florida)

Steven Carrico (University of Florida)

Identifying the breadth and scope of an academic library's collections is a crucial responsibility for making informed decisions and formulating strategies on policies, budget allocation and reallocation, services, and physical space. As such, libraries need to render systematic methods of practical assessment using sustainable evaluative techniques and grasp the explicit knowledge that demonstrates the value of continuing support by administrators through the use of evidence based metrics.

In this paper, two academic librarians demonstrate a straightforward methodology they developed for sustained collections assessment that is comprehensive, practical, and effective. The methodology uses a simplified checklist that follows six phases of the assessment process: (1) identify user base; (2) define collection profiles; (3) determine technical aspects and data to extract; (4) conduct user studies or surveys; (5) reallocate budgets and revise collecting parameters as needed; and (6) communicate to stakeholders. Each phase contains several steps that are easy to follow and replicate. By employing this assessment checklist, librarians can easily adapt, modify, or expand the evaluative initiatives through formative assessment that includes quantitative and qualitative evaluations of library collections. The results should have an impact on existing and future collection building endeavors, including reviewing existing collection policies and strategies. Crucial to the process is how the collections are supporting users in their curriculum development, research, and other scholarly activities. The outcome of creating a sustainable collection assessment is to use quantitative and qualitative evidence; making alterations that are more focused on the user base, expend budgets for resources in a more effective manner, and supporting the missions of the institution, and library while meeting the goals of the collection.

Learning objectives based on topics to be covered:

- Identifying patrons and collection needs and applying formative assessment techniques and tools to existing collections,
- Evaluating and ranking library collections quantitatively (e.g. circulations),
- Determining library collections qualitatively using library surveys and interviews,

- Using social media to promote collections based on metrics,
- Revising collection policies based on evidence, and
- Generating collection and usage reports and communicating to stakeholders in the library and at the institution.

Michelle Leonard is a tenured associate university librarian in the Marston Science Library, University of Florida. In 2006, Michelle developed the original UF Libraries Books on Demand project through interlibrary loan and, subsequently, course reserves. Since 2009, Michelle has conducted research on collection metrics and presented her research at several national and international conferences. Steven and Michelle, along with their colleague, co-authored the newly released book: Implementing and Assessing Use-Driven Acquisitions: A Practical Guide for Librarians. *Steven Carrico is the chair of the Acquisitions Department, University of Florida Smathers Libraries, with an avid interest in collection development, library budgeting, e-books, and patron-driven acquisitions plans. With multiple publications to his credit on a variety of topics, Steven has presented at the American Library Association, Association of College & Research Libraries, and Charleston library conferences. Steven and Michelle, along with their colleague, co-authored the newly released book:* Implementing and Assessing Use-Driven Acquisitions: A Practical Guide for Librarians.

Applying the Principles of Total Library Assessment to Inform Sustainable Collection Development

Michael Luther (Kennesaw State University)

Ana Guimaraes (Kennesaw State University)

Purpose: In 2015, the Kennesaw State University Library System (KSULS) began a pilot project to assess the physical collections of the organization. The collection assessment project coordinators, consisting of the assessment librarian and the collection development librarian, set a goal to assess four subject areas over a one-year time frame. For the project to be successful, two things were clear from the outset: (1) no one-size-fits-all solution would be sufficient to capture the diverse data necessary to adequately inform collection development, and (2) the work of making sense of the gathered information would best be performed by the undergraduate faculty liaisons, those actually making decisions about selection and withdrawal of library materials within specific subject areas. This short paper will discuss the results from the pilot year of collection assessment at KSULS. What did we learn, what were the challenges, and how do we plan to move forward?

Design/methodology/approachThe pilot year of collection assessment involved four collections: Anthropology, Information Systems, Interdisciplinary Studies, and Sociology. Over the course of one year beginning summer of 2015, project coordinators gathered essential data and trained participating liaisons. During the fall semester, liaisons completed assessment reports and provided recommendations for the development and maintenance of their collection. Finally, in the spring semester, liaisons will be developing a list of titles for potential withdrawal.The collection assessment methodology applies the principles of Total Library Assessment as described

by this author in a recent issue of *Journal of Library Administration*. It utilizes multiple methods to better explore various aspects of the physical collection, including:

1. Holdings data, via the Integrated Library System,
2. Collection use, via circulation data and items loaned to other libraries,
3. Existing needs, via faculty survey results and items borrowed from other libraries,
4. User satisfaction, via faculty survey results and historical LibQUAL+ data,
5. Collection strength as compared to established lists via the Bowker Book Analysis tool,
6. Collection strength as compared to institutional peers via the OCLC WorldShare product (to be captured in future years), and
7. Journal coverage via the Thompson Reuters Incites product.

Over the next five years, collection assessment will roll out to other subject areas, with the entire print collection having been assessed at the end of the five-year period. At this point, the process will commence again, allowing a Liaison's collection assessment to be never more than five years old.

Potential Findings: Perhaps most importantly, this project will let us test the efficacy of distributed, integrated collection assessment that provides essential data from diverse data sources to those with the authority to make decisions about selection and withdrawal (Undergraduate Faculty Liaisons) while simultaneously capturing assessment information at the institutional level. The project also hopes to serve as an application of the principles of Total Library Assessment.

Practical implications/value: The collection assessment project at KSULS is notable for the way that it fuses assessment of a collection with maintenance of a collection, and for the way that this process is integrated into library operational workflows.

Michael Luther is assessment librarian and librarian assistant professor at the Kennesaw State University Library System. He is currently exploring the efficacy and feasibility of Total Library Assessment, a concept that recognizes the importance of both breadth and depth within library assessment and attempts to merge assessment with other library functions. Michael received his Master of Science in Library and Information Science from Syracuse University in 2010.

Just in Case or Just in Time? Time to Assess Area Studies Print Collections in Research Libraries

Osman Celik (University of California, Los Angeles)

David Hirsch (University of California, Los Angeles)

Roxanne Peck (University of California, Los Angeles)

Thanks to advances in information technology, collections at academic and research libraries have been increasingly transforming into hybrid ones with print and steadily expanding electronic and digital collections in response to informational and behavioral changes among academic users. The analog-digital divide has acutely placed libraries in a new definitional quest with regard to the

future direction, nature, and scope of their collections. The analog-digital ratio is still heavily in favor of the former since the majority of information resources across the globe from the majority of the non-English speaking world are still predominantly in print. Print collections are not going to fade away in the near future, most certainly not from academic and research libraries' stacks. Faced with digital at home but print abroad collection context, research libraries will continue to build and strengthen their international and area studies print collections in order to continue to support their teaching and research communities.

Given the profound and ongoing changes in their collections, academic and research libraries are also compelled to repurpose their physical presence on campuses. Due to serious budget constraints and exponential growth of serial expenditures coupled with the changing economics of information regarding stewardship, storage, and preservation, it has become increasingly crucial for libraries to find a balanced and sustainable collection development model for international and area studies print monographs. The current status in research library stacks points out the need to strategize collection development of print monographs in area studies. However, any strategy for a sustainable print collection in international and area studies needs to be based on a constant evaluation and critical assessment of print monograph collections.

This short paper presents three different assessments of print monograph collections in area studies from a major research library perspective.

- The first assessment initially employs a use and user-based analysis of print monograph collections in major area studies acquired during 2004-2015 fiscal years at the UCLA Library.
- The second assessment, on a more refined level, shows a Library of Congress (LC) subject headings and LC classification number analysis of print monograph collection in Middle Eastern studies. The results from the LC analysis will be mapped to the research interests of faculty and graduate students, which will demonstrate the level of overlap between research interests on campus and print monographs added to the UCLA Library collection.
- The final assessment will present results of keyword searching of research interests in the local catalog and compare the results for the same search parameters in OCLC within the 2004-2015 publication period.

The outcome of the assessment proposal will suggest a collection strategy for print monographs for international and area studies at research libraries. More specifically, the strategy will help devise a plan to build a more research interest driven (RID) collection and more collaborative collection development across local and regional institutions.

Osman Celik is currently the international acquisitions coordinator in the Print Acquisitions Department at the UCLA Library. David Hirsch has served as librarian for Jewish, Middle Eastern, central Asian, south Asian, and Armenian studies at UCLA since 1989. He is a past president of the Middle East Librarians Association and Executive Board member of the Islamic Manuscript Association. He has lived, traveled, and worked throughout the Middle East, most recently serving as advisor to the Abu Dhabi National Library. Roxanne Peck is the librarian for digital collection

management in the Scholarly Communication and Licensing Department at UCLA. She is responsible for analysis and assessment of electronic resources and materials budget expenditures.

Continuous Usability Testing: the Importance of Being Iterative When it Comes to Assessment and Development of the Library's Digital Services

Anneli Friberg (Linköping University)

I would like to present how Linköping University Library regularly applies usability testing as a way to assess and develop the library's digital services.

The interest for user experience (UX) and usability in libraries has grown over the past few years, and it has become an essential tool for evaluating the library's digital services and physical spaces. The library is the most important resource at a university when it comes to providing information to researchers and students. In order to make sure that we contribute in a useful and valuable way to student learning and research, we have to find ways to understand our users' needs and behavior.

Usability testing per se is nothing new within the library sector, but usually it is done in the process of launching a new or redesigned website. Sometimes the tests are not even conducted by library staff but by consultants. Our approach, however, is a continuous process and is applied not only to the library's website structure but also to digital services and physical space.

At Linköping University Library we combine different methods such as observation, think-aloud protocol, and capturing screen activity. The benefit of triangulation of data is that you get a more complete picture of the usability issues that need to be addressed.

For the last 15 months, a usability team at the library has gathered once a month to do testing. The team consists of five librarians with different skills and roles such as computer programmer, webmaster, and UX expert. Selected employees and randomly chosen students are recruited to conduct tests. Each test person is given a specific assignment based on a common usage for the service to be tested. The test person attempts to complete the assignment while "thinking aloud" while the team records what the test person says and does. Each test results in an aggregated list of feasible improvements, for example a change of terminology.

The key to success is the model itself, particularly when it is carried out monthly during the academic year. We have found that systematic usability testing can and should be a part of regular library activity. It enables an agile and flexible approach to enhance users' experiences of a library. Also, it can encompass so much more than just the website. It helps us to ensure that we are developing the support and service our users really need. Additionally, usability testing is an excellent way to make our services more visible to users.

Anneli Friberg is a senior librarian at Linköping University Library. She is responsible for user experience, which includes coordination and development of the library's customer service, user involvement and assessment of the library's digital services. In the past, she was a senior librarian and

head of division at Linköping University Library, director at Mjölby Public Library, and head of division at Linköping Public Library.

Assessing the Digital Humanities Working Group Projects at the University of Florida

Laura Spears (University of Florida)

Laurie Taylor (University of Florida)

Background: Academic libraries and teaching departments sometimes treat Digital Humanities (DH) as radically new. While DH is markedly innovative in terms of collaborative practices and methods, it is also fundamentally rooted in the humanities and intricately connected to core activities by librarians, especially for collaboration. This paper explains how the UF Smathers Libraries leveraged the library digital collections—with rich technical features and content and a robust underlying infrastructure—to create the necessary scholarly cyberinfrastructure to support the DH collaborative community. UF librarians undertook new DH activities to fundamentally enrich and improve existing, more traditional work that includes collection development, library scholarly councils, collaboration among libraries for print and digital collections, outreach, and instruction.

Purpose: This paper describes two collaborative DH projects completed as part of the UF Digital Humanities Working Group (DHWG) over the period of two years: The "Developing Librarian" Digital Humanities Pilot Training Project (DLPT Project) and the Digital Humanities Bootcamp. These efforts aimed to enhance Smathers Libraries' growing digital collections and related activities by targeting multiple stakeholders—instruction librarians, student users, campus-wide faculty, and administrators. The DLPT Project featured a librarian pilot training project designed to "re-skill" librarians increasingly required to provide digital humanities services; the DH Bootcamp's objective was to increase awareness, technical skills, and develop a community of practice with campus-wide humanities researchers.

Study Design: These efforts proposed to create, conduct, and document collaboration in DH activities to both formatively and summatively assess project activities and deliverables and also to examine the nature of DH capacity building.

Questions asked in each study included:

1.   In what ways can activities be structured to facilitate assessment of activities conducted in the attempt to build capacity and competency in DH projects?
2.   What formative assessment instruments and activities successfully elicit and reinforce participation in DH workshops/trainings?
3.   Will the DHWG activities enable an increase in interdisciplinary mentoring relationships and more diverse proposals submitted to the UF humanities granting organizations?

This paper will present background on each of the projects including the multiple formative activities employed in each such as collaborative brainstorming sessions, multi-media expert

presentations, and structured classroom activities; a description of the summative assessment methods engaged in each project that included pre and post project surveys of participants, multi-media (video) post-event feedback; and recommendations for best practices both for project delivery and overall program evaluation. This synthesis of the DH programs and assessment of the deliverables builds upon the LAIRAH project digital humanities resource evaluations to continue to develop the community of practice for growing DH initiatives (Warwick, Terras, Galina & Huntington, 2007).

Summary: The completion of these projects add value to prized digital collections while simultaneously building a human infrastructure of skilled Digital Humanities researchers and administrators as well as practitioners and consultant librarians. DH programs will enable the DHWG to structure feedback and assessment mechanisms that identify training, development, and documentation infrastructure as well as create collaborations that result in future contributions to the burgeoning humanities in the digital age.

Laura Spears is a PhD candidate and associate assessment librarian with the George A. Smathers Libraries, University of Florida. Her dissertation examines and assesses library value as expressed in social media used for public library funding advocacy. She functioned as the research coordinator for the Information Use Management and Policy Institute (Institute) at the Florida State University. Her publications include several studies of technology deployment in diverse communities including studies of children, broadband access and broadband measurement in public libraries, and multiple publications on IT education with the institute. She is expanding her doctoral research on library values assessment to the academic realm in her role as assessment librarian.

Organizational Issues 1:

Measuring Impact of Liaison-Faculty Relationships

Lisa Horowitz (MIT)

Courtney Crummett (MIT)

Tracy Gabridge (MIT)

Over the past decade, liaison librarian practice at the MIT Libraries and elsewhere has evolved from a collections and reference focus towards user-focused roles of outreach and instruction, similar to roles described in ARL's report "New Roles for New Times: Transforming Liaison Roles in Research Libraries." Traditional assessment practices for liaison work, such as counting reference transactions or instruction sessions or evaluating collections coverage, cannot capture the impact that having strong relationships with university communities has on their teaching, learning, and research activities.

Through assessment of activities intended to enrich relationships between liaisons and faculty, this study evaluated the impact of liaison librarian outreach. A mixed-methods assessment process used desired outcomes, objectives, measures, targets, and results to generate a multi-dimensional

view of liaison work that neither depended solely on traditional kinds of inputs and outputs, nor on surveys or focus groups to generate data. The study focused specifically on relationships that were developed between liaisons and new faculty. Of fourteen measures addressing three objectives, the MIT Libraries were able to show impact for nine while gathering useful benchmark data for the rest. The results of the assessment were then used to further improve liaison practice. Implementation of this assessment also supported cultural change in our organization, providing evidence in favor of the shift of liaison practice away from traditional liaison roles to outwardly facing roles.

Because this study was a first effort to gauge impact of the liaison program, the assessment focused on a subset of relationships, those of liaisons with new faculty. However, the framework (objectives, measures, targets, results) used in this project is not only viable for assessing a full liaison program but can be adapted for other kinds of assessment, where what is being measured (in this case relationships) is intangible and hard to quantify.

Lisa Horowitz is MIT Libraries' assessment librarian, developing, coordinating, and overseeing assessment efforts across the libraries. Additionally, she is the linguistics librarian and a manager in the Liaison, Instruction, and Reference Services unit. She has served as chair of the former LLAMA MAES (Measurement, Assessment and Evaluation Section, now Assessment Section) and as a member of the ACRL Task Force on Standards for Proficiencies for Assessment Librarians.

Calculating the REACH of Engaged Librarians: A Lesson in Poka-Yoke Error Proofing

Sarah Anne Murphy (The Ohio State University Libraries)

Purpose: Consistent capture and recording of data facilitates analysis saves individuals tasked with assessment a considerable amount of time and frustration. This paper illustrates the application of poka-yoke principles to the design of The Ohio State University Libraries REACH database, a system used to centrally gather the instructional and programming activities of the university's liaison librarians and determine the success of the libraries' engaged librarian initiative. Poka-yoke is a Japanese term for error proofing and is a concept applied in LEAN manufacturing to ensure that a process or procedure cannot be performed incorrectly. Applied in the service sector, poka-yoke functions to make a "product or process resistant to factors beyond its control."(1)

Design/Methodology/Approaches: The REACH database uses branching logic to collect data related to four essential engaged librarian activities: credit course instruction, where a librarian is the instructor of record for a full semester; course-related instruction, where a librarian is invited to give a guest lecture for a class; library sponsored programs and workshops; and library orientations or tours not affiliated with a specific Ohio State class. To achieve poka-yoke, the assessment librarian engaged database stakeholders early in the design process to reduce librarian reporting burden by first identifying ways to simplify the data collection form and then identifying mechanisms to join existing university systems, such as the Master Schedule of Classes, to the database.

Findings: Each class taught at the university is assigned a unique five-digit class code. Poka-yoke was achieved by requiring librarians to enter the five-digit class-code when recording credit course and course-related instructional activities. This not only simplified but also facilitated more accurate and robust reporting as librarians would no longer need to input information such as the approximate number of students enrolled in a course or the primary instructor of record for a course. (2) This information could now be pulled directly from other information systems on campus and joined with the database. Reporting burden also was reduced as poka-yoke allowed University Libraries to aggressively simplify its data-input form from approximately 47 fields to 8-10 fields depending on the activity selected.

Value and impact: Ohio State's engaged librarians have several diverse responsibilities and are frequently pulled in many opposing directions throughout their day. This means recording data regarding their daily activities is often a challenge and an afterthought. The application of poka-yoke principles has yielded a twofold benefit for this project, by reducing librarian's reporting burden and improving the accuracy and quality of the data collected.

(1) Chase, Richard B. and Douglas M. Stewart, "Make Your Service Fail-Safe," MIT Sloan Management Review, April 15, 1994.

(2) For an example of a report, please view the REACH Database dashboard at http://go.osu.edu/REACH-Dashboard.

Sarah Anne Murphy is currently coordinator of assessment for The Ohio State University Libraries. She earned a MLS from Kent State University in 2000 and a MBA from The Ohio State University in 2008. She has published two books and several papers related to library assessment.

ARL's Leadership and Career Development Program: An Incubator and Catalyst for Leadership Development

Carlette Washington-Hoagland (University of Iowa)

Mark A. Puente (Association of Research Libraries)

For many years, the library literature has been predicting a mass exodus of positional leaders from the library and information science (LIS) workforce as a product of age demographics and impending retirements. Furthermore, the seemingly intractable problem of the lack of diversity in the LIS workforce has resulted in numerous programs and strategies that aim to increase the number of individuals from historically underrepresented or marginalized populations in the professional workforce. Most of these efforts, however, have focused on entry-level professionals and increasing the numbers of diverse individuals within professional ranks of the workforce. The ARL Leadership and Career Development Program (LCDP), established in 1997, has been unique in its approach since its inception in that it has focused on upper- to mid-career LIS professionals from historically underrepresented groups. In its earliest years, the goal of the LCDP was to develop and encourage these professionals to consider pursuing leadership (director) roles in ARL member libraries. Later program iterations focused on mid-career professionals and the

development of leadership skills across multiple dimensions,with added focus on areas of strategic focus for the Association.

In October 2014, ARL initiated a comprehensive, longitudinal assessment of the LCDP with the goal of ascertaining the effect of the program on its participants and on the research library community. This yearlong process involved determining and evaluating multiple scales—using both quantitative and qualitative data—as indicators of the efficacy of the training methodology and the perceived impact of the experience on former participants. This paper will describe the principle drivers behind the assessment as well as the methodology used to measure the program's success. The results of the assessment will help to inform the design of future iterations of the LCDP and will provide a framework by which other leadership development trainings can be developed and assessed. Historically, assessing the effect of leadership development training, in any context, has been difficult at best. The LCDP assessment offers a systematic approach to measuring the efficacy of specific program components in spite of design changes to the program made through the history of the program. Moreover, the instrument allows for a comprehensive assessment of the program based on perceptions of experience as well as external factors.

Carlette Washington-Hoagland is coordinator of staff development and diversity programming at the University of Iowa Libraries. Her research interests include staff development, usability testing, service quality, engagement, leadership development, diversity, sexual harassment, and retention. She holds an MA in library and information science from the University of Iowa and an MS in sociology from Iowa State University. Mark A. Puente is the director of Diversity and Leadership Programs at the Association of Research Libraries (ARL), a position he has held since March of 2009. He is a graduate of the Knowledge River Program at the School of Information Resources and Library Science at the University of Arizona. He holds a master of arts in music (voice) from Stephen F. Austin State University and a bachelor's degree in vocal performance from St. Mary's University in San Antonio, Texas. Puente directs all aspects of the Association's diversity recruitment and leadership development programs and serves as the ARL staff liaison to the ARL Diversity and Inclusion Committee. He also serves on the ARL ClimateQUAL Team; is responsible for the ARL Career Resources and services; designs and directs the annual ARL Leadership Symposium; and contributes to planning of the National Diversity in Libraries Conference (NDLC), offered biennially.

Using Appreciative Inquiry Methods to Build a Culture of Assessment and Library Instruction Program from the Bottom Up: Uncovering Librarian Values, Assumptions, Beliefs, and Best Practices

Donna Harp Ziegenfuss (J Willard Marriott Library, University of Utah)

Introduction: Changing issues in higher education such as emerging technology, shifting student demographics, and an increasing focus on accreditation and assessment are common themes in the higher education literature. Academic research libraries are not immune to this wave of change. In addition, the new ACRL framework—and an increased focus on library impact on student learning—makes it even more imperative to uncover and understand the changing library context. Library change is a complex process and calls for strategic thinking, organizational buy-in, and

evaluation of the change process. But where do you start? In many cases, change initiatives originate at the top of the organization. However, this paper will present a case study of one institution's thinking about change from the bottom up; focusing on rethinking library instruction programming.

Purpose: To get at the underlying culture around library instruction, a qualitative methodology called Appreciative Inquiry was utilized to gather data from librarians at one institution. Cooperrider, Whitney & Stavros (2008) describe appreciative inquiry as being "based on the simple assumption that every organization has something that works well, and those strengths can be the starting point for creating positive change" (p.3). Appreciative Inquiry shifts the focus from identifying failures to building on the possibilities and applying findings to initiate change. The purpose of this paper is to highlight the methods and findings of this study and show how evidence and findings can be used to rethink library instruction programming based on the strengths of an organization.

Methodology and Findings: Fourteen instruction librarians were interviewed. The Appreciative Inquiry approach focused on asking questions about the positive experiences of librarians and the best experiences they have had teaching instead of focusing on the negative aspects of barriers and challenges. The interviews were transcribed and analyzed using grounded theory methodology and NVivo software. Previous LibQUAL+ and library survey data as well as end of course student evaluation data were used to triangulate the findings.

Twelve categories emerged from the data. Categories were winnowed down to four main themes: value-added roles, emerging and converging identities, blurring boundaries, and common cultures. The findings provide a detailed description of the experiences and aspirations of instruction librarians as well as an understanding of the library context in which they work. The themes were then used to create a framework for planning library instruction.

Practical Implications: This session will demonstrate how Appreciative Inquiry methods were used to uncover the culture, values, and core principles inherent in expertise and experiences of teaching librarians. Session participants will see how themes that emerged were used to create a conceptual framework for building a library instruction program integrated with our new library strategic directions, the ACRL framework, and library teaching best practices. The session takeaways will include templates and directions for conducting appreciative inquiry and how to use data to plan programs that can be used at any institution for building and evaluating library programs. This process could also be adapted to study the underlying culture of any library organization.

Donna Harp Ziegenfuss is an associate librarian and interim head of graduate and undergraduate services in the J. Willard Marriott Library at the University of Utah. She has an EdD in Academic Leadership/Higher Education and an MS degree in Applied Technology/Instructional Design. She has over 10 years of experience teaching, designing instruction, and doing qualitative research. Her research interests focus on library and technology-based instructional planning and course design, assessment and evaluation topics, and online teaching and learning.

