Using Variability to Diversify Library Assessment and Maximize Value of Assessment Data

Jackie Bronicki*

Introduction

“Without deviation from the norm, progress is not possible”¹ is a quote attributed to Frank Zappa. Zappa would have made an excellent assessment librarian and he spoke often in his interviews of the importance of deviation from the norm and how it encourages innovation and identifies areas of potential artistic growth. Academic libraries in the United States have seen a trend in the past two decades towards prioritizing assessment activities as a way of identifying areas for improvement and growth, prioritizing expenditures strategically, and confirming value of services.² In 2004, Lakos and Phipps defined the earmarks of a culture of assessment,³ a core characteristic of which is using customer data to identify effectiveness of the organization. In academic libraries, this has often been done through collecting data through university-wide assessment surveys. Much has been written in the literature about using single-survey assessment tools to collect valuable assessment data, but little was seen until recently regarding combining multiple user surveys as a way of creating a more variable assessment dataset to support a large academic library’s multiple services and departments. In 2006, Hinchcliffe and Chrzastowski reported the value of multiple user surveys in “Getting Started with Library Assessment: Using Surveys to Begin an Assessment Initiative.”⁴ They outlined a three-year assessment cycle using surveys to collect data from multiple populations at the University of Illinois at Urbana-Champaign Library.⁵

One of the core functions of assessment librarians is to identify areas that need improvement by establishing performance indicators by which variances in values are tracked on an interval basis. Gap analysis is one of the main ways to determine what areas to focus on to make improvements and assess resources. Looking for gaps in the measurement variables is inherently part of our assessment and evaluation process, and we often look for differences in our measurement variables to flag potential problem areas or to validate areas where we are trending in a positive direction. LibQUAL+, the widely-used assessment survey for academic libraries, is based on the concept of gap analysis by flagging greater change among three different perception measures of the same variable.⁶ Greater difference in values serve as an important indicator for the assessment librarian to take a deeper look at the variables that show greater gaps. However, it is often hard to tell what is causing these gaps, and as Heath et al. noted in the 2004 paper, “Emerging Tools for Evaluating Digital Library Services: Conceptual Adaptations of LibQUAL+ and CAPM”⁷ there are limitations to LibQUAL+ in terms of “prioritizing the gaps and identifying which improvements would be most beneficial to the user of a digital library” or “use the results to implement real innovation.”⁸ Therefore, variability needs to be introduced into the assessment process, and one

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way of introducing greater variability in library assessment is by diversifying the number of assessment instruments, therefore capturing more variables.

Many current assessment activities address the analysis of a single instance of research or research at a specific point in time. The Association of College & Research Libraries (ACRL), in its 2010 Value of Academic Libraries Report, listed the creation of library assessment plans as a next step to demonstrating the value of the academic library. In 2015, the University of Houston (UH) Libraries created a new assessment coordinator position to formalize library-wide assessment activities, following the same pattern of creating assessment positions seen to date in large academic libraries. At the UH Libraries, LibQUAL+ had been implemented as the sole assessment survey for the prior ten years (2006–2015) which produced a robust longitudinal set of data. With a gap analysis survey approach, an assessment librarian is restrained to looking only for issues within demographic populations at the specific point of time that the data was captured. LibQUAL+ is designed to capture gaps of the current survey population, but often assessment librarians also want to know what has changed over time to point to areas of need and to exploring potential changes to services, collections, and space. Therefore, the assessment librarian needs to look at the data longitudinally for trends. However, if the longitudinal data does not vary greatly, what is the next step to determine assessment needs of the library?

**Research Questions**

The UH Libraries has been involved in informal assessment activities and library statistics gathering for over the past decade, but recently formalized their commitment to assessment by developing an assessment coordinator position. In this paper I will outline the process I went through, as a new assessment librarian in a newly created assessment position, to create an initial cyclical assessment plan for the library to serve the needs of multiple departments while addressing budgetary and staff constraints. The development of the new assessment plan began in summer 2015 as my initial task as the first dedicated assessment librarian at the UH Libraries.