Methods 1:

Relationships between LibQUAL+ Outcomes and Service Quality Scores

Colleen Cook (McGill University)

Martha Kyrillidou (QualityMetrics, LLC)

Bruce Thompson (Texas A&M University)

Outcomes assessment is in vogue. Academic librarians, in particular, search for means to substantiate or prove their worth in tangible ways to university administrations and stakeholders. Outcomes assessment is not straightforward. Much of the time it is best represented through case studies or stories. As such, it is not easily generalizable or scalable. Some attempts to quantify outcomes have been made, notably through the research Carol Tenopir (2013) has supported over the years and more recently through the Lib-Value work she collaboratively pursued with the University of Illinois and the Association of Research Libraries. Also, there is ISO work that has taken place to conceptualize outcomes and many papers presented over the years at the Library Assessment Conference (Kyrillidou, 2015). However, all these efforts can only prove correlations and do not show causation. Proving a relationship that is causal is impossible and actions based upon outcomes assessment, or conclusions made, must be carefully done.

One readily available rich set of such outcomes data is the five outcomes questions collected in LibQUAL+ since 2003. These data for 13 years will be studied to determine whether important correlations and other relationships exist between the outcomes questions, overall service quality scores, and scores. We propose to look at these relationships for different user groups, disciplines, and demographic characteristics.

References

Tenopir, C. (2013). "Building Evidence of the Value and Impact of Library and Information Services: Methods, Metrics and ROI." *Evidence Based Library and Information Practice*, 8(2), 270–274. Retrieved from
https://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/19527/15262.

Kyrillidou, M. (2015). "Outcomes Assessment in Select Papers from the 2012 Library Assessment Conference." *Evidence Based Library and Information Practice*, 10(2), 4–7. Retrieved from
https://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/24806/18440.

C. Colleen Cook is Trenholme dean of libraries at McGill University. Prior to that, she was dean and director at Texas A&M University Libraries. She has published extensively and pioneered the development of the LibQUAL+ protocol that is extensively used across the globe. Martha Kyrillidou is a consultant in library assessment, a research associate at the iSchool at the University of Illinois, Urbana-Champaign, and teaches Research Methods at Kent State University. For 22 years she led the ARL assessment programs. Bruce Thompson is distinguished professor and college distinguished

research fellow of educational psychology, and distinguished professor of library sciences, Texas A&M University. He is the author/editor of more than 200 articles, and several books, including Foundations of Behavioral Statistics.

The Illusory Holy Grail: Comprehensive Mixed-Methodology Assessment is no better than Using a Single Method; A Case Study on the 21st Century Science Library.

Frankie Wilson (Bodleian Libraries, University of Oxford)

The accepted "holy grail" of assessment is to use as many appropriate methods as possible to thoroughly investigate a specific issue. However, resource limitations usually constrain assessment activities to a single methodology for each area of interest, leading library assessment practitioners to worry that they might have missed something—that they are seeing an incomplete picture.

Philanthropic funding, both to conduct the research and to implement the results, enabled the author to investigate "The 21st Century Science Library" using six different methodologies to answer a single research question: In a 21st Century research-intensive university, is there a need for a physical library to support science, technology, engineering, mathematics, and medicine teaching, learning, and research?

This research used the following methodologies, three of which re-used existing data and three that collected data specifically for the research. The three data-reuse methods were: (1) Statistical analysis of gate entry (swipe card) data and seat survey headcount data. Entry data is a by-product of the access control system, and the headcount data was part of the SCONUL Annual Library Statistics. (2) Re-mining free-text comments from the 2012 LibQUAL+ survey. (3) A literature and design review of evolving library spaces and future science research, teaching, and learning workflows.

The three methods of collecting new data were: (4) A survey of members of the Mathematical, Physical & Life Sciences (MPLS) and Medical Sciences (MSD) Divisions, distributed by email via departmental administrators. (5) A series of focus groups of staff and students from MPLS and MSD. Participants were self-selecting. (6) User experience (UX) analysis using anthropological techniques to determine how people actually behave in a space and their emotional response to the space. This research was conducted by another university library as part of a reciprocal project.

This paper describes the findings of the research on two levels. First, the research itself demonstrates that even in an era of "everything online" there is still a need for a physical library building to support science students in a research-intensive university. Second, reflecting on the research process as an example of the "holy grail" of mixed-methodology assessment of an issue, the results show that very little was additionally learned from using more than one of the active assessment methods than would have been learned from undertaking the survey or focus groups or UX. However, there was an advantage when it came to the use of the research results for advocacy—different audiences treated one of the research methods as more "valid" than the others, and so were more persuaded by the results.

The practical implications are two-fold. First, although Oxford University has a unique library ecosystem and so some of the results are not generalisable, this research provides evidence for research-intensive university libraries to counter the assertions from faculty that "scientists don't need library buildings." Second, reflecting on the research provides reassurance to the library assessment practitioner community that they are not "missing something" by being limited due to time or resources to a single research method.

Frankie Wilson is the head of assessment at the Bodleian Libraries, University of Oxford, UK. She holds a doctorate in the field of quality, assessment and culture change in academic libraries, and continues to be an active researcher as well as a practitioner. She has extensive experience in applying a wide range of assessment methodologies (both qualitative and quantitative) to assess the impact of library provision and provides strategic leadership for assessment throughout the Bodleian Libraries including training staff in assessment techniques. She is a member of the Board of the Northumbria International Conference of Performance Measurement and Metrics in Library and Information Services and served on the International Federation of Library Associations Standing Committee on Statistics & Evaluation.

Collaborative Libraries Assessment Across a Multi-Campus College

Tanner Wray (Montgomery College)

Nancy Fried Foster (Ithaka S+R)

Cynthia Pfanstiehl (Montgomery College)

From 2013 to 2016, Montgomery College conducted ethnographic studies of four campus libraries on its three distinctive campuses to understand student work practices and design improved library spaces and services. The community college of Montgomery County, Maryland, Montgomery College is dedicated to the academic and vocational success of its students. The libraries play a significant role in the institutional mission, supporting the curriculum and ensuring that students have the information resources they need and the workspaces and conditions under which to use those resources. Basing this project on earlier work completed at the University of Maryland (see Steele et al., *The Living Library: An Intellectual Ecosystem*), project leaders believed that a better understanding of student work practices and needs would increase the ability of the library to help students complete their academic work successfully.

In this session, a library director and two anthropologists will describe the highly collaborative assessment approach to this in-depth ethnographic project on community college library use. They will review the training of student and staff researchers and describe the methods by which these non-specialists were enabled to gather and analyze data. Key findings and outcomes will be presented.

For each campus, several assessment groups were established, trained, and oriented to the project and were facilitated through a process to complete the work.

41

- Three teams of library and college employees were trained to conduct design workshops and brief face-to-face interviews, and to distribute survey cards, methods used in ethnographic studies at numerous academic libraries.
- Across the campuses, 250 anthropology students and 14 honors students were trained to collect data as part of a complementary ethnographic library study. Student researchers collaborated with their professors to conduct in-person interviews with students and faculty. They also conducted observations of activities and spatial use within the libraries.
- A stakeholders group of college officials was established for each campus. These groups provided feedback on the project approach and also on findings and implementation proposals from the Libraries and Anthropology studies.

The presentation will discuss the organizational and personal impact of including such a large number of participants in a range of roles as researchers, stakeholders, and respondents in the studies. Student researchers and college employees became empowered and confident with their new skills of interviewing, observation, and promoting student-centered change in the libraries. Stakeholders became more knowledgeable about the work of the libraries and developed better and more nuanced understandings of the needs of students. In bringing the project's rich educational experiences to the college, the libraries augmented the college's high impact practices to increase student retention and completion. The project has also positioned the library to be a social sciences research lab and training ground.

The project offers a replicable model for college-wide collaborations among administration, libraries, campus planning, and academic departments leading to customized breakthrough strategies for student-centered learning. Attendees will gain insights into ways in which college-wide qualitative assessment partnerships between administration, staff, faculty and students can inform the design of learning spaces and services.

As director of college libraries and information services at Montgomery College, Tanner Wray leads the library programs and services provided at three campuses. He previously served as the University of Maryland's Director of Public Services. He brought the ethnographic approach used at the University of Maryland to Montgomery College. Nancy Fried Foster is senior anthropologist at Ithaka S+R. She helps libraries and universities understand research, teaching, and learning practices and identify unmet need. Books include The Living Library *(with Patricia A. Steele and others) and* Studying Students: The Undergraduate Research Project at the University of Rochester *(edited with Susan Gibbons). Cynthia Pfanstiehl is an associate professor in anthropology at Montgomery College, where she has worked since 2001. She teaches sociocultural anthropology, physical anthropology, and archaeology. Prior to teaching at the college she was employed for eighteen years by several environmental engineering firms in the field of Cultural Resources Management.*

Event Evaluation: Developing a Rubric for Assessing the Value of Library Programming

Maurini Strub (University of Louisville)

Melissa Laning (University of Louisville)

Libraries routinely offer programming and events with the hopes of increasing awareness of and engagement with library services. Traditionally, libraries have looked at metrics such as attendance and anecdotal feedback as a measure of success. However, with a continuing decline in fiscal support for higher education and libraries, there has been a corollary focus on measuring value and impact. Recently, the Public Library Association has made advances on developing standardized measures of effectiveness on library programming. However, the dimensions that they address are not entirely germane to the audience, fiscal opportunities, and constraints associated within academe. This paper fills the gap in the literature for academic libraries by proposing a comprehensive approach to analyzing the value of events and programming that will help administrators and event planners conduct assessment.

The main library at our institution hosts almost thirty recurring events annually. After interest was expressed in evaluating these events, a small workgroup was charged with examining and constructing a pilot study on event evaluation. The workgroup identified five representative events, which might serve as candidates for the pilot study. To contextualize these events, brief meetings were held with each of the internal contacts to learn: the goals of hosting the event; how success had been defined; whether any measurement/evaluation of the event had taken place; past outcomes; and, about the value of the library hosting and facilitating the events.

We learned that, although the main library provides funding and allocates space and human resources, these events had little to no design input from the library. As such, they did not explicitly advance the library's goals or missions. Further, we found that the main library hadn't defined goals/outcomes for hosting these events. Notably, there was consensus in perceptions of the value of participating in these events. Each internal contact stressed the importance of being identified as an institutional partner or team player. However, short of anecdotal accounts, no measurement of the efficacy in meeting that goal had been undertaken. Additionally, internal contacts—frequently librarians—perceived hosting events as part of their liaison roles. They hoped that their involvement would result in building relationships (i.e., social capital) that would be manifested by inclusion in other projects and would present opportunities for library instruction. Further, while increasing the visibility of the library, they hoped to influence the reputation of the library by being actively engaged in the university's community.

Seeing a potential disconnect between local event planning and the need to focus our limited resources on strategic goals, we saw the importance of developing a rubric that would:

- Make the advancement of strategic goals an essential criterion in event planning;
- Set and measure outcomes for all events;
- Evaluate event performance on multiple dimensions; and
- Determine the impact of our relationship building efforts.

43

By evaluating across four dimensions: engagement; efficiency; effectiveness; and value for attendees, partners, and libraries, this tool provides administrators and internal contacts with a framework for evaluating their efforts and reviewing the return on their investments.

Maurini Strub joined the University of Louisville as the user experience/assessment librarian in 2013. She received her Master of Science in Information from the University of Michigan and a Bachelor of Arts in Biology from Oakland University.She has strong interest in user-centered design within the context of libraries and has worked on several projects that allowed her opportunities to conduct contextual inquiry, user interviews, persona and scenario construction, survey design, and data collection as well as usability testing. Since joining the University of Louisville, she has worked on assessment projects that have looked at spaces and services usage in the main and health sciences libraries as well as space usage in Archives and Special Collections, the libraries' Benchmark Survey data, and the Art Library's hallway surveys. She is currently involved in studies related to persona development, evaluating user engagement, social capital, and creating a culture of assessment.

Melissa Laning is associate dean for assessment, personnel and research at the University of Louisville Libraries. From 1998–2005, she served as the assessment & resource planning team leader at UofL which lay the foundation for the current commitment to user-focused inquiry in the planning of library services. Her current assessment-related projects include developing a rubric for evaluating library-sponsored events and improving access to locally-collected library statistics.

Concurrent Session 3

Organizational Issues 2:

Assessing Your New Library Position: A Story about Creativity, Collaboration, and Collegiality

Amanda Albert (Saint Louis University)

Set the scene: budding library professional graduates and starts her first, full-time, academic librarian position at a mid-sized, four-year institution. The position of instructional services librarian is brand new to the librarian as well as the library, but the librarian is excited, ready to leap in both feet first.

Cut to one month into the position: our professional librarian has learned a lot, figured out how to navigate the politics and places of her new institution, and has taken on minor responsibilities. She has the freedom to design the position as she pleases, and relishes the thought! But she cannot shake the feeling that something is not right. Without the guidance that an established position affords, she is not sure what she is supposed to be doing with her time. Is this all there is?

Scene: present day. The precocious librarian's big idea to assess her way into her job has worked out splendidly! By utilizing Qualtrics to survey her co-workers and meeting with them one-on-one, she was able to successfully assess their instruction interests and desires. She gathered quantitative, qualitative, and anecdotal evidence in order to devise programs, services, projects,

and improvements to keep her busy for years to come! Assessment proved to be a catalyst for change, sparking creativity, collaboration, and collegiality in the library's instruction department.

This very innovative librarian will present the methods to her assessment madness, the techniques she used to create trust and acceptance as a new colleague, the evidence she gathered, and subsequent actions she took, including the ever-important step of closing the loop and communicating the results of the assessment to her stakeholders. The librarian was able to triangulate the data in order to plan, make decisions, and execute ideas in her new position. This paper/presentation will discuss how the assessment influenced not only her decision making, but also how it positively influenced the services and programs of the entire library. The author will also discuss how she is using this assessment and actions derived from the endeavor to communicate her value to her coworkers, library administration, and other stakeholders.

New librarians who read this short paper or attend the presentation will benefit from learning about the successes and pitfalls that come with such an undertaking. Veteran librarians will come away with ideas about supporting their colleagues in their assessment activities. All librarians will develop new ideas about engaging in assessment with career and program planning as a focus.

Amanda B. Albert is the instructional services librarian at Saint Louis University. Her research areas include information literacy instruction, instructional design, assessment, and library value. Prior to this position, Albert served as the distance learning librarian at Kennesaw State University and a paraprofessional at Georgia Institute of Technology.

How Well Do We Collaborate? Using Social Network Analysis (SNA) to Evaluate Engagement in Assessment Program

Nisa Bakkalbasi (Columbia University in the City of New York)

In the past decade, the interest in library assessment has expanded greatly, particularly as a method to gather evidence and context for strategic planning and enhance the effectiveness and efficiency of day-to-day library operations. The heightened interest in assessment has led to full-time positions or units with relevant expertise to lead, coordinate, and facilitate assessment projects that were previously assigned to various library staff members as "other duties." One of the frequently asked questions about this area of library management is concerned with how to organize assessment and evaluation activities within an organization. Should this function be centralized or decentralized? Should assessment librarians be attached to functional units/divisions or central administration? In seeking responses to these questions, it is important to note that there is no single "best" organizational structure for library assessment as it will vary depending on the size and structure of the organization and its existing resources.

As has been the case with our counterparts across the nation, the extent of library assessment activities has grown exponentially at Columbia University Libraries and Information Services (CUL/IS). Since 2006, we have made great strides in establishing an organizational culture of assessment and building an Assessment Program. The 2006–2009 CUL/IS organizational Strategic Plan explicitly called for the library's work to be guided by user-focused design and data-driven

decision making, and it remained as an organizational strategic priority in successive rounds of strategic planning. CUL/IS is a highly decentralized organization and its assessment projects and methodologies are highly diverse. In order to support, advance, and sustain these assessment activities, an effective structure must be put in place to ensure that CUL/IS gathers appropriate, valid, and accurate evidence to support data-driven decision making.

At CUL/IS, using a collaborative assessment model, the assessment coordinator provides centralized leadership, coordination, and guidance for division-based and library-wide assessment activities. Taking a consultative approach, a single full-time librarian works with division staff members to carry out assessment projects. This approach is based on the premise that staff engagement in assessment endeavors is vital to establish a successful organization-wide assessment program. Therefore, the success of the Assessment Program depends on joint ventures, collaborative relationships, and alliances. A critical but often invisible part of this assessment model where we have done little to assess is the collaborative network of the Assessment Program and whether the collaboration model is working.

The purpose of this short paper is to evaluate organization-wide engagement in assessment activities and to understand collaboration. Social Network Analysis (SNA) is utilized for mapping and measuring of connections and flows between staff working on assessment projects. The paper will outline the conceptual approach as well as reporting findings, where the nodes in the network represent the people and the links show relationships or flows between the nodes. The paper will include organizational social network diagram, descriptive information about existing relationships among individuals and clusters, joint efforts expended toward various goals, and suggested strategies for enhancing network structures in line with a collaborative assessment model.

Nisa Bakkalbasi is the assessment coordinator at Columbia University Libraries. Prior to joining Columbia University, Nisa was the director of planning and assessment at James Madison University, and held previous positions at Yale University Libraries. She holds an MS in applied statistics and an MS in library and information science.

Acknowledging the Political, Economic, and Values-Based Motivators of Assessment Work: An Analysis of Publications on Academic Library Assessment

Lise Doucette (University of Western Ontario)

Purpose: Key motivators for assessment work in academic libraries include the persistent service ethic and evolving user focus in libraries; a quality assurance framework in higher education that focuses on measuring outcomes; and an overall political and economic climate of accountability and austerity. However, researchers publishing and presenting about library assessment do always explicitly acknowledge the factors influencing their assessment work, nor do they consistently identify who benefits from the assessment and whose values the assessment represents. This research identifies whether and how researchers acknowledge political, economic, ethical, and

values-based motivators of assessment work, and aims to promote awareness and reflection among researchers about their own motivators.

Methodology: This research comprises a review and content analysis of the papers published as part of the biennial Library Assessment Conference proceedings from 2006–2014. The papers were analyzed through careful reading and by using features of the qualitative software NVivo to identify whether and how researchers acknowledge the factors influencing their decision to undertake their research or project, with a focus on identifying political, economic, ethical, and values-based motivators of the assessment.

Potential Findings: The presenter will highlight results related to frequency and nature of language used by researchers to show their motivation for conducting library assessment work, and will also provide examples.

Practical Implications: Through this research, the presenter will raise awareness by analyzing and demonstrating current practices, and will provide recommendations for critically considering and acknowledging motivators for library assessment work. These recommendations are intended for librarians to consider before and while undertaking assessment work, when preparing manuscripts and presentations about assessment, and when reading assessment-related literature.

Lise Doucette has been the assessment librarian at Western University in London, Ontario, Canada, since 2013. Prior to that, she was a research & instructional librarian for engineering and science at Western University for six years, and she also spent three years as the data and GIS librarian at Laurentian University.

Assessment as User Engagement: Using User Testing and Assessment to Build Investment in the Library's Intranet

Elizabeth Edwards (University of Chicago)

In 2012, the University of Chicago Library charged a group with developing an understanding of staff communication needs with an eye to improving the library's intranet. The findings of this project resulted in the development of specifications for a new intranet; they also highlighted organizational challenges that resulted in further assessment projects.

This lightning talk will present what came next:

- How surveys were used to engage staff in understanding organizational challenges,
- How a heuristic analysis turned into an engaging brainstorm session,
- How pop-up surveys helped identify non-users,
- How paper prototypes brought people together, and
- How user experience will keep the intranet alive.

Elizabeth Edwards is assessment librarian at the University of Chicago. In addition to directing the library's assessment and user experience programs and facilitating the library's annual data

reporting, she often jokes that it's her responsibility to care about the things that no one else does, including the library's intranet.

Using Peers to Shed Light on Service Hours for Librarians

Hector Escobar (University of Dayton)

Heidi Gauder (University of Dayton)

Purpose: Public service hours for many academic librarians have changed within the last decade. As reference statistics have declined, so have job descriptions changed. We often hear terms like outreach, liaison work, embedded librarianship, consulting hours, scheduled appointments. etc., for what used to be normal desk hours. With a changing service model comes accountability. How do institutions account for these new forms of work and duties that have replaced traditional service desk hours? How does this feed into performance or merit review?

The purpose of this short paper is to shed light on the roles of librarians at medium-sized universities, including the work of reference librarians, service model trends, and accounting for work that now may be more self driven and office or department-based. Results from a peer survey will be shared.

Design/Methodology/Approach: The library will be surveying peer institutions in order to examine changing trends and how these institutions may now account for librarian hours that may have traditionally been hosted at a reference or service desk. Communication will be directed to department heads (traditionally, head of reference services positions) asking individuals to complete a survey.

Our survey design will be used to gather such information such as department size, modes of providing reference or research support, accounting for workloads or distribution loads of librarians, and possible factors or practices for merit.

Potential Findings: Given the decline of in-person reference questions and the growth of more accessible information, we would imagine that a majority of institutions are seeing a rise to offering research services on an appointment basis and the traditional service desk is seen as a more as point for addressing more common service needs (directional, supplies, technical support). Some questions we would like to shed light on are: What are the service model approaches? Are they a mix of appointment-based and public service? How are librarians evaluated for their reassignment of former public service hours? Are there practices in place to ensure equity in the distribution of non-public service duties?

Practical Implications: At the current stage, institutions have have had long histories of either providing public service or limited service hours. For institutions that have migrated away from a standard reference desk model, we hope the survey results shed light on other factors including staff performance, service outreach effectiveness, and task distribution for librarians who are no longer responsible for hosting service hours. While each institution will vary and have different

dynamics that influence supporting services, we hope the survey will highlight factors to consider for institutions considering changing a different service model to meet new library demands.

Hector Escobar is the director of education and information delivery at the University of Dayton Libraries. As director he oversees public services for the library, which includes access services and research and instruction services. Heidi Gauder is an associate professor at the University of Dayton Libraries, where she is the coordinator of research and instruction. She conducts assessment for the library instruction program and is a member of the library assessment committee.

Active Learning with Assessment

Katharine Hall (Concordia University)

Meredith Giffin (Concordia University)

How does a newly formed Assessment Committee start to develop a "culture of assessment" within their organisation? As part of our mandate to raise awareness of assessment within the library, the authors (both members of our library's assessment committee) invited all library personnel to join us in our learning experience.

We developed a two-part "Introduction to Assessment" workshop, open to all. The goals of the workshop series were twofold: to increase awareness and understanding of assessment practices, applications, and outcomes in the library and to use a participatory exercise with a real-world example as a means to increase staff engagement and interest in the topic presented.

The workshop consisted of two 90-minute sessions. During the first session, there was a brief and general overview of assessment and various examples from the library context. This was followed by the introduction of a case scenario on loan policies: participants were asked to examine the scenario and brainstorm a list of data that would help in the decision-making process. In the second session, participants were provided with some of the data they requested in the first session and were given time to analyze and discuss before being asked to deliver a recommendation on the case scenario.

The sessions helped demystify assessment as all participants were able to see the complexities of assessment and interpreting data. Establishing a positive staff attitude towards assessment cannot be achieved in a one-time workshop; this was simply a starting point. Feedback from the session indicated that participants very much enjoyed the participatory and cross-departmental nature of the sessions, and when asked if they were interested in learning more about assessment, the majority were. Additionally, discussion from the workshops has spread through word of mouth, and several people who did not attend have expressed interest in future sessions.

As much initial resistance as there may have been to the concept of assessment, there is demonstrated interest by staff in participating in these processes, as well as seeing and acting on the results. Beyond the initial goals of the workshops, the sessions functioned as a learning

experience for the committee and are helping shape our perspective of the committee's role as facilitators in decision-making processes.

Katharine Hall is a reference and instruction librarian at Concordia University in Montréal, Québec. She holds a BSc in Biochemistry and an MLIS. She has been a member of the library's assessment committee since its inception in June 2015. Meredith Giffin is collections coordinator and French studies librarian at Concordia University Libraries. She earned her BA in Anthropology and her MLIS from McGill University. She spends much of her time counting, adding, multiplying, and occasionally subtracting volumes, shelves, and dollars.

Assessment Planning in the Time of Change

Laurie Borchard (California State University, Northridge)

Charissa Jefferson (California State University, Northridge)

This paper provides best practices for creating an assessment plan for academic libraries. Determining factors to consider when designing an assessment plan will be addressed, such as developing key questions: who to consult during the planning phase, what data gathering tools are available, what is the organizational climate within in your library, and what are some potential external influences to consider?

This paper provides tools for developing assessment plans yourself, taking into account the changes in structure, technology, approach to teaching and learning, roles of personnel, and institutional goals. Our approach was team-based, in consultation with library faculty and staff, coordinators and administration. Libraries are constantly evolving and we were at a time of large institutional and professional change. We were undergoing strategic library planning, library morale team building, implementing a new unified library management system, adopting the new ACRL Framework, and university wide changes. Our assessment plan aligned with university and library strategic goals in anticipation of major changes in instruction, technology and staff/faculty workflows.

This lightning talk will cover a planning checklist and provide concrete takeaways for those writing assessment plans.

Laurie Borchard is the digital learning initiatives librarian at California State University, Northridge. She designs and develops online learning tools focusing on information literacy skills. She received her MLIS from the University of Wisconsin, Milwaukee. She is on the Oviatt Library Assessment Team, which focuses on assessment of instruction, collection development, and library services. Her research interests include open educational resources, user behavior, and instructional design in libraries. Charissa Jefferson is the business and data librarian at California State University, Northridge. She earned her MLS from University of North Texas, her MA in Cultural Studies from Claremont Graduate University, and her BA in Women's Studies from California State University, Long Beach. She currently serves on the Oviatt Library Assessment Team and is the library liaison to the campus'

assessment committee. Her research interests include information literacy instruction, collection assessment, and data visualization.

Learning:

Making it Work: Developing a Student-Centered Assessment Model for a Large-Scale Information Literacy Program

Rachel Gammons (University of Maryland Libraries)

Lindsay Inge (University of Maryland Libraries)

For many libraries, information literacy instruction is a difficult balance between quantity and quality, particularly for large-scale courses, such as freshman composition. The proposed lighting talk will discuss the University of Maryland Libraries' recent overhaul of the learning outcomes assessment for English 101 focusing on the transition from a passive multiple-choice test to a student-centered and critically grounded qualitative assessment.

In spring 2015, teaching and learning librarians completed a pilot assessment program for English 101 library instruction. At the end of each library session, students were asked to tweet their "a-ha moment" using #mylibrarymoment. Based on the 6-word memoir, the "a-ha moment" asked students to condense a 50 or 75-minute instruction experience into a discrete set of characters, sharing the single most important take-away from the session. Tweets were collected using an open-source aggregator and coded using seven dispositions from the ACRL Framework for Information Literacy.

In fall 2015, we improved on the existing pilot program. Although Twitter offered an effective platform for the 150 responses gathered during the pilot, expanding that model to serve the nearly 4,000 English 101 students created logistical challenges. From privacy settings to data duplication to the number of students who were (or more often, were not) active on Twitter, there was no easy way to collect the amount of data needed using social media. In response, we transitioned data collection from Twitter to Qualtrics, although individual responses continued to be capped at 140 characters. Using Qualtrics also allowed us to add a customized field for students to identify their library instructor. We also made improvements to data analysis by incorporating a customized rubric based on the ACRL Framework. Each response is categorized into one of seven dispositions (which also serve as learning outcomes for the course), then ranked on a level of developing, proficient, or advanced. Unlike the multiple choice assessment, the a-ha moment values students by treating individual voices as unique and important. It allows students to share experiences that are meaningful and personal, while also enabling us to collect and assess data on a large scale. In fall 2015, we collected and coded 1,200 responses from students.

In spring 2015, we have continued to develop the English 101 assessment adding the evaluation of student artifacts in the form of annotated bibliographies. A representative sample (two artifacts from each section of the course) will be evaluated using the VALUE Rubric for Information Literacy. By layering assessment methods, we are able to capture a holistic representation of our

student experiences. Rather than relying on a single multiple-choice quiz, the multiple points of assessment enable us to capture differences in individual teaching styles, points in the semester, and degrees of impact.

We will share assessment results from the fall and spring semesters, using our experience as a model for to successfully revive an aging information literacy assessment program by incorporating qualitative data in manageable quantities and developing clear and concise analysis methods.

Rachel W. Gammons is the head of teaching & learning services at University of Maryland Libraries in College Park, MD, where she coordinates first year programming, information literacy, and assessment efforts. A 2015 ALA Emerging Leader and a strong proponent of critical theory, feminist pedagogy, and innovative teaching practices, Rachel has published and presented numerous works on teaching and assessment in the academic library.

Multi-Method Assessment to Improve Library Instruction

Zsuzsa Koltay (Cornell University)

Kornelia Tancheva (Cornell University)

Purpose: Improving students' information literacy skills has been an unquestioned mission of library instruction, which, in turn, has been an unquestioned core service of academic libraries. Reaccreditation guidelines have advanced practices of learning outcomes assessment, so measuring student skills against learning goals has become more widespread. But what about overall perceptions of helpfulness and value from the two most important stakeholders of library instruction: faculty and students? What can we learn from such data and how can we use what we learn to improve our instructional offerings or rethink library instruction altogether? Our project is a case study of triangulating from various data sources and using the findings as well as further investigation to create and assess the success of a pilot project intended to improve the student experience, not just their skills.

Methodology and Findings: We compared results from a broad-based faculty survey that the library conducted in 2014 with results from a 2015 consortial survey of undergraduates conducted by the university. Each instrument contained questions about the respondents' use of library instruction and their perception of its helpfulness. Faculty were overwhelmingly more positive in their responses than undergraduates. The student data provided the opportunity of benchmarking across universities, which showed that our students' low perception of the helpfulness of library instruction was very much in line with other universities' results, indicating that the concerns are systemic to the current library instruction practices of the profession.

The results of the two surveys, although not directly comparable, revealed such a stark difference in perceptions that we wanted to investigate further. We used a focus group of undergraduates to add qualitative depth to the survey data. The insights from the focus group helped conceptualize a

pilot project with a campus partner for short instructional videos embedded in Blackboard homework assignments for a just-in-time and efficient approach to library instruction.

Another aspect of the assessment methodology was the evaluation of the pilot through the regular mid-semester surveys of the courses.

Practical implications: The use of assessment data for identifying a problem area, conceptualizing, and evaluating a solution resulted in delivering information literacy instruction in a way that is more effective and helpful to students. The triangulation of data also brought up questions about the overall practice and methodology of library instruction.

Contributions to field: This case study demonstrates the importance of using data from multiple sources for service improvement. Only two data sources (faculty survey and focus group) were local and library-controlled, the other two were developed through collaborations and partnerships. The undergraduate survey administered consortially through the Consortium for Financing Higher Education (COFHE) included a library module as a result of a cross-institutional group of librarians reaching out to COFHE proactively as well as to librarians at the partner institutions to urge them to work with their institutional research staff. The creation and embedding of instructional videos in course design happened in partnership with the teaching innovation support arm of a college, so did the survey that evaluated the pilot.

Zsuzsa Koltay has been the director of assessment and communication at Cornell University Library since 2010, leading a unit whose mission is to help users, staff, and stakeholders understand the library and its environment. Her Cornell career also includes heading a redesign of Cornell's discovery environment, four years as the director of the Engineering Library, and being the founding project manager of Project Euclid, an electronic journal publishing system for mathematics and statistics. She holds an MLS from Indiana University. Kornelia Tancheva is the associate university librarian for research and learning services at Cornell University Library. Prior to that, she was the director of the Olin and Uris Libraries and the Library Annex. Her research interests are in assessment, user centered design of services, as well as drama and literature. She holds a PhD in drama from Cornell University and an MLS from Syracuse University.

Using Images to Understand Students' Approaches to the Research Process

Ann Medaille (University of Nevada, Reno)

Molly Beisler (University of Nevada, Reno)

Purpose: Student drawings were used in combination with written text and oral interviews to understand how students approach the process of executing research assignments.

Design: Librarians at the University of Nevada, Reno collaborated with writing center staff to learn how students approach the research and writing processes. The researchers asked 222 students in classes from a variety of levels and disciplines to draw their processes of executing research assignments. The researchers also asked students to respond to written questions about the most

difficult aspects of their assignments, and they interviewed nine of these students to gain more specific information about what they depicted in their drawings. In conducting the analysis, the researchers identified the most common elements that appeared in the drawings and looked for correlations among these elements. Interviews with students also enabled the researchers to construct narratives of different ways that students undertake the research and writing processes.

Findings: Drawings revealed findings in a number of areas: (1) students used library resources heavily but did not use library services very much;. (2) about one-third of students conceptualized getting help as an essential element of their processes; however, most students who got help received it from peers after they had already drafted their papers; (3) in interviews and some drawings, students showed a clear connection between how much they cared about or liked an assignment and how hard they were willing to work; and (4) in interviews about their drawings, students described how their work with these assignments revolved around attempts to express original ideas, be creative, or manage stress.

Practical Implications: While this study provides insight into the ways that students use library resources and services, it also demonstrates that student-generated images can be a valuable method for data collection. Images offer an authentic expression of students' experiences and evoke concerns that might not emerge through textual data alone. Creating images allows students to reflect on the individual parts of their research experiences while simultaneously communicating narratives about the whole. Even elements that students omit from their drawings can reveal discrepancies between the ways that students and librarians view the research process. Images can be an especially valuable source of data when used in conjunction with written and oral text, but careful attention must be given to thoughtful research design, coding, and analysis. In addition to describing this particular study, the researchers will briefly discuss ways of administering drawing assessments, tips for coding them, and suggestions for using them in combination with other research methods.

Ann Medaille is director of research services at the University of Nevada, Reno where she also serves as the library liaison for education, art, theatre, and dance. She holds an MS in library science from the University of North Texas and an MA in theatre from the University of Colorado at Boulder.

Value:

A Toolkit for Efficient Reporting on the Library's Value to Disparate Stakeholders

Sarah Pickle (Claremont Colleges Library)

The Claremont Colleges Library (CCL) is a shared service of the seven institutions that form the consortium of the Claremont Colleges. While the colleges operate largely independently from one another, CCL's budget comprises contributions from all of them. Accordingly, the library must always be prepared to demonstrate the value it provides for the seven institutions, each of which has its own mission, culture, and administration. This presentation shares one approach that the CCL has taken to addressing that challenge: the creation of a toolkit that enables the library to

efficiently articulate its relationship with and provision for each college in the consortium in independent reports that it plans to issue on a rotating basis.

To guide the research for and the ultimate message of a report for a given college, the toolkit provides a sample interview questionnaire for probing the concerns of senior administrators, a sample survey questionnaire about student work and study habits, and a list of data available in units across the library organization. Also included is a template for the report itself. The toolkit is designed to be practical, easy to populate, and flexible enough to respond to the concerns of institutions with diverse profiles ranging from Pomona College (a prestigious undergraduate liberal arts college with nearly two-thirds of graduates taking degrees in the social sciences, arts, and humanities) to the Keck Graduate Institute (a professional school for students of pharmacy and the applied life sciences). While there is certainly room in the toolkit for adding information about the impact of the library on its patrons from a college when those data are available, its primary focus is financial data and data reflecting usage of library resources, services, and facilities. The volume and quick turnaround time for these reports limits the CCL to working primarily with figures that are already available or otherwise easily collected.

This toolkit is especially useful for libraries that have to report frequently on their value, perhaps because they serve a variety of stakeholders in a shared-services environment or because their institutions are run under the responsibility centered management model. It is also extensible to libraries in the position of defending the return they provide on their institutions' investments in them.

Sarah Pickle is the assessment librarian at the Claremont Colleges Library. She came to this role after serving as the CLIR/DLF social science data curation fellow at Penn State Libraries. Previously, Sarah was an analyst at Ithaka S+R where her research focused on the sustainability of digital resources and the efforts that academic and cultural heritage institutions have made to support digital scholarship.

Take Back the Data: The 21st Century Library

Kirsten Kinsley (Florida State University)

Lisa Horowitz (MIT)

What data, facts, and figures tell the story of the 21st Century Library? Do the statistics that we collect regularly reflect what we do now? In some ways, librarians have become slaves to our own data collection practices. When we continue to faithfully, unquestioningly collect figures that held meaning in the 20th century, we fail to paint the picture of today's transformational library. Cutting-edge technology, open access efforts, and digital scholarship initiatives are not represented adequately in our current metrics that still include numbers of books, circulations, and reference transactions.

In this presentation, we define the 21st Century Library and advocate for the data that can tell its complex story. This short paper will be based on card-sort research methodology to prioritize

meaningful metrics based on the full scope of what we do in all kinds of different libraries. We will share with the audience the results of this research to inspire deeper dialogue about which metrics are prioritized, issues in gathering some of these, and how to move forward with this research. Through this process, we are hoping to develop advocacy in librarianship to use data more strategically and tell a new story more reflective of the 21st Century Library.

Attendees will hear what librarians are prioritizing from the research results and begin to formulate ideas and plans that will change the image of the library through thoughtful and boundary-pushing metrics. Librarians determined which statistics we should gather many years ago. Librarians should take back that data and be empowered to decide what is important in today's world.

Kirsten Kinsley is assessment librarian at Florida State University in Tallahassee, Florida. Her current research interests include library usage and student success, library advocacy using data, and user experience. She would like to learn how to apply critical thinking about the data she collects to better communicate the value of libraries to others. Lisa Horowitz is MIT Libraries' assessment librarian, developing, coordinating, and overseeing assessment efforts across the libraries. Additionally, she is the linguistics librarian and a manager in the Liaison, Instruction, and Reference Services unit. She has served as chair of the former LLAMA MAES (Measurement, Assessment and Evaluation Section, now Assessment Section), and as a member of the ACRL Task Force on Standards for Proficiencies for Assessment Librarians.

Lean Libraries Optimize Outcomes!

Annie Norman (Delaware Division of Libraries)

Showcasing value is an ongoing challenge for libraries. For more than a decade, Delaware Libraries have been learning to design strategy, processes, and assessment based on methodologies used by businesses (Gore, DuPont, Siemens, and more) to achieve performance excellence. Additionally, action research was conducted with a "focus on the customer," which supported development of tips, tools, and techniques that patrons can use to maximize their informal learning while also documenting the libraries' contributions. The practical implications so far—support and funding for Delaware Libraries increased exponentially! Although primarily applied to Delaware public libraries, this approach has potential for showcasing value in all types of libraries. In this lightning talk, learn how adopting the "library business model" methodologies can help you measure and maximize your library value.

Dr. Annie Norman is state librarian & director of the Delaware Division of Libraries and is chair of the COSLA Research & Statistics Committee. Under her leadership, the statewide Delaware Library Catalog was established and the Delaware Division of Libraries received the Delaware Quality Award of Merit and the Delaware Library Association Institutional Award in recognition of performance excellence principles and practices. Her recent TEDxWilmington talk, "Libraries and the American Dream," showcases tools for the public to track their learning (and library-supported outcomes!).

Concurrent Session 4

Methods:

Academic Library Services and Undergraduate Academic Success: Trends in Research Literature

Ashlynn Kogut (Texas A&M University)

The purpose of this scoping review is to examine the current empirical research regarding connections between academic library services and undergraduate academic success measures. York, Gibson, and Rankin's (2015) Operationalized Model of Academic Success and Oakleaf's (2010) surrogates for student learning were used to define measures of academic success. This scoping review explores two research questions: (1) what academic success measures are explored in relation to academic library services? and (2) what research designs have been used to study academic success measures and academic library services?

This study utilized the scoping review method to find and summarize articles related to library services and undergraduate student success. I searched two databases, ERIC (EBSCO) and Library, Information Science & Technology Abstracts with Full Text (EBSCO), to identify scholarly literature. In addition, I searched key journals focusing on higher education and academic libraries. Three key concepts were identified from the purpose statement: academic libraries, undergraduate students, and academic success. I combined the three key concepts and related synonyms into one keyword search and restricted the publication date to 2010–present to encompass the dates after the publication of *The Value of Academic Libraries*. After applying predetermined inclusion and exclusion criteria, this scoping review included 33 journal articles in the original search conducted October 2015. The literature search and findings will be updated in September 2016.

In the included articles from the original search, there are trends in the publication dates, the journals, and the study locations. The number of articles published on academic libraries and academic success has increased over the past five years. Seventeen different journals published the included articles; however, only one journal is outside of the library science field. The study locations show that this is a topic of international interest.

Retention, GPA, degree attainment, information literacy skills, and graduation rates are the five academic success measures explored in the articles from the original search. When examining the number of times individual academic success measures were explored individually or jointly with other measures, GPA and retention are the most frequently occurring measures.

Every included article from the original search used quantitative methods. Twenty-eight out of the thirty-three articles used quantitative methods exclusively, and the remaining five articles used mixed methods. Despite the ubiquity of quantitative methods, only three articles articulated and

used a theoretical framework. The majority of the quantitative methods utilized in the studies do not require extensive knowledge of statistical procedures.

This scoping review provides areas for librarians to consider when designing research on the topic of library contributions to student success. First, librarians should consider research designs beyond simple, correlational studies. Second, when designing studies, researchers should consider utilizing higher education theoretical frameworks. Finally, research should be conducted to investigate additional academic success measures, like job placement, post-college performance, and graduate school entrance exams.

References:

Oakleaf, M. (2010). *The Value of Academic Libraries: A Comprehensive Review and Report.*

York, T., Gibson, C., & Rankin, S. (2015). "Defining and Measuring Academic Success." *Practical Assessment, Research & Evaluation*, 20(5), 1–20.

Ashlynn Kogut is the former planning and assessment coordinator at the Texas Medical Center Library in Houston, Texas. She is currently an education and social sciences librarian at the Texas A&M University Libraries. She is enrolled in the Higher Education Administration doctoral program at Texas A&M University. She is an active member of the Texas Library Association and the Association of College & Research Libraries.

Assessing User Engagement with Library Exhibits Using Eye Tracking

Kris M. Markman (Harvard University)

The goal of this project is to learn more about how visitors to library exhibits interact with the displayed objects and the physical surroundings. Published research on library exhibits is quite sparse, with most work dedicated to how-to guides (i.e., Brown & Power, 2006; Matassa, 2014; Visser, 2004) or case studies of specific exhibits (Fouracre, 2015). Within the area of museum studies, more attention has been paid to examining visitor experience, although this research tends to be conducted through surveys and similar techniques (Kirchberg & Tröndle, 2012). More recently, museum studies scholars have included observational methods as part of visitor experience research (Pekarik, Schreiber, Hanemann, Richmond, & Mogel, 2014; Tzortzi, 2014). Fouracre (2015) argues that with the increasing use of exhibits in libraries, more evaluation of these exhibits is required. In particular, Fouracre notes that new technologies such as eye tracking have great potential for the study of visitor behavior in libraries.

Eye tracking technologies use infrared sensors to detect pupils and track eye movements across a target, for example a computer screen. Eye tracking technology is also available in wearable form as lightweight glasses. Wearable eye trackers have been used in museum studies, and have illuminated otherwise inaccessible aspects of the visitor experience, such as how visitors alternated viewing between two small displays that were located next to each other (Eghbal-Azar and Widlok, 2013) and how long people spent viewing exhibit labels (Brieber, Nadal, Leder, and

Rosenberg, 2014). This research demonstrates the promise that wearable eye tracking holds for the study of library exhibits.

This study will compare two exhibits in two different Harvard special collections exhibit spaces. By comparing two exhibits, we will be able to determine if the physical space layout affects users' behaviors, as well as if different curatorial styles in exhibit organization and labeling affect users' behavior. By using the eye tracking glasses, we will be able to determine what objects visitors look at, and with what duration, thereby providing valuable insight for curators and for the special collections community at large. The following research questions guide this study:

- RQ1. How do users physically navigate library exhibits given different case/room layouts?
- RQ2. How do users explore items in individual exhibit cases?
- RQ3. How much time do users spend reading exhibit labels?
- RQ4. How do interest and knowledge of the subject matter affect how visitors view library exhibits?

This study will recruit a wide range of participants, including undergraduate and graduate students, faculty, staff, and library visitors. Participants will be asked to spend a minimum of five minutes wearing the eye tracking glasses and will otherwise be allowed to browse freely through the exhibit space. When the participants have finished, they will be given a short, online questionnaire to assess their level of interest in and knowledge of the exhibit topic. This will allow us to learn if exhibit viewing behaviors vary based on how engaged visitors are with the subject matter.

Kris M. Markman is the online learning librarian for Harvard Library and leads the Digital Learning & UX group. As a researcher, she is interested in communication issues related to teaching and learning with technology, online collaboration, and participation in online communities. She holds a PhD in communication studies from the University of Texas at Austin.

Why Seek Expertise in an Age of DIY?: One Library's Qualitative Approach to Understand When and Why Students Seek Reference Assistance

Marc Vinyard (Pepperdine University)

Colleen Mullally (Pepperdine University)

Jaimie-Beth Colvin (Pepperdine University)

"What is driving the increasing number of reference transactions at our institution over the last few years?" This question—asked by a reference librarian when presented with longitudinal data about library services—became the basis of a collaborative research project. Conducting in-depth interviews with students who had recently used reference services for research allowed us to explore, explain, and understand why our services are increasingly being used despite declining national statistics.

The upward trend locally at our institution is in stark contrast to a 60% decline nationally from 2005 through 2014 among doctoral research universities for reference statistics (source: ACRL Metrics). Quantitative data will not explain our students' motivations for seeking out research assistance. Our project aims to provide insight into what motivates students at our university to ask librarians for research assistance. This study examines how students look for information on their own, along with their behaviors when seeking librarian assistance, experiences during the process, and changes in their information seeking strategies following their interaction with a librarian.

Our research builds on several recent studies. Karen Sobel's research surveyed students about why they asked librarians for assistance. In another study by Alison Head and Michael Eisenberg, students were surveyed about their information seeking behavior and then interviewed as follow up. Our paper will: (1) connect our findings to existing research studies; (2) update the literature for librarians; and (3) unpack the process of conducting practical, local qualitative assessment.

To understand why our librarians are increasingly in demand, we conducted in-depth, semi-structured interviews with ten undergraduates who represented a diverse range of majors. Students who had met with a librarian in-person for more than twenty minutes qualified for the study.

These interviews were recently transcribed and the thematic analysis will follow during the spring semester of 2016. At this time, we can highlight some insights from students: (1) faculty members are important in motivating them to seek librarian assistance; (2) rather than relying upon the reference librarian staffing the desk, students often seek out specific liaisons for assistance; and (3) despite reporting relief at receiving librarian assistance, they generally reported they would still begin the research process unaided, remaining loyal to DIY search preferences.

Librarians at our institution have speculated about connections between reference transactions and other services such as library instruction but, until now, have never conducted research to explore these relationships. The interviews allowed us to gather descriptions and insights from students about their behaviors, thoughts, and attitudes when looking for information (specifically when the process becomes challenging) and the experiences of receiving librarian assistance. We believe the findings of our study will assist us in promoting our reference services more effectively to students so that we remain relevant to our users and continue to grow our reference services. Our paper will demonstrate how institutions can use qualitative approaches effectively in order to answer questions that statistics can provoke.

Marc Vinyard is a reference and instruction librarian at Pepperdine University Libraries. He is a liaison to the history, business, and economic divisions. His research interests include business information, information seeking behavior, bibliometrics, and international campus libraries. Marc has written articles in the Journal of Library Administration *and* Charleston Advisor. *Colleen Mullally, assessment librarian for Pepperdine University Libraries, directs and coordinates assessment projects related to resources, services, and spaces. She works to provide evidence that demonstrates the value and impact of the libraries and identify avenues to improve library usage and engagement with the university community. Jaimie-Beth Colvin is the reference, instruction, and*

faculty services librarian at the University of Pepperdine's undergrad library, Payson. She graduated from University of California Los Angeles with a BA in history/art history. She returned to UCLA for her MLIS degree and has work at Payson since graduating in 2013 as the subject liaison for social work, sociology, and theater.

There's Method in the Madness: Understanding the Benefits and the Usage of Usability Methodologies in a Website Life Cycle

Rachael Winterling (University of North Carolina at Charlotte)

The session will focus on the influence and usage of data visualization tools in a usability study. The presenter will discuss the importance of conducting usability testing throughout the development cycle of a product. The session will show the impact usability testing and data visualization had on the website redesign at UNC Charlotte's J. Murrey Atkins Library. In addition, the session will serve as an example for other libraries to assess their current site or future redesign. Other libraries will benefit from this session by gaining knowledge about usability testing and data visualization.