Prior to the development of the assessment position, the UH Libraries administration had used collected LibQUAL+ survey data yearly from 2006 onward to provide a core longitudinal dataset. The questions I began asking when looking at the longitudinal 2006–2015 LibQUAL+ data for UH Libraries were: What happens if your longitudinal data doesn’t vary significantly? What does this tell us as assessment librarians and what does it point to for the library to focus time and money on changing? Is variance needed in longitudinal assessment data to identify potential areas of future changes to services? Without great variance in longitudinal survey research, do we need to get variables from other surveys to supplement this data? Could I provide UH Libraries with enough assessment variables within library services, collections, and space variables from just one assessment survey? Is variability in surveys needed to collect more data? From these queries, I developed four research questions:

1. Is the current assessment data enough to identify which areas of service, collections, and space need further focus or change?
2. Although LibQUAL+ is highly useful for capturing perceptions of the user populations the library serves, do we need to further diversify the assessment cycle to capture important assessment variables beyond LibQUAL+?
3. How do we collect and gather a greater number of variables in a library with multiple departments that need more specific assessment data specific to their workflows to enhance their services (i.e. Systems, Web Services, Acquisitions, Collections, Liaison Services, Administration, and Access Services)?
4. How do we diversify the current assessment plan without creating unrealistic time lines or incurring excessive staff time and monetary expenditures?
Objectives and Solutions
Prior to developing a formal assessment plan, I outlined both the objectives of a long-term assessment plan and what I felt were solutions to the limitations of the current single-survey assessment plan:

Objectives
- To capture assessment findings from a more inclusive array of library services such as technology, electronic resources, discovery, and instruction
- To identify a comprehensive list of measurement variables
- To capture assessment benchmarks allowing us to understand long-term trends across multiple measurements of success
- To diversify our assessment activities to avoid duplication of results and also gather data from multiple instruments leading to greater analytical capabilities

Solutions
- Identify key national research surveys that encompass and capture variables across multiple departments and service areas
- Compare the scope of each instrument and develop appropriate timelines of dissemination to maximize the scope of data collected
- Create a multi-year, multi-instrument approach to assessment to maximize the usefulness of data

Creating a Multi-Instrument Approach to Assessment
The four research questions led the impetus to create a multi-instrument approach. Upon review of the UH Libraries’ LibQUAL+ longitudinal data, few substantially large variations were seen in the data across time. To minimize table size for the sake of this paper, three random variables (AS-5, IC-5, LP-3) were selected from the data, one from each of the three major LibQUAL+ categories (see table 1, figure 1).

From this data review, I began to recognize the need to diversify our assessment instruments without needing additional staff or incurring increases in expenditures on assessment research. Currently, as the sole assessment librarian at the UH Libraries, I am supporting over 10 departments and 120 staff, and dedicated staffing for large-scale assessment work is limited to me at this time. So, to accomplish my assessment planning I began to research other national library-specific surveys as well as organizations outside the realm of libraries but still relevant to higher education and library services in general. In 2014, the UH Libraries were asked to collaborate with the University Provost’s office to lead the implementation of the ECAR Study of Undergraduate Students and Information Technology study designed by EDUCAUSE. The study was a university-wide look at how undergraduates integrate technology into both their student lives (the classroom and learning environment), and what technology they own and use in their personal lives. This study was not specific to library services, but captured a great deal of data relevant to the many areas we support. For example, the types of devices students use and how they prefer to receive information is directly related to determining what electronic resources we should be offering to support our community. The library acted as study coordinator, using the raw and reported data coming directly to the library. The ECAR UH data was benchmarked to the 212 other institutions who also participated in 2014. UH was given access to their own raw data and we received benchmark reports comparing us to other institutions based on type. The library presented this data, not only internally to support our own processes, but also to UH leaders such as the Deans’ Council so they could see the evidence for needed physical, technological, and service improvements. For example, in the 2014 UH ECAR data, the undergraduate response...
showed a five percent decrease in laptop ownership in comparison to the other public institutions in the study (see figure 2). Based on this finding, the library now has a program allowing students to check out laptop notebooks at the circulation desk, and in 2015-2016, there were 5,259 notebooks checked out to patrons, demonstrating that the library was able to fill a need we had identified in the ECAR 2014 study. This prompted the idea that the UH Libraries could incorporate multiple instruments of assessment to supplement the traditional tool (LibQual+) used to assess the variety of services our library provides to the university population. Also, by using