The paper will discuss the usability study that J. Murrey Atkins Library conducted to test, influence, and support the redesign of the website's homepage, navigation, and secondary pages. Four types of usability testing (exploratory, assessment, comparison, and validation) were referred to as the usability coordinator planned and executed the different methodologies throughout the website redesign development cycle. The usability methodologies utilized include card sorting, tasks-based testing, focus groups, first click testing, surveys, and heuristic evaluations. Each methodology produces quantitative and qualitative data to support recommendations to ensure efficiency, functionality, and desirability of the website. In addition, data analytics and visualization tools such as Google Analytics, HTML_CodeSniffer, Optimal Workshop, and Tableau were utilized to support the quantitative and qualitative data. Four different audiences (Teaching Faculty, Library Staff, Graduate Students, and Undergraduate Students) participated in the different methodologies of the study. A library website is an essential gateway to provide information and services to its users; therefore, a site must be efficient, effective, easy to learn, error tolerant, and engaging.

The redesign of the website was decided for two reasons: the site platform needed to be migrated from Drupal 6 to Drupal 7 and prior usability studies and evaluations on the site recommended updates and changes to the site's content and design. After the decision was made to redesign the website, Atkins Library reinstated the Web Advisory Group (WAG), which includes volunteers from every department to discuss the website redesign and other web-related information. The goal of the redesign is to create a patron-centered website.

The usability coordinator used the data from previous usability studies, website audit, a heuristic evaluation, and Google Analytics to initiate the planning process. In addition, the usability coordinator collaborated with WAG and the library's graphic designer/software developer

throughout the study's planning and execution. The usability coordinator gave updates throughout the study, presented on findings for each methodology, and gave recommendations for next steps.

Rachael Winterling is the usability coordinator at UNC Charlotte's J. Murrey Atkins Library. Rachael works within the library's assessment team and is responsible for conducting usability assessments and usability studies at Atkins Library.

Assessment by Design: A Design Thinking Project at the University of Washington Libraries

Jackie Belanger (University of Washington Libraries)

Christine Tawatao (University of Washington Libraries)

Linda Whang (University of Washington Libraries)

Stephen Weber (University of Washington Libraries)

John Danneker (University of Washington Libraries)

Amelia Klaus (University of Washington Libraries)

Linda Garcia (University of Washington Libraries)

Design Thinking is a user-centered approach to the development of services and spaces that is increasingly being used in public and academic libraries. It is a valuable approach for libraries for two key reasons: first, the emphasis on ongoing engagement with users through a variety of qualitative methods (interviewing, observation, etc.) places the focus continually on user experience within and beyond the library; second, the use of that feedback in an iterative process of rapid design, prototyping, and (re)assessment means that this approach can help libraries be more nimble and responsive to user needs. Design Thinking's emphasis on iteration, in which feedback is gathered from users at each stage of the process of creating new services and resources, can be a valuable complement to larger scale assessment projects that demand longer periods of time to gather, analyze, communicate, and act upon data.

The presenters will discuss the basic concepts behind Design Thinking and how they applied this approach for a 2015–16 project at the Odegaard Undergraduate Library at the University of Washington. This pilot project, led by the assessment librarian and the web & user experience librarian, focused on identifying challenges faced by transfer students at the University of Washington. They assembled a small team comprised of graduate students, librarians, and library staff members in order to investigate the question of how the libraries might better serve the needs of transfer students. Beyond this immediate aim, the pilot was also designed to help the team better understand how this approach might be rolled out more widely as part of an overall assessment program. The presenters will discuss the value of Design Thinking in terms of an assessment program that combines both qualitative and quantitative methods and explore how Design Thinking can be used to implement and/or redesign new library services and spaces in a way that

is sustainable and manageable. Presenters will share what they learned (successes and failures) from implementing this project and provide tips for the effective use of this method in academic libraries.

Jackie Belanger is the assessment librarian at the University of Washington Libraries. Christine Tawatao is the web & user experience librarian at the University of Washington Libraries.

Using Informal Learning Spaces and Non-Traditional Methods to Assess Student Success

Sojourna Cunningham (University of Richmond)

Anna Sandelli (University of Tennessee, Knoxville)

"Student success" and the "user experience" are terms that have increasingly gained prominence in conversations around assessment and student support. Understanding these terms not only involves fostering dialogue among librarians and administrators, but also incorporating student voices into discussions surrounding academic libraries and their contributions to the the university community.

Purpose: In 2015, in an effort to incorporate student voices into this ongoing conversation, librarians at the University of Tennessee, Knoxville (UTK) began a longitudinal ethnographic whiteboard study. The study utilized whiteboards to examine the role of the library as a learning community and to investigate how students' experiences, habits, interests, and preferences, both within the library and throughout campus, create and inform this learning community.This lightning talk will summarize and report on the findings of the 2015 ethnographic whiteboard study conducted at UTK, as well as a subsequent iteration of the study conducted in 2016 at both UTK and the University of Richmond (UR).

Design/methodology/approach: The researchers placed whiteboards in public and social spaces throughout their libraries. With input from across the libraries' staff, they created a list of open-ended questions that were then placed on the whiteboards daily during the first iteration of the project and weekly during the second iteration.

Potential Findings: Following data collection, the researchers transcribed and coded the whiteboards based upon four main categories: demographics; habits and preferences; dialogue and community opportunities; and student success. Highlights from the first year and early findings from the second year will be shared.

Practical implications/value: This presentation will focus on the long-term planning required for the project, best practices in communicating internally and externally, lessons learned through multiple project iterations, and findings related specifically to students' understanding of what success means to them and the ways in which libraries support and/or hinder that success.

Sojourna Cunningham is the social science and assessment librarian at the University of Richmond. Sojourna has conducted website usability studies and student focus groups and assisted in the analysis

of LibQUAL+ survey results. She has piloted several assessment research studies, including a longitudinal space assessment and an ethnographic study of student whiteboards. In 2014, she was selected as an American Library Association Emerging Leader and won the ARL Library Assessment Conference Travel Award. She holds an MLS from the University of North Carolina at Chapel Hill and a BA from the University of Pittsburgh. Anna Sandelli is the student success librarian for undergraduate user experience at the University of Tennessee, Knoxville. Her role involves designing and participating in instruction, outreach, and assessment initiatives to assist varied student populations in learning the tools of scholarship while adjusting to life at a four-year research university. She has developed and contributed to several assessment research studies, including a survey of undergraduate rhetoric and composition instructors' practices and perceptions of library instruction and an ethnographic study of student whiteboards. She holds an MSLS and a BA from the University of North Carolina at Chapel Hill.

Building on Success: Increasing the Impact of an In-House User Satisfaction Survey

Emily Daly (Duke University Libraries)

In 2013, Duke University Libraries' staff transitioned from using LibQUAL+ Lite to a user satisfaction survey designed, tested, and implemented entirely by library staff. Staff in numerous library departments were highly engaged in developing and piloting survey questions, analyzing and responding to findings, and participating in follow-up assessment, including focus groups and observational studies.

The collaboratively designed user needs assessment, which aimed to gather feedback about current and future library, services, collections, and spaces, was deemed a success, but we knew there were aspects of the project we could improve when we ran the survey for a second time in the 2015–16 academic year. For instance, we wanted to reach more users, increase our response rate, and focus our efforts on gathering feedback about library services and resources from undergraduate and graduate students. In an effort to create a more valid survey instrument, we worked very closely with student advisory board members and pilot respondents to test the flow of our survey and the format and language of question and answer choices. Based on our low response rate from students in 2013, we adjusted the time of year we distributed the second survey and offered an incentive to respondents. We also changed our recruitment strategy, basing our invitation to participate on behavioral decision making research conducted at Duke University. Finally, we worked much more closely with Duke's institutional research staff during our second iteration and integrated many of their well established and refined survey guidelines into our protocol. These numerous changes in strategy enabled us to design a more robust and focused survey that reached many more students than our initial study did.

This short talk will highlight lessons we learned in our 2013–14 survey project and changes we implemented in 2015–16 that enabled library staff to gather more substantive findings from a more focused user population.

Emily Daly is head of assessment & user experience at Duke University Libraries in Durham, NC. She leads Duke Libraries' website team and conducts user research related to the libraries' website as well as library services, collections, and spaces. Emily also serves as librarian for education and helps coordinate the libraries' Assessment Team and Undergraduate and Graduate Student Advisory Boards. Prior to working at Duke, Emily taught high school English for a short time, served as the teen librarian at Natrona County Public Library in Casper, Wyoming, and worked as a school librarian in Durham's Southern High School. She received her BA in English/secondary education from NC State and her MS in library science from UNC-Chapel Hill.

So Everyday: Interviews with Academic Researchers to Understand Their Day-To-Day

Erin Eldermire (Cornell University)

Neely Tang (Cornell University)

Academic researchers work differently today than they did in the past. They manage increasingly complex work demands, navigate through immense and growing bodies of literature, and form scholarly communities both in their immediate neighborhoods and remotely across vast geographic areas. They have an expectation of instant communication and connection while they struggle to maintain a work/life balance.

If we were to design a library from scratch to support today's academic researcher, what would it look like? How can we adapt our libraries now to best facilitate our researcher's academic lives? To help answer these questions, seven Cornell librarians partnered with Ithaka S&R to study the everyday lives of 21 faculty, graduate, and undergraduate researchers at Cornell University. Study subjects represented a wide range of disciplines, representing the humanities, social sciences, and sciences. Likewise, the librarians involved represented an equally diverse field.

For an entire day—from waking up to going to sleep—subjects documented their whereabouts, whether or not they were engaged in academic activities. Immediately following the day that they documented, two individuals from our group interviewed each subject to delve into their everyday activities and whereabouts. Interviewers were assigned to subjects in an ad-hoc manner, and subject backgrounds of interviewers compared to study subjects were given no heed. As a result, interviewers and interviewees may or may not have any disciplinary background in common. Interviews were transcribed, coded, and major themes emerged to form a picture of the day-to-day for an academic researcher.

The follow-up interviews were rich and full of surprises. Subjects brought their documentation of their previous day, which gave us a framework with which to ask questions. Although the conversational aspect of the interviews meant that the researchers often pointed out broader trends, we made an effort to bring the conversation back to the day that the researcher documented. This enabled us to focus on the details of their day and draw our own conclusions across the individuals that were included in our study.

Although the methodology that we used took concerted effort and time, the outcomes of our research are as dynamic as the lives of the people who we studied. Other assessment methods would not have yielded such a deep understanding of the day-to-day of an academic researcher and may have fallen short in addressing the transforming life of a researcher. This assessment method can be applied to many different populations and user groups to understand the needs, challenges, and variety of people who your library supports.

This paper will detail the methods that we used and will reveal broad similarities and differences between the groups represented in our research.

Before becoming a librarian, Erin Eldermire studied birds and bird behavior as a wildlife field biologist in locations from the Alaskan tundra to the Costa Rican dry forest. After focusing on wildlife research for a decade, she felt a pull to focus more on the research process and on supporting the scientific community in general, which is when she turned to librarianship. In 2014, she received her MLIS from Syracuse University and shortly thereafter melded her animal past with her librarian present when she accepted the position of a veterinary outreach and scholarly service librarian at Cornell University Library.

Erin is an enthusiastic cross-country skier, but in the off-season, you may see her training for her next half marathon. Her interests lie in interdisciplinary connections, breaking down barriers for scholarship and research, and finding the story behind every research project. She currently lives near Ithaca, NY with her husband, Charles, their two young children, and their flock of backyard chickens.

Organizational Issues 3:

Measuring the Effectiveness of a Research Continuing Education Opportunity for Librarians: Institute for Research Design in Librarianship (IRDL), 2014—2016

Kristine Brancolini (Loyola Marymount University)

Marie R. Kennedy (Loyola Marymount University)

This paper reports on efforts to date to assess the impact of a continuing education program, the Institute for Research Design in Librarianship (IRDL), which is designed to help academic librarians improve their social science research skills and increase their research output. In 2013, Loyola Marymount University received a three-year grant from the Institute of Museum and Library Services (IMLS) to create IRDL. The centerpiece of the project is a nine-day workshop on research design each summer from 2014 to 2016. Applicants submit a research proposal and other supporting materials. During the summer workshop, 21 participants revise and refine their proposals and prepare to conduct their study during the coming year. Two instructors, an anthropology researcher and a faculty member from an information school, teach social science research methods and consult one-on-one with participants. Scholars leave the institute with increased knowledge of research methods and skills and with a viable research proposal to be conducted during the following academic year. The co-directors of the institute continue to check

in with participants monthly and other social media mechanisms allow participants to stay in touch with one another for advice and support.

Developed from existing research findings regarding factors that impede and promote the research success of academic librarians, IRDL has been assessed with regard to its ability mitigate negative factors and enhance positive factors. Each year, the investigators have measured the program's effectiveness in achieving these goals. They also measure the research progress of the scholars and work to eliminate barriers to success. The research question is: what are the most important elements in an effective program to teach librarians to conduct social science research and to support their work? IRDL provides valuable data to address this question and the opportunity to refine our program in response to these data.

Preliminary findings were reported at the Library Assessment Conference 2014. This paper will update those findings, reporting the multiple assessments of the annual cohorts from IRDL 2014 and 2015 and the preliminary summative evaluation that will be conducted at the conclusion of the 2016 summer workshop. The study measures: (1) research self-efficacy before and after the summer workshop using a validated academic librarian research self-efficacy scale; (2) the quality of the research proposal before and after the summer workshop; (3) the development of personal learning networks; (4) perceptions of the participants regarding the value of the entire experience and consequences of their participation in the program; and (5) the research output of participants by the end of their IRDL year. It describes assessment measures and efforts to make improvements in the summer workshop and other aspects of the program to maximize the probability that each scholar will complete their research project by the end of their 12-month participation in IRDL, which is the specific outcome of the project. However, this paper will also report on the positive unintended outcomes of IRDL and recommendations for the future of IRDL.

Kristine Brancolini is dean of the Library at Loyola Marymount University. She is principal investigator and co-director of the Institute for Research Design in Librarianship (IRDL). Her current research interests are research self-efficacy and factors contributing to the research productivity of academic librarians.

Proficiencies for Assessment Librarians and Coordinators: Defining a profession

Mark Emmons (University of New Mexico)

Alice Daugherty (Louisiana State University)

Lisa Horowitz (MIT)

Carol Mollman (Washington University)

Megan Oakleaf (Syracuse University)

Zoltán Szentkirályi (Southern Methodist University)

Terry Taylor (DePaul University)

Purpose: The Association of College & Research Libraries (ACRL) charged a Task Force with developing Standards for Proficiencies for Assessment Librarians and Coordinators. In response to a higher education environment with increasing accountability and diminishing resources, library administrators have responded by assigning assessment duties to librarians or creating assessment librarian positions to assess the value of the library and create a culture of assessment. The Standards describe the proficiencies assessment librarians need to be successful in their jobs.

Design/methodology/approach: The Task Force collected proficiencies by brainstorming, conducting a literature review, reaping assessment proficiencies from existing library standards, and surveying assessment experts in librarianship and in higher education. The Task Force applied card sorting techniques to categorize proficiencies.

Findings: The standards comprise 11 broad categories and 52 specific proficiencies. Categories include: (1) knowledge of assessment in libraries and higher education; (2) ethics; (3) assessment methods & strategies; (4) research design; (5) data collection & analysis; (6) communication & reporting; (7) advocacy & marketing; , (8) collaboration & partnerships; (9) leadership; (10) management; and (11) mentoring, training, & coaching.

Practical implications/value: The Standards for Proficiencies for Assessment Librarians and Coordinators allow academic libraries to begin with a common definition of assessment librarian responsibilities. Proficiencies may be used to write job descriptions that define the duties of assessment librarians, assess performance and guide evaluation, and develop professional development programs. Ultimately, the Standards should help librarians demonstrate their library's value to the institution.

Task Force members included: Mark Emmons (chair), Stephanie Alexander, Karen Brown, Alice Daugherty, Lisa Horowitz, JoAnn Jacoby, Carol Mollman, Megan Oakleaf, Terry Taylor, and Zoltán Szentkirályi.

Mark Emmons is the associate dean of public services at the University of New Mexico College of University Libraries & Learning Sciences and a full Professor. He has a BA and MLS from UCLA and a EdD from the University of New Mexico. Mark's scholarly interests are on the impact academic libraries have upon student success and resources for film research. Mark has been very active in ACRL, most recently serving as the chair of the Task Force for Standards for Proficiencies for Assessment Librarians and Coordinators. Alice Daugherty is the collections assessment and analysis librarian at Louisiana State University Libraries. She has worked at LSU Libraries since 2004 and currently serves as the point person for assessment and statistics within the libraries. She has been very active in ALA having served on the ACRL Value of Academic Libraries, the ACRL Task Force on Assessment Competencies, and multiple committee appointments within the Distance Learning Section, where she is currently the section's Past-Chair. Lisa Horowitz is MIT Libraries' assessment librarian, developing, coordinating, and overseeing assessment efforts across the libraries. Additionally, she is the linguistics librarian and a manager in the Liaison, Instruction and Reference Services unit. She has served as chair of the former LLAMA MAES (Measurement, Assessment and Evaluation Section, now Assessment Section) and as a member of the ACRL Task Force on Standards

for Proficiencies for Assessment Librarians. Carol Mollman earned her MBA from Columbia Business School followed by two decades of corporate marketing management in the technology sector. In 2003 she earned her MLIS at University of Kentucky and transitioned into academic librarianship in the Business Library at Washington University in St. Louis. Carol has led the libraries' Assessment Program since 2006. Megan Oakleaf is an associate professor of Library and Information Science in the iSchool at Syracuse University. She is the author of the Value of Academic Libraries Comprehensive Review and Report *and* Academic Library Value: The Impact Starter Kit*. Zoltán Szentkirályi is the director of assessment for the Central University Libraries at Southern Methodist University. Zoltán earned an MS in Statistics from the Ohio State University in 1997 and worked as a statistician for Nielsen TV, Abbott Labs, and as an independent consultant prior to joining SMU Libraries in 2012. He is an active member of the GWLA Student Learning Task Force and Research Project, and also serves on the ACRL Task Force on Standards for Proficiencies for Assessment Librarians. Terry Taylor is the associate university librarian for Teaching, Learning, and Research Services at DePaul University where she oversees reference, instruction, assessment, collections, and outreach. She currently serves on the ACRL Value of Academic Libraries Committee, the LLAMA MAES Using Management Data Committee, and the ACRL Task Force on Standards for Proficiencies for Assessment Librarians.*

Creating Sustainable Assessment Practice through Collaborative Leadership: Informing and Being Informed by Higher Education Leaders

Lisa Hinchliffe (University of Illinois-Urbana Champaign)

Kara Malenfant (Association of College and Research Libraries)

Karen Brown (Dominican)

Meaningful and sustained assessment is best achieved when the academic library takes a collaborative leadership role on campus. Simply developing and implementing assessment for the library is not enough. While the value of collaboration among diverse campus constituents is widely recognized, it is not easily achieved. This paper synthesizes the results of the Assessment in Action (AiA) program that involved over 200 campus teams led by librarians and shares the reactions of executive directors of higher education and research associations to the results.

The library leadership practices that emerged from the AiA projects apply to a variety of institutional settings and can be implemented within the context of different campus priorities. Promising and effective practices are team-based strategies that (1) achieve common understanding about definitions and attributes of academic success, (2) produce on meaningful measures of student learning, (3) keep collaborative assessment activities aligned with institutional priorities, and (4) create a unified campus message about student learning and success. The AiA projects model these types of collaborative leadership approaches to conducting assessment and using the results to create transformative and sustainable change.

During fall/winter 2015, AiA project leaders conducted exploratory interviews with the executive directors of twelve higher education and research organizations to share the results of the AiA

program and gather input for planning next steps. Four themes emerged regarding key trends in higher education related to the assessment of student learning and students' academic experiences that inform library leadership and engagement with campus constituents: 1) use assessment data astutely; (2) envision advocacy as an important role of leadership; (3) investigate the contextual nature of learning experiences; and (4) articulate the role of higher education in national life.

The paper will elaborate on the themes from these conversations and suggest new directions for academic librarians as campus leaders of collaborative assessment activities and for advancing future library initiatives.

Lisa Janicke Hinchliffe is professor and coordinator for information literacy services and instruction in the University Library at the University of Illinois at Urbana-Champaign. She is a past-president of the Association of College and Research Libraries (ACRL), which launched the Value of Academic Libraries Initiative during her presidency. She has presented and published widely on the value of academic libraries and library assessment, evaluation, and innovation, and co-led the ACRL Assessment in Action design/facilitation team. Kara J. Malenfant is senior strategist for special initiatives at ACRL, where she coordinates government relations advocacy and scholarly communication activities and is the lead staff member on the Value of Academic Libraries initiative. She co-led the ACRL Assessment in Action design/facilitation team. Karen Brown is a professor at Dominican University (River Forest, Illinois) in the Graduate School of Library and Information Science and teaches in the areas of assessment, foundations of the profession, literacy and learning, and collection management. She served as project analyst for the ACRL Assessment in Action program.

Space 2:

A Day in the Life: Practical Strategies for Understanding Student Space-Use Practices

Andrew Asher (Indiana University Bloomington)

Donna Lanclos (University of North Carolina, Charlotte)

Maura Smale (City University of New York, City Tech)

Barbara Fister (Gustavus Adolphus College)

Juliann Couture (University of Colorado, Boulder)

Mariana Regalado (City University of New York, Brooklyn College)

Jean Amaral (Borough of Manhattan Community College, CUNY)

Sara Lowe (Indiana University Purdue University Indianapolis)

Research on students' educational experiences demonstrates the importance of a holistic understanding of the complexity of students' lives to developing university programs, services, and resources that effectively address students' needs. While investigating the local expression of student "taskscapes"—the ensembles of interrelated social activities that take place across space and time—at a single university provides critical information about students' lived experience, few studies have sought to conduct cross-institutional comparison and analysis.

The "A Day in the Life" study was therefore designed to build an ethnological argument about the experience of higher education in the United States through a multi-sited ethnography of students at eight different institutions of higher education. These universities were chosen to represent not only a cross-section of different types of higher education institutions but also the diversity of the US student body.

Participating students were asked to chart the course of their movements during an academic day by responding to text messages sent to their mobile phones by a research project telephone system. These responses included the times and places the student visited and a brief description of their purpose for going there or the activity they were participating in. After the data collection was complete, the research team created a map of each student's day that was used to guide an interview about the student's daily tasks and activities, the spaces and locations in which the student conducted academic research and day-to-day work, and the student's overall educational experience.

This data enabled the research team to make rigorous comparisons about how the student experience varies across different institutional contexts and to uncover differences associated with demographic variables including age, ethnicity, and economic class, as well as university environments such as a rural, urban, or suburban location. In particular, this paper examines the effects of commuting time and distance on students' academic activities, the relationship of residency to campus life, and the centrality of libraries as task hubs between other locations and activities, and explores ways in which libraries can use this information to address the specific needs of their student bodies.

Andrew Asher is an anthropologist and the assessment librarian at Indiana University Bloomington, where he leads the libraries' qualitative and quantitative assessment programs and conducts research on the information practices of students and faculty. Asher has written and presented widely on utilizing ethnography in academic libraries, including the co-edited volume, College Libraries and Student Culture *(ALA Editions, 2012), and is currently writing a methodological handbook for librarians on developing and implementing anthropological and other qualitative research methods. Donna Lanclos is an anthropologist working with ethnographic methods and analysis to inform and change policy in higher education, in particular in and around libraries, learning spaces, and teaching and learning practices. She is associate professor for anthropological research at the J. Murrey Atkins Library at UNC Charlotte. Juliann Couture is an assistant professor and interdisciplinary social sciences librarian at the University of Colorado Boulder. Her research interests include studying the student experience to improve academic libraries and serves as coordinator of the CU Boulder University Libraries' User Experience working group. Jean Amaral is the outreach librarian at*

Borough of Manhattan Community College. She is currently engaged in several research studies, including projects that address student and faculty information needs and seeking, use of open educational resources, future libraries, student technology use, and servant leadership. Amaral also presents on contemplative pedagogy and mindfulness in education, the scholarship of teaching and learning, and learner-centered teaching. Sara Lowe is currently educational development librarian at Indiana-University Purdue University Indianapolis. With close to ten years of experience in academic libraries, she has published and spoken nationally on topics ranging from assessment to instruction to collection development.

Lead Users: A Strategy for Predictive, Context-Sensitive Service and Space Design

Ameet Doshi (Georgia Institute of Technology)

Elliot Felix (brightspot strategy)

Many research libraries are faced with the conundrum of dealing with declining print usage, deteriorating infrastructure, and greater demand by users for new spaces, technology, and services. In response, libraries are reimagining their spaces and services to advocate for renovation. Given that large-scale capital projects require years of planning, design, and construction, how do research libraries anticipate and properly align the architectural program and services with user needs when construction is complete? More importantly, how can libraries create locally-specific solutions rather than just rely on general best practices?

To answer this question at Georgia Tech, we hypothesize that by using design research techniques to engage "lead users," libraries can understand how emerging behaviors today will become the mainstream tomorrow. Using lead users to predict the future has foundations in the work of Everett Rogers who determined that new ideas diffuse from innovators, to early adopters, to an early majority, to a late majority, to laggards. Furthermore, Eric Von Hippel uncovered that many innovations are developed by lead users themselves; for instance, the "Camelbak" water bottle was created by an marathoner (also an EMT) who taped an IV bag to his shirt to facilitate hydration without stopping. Design research methods such as shadowing observations, role play, and prototyping are also well-documented in the work of Jane Fulton Suri, for example.

The Georgia Tech Library partnered with brightspot strategy to apply a method of working with lead users to design programs and services. The methodology included: engaging library user advisory boards, interviewing and shadowing lead users, conducting interactive workshops with user constituencies, and periodic validation workshops with students, faculty and senior leadership.

Our findings suggest the following:

- As researchers become more specialized, they embed into silos; bringing them out requires effort through organizing events and developing common language.
- Mastering hardware and software skills is as important as mastering content.
- Physical and digital tools and spaces must work together seamlessly.

- Students should be able to apply their knowledge across disciplines, hence organizing library experts by traditional disciplines may make less sense going forward.
- Many of the barriers to research are not content or access issues but are administrative hurdles and complexity. These can be overcome with someone to help researchers navigate things like grant administration, research certifications, patents and copyright, and publication strategy.

Our recommendations to address these findings included architectural program and service possibilities (such as a "teaching studio" and spaces to support digital scholarship, or "research navigators" to help researchers navigate administrative complexity) that were then validated with students, faculty, library staff, and leadership through follow-up surveys, interviews, and workshops. This approach has resulted in a program and service design that attempts to anticipate user expectations for spaces and services to support research, teaching, and learning in 2020 when the Georgia Tech Library project is complete.

Attendees at this engaging session will gain practical understanding about this unique research method, learn how they can apply it on their campuses, and recognize the limitations of this predictive approach.

Elliot Felix leads and founded brightspot, a strategy consultancy that guides organizations to their future, helping them transform their spaces, service offerings, and organization to improve the experience of their users and staff. He is a strategist, facilitator, and sense-maker who has directed projects for leading companies, non-profits, cultural institutions, colleges, and universities including Carnegie Mellon University, Georgia Tech, Google, NC State University, New York University, New York Public Library, SFMOMA, the Smithsonian Institution, University of Virginia, University of Michigan. He frequently writes and speaks about design strategy. Solving space, operational, and organizational problems gets him up in the morning. Thinking about the future of work and learning keeps him up late.

From Data to Development: Using Qualitative Data to Create New Ideas and Ssolutions

Åsa Forsberg (Lund University)

Ingela Wahlgren (Lund University)

Our paper describes our process to create a decision basis for development based on the users' experiences of our library space and our analysis of this evidence. We will especially focus on how we worked with the collected data to understand our users' needs and to create ideas and solutions for our library space.

The Library Services Unit at the Lund University Library consists of five staff members and works with library space, reference services, and teaching activities. During autumn 2015, we conducted a large qualitative user study on our library as a learning space. The purpose of the study was to find evidence regarding user needs in order to be able to make well-informed decisions for a

development project. The study incorporated several different methods. Some were of the UX variety: cognitive maps, touchstone tours, and observations. In cognitive maps, users are asked to draw a map of the library from memory; they only have six minutes to do so, and analysis is based on the components/places included or omitted in the maps. A touchstone tour is a walk-and-talk with a user, during which the user performs a typical task in the library. Other methods were focus groups and individual interviews. We also analysed the comments in a recently conducted LibQUAL+ survey and from a graffiti board that we placed in the library.

We dedicated two days to analysis of the collected data and to ideation. The method used for analysis was affinity mapping, where you extract keywords from the data and cluster them. Then we used the method Six—Eight—Five to generate ideas. Six—Eight—Five is a structured brainstorming method, where the participants during five minutes individually write six–eight ideas on post-it notes and then post them on a board. This process is repeated several times; each time the participants may generate new ideas or further develop their own or their peers' ideas. The ideas were sorted using the How-Now-Wow method, in a matrix according to if they are conventional and easy to carry out (Now), innovative and difficult to realize (How) or innovative and easy to realize (Wow). Based on the How-Now-Wow matrix, we wrote a three-year development plan for the library learning space to be presented to library management in the beginning of February 2016.

The project was successful in that it gave us many insights into how our users perceive the library space and their views and opinions on a functional learning space. The findings covered many aspects, including (but not restricted to) navigating/wayfinding/understanding the different functions in the library, the importance of clean bathrooms, the opinions on access to food and drink, and the criteria for a good study space.

If the development plan is carried out, we plan to follow up this study with frequent smaller qualitative user studies in order to evaluate changes and create interactivity with our users.

The paper will discuss the usefulness of the selected methods to understand students' and researchers' needs and requirements when using the library in a learning context and the evidence of the user studies; how do users perceive the Lund university library and what are our conclusions and actions to meet their expectations?

Åsa Forsberg is a librarian and is head of the library services unit at the University Library in Lund. Ingela Wahlgren holds a MLIS and works at the University Library in Lund in the library services unit.

Space: Describing and Assessing Library and Other Learning Spaces

Robert Fox (University of Louisville)

Steve Hiller (University of Washington)

Martha Kyrillidou (QualityMetrics, LLC)

Joan Lippincott (Coalition for Networked Information)

Colleges and universities are investing in revamping their spaces to meet student and faculty needs. As collaborative, shared, and digital library collection development matures, the print record that occupies library shelves representing the intellectual works of our students and faculty is utilized less frequently compared to the digital. The miles and miles of open physical shelving housing print books and journals that have occupied prime real estate on campuses to facilitate access to the print record are rethought, reimagined, and redesigned. Shared and/or remote physical storage houses our less frequently used print record. The prime real estate of library space is conceptualized as an environment where our students and faculty physically occupy in greater numbers with greater frequency and intensity in order to achieve increased inspiration, enhanced productivity, and improved learning and research outcomes. The need to capture the transformation and evolution of library spaces is an important driver in this day and age.

Classrooms and other spaces are also transforming in the academy to be more effective conduit for student learning, understand research, graduate studies, and faculty research.

The presenters will discuss a variety of approaches that organizations are undertaking ranging from the ARL Facilities Inventory to the FLEXSpace effort to the Learning Space Rating System at ELI/EDUCAUSE. The team will present results from the ARL Facilities Inventory and lessons learned to date.

Short Description: Find out what data are useful to university and library leaders and directors for benchmarking, longitudinal analysis of spaces, and what kinds of innovative renovations and construction projects are being reported. How can we capture the value of library spaces and their contributions to student and faculty outcomes, and how can library space assessment be woven into campus wide projects?

Outcomes: Recognize the linkages between library space assessment and university-level student and faculty outcomes through campus wide assessment efforts in order to establish the library as a strong collaborative partner.

Bob Fox has been dean, University Libraries at the University of Louisville since 2011. Prior to that, he was associate dean for the Georgia Tech Libraries from 2005–2011. He serves as chair of the ARL Assessment Committee and is a 2010 graduate of the ARL Leadership Fellows program. Bob's publications and presentations have been in his research interests of library facilities, assessment, and user engagement. Steve Hiller is director of assessment and planning at the University of Washington Libraries. He has been an active member of the library assessment community for nearly twenty five years, publishing and presenting widely during that period. Martha Kyrillidou is a consultant in library assessment, a Research Associate at the iSchool at the University of Illinois, Urbana-Champaign, and teaches Research Methods at Kent State University. For 22 years she led the ARL assessment programs. Joan Lippincott is the associate executive director of the Coalition for Networked Information (CNI), a joint program of the Association of Research Libraries and EDUCAUSE. She writes and speaks about learning spaces and assessment, focusing on how library

programmatic elements in new types of physical environments can enhance teaching, learning, and research.

Concurrent Session 5

Special Libraries

Measurement and Metrics for US Presidential Libraries and Museums

Wanda Dole (Abraham Lincoln Presidential Library and Museum)

Jack Robertson (Thomas Jefferson Foundation)

Although there are established measurements and metrics for academic libraries, there are few, if any, for presidential libraries, especially hybrid presidential libraries. The presidential library system, which is part of the National Archives and Records Administration (NARA), administers 13 libraries documenting the lives and work of US presidents since Herbert Hoover (1929–1933). Libraries and museums documenting the lives of earlier presidents are housed and administered in a variety of ways— by foundations, universities, state historical libraries, state governments. This presentation examines and compares the characteristics and current practices of NARA and non-NARA presidential libraries and attempts to develop guidelines and metrics for measuring them. It examines in depth the unique characteristics and challenges of two non-NARA presidential libraries: the Abraham Lincoln Presidential Library and Museum in Springfield, IL, and the Thomas Jefferson Foundation in Monticello, VA.

Wanda Dole served as the interim director of library services at the Abraham Lincoln Presidential Library and Museum from January to June 30, 2016. She is a library consultant and the emeritus dean of libraries and professor, University of Arkansas at Little Rock and has served in administrative positions in large and mid-sized academic libraries. Her research interests include strategic planning, measurement and evaluation and professional ethics. She edits a column on strategic planning and assessment in the Journal of Library Administration*. Jack Robertson has been foundation librarian at Monticello's Jefferson Library since 2000. He served as director of the University of Virginia's Fiske Kimball Fine Arts Library, 1987–2000, and also worked stints at the National Gallery of Art Library and Vanderbilt University's Arts Library. He has taught courses at Vanderbilt, University of Maryland, and University of Virginia.*

Assessing the Use of Special Collections: Case Studies from Harvard's Houghton Library

Emilie Hardman (Houghton Library, Harvard University)

Houghton Library, Harvard University's primary rare books and manuscripts library, is a notably active site of scholarship and public engagement with its diverse and wide-ranging collections. Though it may be an outlier in terms of scale of operations and holdings, Houghton's engagement with its use and user data may still serve as a series of useful case studies for repositories of special

collections materials, both big and small. With holdings that vary from papyri fragments to 20th century archival collections stretching beyond 200 linear feet, accounting for the use of our collections is not always a straightforward situation, and it is easily complicated further by considering the various kinds of use and many types of users who engage with our collection materials.

Following implementation of Aeon, a special collections-focused circulation system, in 2010, Houghton began developing questions for the newly assembled store of data collected. Through Aeon we have amassed a huge amount of (more or less) standardized data about who our users are, when they come, how long they stay, and what collection materials they use. With this data now at our fingertips, we have been working to learn about and respond to our patrons and to the needs of our collections by creatively examining data captured by Aeon. This has taken shape in ways big and small, with projects stretching over the years, annual and monthly reports consistently contributing to our understanding of users, and on-the-fly forays to answer questions in the moment. Further, our engagement with data collected passively by Aeon, has truly inspired the coveted "culture of assessment."

Houghton has explicitly looked to other tools that can similarly gather information we will be able to bring an analytic eye toward, prominently the Special Collections and Archives Class Request Tool which is in production throughout Harvard and which not only collects data passively, but also initiates class assessments by professors as a function of closing completed classes. Additionally, Houghton has engaged in the development of other instruments to ask more about user experience, including Houghton's first user survey, as well as archival user experience focus groups and tests.

This presentation will explore the range of practices, such as cataloging, preservation, user experience, instruction, and collection development, that are informed by our analysis of use and user data. Suggestions will be proposed for implementing and building tools to suit the needs of special collections data collection, as well as querying and sharing data. Problems particular to special collections will be considered, and specific findings will be shared from our many and varied assessment initiatives.

Emilie Hardman is Houghton Library's research, instruction, and digital initiatives librarian. She holds an MLS from Simmons Graduate School of Library and Information Science with a concentration in archival management, and MA in sociology from Brandeis University, where she also completed her doctoral coursework.

Special Collections Assessment Efforts at ARL

Jackie Dooley (OCLC)

Martha Kyrillidou (QualityMetrics, LLC)

Since 2011–2012, ARL has collected annual data on special collection expenditures, staffing, and activities, supplementing earlier assessment efforts. OCLC Research has analyzed the data to

discern patterns. We propose in this short paper to describe what these data tell us, in conjunction with a few qualitative special collections impact stories ARL has collected from member libraries. Furthermore, we will review the data in conjunction with data collected earlier by OCLC Research and ARL to discern patterns. Finally, we will propose useful ways of engaging with special collections assessment efforts in the future.

References

ARL Statistics (annual data compilation) 2011–2016. Washington, DC: Association of Research Libraries, annual.

Jackie Dooley and Katherine Luce. *Taking our Pulse: The OCLC Research Survey of Special Collections and Archives in the United States and Canada.* Dublin, OH: OCLC Research, 2010.

Jackie Dooley is a program officer at OCLC Research. As an expert in special collections and archives, she was a member of ARL's Transforming Special Collections in the Digital Age Working Group for nine years. She conducted the OCLC Research survey of special collections and archives that was published as Taking Our Pulse in 2010, updating ARL's similar 1998 survey.

Martha Kyrillidou, is a consultant in library assessment, a research associate at the iSchool at the University of Illinois, Urbana-Champaign, and teaches Research Methods at Kent State University. For 22 years she led the ARL assessment programs.

Analytics/Value:

Graduate in Four Years? Yes, the Library Can Help with That.

Jan Fransen (University of Minnesota Libraries)

Kate Peterson (University of Minnesota Libraries)

Kristen Mastel (University of Minnesota Libraries)

Shane Nackerud (University of Minnesota Libraries)

Krista Soria (University of Minnesota Office of Institutional Research)

Since Fall 2011, our library has been collecting usage data for several types of library interactions: loans, digital use, public workstation use, online reference interactions, and instruction. We have found positive correlations between first year students' use of the library and a variety of success measures from GPA to academic engagement.

By the spring of 2015, many members of that first cohort had graduated. Matching the data from their first year with information on whether they had graduated, were still active students, or had withdrawn, we hoped to determine whether there was a correlation between library use in the first year and graduation within four years, as well as whether there was a correlation between library use in the first year and retention at the four year mark (as opposed to withdrawal).

At the same time, we chose to apply a different statistical technique, Propensity Score Matching, in this analysis. Our previous work used regression analyses to account for factors that might also affect student outcomes. Such analysis is more robust than simply comparing one group's GPA to another's, but Propensity Score Matching allows us to construct "control" and "treatment" groups after the fact that are very similar to each other, further reducing the bias inherent in any work where members of the group self-select their membership.

Using Propensity Score Matching and the 2011 cohort, our results suggest that using the library at least one time in the first year of enrollment significantly increased the odds that a student would graduate in four years or remain enrolled after four years as opposed to withdrawing from the university. In fact, students who used electronic resources during their first year were almost twice as likely to graduate in four years than those who did not.

Janet (Jan) Fransen is the service lead for researcher and discovery systems for University of Minnesota Libraries in the Twin Cities. In that role, she works across libraries divisions and with campus partners to provide library systems that save researchers' and students' time and improve their access to the materials they need to get to their next steps. Kate Peterson is the undergraduate services librarian at the University of Minnesota in the Twin Cities. She works with the Writing Studies department including teaching new students about the libraries in first year writing and orientation. She previously worked at California State University-Long Beach, St. Cloud State University and Capella University. Kristen Mastel is an outreach and instruction librarian at the University of Minnesota Libraries. She is the liaison to the College of Continuing Education, Extension, and Agricultural Education. As an instructor coordinator she is constantly striving to increase the effectiveness of her colleagues' teaching. Currently, one of her focus areas for research is how to assess outreach activities. Shane Nackerud is the technology lead for libraries initiatives at the University of Minnesota Libraries. Shane is working on finding new ways of integrating open access and library content into courses and curricula, as well as investigating new publishing and content creation models. Shane's research interests include library use assessment, libraries and e-learning, resource integration, academic publishing, and web design. Dr. Krista M. Soria works as an analyst with the Office of Institutional Research at the University of Minnesota, Twin Cities. Dr. Soria is interested in researching high-impact practices that promote undergraduates' development and success, the experiences of first-generation and working-class students in higher education, and programmatic efforts to enhance college students' leadership development, civic responsibility, and engagement in social change. Dr. Soria has worked for more than a decade in higher education, serving as an admission advisor, TRIO education advisor, academic advisor, and adjunct faculty for the University of Minnesota, Hamline University, St. Mary's University of Minnesota, St. Cloud State University, and the University of Alaska Anchorage.

Academic Libraries and Student Retention: The Implication for Higher Education

Mary O'Kelly (Grand Valley State University)

Attracting and keeping students is a high priority in higher education and for some time academic libraries have examined some of the ways they might be contributing to student retention. Some

have found a relationship between library instruction and retention, others have found it between library use and retention. This paper takes a step back from the discrete factors correlated with retention and instead looks at the possible faculty effect on library use. It will review the existing literature on academic libraries and student retention and will present the role of the classroom professor in driving library use. In other words, the library—and all its spaces, services, and resources—is not causing retention but rather is a conduit by which effective teaching faculty direct their students to the library as a critical academic support service.

The high-impact educational practices identified by George Kuh (2008) and the Association of American Colleges and Universities include several activities that are directly or indirectly supported by libraries. Many academic libraries provide first-year seminars or workshops. They collaborate with other campus support services to offer co-curricular programming and common intellectual experiences. They support writing-intensive courses that have high levels of information literacy content through direct instruction and librarian consultations. They offer mentoring and resources for undergraduate research projects. They also send librarians into capstone classes for in-depth instruction in advanced library research.

Each of these practices, often led or initiated by teaching faculty, drive student use of the library. Student use of the library is correlated with student retention in several studies. Faculty influence whether a student uses the library, whether through direct assignments or co-curricular programs. Therefore, as this paper proposes, faculty engagement with the library is a contributing factor to student retention and is a hidden best practice.

Academic libraries are part of a complicated higher education system, yet much of our library assessment is focused inside the walls of the library. This presentation will encourage assessment librarians to design collaborative assessments related to student retention that deeply explore the relationship among teaching faculty, academic libraries, and student retention.

Reference

Kuh, G. D. (2008). *High-impact educational practices: What the are, who has access to them, and why they matter.* Washington, DC: Association of American Colleges and Universities.

Mary O'Kelly, MLIS, is an associate librarian and head of instructional services at Grand Valley State University in Allendale, Michigan. She is responsible for developing a framework for assessment of library instructional efforts, establishing standards for teaching, and coordinating continuing education programs for library faculty instructors. She has written and presented on library instruction and student retention, assessment of peer-to-peer student research consultations, training and development of peer research consultants, and professional development for faculty and staff.

What Do We Want to Know: Completing an Action-Oriented Research Agenda

Debbie Malone (DeSales University)

Lynn Silipigni Connaway (OCLC)

Alan Carbery (Champlain College)

The ACRL Value of Academic Libraries Committee is investigating and writing a research agenda that is both an update on progress since the 2010 "Value of Academic Libraries: A Comprehensive Research Review and Report" (www.acrl.ala.org/value). and a look ahead at important areas where more work needs to be done. We want to move the conversation to more directly communicate library value and library contributions to student success in language that resonates with institutional and higher education priorities.

Our work began with an extensive analysis of higher education publications and associations to identify trends and predications of future needs. We reviewed numerous related ACRL resources and publications and an unpublished gap analysis done by the VAL Committee in 2014. After the common themes in the literature were identified, other documents, such as the outcomes associated with the successful Assessment in Action (AiA) cohorts (http://www.ala.org/acrl/AiA#summaries) and the varied research that has been highlighted in the "Valueography" compiled by the ACRL Value of Academic Libraries Committee (http://acrl.ala.org/valueography/) were analyzed.

We were heavily influenced by a small group of ACRL leaders who conducted in-depth conversations with external experts from twelve higher education associations to identify key topics being addressed by the organizations and their views on the larger national conversation about factors that impact student learning and success. Several general themes emerged from these conversations, and they helped shape design of our research agenda.

The agenda is focused on a series of important questions identified by the committee's prior work. How does higher education contribute to an individual's lifelong learning for careers and general life satisfaction, and where can libraries make a contribution? How do students achieve general learning outcomes across disciplines and through experiences in and out of the classroom and what role do libraries play in these processes? Higher education institutions need individuals who can use appropriate data in collaboration with others on their campus. How can librarians play leadership roles in this area? Significant effort within higher education has been focused on collecting and interpreting data, but what is the yield in student learning improvements? What roles can librarians play in leveraging existing research to make improvements in student achievement on their campuses?

Within each of these areas, the research agenda provides key inquiry questions, options for responding to the questions including study design with affordance and limitations as well as best research practices from the AiA cohorts' work.

Prior to publicly releasing the final ACRL action-oriented research agenda, the ACRL Value of Academic Libraries Committee is seeking feedback on the draft to date during this session.

Debbie Malone is the library director at DeSales University and is the current co-chair of the ACRL Value of Academic Libraries Committee. She has also served on the ACRL Board of Directors from 2016-2010, and as chair of the ACRL Liaisons Coordinating Committee. She is a past liaison to the National Resource Center for the First-Year Experience. Lynn Silipigni Connaway, PhD, is a senior research scientist at OCLC Research. She leads the User Studies Activities at OCLC Research and was the chair of the ACRL Value of Academic Libraries Committee. She has authored numerous publications and done presentations on the assessment and development of user-centered library services.

Organizational Issues 4:

Using a Social Network Analysis to Inform Library Communication Patterns

Holt Zaugg (Brigham Young University)

Social networks indicate how well information is able to move throughout an organization unimpeded. It offers insight into gaps in communication patterns that indicate in bottle-necks or isolated individuals or departments. Furthermore, it may be used to identify key people to determine how they facilitate or hinder communication within the library. Finally, the Social Network Analysis, may indicate groups of people or departments who should be situated closer to one another to facilitate essential interactions to improve library service delivery. This paper will discuss the efforts to conduct a Social Network assessment within a large academic library. It discusses preparatory steps and pitfalls that may need to be considered when conducting the assessment. It will highlight preliminary findings from the analysis. It should be noted that, as of submission, data collection is still underway for this assessment.

Holt Zaugg completed his PhD in Educational Inquiry, Measurement, and Evaluation from BYU. He has extensive experience in design, instruction, teacher PD, and training. Holt is the assessment librarian at the Harold B. Lee Library at BYU where he consults on and conducts a variety evaluations of library services.

So You Developed the Framework for Liaison Work—What's Next?

Yelena Luckert (University of Maryland Libraries)

This paper will discuss the implementation of an assessment program for subject specialists/liaisons at the University of Maryland. The framework for the subject specialists/liaisons at the University of Maryland was put in place in 2014. 2015 was the first full annual review cycle under the new guidelines. The assessment program includes procedures for assessing the liaisons' research services, collection development activities, teaching and learning services, scholarly communications and outreach and engagement activities. This paper will discuss practical steps towards implementation, outcomes, challenges and successes of the new

program. It will also examine new services and initiatives to address the changing higher education environment and to better demonstrate the value of liaisons within their own institutions.

*This paper is a follow up to the paper presented at the 2014 Library Assessment Conference, "Creating and Implementing a Liaison Assessment Program," by Gary White and Daniel C. Mack, University of Maryland.

Yelena Luckert is the director for research and learning at the University of Maryland Libraries. She is currently in charge of liaison services at her library. She has been actively involved with the Association for Jewish Libraries, including serving on its Council for many years. She has also been much involved in Slavic librarianship.

Reskilling for the Digital Humanities: Assessing Outcomes of the "Developing Librarian" Program

Nisa Bakkalbasi (Columbia University in the City of New York)

Barbara Rockenbach (Columbia University in the City of New York)

John Tofanelli (Columbia University in the City of New York)

In the spring of 2012, the Columbia University Libraries (CUL) Humanities & History Division embarked upon a two-year experiential training program with the goal of acquiring new skills and methodologies that would enable staff to become more effective collaborators on digital humanities projects. The training program was project-based; and it was inspired by "Re-skilling for Research" (RLUK) and "Research Support Services for Scholars: History" (Ithaka S+R). All participants worked together in teams to create a digital archive and exhibition that would become a permanent public resource. Through practical training units that fostered individual/group learning and skills development, we paralleled the ways researchers engage with new tools and methodologies. Practical exercises were focused on individual contributions to a common and ongoing project of documenting the history of Morningside Heights and its environs 1820–1950. Our aim was to have a project sufficiently engaging and limited in scope to allow the group to succeed in its goal.