<table>
<thead>
<tr>
<th>Year</th>
<th>AS–5</th>
<th>IC–5</th>
<th>LP–3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Adequacy Mean</td>
<td>Desired Mean</td>
<td>Minimum Mean</td>
</tr>
<tr>
<td>2015</td>
<td>0.65</td>
<td>7.74</td>
<td>6.6</td>
</tr>
<tr>
<td>2014</td>
<td>0.5</td>
<td>7.95</td>
<td>6.68</td>
</tr>
<tr>
<td>2013</td>
<td>0.54</td>
<td>7.93</td>
<td>6.63</td>
</tr>
<tr>
<td>2012</td>
<td>0.5</td>
<td>7.95</td>
<td>6.68</td>
</tr>
<tr>
<td>2011</td>
<td>0.5</td>
<td>7.96</td>
<td>6.73</td>
</tr>
<tr>
<td>2010</td>
<td>0.34</td>
<td>8.03</td>
<td>6.88</td>
</tr>
<tr>
<td>2009</td>
<td>0.23</td>
<td>7.95</td>
<td>6.72</td>
</tr>
<tr>
<td>2008</td>
<td>0.19</td>
<td>8.19</td>
<td>6.92</td>
</tr>
<tr>
<td>2007</td>
<td>0.31</td>
<td>8.01</td>
<td>6.79</td>
</tr>
<tr>
<td>2006</td>
<td>0.21</td>
<td>8.15</td>
<td>6.9</td>
</tr>
<tr>
<td>2015</td>
<td>IC–5</td>
<td>Desired Mean</td>
<td>Minimum Mean</td>
</tr>
<tr>
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<td>8.13</td>
<td>6.95</td>
</tr>
<tr>
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<td>0.29</td>
<td>8.17</td>
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</tr>
<tr>
<td>2013</td>
<td>0.44</td>
<td>8.13</td>
<td>6.87</td>
</tr>
<tr>
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<td>0.29</td>
<td>8.17</td>
<td>6.88</td>
</tr>
<tr>
<td>2011</td>
<td>0.47</td>
<td>8.13</td>
<td>7.01</td>
</tr>
<tr>
<td>2010</td>
<td>0.2</td>
<td>8.25</td>
<td>7.1</td>
</tr>
<tr>
<td>2009</td>
<td>0.31</td>
<td>8.12</td>
<td>6.87</td>
</tr>
<tr>
<td>2008</td>
<td>0.14</td>
<td>8.24</td>
<td>7.13</td>
</tr>
<tr>
<td>2007</td>
<td>0.33</td>
<td>8.21</td>
<td>7.11</td>
</tr>
<tr>
<td>2006</td>
<td>0.34</td>
<td>8.3</td>
<td>7.05</td>
</tr>
<tr>
<td>2015</td>
<td>LP–3</td>
<td>Desired Mean</td>
<td>Minimum Mean</td>
</tr>
<tr>
<td>2015</td>
<td>0.65</td>
<td>8.01</td>
<td>6.79</td>
</tr>
<tr>
<td>2014</td>
<td>0.59</td>
<td>7.98</td>
<td>6.55</td>
</tr>
<tr>
<td>2013</td>
<td>0.6</td>
<td>7.99</td>
<td>6.58</td>
</tr>
<tr>
<td>2012</td>
<td>0.59</td>
<td>7.98</td>
<td>6.55</td>
</tr>
<tr>
<td>2011</td>
<td>0.6</td>
<td>7.96</td>
<td>6.67</td>
</tr>
<tr>
<td>2010</td>
<td>0.49</td>
<td>8.07</td>
<td>6.8</td>
</tr>
<tr>
<td>2009</td>
<td>0.63</td>
<td>7.86</td>
<td>6.51</td>
</tr>
<tr>
<td>2008</td>
<td>0.53</td>
<td>7.97</td>
<td>6.64</td>
</tr>
<tr>
<td>2007</td>
<td>0.62</td>
<td>7.85</td>
<td>6.66</td>
</tr>
<tr>
<td>2006</td>
<td>0.81</td>
<td>8.04</td>
<td>6.58</td>
</tr>
</tbody>
</table>
previously validated, nationally recognized surveys, the time needed to develop local surveys and implement them on campus would also be avoided.