At the 2013 Northumbria Conference, we presented the assessment design for this training program and results at midpoint of the study, "Re-skilling for Research Support in Digital Humanities." At this conference, we would like to present final results from data collected using all three instruments to assess the skills, behaviors, and outcomes of the program.

The design for assessment methodology grew out of our evolving digital humanities services. We are expanding our service offerings in digital humanities across campus in order to provide more effective support for the emerging information needs of humanities researchers at the Columbia University. In order to measure the success of this service development, we stated three corresponding objectives in specific and measurable terms:

1. Learn tools and methods that support the emerging research needs and trends in the humanities;
2. Create a more interesting and engaging work environment for liaison librarians; and
3. Engage effectively with the humanities research community across the university.

Following are the three methods/instruments we have used to measure all objectives:

1. "Explicit Self-Reflections" were used to assess what participants learned in each training unit.
2. "Utrecht Work Engagement Scale (UWES)" measured how liaison librarians felt about their work before and after the training program.
3. "Skill Set, Knowledge & Attitude Assessment" was administered at the end of the training program to measure effectiveness of the training program as a whole. In "Skill Set, Knowledge & Attitude Assessment" participants scored themselves for each skill set and validated their scores by discussing them with one of their peers.

In this paper, we will share the results of all three instruments, including the self reflections, the before and after of the "Utrecht Work Engagement Scale (UWES)" baseline questionnaire, and the "Skill Set, Knowledge & Attitude Assessment" instrument. The presentation will conclude by discussing how a formal assessment plan, directly tied to the learning outcomes, can be useful in assuring that libraries effectively measure and report progress and outcome of training and development programs. Such an assessment plan would have the benefit of distributing accountability among library administrators and training program participants.

Nisa Bakkalbasi is the assessment coordinator at Columbia University Libraries. Prior to joining Columbia University, Nisa was the director of planning and assessment at James Madison University, and held previous positions at Yale University Libraries. She holds an MS in applied statistics and an MS in library and information science. Barbara Rockenbach is the interim associate university librarian for collections & services at the Columbia University Libraries. Prior to this position, Barbara was the director of the Humanities & History Libraries at Columbia for five years and held positions at Yale University Libraries and JSTOR. John Tofanelli is the librarian for British and American history and literature at Columbia University Libraries. His interests include textual criticism and the future of print materials in libraries.

A Comparison Study of the Perceptions, Expectations, and Behaviors of Library Employers on Job Negotiations as Hiring Employers and as Job Seekers

Leo Lo (Old Dominion University)

Jason Reed (Kansas State University)

A literature review reveals articles encouraging applicants to negotiate and tips on how to negotiate, but no comprehensive study on the prevalence of librarian negotiations and if different demographic groups are more likely to engage in negotiation. Only when broadening the search to other fields can researchers investigate how different demographic groups engage in negotiation.

This research fills a gap in the library literature and compares the results to similar studies in other disciplines.

The research question of this study was to investigate the perceptions, expectations, and behaviors of library employers on job negotiations as both employers and as job seekers. In addition to demographic data, including gender, age, position, and type of library respondents work in, the survey also collected data on respondents' reasoning of why they did or did not withdraw a job offer, their level of comfort in negotiating, and how much flexibility they believe there was for negotiating job offers. The research question was addressed through quantitative analyses of responses to multiple-choice, and qualitative analyses of responses to open-ended questions.

Out of 462 total respondents, 403 completed the survey. The high response rate combined with the research scope result in one of the most comprehensive studies on this topic.

130 respondents (29%) were in a position to handle one or more job offer negotiations as an employer in the last five years. The majority of the employers have never withdrawn a job offer because of an unsuccessful negotiation with the job candidate (71%, n=77). 13% (n=14) have only withdrawn a job offer once; while 17% (n=19) have withdrawn job offers more than once.

More respondents who have had job negotiation(s) as employers felt more comfortable with the negotiation process, and fewer of them felt very uncomfortable. Chi-square statistical analysis shows that there is a statistically significant relationship ($X2$ (4, N=405) =0.00, p=.05) between whether the respondent has handled one or more job offer negotiation(s) as an employer in the last 5 years and how they rate their level of comfort with the negotiation process.

Data indicate that there are differences in the perception of job offer flexibility from the employer's perspective and from the job seeker's perspective, from the same population. As **employers**, respondents who currently hold dean level positions (n=55), 32.73% (n=18) believed that there is "a lot of flexibility" for negotiating; 45.45% (n=25) thought that there is "some flexibility" for dean level positions. As job seekers (n=44), the percentage of respondents (who have negotiated job offers as employers and who currently hold dean level positions) who selected "a lot of flexibility" dropped from 32.73% to 11.36% (n=5), while the percentage of respondents who believed there was "some flexibility" increased from 45.45% to 63.64% (n=28).

Negotiation is a valuable leadership skill. The data of this study provide insight for professional development for library leaders.

Leo Lo is a creative problem solver and a motivator. He joined Old Dominion University in 2016 as associate university librarian for services to develop a culture of assessment, engagement and innovation. Previously Lo was the head of McLure Education Library at University of Alabama, and the research & development librarian at Kansas State University Libraries. Lo holds an MLIS from Florida State University, and a MFA in screenwriting from Hollins University. Lo's research includes the use of narrative in education, communication, and leadership; library assessment; and talent management. Jason Reed joined Kansas State University in 2013 as a faculty and graduate services librarian. Reed is currently the head, Library User Services at Kansas State University. Reed holds an

MLS from the University of North Carolina Chapel Hill. Reed's research includes professional development for librarians, role of technology in library land, assessment, and job search process from discovery to offer acceptance.

Building Library-Wide Engagement in Assessment from Scratch

Beth Martin (University of North Carolina at Charlotte)

Anne Cooper Moore (University of North Carolina at Charlotte)

Rachael Winterling (University of North Carolina at Charlotte)

This session will discuss building an assessment program from the ground up in a academic, research library. As recently as three years ago, instruction assessment and required statistical reports were the only types of assessment performed. Large scale assessments such as MISO (2013) and LibQUAL+ (2003) were performed sporadically, but the library did not have the interest, expertise, or sufficient personnel to analyze the data beyond the packaged reports. The library had an anthropologist and a usability assistant whose activities were directed outward to the campus as a whole and were not considered possible avenues to assess library services and collections. Three years ago, a librarian who was interested in assessment was hired for a different position and was encouraged to use some of her time to analyze already-collected data. She analyzed the reports and conducted an audit of the metrics that had been collected over the years. The data audit attracted attention to the possibilities of assessing services and collections, which led to investigating Tableau for visualization.

A new dean of the library (2015) wanted to expand the role of assessment to a department that could coordinate large scale assessment, consult with departments on their assessment needs, and demonstrate the impact of the library on student retention and success. The dean built a department with expertise in both quantitative and qualitative methods. The department consists of a full-time assessment librarian, an anthropologist, a usability coordinator, and an assessment assistant. An Assessment Committee was also appointed with volunteer representatives from areas across the library. The assessment department and committee bring their specialized knowledge and assessment expertise to bear on assessing library services, programs, collections, spaces, and operations and use Tableau for data visualization. The group performed the LibQUAL+ Lite survey (fall 2015), to investigate patron perceptions of our spaces to inform further renovations, and is partnering with Student Affairs to analyze our data with the National Survey of Student Engagement to better understand how the library impacts student retention and success. This is just the start of building a holistic culture of assessment that not only demonstrates large-scale impact, but also addresses the contextual issues that affect our campus and library. In the space of three years, the library has moved from a lack of understanding of the concept of assessment to applying an assessment lens to all library activities. Other libraries will benefit from learning how library-wide engagement in assessment can be built from scratch.

Beth Martin is the head of assessment at UNC Charlotte's J. Murrey Atkins Library. Her interests include understanding the library impact on student retention and success, data visualization, and

assessment culture. Anne Cooper Moore joined UNC Charlotte as dean of the J. Murrey Atkins Library in June 2015. Previously she served as dean of library affairs at Southern Illinois University (SIU) Carbondale. Her interests include shaping facilities, collections, and services that meet the evolving needs of students, faculty, and other constituents. Rachael Winterling is the usability coordinator at UNC Charlotte's J. Murrey Atkins Library. Rachael works within the library's assessment team and is responsible for conducting usability assessments and usability studies at Atkins Library.

Writing the Library's Story, Three Outcomes at a Time

Luke Vilelle (Hollins University)

Gain ideas for keeping your assessment work timely, fresh and relevant through the lesson of one small liberal arts college library's ongoing engagement with assessment. With only nine full-time staff members, the library developed an assessment strategy that shares the load among staff members, positions the library well for re-accreditation narratives, and continually demonstrates library value to the campus administration.

As is often the case with regards to assessment, the work started with a mandate. To better prepare for the re-accreditation process, and particularly the institutional effectiveness component, the campus administration asked every unit to develop three outcomes to be assessed on a yearly basis. In conjunction with the mandate, the library saw an opportunity to create a cycle of assessment— driven by library needs— that would benefit the library, its users, and the campus, while demonstrating the value of assessment to library staff members.

Instead of identifying three evergreen outcomes, the library committed to choose outcomes for assessment every year, based on the knowledge that three outcomes would not be able to cover the wide range of the nine library principles identified in the ACRL Standards for Libraries in Higher Education. Also, library priorities and projects will vary from year to year, so the strategy of selecting three new outcomes each year (with a library commitment that at least one outcome will always be a student learning outcome) allows the library to ensure that assessment is conducted on its most impactful work each year.

All library staff are involved in the process, beginning with outcome selection.

Each outcome must relate to the library's mission, must stem from an ACRL standard (preferably one that was not addressed in the previous round of assessment), and must provide immediate value to the library. After staff deliberation and selection of the year's desired outcomes, the university librarian identifies the staff member whose job responsibility relates most closely to that outcome, and asks that person to either coordinate the outcome assessment or to co-coordinate in tandem with the university librarian. In just two years, more than half of the library staff has engaged with the process as a coordinator or co-coordinator of an outcome assessment.

Through the process, the library has also gained valuable information with which it could make immediate changes to improve services. Whether through assessing the timeliness and accuracy of

print material processing in the wake of a staff re-organization, or the ability of students to cite references correctly, the results have had an immediate impact on the library and campus community through changes to services and resources.

The presentation will share this model for developing a multi-faceted program of assessment. Flow charts will demonstrate the structure of the assessment cycle. Examples of results, changes and campus reaction will also be shared, so that attendees can better appreciate the potential value of this approach.

Luke Vilelle has been the university librarian at Hollins University since 2012. Luke previously served at Hollins as the public services librarian, and was a part of the Wyndham Robertson Library team that received the ACRL Excellence in Academic Libraries Award in 2009. Luke has published and presented on a variety of public services and outreach topics, and received the Reference Service Press Award in 2010 from the Reference & User Services Association for his co-authored article, "Don't Shelve the Questions: Defining Good Customer Service for Shelvers."

Services 1:

Supporting Parents in Early Literacy through Libraries (SPELL): An Assessment of a Multi-Site Public Library Project

Linda Hofschire (Library Research Service, Colorado State Library)

Purpose: The purpose of this study is to assess the impact of an early literacy project, Supporting Parents in Early Literacy through Libraries (SPELL), that was implemented in eight Colorado public libraries in 2015–16. The SPELL project is predicated on the fact that although public libraries have offered early literacy programs for parents and children for many years, no clear research is available on effective, systematic methods libraries can use to reach low-income parents of children age birth through three. Through a previous IMLS-funded study, we used several methods, including a literature review and surveys and focus groups with low-income parents, to ascertain key factors that may help libraries support these parents in practicing early literacy activities daily at home. These findings were used to develop the SPELL Blueprint, a resource that provides recommendations that public libraries may use to reach and support low-income parents. The current study, also funded by IMLS, tests the effectiveness of the Blueprint by training public library staff and their partners (e.g., Head Start, United Way, etc.) to implement the Blueprint's recommendations in eight diverse Colorado communities. Based on these trainings, the participating libraries and partners developed prototype programs to provide early literacy training for parents in their communities. We predict that (1) as a result of participating in SPELL trainings, librarians and partners will report increased knowledge of the SPELL Blueprint and confidence in their ability to implement Blueprint recommendations, and (2) as a result of participating in the SPELL prototype programs, parents will report increased knowledge of early literacy activities and confidence that they can help their child(ren) be ready to learn to read in kindergarten.

Design/Methodology/Approach: We are using multiple methods to assess the impact of SPELL. These methods include (1) outcome surveys of trainings conducted for librarians and partners at the beginning and midpoint of the grant period; (2) parent outcome surveys administered at the eight SPELL libraries; (3) input/output analysis based on the libraries' monthly reporting of spending, staffing, number of programs offered, program attendance, etc.; (4) observations of SPELL prototype programs; and (5) in-depth interviews of SPELL librarians and their partners.

Findings: We will complete data collection for this project in February 2016, and analyze the data and write a paper summarizing the results between March and August 2016.

Practical Implications/Value: Because the library field has little published research or proven practice related to reaching low-income parents of children ages birth through three through early literacy programs, a key contribution of this study is to provide eight research-based prototype programs applicable to a diverse range of public libraries. Ultimately, these prototype programs will recommend best practices that public libraries can employ in order to implement effective early literacy programming for low-income parents. In addition, the prototypes will highlight library policies, services, and practices that make the library more accessible and usable for the targeted demographic.

Linda Hofschire is the director of the Colorado State Library's Library Research Service (LRS). She has more than 15 years of experience working in social science research and evaluation. At LRS, she manages a variety of research and evaluation projects such as a biennial study of US public library websites and social media, and outcome-based evaluations of state library programs. She has an MA and PhD in Mass Media from Michigan State University, and an MLIS from the University of Illinois.

Delighting Our Customers: Building Services Collaboratively with Learners at a Distance.

Selena Killick (The Open University)

Sam Dick (The Open University)

The Open University is the UK's largest academic institution dedicated to distance learning, with over 173,000 students. Distance learning students can provide a unique perspective on the experience of the library. As the number of students enrolled in distance education courses continues to grow globally there is an increasing opportunity to work with distance students on service design and development. Engaging with distance students can be challenging, but not impossible. This paper discusses how The Open University Library has utilised a number of methodologies to work in partnership with its students on service design to the benefit of the service.

The Open University Library has developed a successful student partnership culture through effective engagement with its users. Operating a 500 strong student research panel recruited through a rolling programme, the library continually works with a representative sample of students to develop, design and evaluate services. Pre-engagement with students in this method

has resulted in a mutually beneficial partnership with the user community. This paper presents two examples of how the OU Library has worked with distance learning students.

In the fall of 2013 the library embarked upon an 18 month project to replace its existing Library Management System with a new discovery tool. Working in partnership with students from the outset the new system was designed and built following extensive user needs analysis and testing. Distance research methods used included remote desktop sharing, wireframe testing and student interviews. The new discovery service was successfully launched in spring 2015.

Since early 2015 the library has been undertaking a longitudinal qualitative study to understand the value and impact the library's services and resources have on the student experience. Working with the library student panel members, a series of research interviews have been conducted annually to explore if, how and to what extent the online library enhances students' studies. The findings have been used to advocate the value of the library within the university, to increase opportunities for inclusion in pan-university initiatives as well as informing future communications, for example an online welcome video for new students.

Working with distance learning students in partnership has helped to improved services for all users. It has also resulted in a positive impact on the library's institutional reputation with students and colleagues alike. The library student research panel has been identified as an area of best practice within the university, with other departments now seeking to implement a similar culture of student partnership.

This paper will provide practical value for any library with a distance learning community. Specific methodologies of successful distance learner engagement with be presented along with lessons learnt.

Selena Killick is the library services manager responsible for student engagement at the Open University Library. Her remit includes leading the strategy, planning and evaluation of a consistent student experience within Library Services. Sam Dick is the quality and insight manager at the Open University Library. Her role is to lead strategic development of student insight and collaborative engagement, market intelligence and advocacy and communications.

Evaluating from Arm's Length: Assessing Services Provided by a Library Consortium

Sabina Pagotto (Scholars Portal, Ontario Council of University Libraries)

Kathryn Barrett (Scholars Portal, Ontario Council of University Libraries)

Katya Pereyaslavska (Scholars Portal, Ontario Council of University Libraries)

Assessing services provided by a consortium presents a slightly different set of challenges than assessing services provided by a library. However, there is very little literature on the subject, even though member libraries are increasingly eager to know the quality and value of the services they receive from consortia. This presentation seeks to bridge that gap by discussing the challenges

faced and strategies used by Scholars Portal, the service provider for an academic library consortium in Ontario, in assessing its services.

Approach: The assessment practices of three services are reviewed. This includes two services for end users: a virtual reference service and an accessible texts repository; and one service for libraries, a link resolver/knowledge base. In each case, current assessment practices were documented, their strengths and weaknesses were evaluated, and new assessment measures recommended.

Findings: The distance between consortium and end users, a relationship mediated to varying degrees by the user's local library, presents a difficult challenge and must be acknowledged in assessment planning. While every service provided by Scholars Portal has a different user base and different outcomes, making consistency of measurement across services difficult, consistency of assessment practices within each service is vital to tracking our performance and communicating our value to members.

Impact/Value: More streamlined and consistent evaluation tools for Scholars Portal services are being developed, helping us to more effectively track our performance and communicate our value to members. The question of how to measure the value of a consortium is still an open one and this presentation seeks to contribute to the conversation with a focus on measuring the value of consortial services.

Sabina is the client services & assessment librarian at Scholars Portal, the service arm of the Ontario Council of University Libraries. She has a MLIS from the University of Western Ontario. Kathryn is the virtual reference librarian at Scholars Portal, where she coordinates both English and French consortial chat reference services. She has an MLIS from McGill University. Katya is the librarian for accessibility initiatives at Scholars Portal and formerly the visiting program officer at the Association of Research Libraries. She is a winner of the 2015 Ontario Accessibility Champions Award and holds an MI from the University of Toronto.

Concurrent Session 6

Data:

What Do We Collect and Why?: Using a Self-Study to Improve Data Collection Practices

Summer Durrant (University of Mary Washington)

Suzanne Chase (University of Mary Washington)

Academic libraries collect a tremendous amount of data about their resources and services; however, making effective use of this data is challenging. This is especially true for small academic libraries that often do not have a full-time position devoted to assessment activities. This paper discusses the results of a self-study the University of Mary Washington Libraries conducted in fall

2015 to examine and improve our data collection practices. The goals of the project were to: (1) compile an inventory of all library metrics collected by staff and systems, (2) devise and implement strategies to standardize and optimize our data collection methods, and (3) assist staff with analyzing data to make informed decisions and demonstrate impact.

To complete this self-study, a working group was formed comprised of staff from different units in the library. During the fall semester we interviewed all full-time staff members (26 total) to ascertain the types of data they collect, where the data are stored and in what format, and how the data are used. We also asked staff to describe the challenges they experience with collecting and analyzing data and to provide feedback on what information they thought the library should start or stop collecting. A separate interview was conducted with the university librarian to determine what data are typically reported to university administrators and external stakeholders. Responses to these interview questions were coded and analyzed in NVivo.

In this paper, we describe our approach to conducting a self-study, including the questions used for the semi-structured interviews and the final library metrics inventory. We discuss key themes that emerged from staff interviews: (1) concern about how (or if) collected data are used, (2) uncertainty about whether data are recorded accurately, (3) difficulty finding library data because it is stored in multiple places, and (4) difficulty using data to make informed decisions. Lastly, we provide examples of how we are using the findings of the self-study to optimize our data collection practices. Librarians from small liberal arts colleges, particularly those interested in starting a formal assessment program, will find value in this paper.

Summer Durrant is the electronic resources librarian at the University of Mary Washington. She is interested in digital analytics topics and has presented at several conferences, including the LITA Forum and Library Assessment Conference.

Suzanne Chase is the digital resources librarian at the University of Mary Washington. She manages a portfolio of digital collections and projects, and is interested in the assessment of digital library programs.

Using a Tool to Build a Culture of Assessment: The Data Framework

Starr Hoffman (University Libraries, University of Nevada-Las Vegas)

Ashley Hernandez-Hall (University Libraries, University of Nevada-Las Vegas)

Academic libraries capture and report a vast quantities of data, thus, keeping track of what needs to be gathered, how, when, and by whom is not a simple endeavor. The University of Nevada-Las Vegas (UNLV) Libraries first developed a Data Framework over a decade ago to track what data was required to be collected and reported. Since data use at the libraries has grown exponentially, a major revision and reconfiguration was necessary.

The UNLV Libraries approached the revision project systematically, carefully investigating existing and missing data, reporting deadlines, and other factors. Creating a Data Framework

Model was an essential step in the revision process. This model served as a guide in creating and updating what data is collected (data points and definitions), who provides the data (hierarchy of data providers), how they collect it (step-by-step procedures), how often it is reported, its purpose, and identifying who needs the data (data requesters). This model allowed library faculty and staff to more fully understand the complex process of collecting accurate data. The end result is a tracking tool that acts as a data management map, allowing the UNLV Libraries to keep a stream of accurate and consistent data flowing into the Planning and Assessment Unit.

During the revision project, we confirmed several hypotheses:

- Data points in the original Data Framework were sometimes out of date, inaccurate, or unused.
- The purpose and benefits of data collection and reporting was not clear among library faculty and staff.
- Data collection methods and procedures were not clear and not always consistent from one year to the next.

We also had unexpected findings:

- Departments collected large amounts of data that were not reported to the Planning and Assessment Unit.
- Although we expected resistance to shifting data responsibility to the Assessment Department, in fact, library faculty and staff were open to a central data storage system and were encouraged by additional assistance with data collection and reporting.

Data that is not collected or reported accurately and consistently is not valuable for academic libraries. This problem is especially significant when data is used for decision making or funding requests. A Data Framework is beneficial because it ensures ongoing accuracy of data collection and reporting, specifies data definitions and procedures, and most importantly, it bolsters staff morale about data. This latter point is particularly important in fostering a culture of assessment in which data is used as a tool for reporting, decision making, research and assessment, and storytelling.

This session will be valuable for librarians desiring better data control throughout their organization and increasing staff interest in data collection and use. It will provide guidelines for creating a Data Framework specific to their organization.

The Data Framework Revision is nearly finished and we expect to have it completed by summer 2016.

Starr Hoffman (PhD, MLA, MA) is the head of planning and assessment at the University Libraries, University of Nevada-Las Vegas (UNLV). Prior to joining UNLV, she was head of the Journalism Library at Columbia University in New York. Her research interests include data visualization, academic library leadership, and strategic planning processes. Ashley Hernandez-Hall (MSW) is the library data analyst at the University Libraries, University of Nevada-Las Vegas (UNLV). Prior to

joining UNLV, Ashley was an analyst for Clark County, NV, focused on analyzing data pertaining to the homeless population. Ashley is currently pursuing her PhD in Public Affairs with an emphasis on policy evaluation. Her skills and interests are currently focused on data analysis and visualization.

All Your Data Displayed in One Place: Preliminary Research and Planning for a Library Assessment Dashboard and Toolkit

Mackenzie Smith (University of California, Davis)

William Garrity (University of California, Davis)

Megan Hurst (Athenaeum21)

Christine Madsen (Athenaeum21)

Frankie Wilson (University of Oxford)

Wolfram Horstmann (Göttingen State and University Library)

We will present the results of a multi-institutional scoping study, funded by the Mellon Foundation, for a research library executive assessment dashboard and toolkit. The purpose of the collaborative project is to create a toolkit of standards, scripts, and analytics modules to enable research library administrators to create their own customized dashboard. We will discuss our efforts to align the most important library management questions with available and relevant library data sources; our initial concepts for top-priority modules for the dashboard; our analysis of commercial dashboard tools, such as Tableau; and possibilities for extensions and customizations to such tools, as well as options for open source extensions or alternatives to such tools.

There have been many important, specialized efforts over the years to collect and standardize library data (including Ithaka S&R, LibQUAL+, MINES for Libraries ®, Association of Research Libraries annual Statistics, COUNTER, SUSHI, SCONUL, and California Digital Library's Journal Value Metrics, as well as non-English speaking approaches such as the German library index BIX). This project builds upon these efforts by developing a toolkit to enable libraries to centralize these and other data sources, and a dashboard to more easily visualize, analyze, and utilize the data. Standardizing and collocating such data will give library leaders views of data, patterns, and trends for their libraries that were previously unavailable, or, at best scattered, and so help them better plan for the future in an increasingly complex landscape.The toolkit and dashboard will also help library administrators make strong cases for their libraries' roles within their institutions. Ultimately, this type of infrastructure will allow library leaders to more easily and quickly understand the most important information they need, including efficiency of provision of goods and services, value for money, customer satisfaction, and the real costs of goods and services in their libraries.

We envision a basic, open source software-based "dashboard" with modules for standard data sources. More complex modules may involve customizable cost formulas. By standardizing approaches to existing data sources with a toolkit, data can more easily be compared amongst

institutions. Existing data visualisation tools, such as Tableau, take data sources from the institution in isolation, presenting them in dashboards, while our proposed infrastructure will set the foundation for benchmarking, through the incorporation of standardized scripts (for ROI, for example) and open-source modules.

The February through June 2016 scoping study will deliver the following:

- Prior/Current Work Inventory: Documentation of recent and current projects or initiatives at research libraries worldwide that are addressing the problem of library data and assessment.
- Tools Inventory: Description and potential relevance analysis of existing open source and proprietary service offerings that provide dashboard views or integrations.
- Data Inventory: Documentation of key library data sources, and any additional campus data sources commonly or easily available to libraries.
- User Identification & Needs Inventory: Summary of the status, plans, and needs for assessment at 3-5 research libraries internationally.
- Detailed Implementation Plan: Timeline and resource estimates for follow-on implementation.

At the Library Assessment Conference, we will present the results of the scoping study and work since then.

Bill Garrity is deputy university librarian and chief of staff at the University of California, Davis. As deputy, he shares with the university librarian overall responsibility for the University Library system; as chief of staff, he supervises the library's personnel and is generally responsible for the overall administration and operation of the University Library system, with specific responsibility for library operations, services, and activities; staff management, structure, and coordination; internal and external communication; assessment and evaluation; long-range facilities planning; and partnership negotiations. Bill was at Dartmouth beginning in 1996, first as director of biomedical libraries for Dartmouth College, the Geisel School of Medicine, and the Dartmouth-Hitchcock Medical Center, and instructor in the Department of Community and Family Medicine and chief of Internal Communications for Geisel School of Medicine, and subsequently was associate chief information officer and director of Academic and Campus Technology Services, Computing Services, Dartmouth College. Before going to Dartmouth, Bill was associate director for Information Services at the Biomedical Library of the University of Pennsylvania, executive librarian in the office of the university librarian of the University of Chicago, and science reference librarian/biomedical specialist at Chicago's John Crerar Library. Bill has a Master of Arts from the Graduate School of Library and Information Science of the University of Chicago and a Bachelor of Sciences (biology) from Siena College (Loudonville, New York). He was a Peace Corps volunteer in Costa Rica before beginning his graduate studies at Chicago. Before co-founding Athenaeum21 with Christine Madsen, Megan led user research, user experience, internationalization and accessibility initiatives at EBSCO Information Services for over 7 years, most recently serving as director of product management for the EBSCO Discovery Service and EBSCOhost platforms. In this and previous product manager roles, she led the user experience research and definition of EBSCO's state-of-the art Digital Archives interface to

support scholarly engagement with digitized historical materials; co-led the re-architecture of the NoveList user interface to align with how readers think about the books they love to read; the user research for searching library materials in multiple languages; the re-engineering of the NetLibrary eBook user experience on the EBSCOhost platform; and the design of the EBSCO Discovery Service and EBSCOhost mobile websites.Prior to EBSCO, Megan created and led the usabililty testing, web analytics, and impact-reporting initiatives for Harvard University Library's pioneering Open Collections Program (OCP) from 2004 to 2006, architecting Harvard University Library's first large-scale outreach and evaluation program for digital collections. Prior to OCP, Megan worked as a management consultant with MIDIOR, a product development and management consultancy, serving clients ranging from venture-funded start-ups to Fortune 100 enterprises in diverse industries. Megan graduated from Smith College and holds master's degrees in integrated media from Massachusetts College of Art & Design, and in library and information studies from the University of Rhode Island (URI). Frankie Wilson is the head of assessment at the Bodleian Libraries, University of Oxford, UK. She holds a doctorate in the field of quality, assessment and culture change in academic libraries, and continues to be an active researcher as well as a practitioner. She has extensive experience in applying a wide range of assessment methodologies (both qualitative and quantitative) to assess the impact of library provision, and provides strategic leadership for assessment throughout the Bodleian Libraries including training staff in assessment techniques. She is a member of the Board of the Northumbria International Conference of Performance Measurement and Metrics in Library and Information Services, and served on the International Federation of Library Associations Standing Committee on Statistics & Evaluation.

Getting Vizzy with It: Data Visualization in Support of Assessment, Planning, and Communication

Ebony Magnus (SAIT Polytechnic)

Purpose: This short paper will demonstrate the value of effective data visualization in examining, exploring, and communicating library data. When implemented strategically, visualization techniques can be utilized to illuminate passively-collected library data, uncovering new information and informing evidence-based decision making.

Design/methodology/approach: Using common library data sets visualized multiple ways, the speaker will demonstrate the extent to which principles of visual analysis and data visualization techniques can enhance our understanding of the data we draw on daily. The speaker will use the story format in Tableau to show cross-sections of reference interaction and circulation data that highlight peak service periods, volume of question types, and circulation patterns. The interactivity of the visualizations allows the user to drill down for additional exploration and detail, while the variegated presentation of the data supports decision-making for service provision, patron information needs, and resource usage patterns.

Potential Findings: The visualizations that will be shared during this presentation have been utilized to directly influence evidence-based decision making at SAIT Polytechnic Library. As a result of the detailed analysis and multi-faceted visualization of reference and circulation data

gathered at the library's single service point, staffing levels have been adjusted to better serve patrons; library resources have been created to support common patron needs and requests; and the tool used to collect reference interaction data has been modified to streamline and refine data collection. It is the speaker's intent that people who attend this short talk will learn how they can use data visualization methods to more effectively interpret passively-collected library data, and thus improve decision making at their libraries.

Practical implications/value: It hardly bears stating at this point, but libraries must demonstrate value; they must function efficiently on constrained budgets; and in some cases they must provide compelling evidence to maintain funding. Data visualization is one method for handling unwieldy data sets, and presenting them internally for effective planning and externally to engage stakeholders and clients. However, there are inherent challenges to presenting data visually to uninitiated audiences. The speaker will discuss briefly the barriers that can arise when sharing data visualizations with internal and external audiences, and possible solutions for overcoming these barriers and engaging stakeholders. This presentation will appeal to library assessors, communicators, and strategists, and data visualizations enthusiasts and novices, alike.

Ebony Magnus is the assessment & UX librarian at SAIT Polytechnic in Calgary, Canada. Prior to joining SAIT, she was the UX & assessment librarian at the Michigan State University Libraries. She earned her MLIS from UBC in 2013, where she was a graduate assistant in the Library Assessment Office.

Do We Collect that Information and if So, How Can I Access It? Designing a Statistics Depository

Gina Petersen (Northwestern University Library)

Michael Perry (Northwestern University Library)

One of the goals of the organizational restructure at Northwestern University Library was to better understand the statistical and data landscape of the organization. Which units were collecting and reporting what pieces of data and what kind of analyses were being done on these sources? How was the library furthering its strategic goals and what metrics determined success? The library assessment specialist and the head of assessment and planning worked with staff throughout the libraries to determine what data was being collected and by whom and in what formats. They then designed and implemented a central depository for data, a schedule for depositing information, and a community of practice around data stewardship. Presenters will discuss their process, challenges, and the benefits of the project.

Gina Petersen is the library assessment specialist at Northwestern University Library. In this role she leads the library's user-focused assessment initiatives, including collection and analysis of qualitative and quantitative data. Michael Perry is the head of assessment and collections at Northwestern University Library. In this role he oversees the development of the library strategic plan and the assessment initiatives and project planning that support its outcomes.

The Power of Performance: Outcome Measurement in Modern Times

Emily Plagman (Public Library Association)

Denise Davis (Sacramento Public Library)

In 2015, the Public Library Association, in partnership with the Performance Measurement Task Force, launched its latest field driven initiative: Project Outcome. Project Outcome is dedicated to helping public libraries understand and share the true impact of essential library services and programs. Project Outcome provides libraries with seven patron-focused surveys, online, interactive tools for collecting and analyzing the data, and practical guidance using the results for advocacy, planning and decision making. The paper will research the participation rates and activity of its enrolled users, examining the participation and outcome measurement adoption rates across the field. It will also review the aggregated patron response data, collected by libraries across the country, in order to determine national trends of the outcomes of library programs and services. Lastly, it will identify areas where its users have analyzed the patron data and taken action as a result of their findings. The results of this research will provide attendees a clearer understanding of how the public library field is adopting outcome measurement and using the data to make better and more informed decisions about their library.

Emily Plagman is the project manager for PLA's performance measurement initiative, Project Outcome, funded by the Bill & Melinda Gates Foundation, overseeing its development and implementation. Prior to joining PLA, Emily worked as a project manager at the Chicago Metropolitan Agency for Planning, where she worked on an ARRA grant to introduce new energy efficiency programming to the Chicagoland region. Emily received her master's in international public affairs from the LaFollette School of Public Affairs at the University of Wisconsin and her bachelor's in political science at Marquette University.

Showcasing Faculty Research with Elements and Tableau

Gabrielle Wiersma (University of Colorado, Boulder)

Matt Ramey (University of Colorado, Boulder)

Universities take great pride in the scholarly output of their faculty. There are various metrics to calculate research productivity, but it can be difficult to collect the necessary data to measure the impact of scholarly works at an institutional level. Information about which books, articles, and other works have been published by faculty is recorded in disparate places such as departmental websites and individual CVs. These data sources may provide evidence of the work of a particular scholar or department, but they do not provide a complete picture of the faculty as a whole.

Librarians at the University of Colorado have partnered with the Office of Faculty Affairs to systematically collect and analyze faculty publication data. Faculty are required to report scholarly activities in an annual report of professional activities. The university is piloting a research information management system called Elements to record and report scholarly research activities.

Publications can be manually added to Elements, and Faculty Affairs has activated multiple data feeds from major indexes like Web of Science, PubMed, and CrossRef to automatically populate the database. Faculty interact with the system to claim or reject authorship, link to co-authors, and export publication information in a variety of formats from Elements.

As a central data repository, Elements contains a wealth of information about faculty publications that can be used for many different purposes. The Office of Faculty Affairs primarily collects this data for academic departments, who in turn, use this data for annual evaluations. The libraries, however, are interested in publication data to ensure that they are collecting books and other faculty scholarship.

There are many analytical features within Elements including reports, graphs, and statistics for a college, department, or single user. The comparative statistics are particularly useful for deans and departments who can quickly run a list of newly published books, articles, and other scholarly works by their faculty. The libraries can simply use a basic report and export publication information into an Excel spreadsheet. The libraries have started to compare the list of faculty publications with library holdings to verify that books published by faculty are added to the collection and to determine if we are providing adequate access to the journals in which they most frequently publish. Connecting faculty publication data to library holdings will strengthen and guide collection development as the libraries learn more about faculty research interests and needs.

This project has also led to the creation of dynamic dashboards to make faculty research and library collections more visible. Data exported from Elements can be used as a data source for visualization software like Tableau. The libraries have used Tableau to create an interactive dashboard that illustrates the connection between faculty research and library resources. The dashboard highlights recent faculty publications and demonstrates the value of library collections by indicating how well the library supports faculty research. This presentation will provide an overview of CU Boulder's faculty publication project and describe how resources like Elements and Tableau can be used to showcase scholarly research.

Gabrielle Wiersma is an assistant professor and head of collection development and assessment at the University of Colorado Boulder Libraries. Her research focuses on research focuses on library collection management and assessment. She is interested in innovative acquisition models and collection analysis tools. Matt Ramey is the scholarly impact liaison with the Office of Faculty Affairs at the University of Colorado Boulder. Matt's research interest focuses on the use of research information management systems to collect, analyze, and provide bibliometric data to the campus. This work extends and enhances the services traditionally performed within the Office of Faculty Affairs, as well as providing the opportunity to promote interdepartmental collaboration with the University Libraries. Matt has an MLIS from the University of Denver.

Learning 4:

Assessing International Students in the Library Instruction Classroom

Susan Avery (University of Illinois- Urbana Champaign)

Kirsten Feist (University of Illinois- Urbana Champaign)

The face of the instruction classroom in our libraries is rapidly changing as the presence of international students at academic institutions in the United States continues to grow. The 2015 Open Doors Report notes a growth rate of 10% in 2014–15, the highest since 1978–79. For many of these students this marks their first foray into academic research and academic libraries, in a setting and culture that differs markedly from that of their home countries, all in a non-native language. This paper is focused on an assessment of first-year international students in English as a Second Language (ESL) courses at the University of Illinois at Urbana-Champaign. We sought to discover what strategies would have the greatest impact on international students' success as they engaged in the research process.

The study in this paper is being conducted during the 2015–16 academic year and is assessing the effectiveness of two assignments that take place in a first-year writing course for international students. The first assignment assesses a concept map worksheet that is completed by students prior to library instruction. Students identify their research topic, main keywords, and alternatives. The concept map lays the groundwork for the database searching that takes place during the instruction. The second assignment is an annotated bibliography which is assessed to ascertain information about the sources students selected. Factors assessed include whether or not articles were found in library databases, the date and length of the articles, if the articles were scholarly, and their relevance to the student's topic on their concept map. An initial assessment was completed in fall 2015. Not surprisingly, we found that international students struggled with identifying keywords and alternatives and applying criteria to determine the reliability of a source. Modifications to the assignments have been implemented for spring semester and the assessments will be repeated. The results of this assessment will provide both those who teach in ESL programs and instruction librarians a greater understanding of how international students approach research assignments. Modification of both the assignments and teaching that takes place in the ESL and library instruction classrooms are an expected as a result of this study.

While the literature includes numerous surveys and focus groups of international students and their use and expectations of academic libraries, little exists that actually examines how they engaged with research assignments. This paper is unique in that it shares the results of assessments of research assignments of international students. The authors realize that smaller institutions are unlikely to have specific ESL courses for international students. However, we expect this study will result in a greater understanding of how international students engage with academic research and resources and provide generalizable guidelines for working with international students that can be applied in multiple settings.

Susan Avery is instructional services librarian in the Undergraduate Library at the University of Illinois at Urbana-Champaign where she manages the library instruction program that supports first-year writing classes. Her research is focused on aspects of library instruction including assessing student learning, connecting instruction and reference, and collaborations with faculty.

Developing a Practical Framework for Information Literacy Program Evaluation

Paul Bracke (Purdue University)

Clarence Maybee (Purdue University)

Sharon Weiner (Purdue University)

The Purdue University Libraries, like many academic libraries, face increased expectations for demonstrating their value and impact. This has not only led to an expectation of the increased use of metrics to demonstrate impact, but also a more fundamental imperative that libraries more clearly articulate their contributions and value to educational and research outcomes of their campus communities. At Purdue, the provost implemented a new program review process in July 2015, while the libraries were simultaneously going through the process of developing a new mission statement for its information literacy program. This statement was developed through a broad collaborative process within the libraries and with external campus stakeholders. These two developments led the libraries to launch a project to advance an outcomes-based, mission-centric framework for evaluating its information literacy programming that can be sustained over time. The project to develop this framework was predicated on being able to answer the following question, derived from the program mission statement: "Does the Purdue University Libraries' information literacy programming empower diverse learners to use information to learn in transformative ways; lead to the discovery of new knowledge; and foster academic, personal and professional success?" This question not only needs to be answered, but needs to be answered on an ongoing basis to communicate the programming impact to external stakeholders. To be effective, sustainable, and practical, it also needs to be uncomplicated and integrated into regular workflows. The methods for developing this framework consisted of four steps: (1) focus groups with librarians to collaborate on gaining a more comprehensive understanding of existing assessment practices, as well as their perceptions of challenges and opportunities in assessing information literacy programs, (2) analysis of focus group findings, characterizing current assessment practices and identifying where outcomes-based assessment is already occurring, (3) a gap analysis, comparing focus group findings to the information literacy mission statement, and (4) development of recommendations with measures/indicators to address gaps and develop a comprehensive framework for program evaluation. Organizational issues that might have occurred were prevented by (1) emphasizing that the project was to examine information literacy assessment at a program level, and was not assessing individual librarians or students; and (2) involving librarians through focus groups and requesting feedback on the framework and recommendations. We expect that the results of this project will contribute to the body of knowledge in library assessment by presenting a framework for the outcomes-based evaluation of

information literacy program evaluation that is based on a strategic perspective on the program, but that also builds upon existing practices and capacity within the organization.

Paul Bracke is associate dean for research and assessment and associate professor of library science at the Purdue University Libraries. In this position, he has several areas of responsibility for promoting research by Libraries' faculty and integration with research activities on campus, oversight of data repository services, developing strategies for assessment of libraries programs and overall library impact, and information technology within the Purdue Libraries. Bracke has been responsible for leading Purdue's participation in a number of strategic collaborations, including a development partnership on Ex Libris Alma, leadership roles within DataCite, and participation in a number of Committee on Institutional Cooperation (CIC) initiatives. He has also been responsible for technical services, document delivery, and interlibrary loan while at Purdue. Prior to his time at Purdue, Bracke held positions at the University of Arizona, the University of Texas Medical Branch at Galveston, and the University of Illinois at Urbana-Champaign. These positions provided him with a broad range of experience, ranging from reference and instruction duties to public outreach and technology services. Clarence Maybee is assistant professor and information literacy specialist in the Purdue University Libraries, where his work focuses on enabling and extending student learning through information literacy. Maybee coordinates the libraries' involvement in the teacher development program, Instruction Matters: Purdue Academic Course Transformation (IMPACT). He received a PhD from Queensland University of Technology in 2015. Maybee has presented and published regularly about his research, which explores information literacy in higher education. More information about Maybee's research may be found on his website: https://sites.google.com/site/clarencemaybee/home. Sharon Weiner, EdD, MLS, is a professor of library science and holds the position of W. Wayne Booker chair in information literacy. Dr. Weiner's research interests focus on contextualizing information literacy, as well as on the organizational, policy, and social justice aspects of information literacy. She holds a doctorate in higher education leadership and policy studies from Vanderbilt University and a master's in library science from the University at Buffalo. She has been the library dean at the University of Massachusetts Dartmouth, director of Vanderbilt's Peabody Library, and a department head in the University at Buffalo Health Sciences Library.

Assessing Student Learning: A Rubric-Based, "E-Portfolio" Approach to Longitudinal Assessment of Information Literacy

Alan Carbery (Champlain College)

Measuring student performance in information literacy instruction is a lofty goal. To map and chart student performance at multiple points throughout their degree is an even taller order. This paper describes the efforts by one institute to design and build a sustainable and longitudinal model of direct assessment of student information literacy performance. This assessment, in turn, allows the librarians to design and deliver instruction based on actual student performance.

Ultimately asking the important question—"We're teaching, but are our students learning?"— this model of assessment studies the developmental path of students who receive an embedded, sequential program of information literacy instruction throughout their degree. By using a

competency-based information literacy rubric designed in-house, teaching librarians directly assess authentic student coursework from various points throughout the curriculum for evidence of information literacy performance. This model investigates the impact of librarian-led instruction, and charts the progress of information literacy outcomes throughout the undergraduate degree.

Findings from this study show that students demonstrate early success in finding and retrieving information sources, but often lack the skills necessary to synthesise and connect sources within their written work. Throughout their degree studies, students show evidence of growth and progress in information literacy, particularly as a result of targeted instruction. This paper also considers variables other than librarian intervention that affect student performance in information literacy, such as the role of academic faculty as well as strategic assignment design.

Longitudinal assessment of information literacy at various points throughout the degree provides the teaching librarian with invaluable and crucial insight into the concepts, skills and strategies that are most troubling to students. It also allows us to design and deliver instruction that can be introduced at timely and appropriate stages throughout the sequential program in an effort to positively impact student performance. This longitudinal assessment of information literacy has also allowed us to engage faculty in conversations about information literacy.

This paper will talk about the development and evolution of this assessment model using an e-portfolio model. It will describe the process of designing and creating a single rubric for information literacy that can be used across the curriculum. Directly assessing real instances of student coursework right throughout program will be discussed. Finally, this paper will demonstrate how librarians have closed the assessment loop, and integrated our findings into instructional design. This paper will conclude with future directions for this holistic, longitudinal model of information literacy assessment. This paper will appeal to practitioners wishing to design and develop a robust model of rubric-based assessment within their institutes.

AlanCarbery is the associate library director in Champlain College Library in Burlington, Vermont since 2013. He previously held positions in academic libraries in the Republic of Ireland. He is particularly interested in teaching and research; development of the librarian as a teacher; reflective practice; problem-based and inquiry-based learning; blended and online learning, and assessment of student competencies; instructional design, and educational technology.

Services 2:

Usability Study of Database Accessibility for Students Who Use Screen Readers

Nicole Campbell (Washington State University Vancouver)

Sue Phelps (Washington State University Vancouver)

In academic libraries, digital technologies are essential centerpieces to the discoverability and delivery of information, especially as we license and purchase increasing numbers of electronic

journals, online databases and e-books. We are busy building and refining our digital libraries to best meet library user expectations and to make our collections and services available anywhere. Simultaneously, people with disabilities are increasingly pursuing post-secondary education. These students expect, and should have, equitable access to all digital library materials. Further, the recently amended Section 508 of the Americans with Disabilities Act requires that institutions receiving government funding must only purchase or subscribe to web-based products that are accessible. This law applies to all of the web-based resources libraries provide for student research.

Navigating the research process and accessing scholarly resources can be challenging for many students. Those who use screen readers to access information have an added layer of complexity to their information seeking. While librarians have developed services to support students with print disabilities, it is often not clear the exact nature of the research process these students experience and how that experience compares to students who do not use screen readers.

The library literature includes research analyzing the accessibility of various library resources and includes reports on the difficulties students are having and exploring how to meet the students' immediate needs. However, there is very limited research investigating accessibility and usability of digital resources by studying the research process of students who use screen readers. Can students who use screen readers successfully and independently use research databases to find scholarly information and how does their experience compare to people who do not use screen readers? Examining this question will assist librarians in developing improved services and advocating for more accessible online resources.

This paper will present the results of a usability study of database accessibility. This methodology allows for observation of study participants as they complete a series of tasks using three scholarly databases. The study participants include one group who regularly use screen readers for their information seeking and another group who do not use screen readers. All participants are given the same tasks. Data collection for this study is occurring during early 2016; the study will be complete by summer 2016.

This study is in line with ARL's guiding principal of intellectual freedom and scholarly communication to "promote and advocate barrier-free access to research and educational information resources" (ARL website) through conversation in the ARL community and further research on behalf of this population. Recommendations for enhancing services and advocating for more accessible digital resources will be included.

ARL Website: http://www.arl.org/about#.VrFCaCorKM8.

Nicole Campbell is head of reference & electronic services at WSU Vancouver Library. Her research interests include the usability and accessibility of digital library resources and systematic reviews as an avenue to explore the professional literature. Her previous research has included usability studies and evaluating faculty-librarian relationships. Sue F. Phelps is a health sciences and outreach services librarian whose research interests include student learning with a focus on underserved populations

and at risk students. Previous projects have focused on authentic assessment of student learning, Veteran students and faculty librarian relationships.

Beyond Data Management: Designing User-Driven Data Services at UCSF Library

Ariel Deardorff (UCSF Library)

Jim Munson (UCSF Library)

Purpose: As the biomedical sciences grow more data intensive, scientists and researchers are increasingly being expected to work with larger, more complicated datasets. UCSF Library, the only library on a health sciences campus, wanted to expand its data services to ensure that the university's students, staff, and faculty were prepared to work with their research data throughout the data lifecycle. Because this was a relatively new area for the library, the data management team decided to assess the data needs of the university in order to determine which services they should offer.

Design/Methodology/Approach: The data needs assessment relied on a mixed methods approach combining informal community feedback with formal surveys and focus groups. As the goal was to let the community guide the creation of a new service, the data management team used open-ended questions to reveal service gaps and data challenges, as well as resources and tools that the UCSF community desired. The process began with informal feedback gathered through whiteboards and pop-up question stations around the university. These answers then formed the basis of a formal survey administered through listservs as well as library classes and workshops. Focus groups followed up on the issues revealed in the survey and gave the data management team an opportunity to get feedback on potential service models from the UCSF community.

Findings: Initial findings indicate that the UCSF community is very interested in workshops and classes on programming with R and Python as well as data visualization and assistance finding open data sets. Further analysis will help the library determine the data needs of specific groups on campus and decide how the library's new services should fit into the landscape of research support at UCSF.

Practical Implications/Value: The findings of this needs assessment will help the UCSF Library's data management team articulate program outcomes that will form the basis of their new data services, a potentially huge growth opportunity for the library that could add significant value to the research community on campus. These outcomes will enable future assessment efforts to ensure that the library is appropriately serving the data needs of its community. This project can also serve as an example for other libraries interested in performing a data needs assessment.

Ariel Deardorff is an assessment and data management librarian at UCSF Library and a second year NLM Associate Fellow. Ariel's assessment work involves building an assessment program for the library, and working on several assessment projects related to LibQUAL+, chat reference, and Pop-up services. On the data side, Ariel is leading a data needs assessment to form the basis of new data

services at UCSF Library. She is also heavily involved in the library's current data management program.

OBILLSK: Using Predictive Analytics to Anticipate Interlibrary Loans

Ryan Litsey (Texas Tech University)

Kenny Ketner (Texas Tech University)

Weston Mauldin (Texas Tech University)

Scott Luker (Texas Tech University)

The Texas Tech University Libraries have designed a statistical tracking system known as OBILLSK (Online Based Inter-Library Loan Statistical Kit). This system analyzes ILL requests between member libraries of a consortium and presents the transaction data in near real time on a map of the country. It also visualizes the entire history of each request and can calculate hard-to-obtain statistics such as time in transit between institutions.

A new subsection of OBILLSK is called ALIEN (Automated Library Information Exchange Network). ALIEN runs a series of probabilistic algorithms that are designed to create a matrix of ILL requests within the consortium. The more an item is requested, the more ALIEN learns about the probability of that item being requested in the future. Once that has happened over successive generations, the system can, within a certain confidence interval, predict when an item will be requested through ILL. Once that threshold is met, the system outputs an e-mail with a recommendation to start making requests for the predicted item. This is the next evolution in the field of ILL. The goal is not to get items when they are wanted or needed by the patron, but to request them before the patron even knows they want them.

Ryan Litsey is the associate librarian for document delivery at Texas Tech University. A graduate of Florida State University with a degree in library and information sciences, he has spent a majority of his academic career developing ground breaking technologies that have endeavored to transform resource sharing. Both Occam's Reader and the stats tracking system OBILLSK have changed the way ILL librarians are able to share the resources of their respective institutions. He is also active in ALA and is the associate editor for the Journal of Interlibrary Loan Document Delivery and Electronic Reserve. His academic research is in resource sharing, predictive analytics and anticipatory commerce.

Evaluating Reference Consults in the Academic Library

Alison J. Moore (Simon Fraser University)

Lorie A. Kloda (Concordia University)

Background: Information services for students and faculty is a key area of responsibility for reference (or subject) librarians in the university setting, and in-depth reference consults are an

important component. Reference consults, also referred to as consultations or individualized appointments, are reference encounters which are scheduled in advance and consist of expert reference assistance or one-on-one instruction (Gale & Evans, 2007; Magi & Mardeusz, 2013). Yet, while most academic libraries are diligent about keeping reference statistics, they rarely go beyond these basic measures to evaluate the quality and outcome of reference consultations (Savage, "Not counting what counts," 2015).

Purpose: In early 2015, a project was undertaken by the assessment librarian in collaboration with an MLIS student to investigate, propose, and pilot test a method for evaluating the quality and outcomes of reference consultations across an academic library system of a large research library in North America. The goal of this project was to gather evidence to demonstrate the centrality of reference consultations as part of librarians' core contributions to the academy. Specifically, the project was interested in gaining an improved understanding about why library users book reference consultations, what occurs during them, how helpful they were, and to what extent reference consultations addressed and fulfilled university values.

Design, Methodology, & Findings: One of the challenges that this project faced was a lack of previous investigation in this area. Few academic research libraries have created similar evaluation tools. This project builds on the work of Gale and Evans (2007), Magi and Mardeusz (2013), and Faix, MacDonald, and Taxakis (2014), in addition to that of Reinsfelder (2012) and Savage (2015).

In order to develop a practical assessment tool, fact-finding interviews were conducted with five reference librarians. The feedback provided in these interviews moved the evaluation method towards an outcomes assessment model. Once a draft of the evaluation tool was complete, it was reviewed by the Library Assessment Advisory Committee, revised, and then pre-tested. The evaluation tool was built using Google forms and launched on March 10, 2015. Invitations were sent out to a total of 98 possible respondents during the pilot test period. Overall, there were 53 responses to the evaluation tool, and 24 comments, for a response rate of 54%. The comments were overwhelmingly positive, as were the vast majority of the responses to the questions.

Practical Implications/Value: Though preliminary, the findings can be helpful in determining the usefulness of evaluating reference consultations, and the outcomes of engaging in assessment of this core library service. The results obtained from implementing this tool can be used to improve services and to demonstrate the value of the library to its users for research, teaching, and learning. With minimal adaptation, this evaluation tool could also be used to evaluate the outcomes of other types of reference transactions, such as online/virtual chat reference and in-person reference desk encounters. Using the same tool to evaluate all varieties of reference services would offer a clearer picture of library user's experiences and facilitate easy comparison of results.

Alison J. Moore is a reference librarian at the Fraser branch of the Simon Fraser University Library in Surrey, BC. In 2015, Alison was a practicum student with the McGill Library Assessment Program and a student librarian at the Concordia University Libraries in Montréal, QC. LorieA. Kloda is the associate university librarian for planning and community relations at Concordia University in

Montréal, QC. She is also the editor-in-chief of Evidence Based Library and Information Practice. *From 2012 to October 2015, Lorie was the assessment librarian at McGill University.*

Tracking for Outreach: Using data for cross-unit purposes

Heidi Gauder (University of Dayton)

Hector Escobar (University of Dayton)

Since creating an information commons a couple years ago, this library's research team has been coordinating data gathering methods with the writing center. With both units using standard check-in procedures at a shared desk and hosting in-depth consultations in a shared space, it made sense to share technologies. Since spring 2015, we have logged students for research consultations with software that is commonly used by writing centers, tutoring and other academic support units. We are not only able to count the number of consultations, but we are also able to record cross-referrals with the writing center, calculate average consultation session lengths, and more.

As we began reviewing research consultation data, we saw information that could not only help the research team and the information commons, but it could help inform our library instruction efforts, particularly outreach. We see opportunity in moving from anecdotal evidence that classes were coming in for research support to documenting exactly which classes were coming in for research support. We were curious in knowing which research consultations could be classified as follow-ups from an instruction session. We likewise wanted to know which courses were driving students to a research consultation, whether as an instruction session follow-up or in cases where no instruction had been provided. The consultation data could help us answer these questions and help us develop a proactive outreach model.

This data, along with instruction data for comparison, will provide a basis for developing faculty outreach opportunities, whether for instruction or facilitating greater use of our writing and research consulting services.

Both research consultation data and instruction data will be analyzed. The research consultation data, which will ultimately include three semesters, contains information relating to semester, meeting date, department and course number, and instructor. We have culled instruction data for the last four semesters, with the same data fields as the research consultation data. By comparing the two files, we can ascertain whether research consultations occurred after an instruction session or, more tellingly, where the absence of any instruction sent the student for research help.

We anticipate that the data will help us identify potential courses that might benefit from librarian collaboration, whether it is instruction, additional material support, or expanded use of services in our information commons. The initial findings would help us develop an outreach plan targeted at faculty with the ultimate goal of facilitating student learning.

Although not without controversy, using standardized swipe data helps create a uniform set of data files that can be analyzed by the units housed in the information commons. By using data collected from one service point to help analyze the work of a related library service, we will be able to determine relevant campus constituents for a targeted, proactive outreach plan. Session attendees will be able to consider the implications and utility for this method at their own institutions.

Heidi Gauder is an associate professor at the University of Dayton Libraries, where she is the coordinator of research and instruction. She conducts assessment for the library instruction program and is a member of the library assessment committee.

Hector Escobar is the director of education and information delivery at the University of Dayton Libraries. As director he oversees public services for the library, which includes access services and research and instruction services.

Spaces 3:

A Factor Analysis Approach to Persona Development using Survey Data

Hae Min Kim (Drexel University Libraries)

John Wiggins (Drexel University Libraries)

Libraries require an easily communicated understanding of their users' interactions in order to improve services. Personas are characters representing user groups. Personas are used in design, to clarify major user motivations and needs, and predict their generalized behaviors while using products and services. In libraries, personas are useful for planning space, services, and communications with stakeholders. While both qualitative and quantitative methods can be used to collect data for developing personas, many cases have been based on individual and focus group interviews from such patron types as undergraduates, graduates, faculty from various disciplines. These methodologies can misinterpret aspects of original information and produce stereotyped or unbelievable personas (Pruitt and Adlin, 2006; McGinn and Kotamraju, 2008). In order to reduce these problems, we used a quantitative method to identify different user groups. Factor analysis has been used in studies including Brickey et al. (2012), Tu et al. (2010), and Sinha (2003) to explore user characters, which help differentiate significant qualities that identify groups of users. In this study, we present factor analysis based on user survey data as a quantitative persona development method. Drexel University Libraries (DUL) have collected questionnaire responses through a 24/7 user feedback tool since 2010. The questionnaire prompts users' perceptions and reported ratings of importance and satisfaction for a spectrum of library services. Its data are suitable to use exploratory factor analysis for identifying different groups for DUL users. We collected 1148 responses and will apply factor analysis, which can reveal a subset of significant groups from the large set of variables. Each group will include different user characteristics in their library service perceptions and engagement behaviors. Results will suggest that there are several factors identifying DUL users. The personas will be discussed with respect to implications

for library service improvement and decision making. This study will contribute to the introduction of factor analysis for persona development use in library settings. The results will be valuable to library service assessment managers for the development of personas with unbiased perspectives and insights gained into users' behaviors, to improve user experiences, and to guide strategic planning for service promotion and user outreach.

Hae Min Kim is the data analyst for resource access at Drexel University Libraries. John Wiggins is the director, library services &quality improvement at Drexel University Libraries.

Assessing to Transform an Aging Learning Commons: Leveraging Multiple Methods to Create a Holistic Picture of Student Needs

Jessica Adamick (University of Massachusetts Amherst)

Sarah Hutton (University of Massachusetts Amherst)

Purpose: The transformation of academic library spaces is necessary to keep up with a constantly changing intellectual landscape. Over 10 years old, the UMass Amherst Learning Commons has experienced growth and minor reconfigurations over time, but dramatic transformation is needed to meet the needs of future students. This paper describes a phased approach to adapting an existing learning space, which resulted from the two-year assessment process undertaken by a multi-department team. The team employed quantitative and qualitative methods to investigate student work patterns and preferences and the library spaces and organizational structures that support them.

Design: New assessment methods were developed specifically for this project, but we also leveraged the results of ongoing assessment methods. The most significant new assessment method was the creation of a testbed space of various microclimates, which was used to evaluate the most successful types of spaces and combinations of furniture and technology. Other new assessment methods included focus groups, an environmental scan, and site visits. Combined with ongoing methods and projects, which included ethnographic research, headcount data collection, ARL LibQUAL+ surveys, and evaluative reports from multiple departments, we were able to create a robust picture of student behavior and needs in an academic library. Tableau data visualization software was used to visualize much of these data.

Findings: Findings include a three-phase plan to transform our Learning Commons over two years, and propose combining multiple service points to a co-located service area, moving staff work areas to expand and consolidate our Digital Media Lab and MakerBot Innovation Center, the creation of a Writing and Research Center and academic showcase, updated group work areas, and the implementation of explicit "alone together" work areas. These changes have implications for a major organizational shift and staffing changes; methods to organizationally address these changes will also be covered in this paper.

Practical Implications/value: First, this paper contributes original research on student work patterns and preferences and the library spaces and organizational structures that support them.

These findings are additionally valuable due to the practical, scalable, and easily duplicable methods used. While this was a large and time consuming project, we were able to leverage past and ongoing assessment work, demonstrating the value and sustainability of a strong assessment program.

Second, our microclimate testbed model has been a great success because it has allowed us a preliminary phase to try out furniture and technology to support student learning. We were able to assess some early conceptions of our future Learning Commons in a low-stakes manner, while allowing us to give students a sneak preview of what is to come.

Third, in libraries, assessment of departmental work and services are often performed from an individualistic perspective, but our Learning Commons assessment directly involved three library departments and two information technology departments. The involvement of multiple departments has led to new cooperative partnerships, leading to new services and directions for the academic library, and contributing to the ongoing discussion of traditional and changing library services.

Jessica Adamick is the assistant to the associate director for library services at the University of Massachusetts Amherst, working primarily in project management and assessment. Previously, she served as a project manager for two national disciplinary repositories in science and engineering disciplines. She holds an MLS from Indiana University. Sarah Hutton is the head of undergraduate teaching and learning services at the University of Massachusetts Amherst, leading assessment of the Learning Commons and Digital Media Lab. She holds an MLS from URI and is working on an Educational Policy and Leadership PhD at UMass Amherst.

Consulting Detectives: How One Library Deduced the Effectiveness of Its Consultation Area & Services

Camille Andrews (Cornell University)

Tobi Hines (Cornell University)

Managing multiple service points in the library, including those of external stakeholders, has been a challenge for the library, given the varying hours of service, lack of visibility and awareness about service points, and the limitations of shared space. After the results of an environmental scan and series of focus groups, the library piloted a new consultation area in the fall of 2015 that brought together several consultation services that had been scattered throughout the library (including library reference, GIS, writing help, and data and statistical services) to help alleviate these issues. Hear how the library used a mixed-methods approach (including surveys, space observations, and transaction data analysis) to design a centralized consultation area and measure the effectiveness of the new location and service design. The results have indicated both user and staff satisfaction with the new space, suggested valuable improvements, and impacted our final recommendations for consultation services and eventual plans to transition to a new consultation model. This session will be useful to any library considering its own public service and space redesign.

Camille Andrews is user engagement librarian at Albert R. Mann Library at Cornell University Library (CUL), where she works on outreach, instruction, and assessment for learning outcomes, technologies, services and spaces. Since 2004, Camille has been involved in information literacy, learning technology, user studies and space design initiatives in libraries. Tobi Hines is the user services & multimedia librarian at Cornell University Library's Albert R. Mann Library, and is responsible for overseeing all access services functions, as well as assisting with user studies, learning spaces initiatives, and space/technology/service assessment.

It's All About the Learning: What Students Say About Their Learning in Informal Learning Spaces in The Library

Susan Beatty (University of Calgary)

The purpose of this study is to determine what effect the design of informal learning spaces in an academic library have on learning behaviors. The goal is to determine how informal learning spaces can better support self-regulated learning. The study will use a series of questions/themes developed from the results of an unobtrusive study of students' learning behaviors in the library (Beatty, 2015). In the first phase of the new study, twenty students will be recruited to participate in semi-structured interviews which will explore their learning activities in the library and their thoughts on the spaces that they use to study. The study will explore not only what students do but why they do it in a particular location in the library and how the space impacts their learning. Further analysis will compare results of the two studies. It is through the final phase of integration and comparison of results, both quantitative and qualitative where the key learnings will occur. The interviews will occur in early 2016. Analysis will occur March to June.

Most learning occurs outside the classroom yet research on the relationship of teaching and learning to informal learning space is in its beginning phases in higher education. Temple (2008) notes the dearth of research on learning space in higher education. He comments that teaching and learning in the university includes the need to understand the impact of university space. Academic libraries are being renewed and designed for learning. However, little is known about what sort of learning goes on in the library in the spaces to support that learning. This study will ask students to consider the relationship of space to their learning choices. This paper will focus on how space effects their activities such as organizing studying thoughtfully, managing time and effort effectively, and forcing oneself to concentrate (Entwistle and Peterson, 2004). It will offer a look into students' perceptions around approaches to their intentional learning.

In a recent multi-site observational study of students in libraries, May and Swabey (2015) concluded that there is a need for more research and a method to clearly demonstrate the link between libraries and learning. The methodology of this exploratory study may provide for results that make a link between libraries and learning more clear. This paper will also discuss key learnings which can be applied to future informal learning space development in libraries and serve to provide some correlation between libraries, space and informal learning behaviors in an academic library.

Beatty, S. (2015). New spaces, new learning behaviors: results of an unobtrusive study. Poster, ALA 2015 annual conference, San Francisco, June 2015. http://prism.ucalgary.ca/handle/1880/50610.

Temple, P. (2008). Learning spaces in higher education: an under-researched topic. *London Review of Education*, 6 (3) 229–241.

May, F. & Swabey, A. (2015). Using and experiencing the academic library: a multisite observational study of space and place. *College and Research Libraries*, 76(6) 771–795.

Entwistle, N.J. & Peterson, E.R. (2004). Conceptions of learning and knowledge in higher education. *International Journal of Educational Research*, 41 (6) 407–428.

Susan Beatty is a librarian at the Taylor Family Digital Library, University of Calgary. Her recent research is on the relationship between student learning behaviours and learning space design. Susan has presented at national and international conferences on various aspects of library leadership in learning.

Public Workstation Use: Visualizing Occupancy Rates

Jeremy Buhler (University of British Columbia)

Purpose: UBC Library's Vancouver campus provides nearly 500 public computer workstations across nine branches. Occupancy rates vary considerably from one location to the next depending in part on the desirability of the work space, convenience of the location, time of year, and type of computer. The purpose of this project is to help distribute limited workstation resources to best advantage, making sure allocations align with recent use patterns.

Methodology: A database managed by UBC IT records login and logoff times for each workstation session. This data is exported to Excel and additional data points are calculated: the number of workstations in use at any given time, the amount of time at each level of occupancy, and session durations.

After refining the dataset we use Tableau Desktop for visualization and modelling. A timeline shows occupancy levels for the entire reporting period calculated at 1 minute intervals, making it easy to spot patterns and peak periods. A bar graph shows the percentage of time at various occupancy levels, and line graphs identify the busiest month and time of day at each location. Date filters allow the user to focus on selected periods.

Potential findings: Initial work reveals that in some parts of the library occupancy rarely exceeded 75% in all of 2015. In other areas, during peak periods occupancy reached 100% at least once per weekday. Modelling with Tableau makes it easier to estimate what occupancy rates would have been like if each area had a different number of workstations.

Practical implications/value: Many library activities are monitored through rudimentary counts—in the case of workstations, sometimes counts of logins or sessions. This project provides the tools required for more nuanced target-based management of the library's public workstations. It is

expected to help administrators allocate workstations according to demand, placing resources where they are likely to provide the greatest return on investment. If successful the same method could be applied to other library resources, including loans of equipment or bookings of meeting rooms.

Jeremy Buhler is assessment librarian at the University of British Columbia, a position held since 2011. In his work he takes small steps toward UBC Library's assessment vision, a magic place where "existing data is accessible, presented with clarity, and used in creative new ways, [...] and university administrators are confident that library decisions are based on the best available evidence." In 2015 he led an initiative to implement Tableau Server at UBC Library. Most months he wanders on the slopes above Vancouver, rarely thinking about numbers.

Library Snapshot Day, or the 5 W's—Who, What, When, Where, and Why are Students Using Academic Library Space: A Method for Library User Experience Assessment

Gricel Dominguez (Florida International University)

Genevieve Diamond (Florida International University)

Denisse Solis (Florida International University)

Enrique Caboverde (Florida International University)

During the fall 2015 academic term, members of the Florida International University Libraries came together to create a team of 18 researchers, composed of members from public and technical services, administration, and systems, to conduct a large-scale observational study founded on the premise of library sweeps presented by Mott Linn (2013). The project received Instructional Review Board approval in October 2015, after all researchers completed IRB training. The goal of the study was to better understand how students are using the library facility, interacting with its services, and using the collections. This collaboration resulted in the development and implementation of the first ever "Library Snapshot Day" at the Florida International University Green Library on November 3rd 2015. Conducted as an experimental study to gain insight into actual vs. perceived library use and satisfaction, the study collected qualitative and quantitative data during a 3-hour peak period of library usage. The study employed an observational checklist adapted from the Linn (2013) research model, "pop-up" user comment boards, and data extracts from the Integrated Library System, Google Analytics, and other automated systems. Designed to reveal factors such as seating availability and preferences, user behaviors, and issues related to building limitations and library use policies, the checklist made note of 34 factors, across 3 major categories (Where is this person, Possessions, Activities). Observational teams were divided across the Green Library's 6 public floors. Photographs and observational notes served to supplement findings noted in the checklists. A survey of library users, live tweets, and systems data also served to generate a "big picture" understanding of library use. Data analysis of the 4,100 user observations, 280 comments, and systems extracts have led to fresh and surprising insights into how students interact with spaces and services. The lightning round will present preliminary

results and offer recommendations and encouragement to others wishing to undertake similar projects. The discussion will demonstrate the process for conducting an observational study in an academic library, present methods for data analysis, and recommend techniques for presenting compelling results.

Gricel Dominguez is user engagement librarian at Florida International University. She is particularly interested in how users adapt library spaces. She received her MLIS from the University of South Florida in 2011 and is a reviewer for Library Journal. *Genevieve Diamond is the access services librarian and department head at Florida International University. Genevieve has been interested for some time in discovering how the large volume of visitors to the Green Library use the resources and was delighted to take part in this study. Genevieve received her MLIS from Florida State University in 2014 after working in the FIU Libraries for over ten years. Denisse Solis is a copy cataloger at Florida International University. She holds bachelor's degrees in history and art history with a certificate in European studies. She is currently pursuing her MLIS online at Kent State University with an interest in special collections, archives, and digital preservation. She is also a 2015–2017 ARL Diversity Scholar. Enrique Caboverde is a cataloging associate at Florida International University where he holds a Master of Music degree in performance and earned high honors for his graduate thesis. He is currently working towards an MLIS at Kent State University with a focus in music librarianship.*

Advancing Campus Priorities Through Informed Space Reallocations

Robert Fox (University of Louisville)

Bruce Keisling (University of Louisville)

How do we allocate library spaces as user needs and institutional priorities shift? Is it based on the squeaky wheel method or can assessment lead us to shape an informed approach?

This paper will show how one library addressed the issue by crafting a progressively comprehensive assessment program with each step building on previous findings and with data from the program used to strategically reallocate library spaces. What began as a longitudinal set of campus-wide surveys led to a six-month multi-methods study into renovating, repurposing, and strategically reallocating space on the library's first floor. While that renovation was still underway, planning began for the current project which is employing data to take a floor largely dedicated to print collections and thoughtfully carve out space for two university-wide strategic priorities: creating new student learning spaces and developing a faculty technology innovation lab. Data elements being utilized include: collection overlap analysis, current and potential de-accession rates, impact of potential additional back file purchases, item-level transactions, and availability of storage space. In addition to seeking a balance between competing uses of floor space, library leaders are seeking to optimize the human and financial resources being deployed to successfully complete the project. The faculty technology innovation lab is being developed with a campus partner so the library also had to factor in consideration for that partner's time schedule and financial contributions to the project.

The paper will demonstrate how a series of assessment projects can successfully build on each other and how data can be used to advance key library and campus priorities not only for this library but with methods and results generalizable to other libraries.

Short description:

How can you use assessment data to allocate your library's spaces to meet shifting needs for collections, users, library personnel, campus partners, and institutional priorities? Learn how one library built an assessment program that has informed past and ongoing space reallocations, leveraged campus partner financial support, and optimized the human and financial resources needed to successfully complete and maintain the projects.

Current status of project:

The assessment and implementation processes for the first floor project are complete and in hand. While significant work has been completed on the current third floor project, it is still underway. The assessment process for the third floor will be completed with reportable findings prior to the Library Assessment Conference.

Learning outcomes:

1. Learn how data from one assessment project can inform and guide future assessments.
2. Learn how a combination of qualitative and quantitative data can be used to inform space allocations.
3. Learn how campus partners can provide key assessment information and project support.

Bob Fox has been dean, university libraries at the University of Louisville since 2011. Prior to that, he was associate dean for the Georgia Tech libraries from 2005–2011. He serves as chair of the ARL Assessment Committee and is a 2010 graduate of the ARL Leadership Fellows program. Bob's publications and presentations have been in his research interests of library facilities, assessment, and user engagement. Bruce Keisling is associate dean of libraries and director, Ekstrom Library at the University of Louisville. His MLS is from the Catholic University of America, and he has nearly twenty years of experience in academic libraries. He has been involved in a number of assessment and library renovation projects. As director of Ekstrom Library, U of L's largest and busiest library, he is currently overseeing projects in both of these key areas.