In the past, UH Libraries had participated in LibQUAL+ yearly, and while very valuable to identifying if the library was meeting the overall needs of the user population, I felt we needed to collect far more and specific variables to support the assessment needs of departments such as systems, liaison services, web services, electronic resources, collection development, and access services. Using LibQUAL+, on a less frequent basis, in conjunction with
other research instruments would allow the library to expand the assessment data to include areas such as instruction, technology use, technology ownership, resource discovery, user experience, and other existing and emerging services. Also, a less frequent LibQUAL+ schedule would also increase the ability to spot trends in the data across a bigger time period, and the budgeted allocation could be used to gather broader supplemental data in other areas during the interval years. A multi-year, multi-instrument approach would also allow the library to gather benchmark data in areas that we have not formally researched to date. All of the research studies proposed in the assessment cycle also included benchmark data to other participating institutions as well. Not only do we have access to UH institutional data from each survey, but the benchmark data provided by the multiple organizations allows the library to compare itself to identified peer institutions. This type of comparison benchmark data is not only valuable to the library to see how we compare to similar large academic public libraries, but it also provides relevant data we can present to our university administration. Benchmark data is a powerful tool when interacting with university administration, showing the value of the library or the need for monetary support in areas where we fall below our peer institutions. Before deciding on the final schedule of surveys, I outlined several project management variables that would help determine the order of the survey dissemination, such as opt-in dates, data collection date parameters, completion time, and cost (see table 2). Some instruments such as the Measuring Information Services Outcomes (MISO)\(^\text{12}\) have to be implemented at specific times, while others such as Ithaka S+R\(^\text{13}\) can be implemented at any point during the year as determined by the assessment librarian.
This proposed schedule of assessment research activities is intended to outline a research timeline that allows the UH Libraries to maximize the value of the assessment data collected over four-year intervals while taking into account budgetary constraints. Because one survey instrument in the four-year plan is a free opt-in national survey, over the course of four years using four different instruments, our assessment costs for surveys would be approximately $5,000 more than a yearly schedule of implementing LibQUAL+ (see table 2). At the same time, we would get exponentially more assessment variables for the minimal increase in expenses. Therefore, I proposed to library administration a plan that would gather data across all areas of current services and departments and diversify assessment activities to build a large multi-purpose dataset of measurement variables that would benefit the work of multiple departments.

<table>
<thead>
<tr>
<th>Survey Instrument</th>
<th>Opt-In Date</th>
<th>Dissemination Date</th>
<th>Data Collection Period</th>
<th>Number of Variables</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECAR Undergraduate Survey</td>
<td>12/15/2015</td>
<td>3/15/2016</td>
<td>3 weeks</td>
<td>248</td>
<td>Free</td>
</tr>
<tr>
<td>ECAR Faculty Survey</td>
<td>12/15/2015</td>
<td>3/15/2016</td>
<td>3 weeks</td>
<td>256</td>
<td>Free</td>
</tr>
<tr>
<td>Ithaka S + R Undergraduate Survey</td>
<td>Anytime</td>
<td>Anytime</td>
<td>2 weeks</td>
<td>Customized</td>
<td>8000–12,000</td>
</tr>
<tr>
<td>Ithaka S + R Graduate and Professional Survey</td>
<td>Anytime</td>
<td>Anytime</td>
<td>2 weeks</td>
<td>Customized</td>
<td>8000–12,000</td>
</tr>
<tr>
<td>Ithaka S + R Faculty Survey</td>
<td>Anytime</td>
<td>Anytime</td>
<td>4-6 weeks</td>
<td>Customized</td>
<td>8000–12,000</td>
</tr>
<tr>
<td>LibQUAL+</td>
<td>2/15/2016</td>
<td>4/1/2016</td>
<td>3 weeks</td>
<td>44</td>
<td>3200</td>
</tr>
<tr>
<td>MISO</td>
<td>10/1/2015</td>
<td>2/15/2015</td>
<td>3 weeks</td>
<td>Customized</td>
<td>2000–2600</td>
</tr>
</tbody>
</table>

The final assessment plan included four surveys from nationally recognized organizations supporting both academic libraries and higher education including LibQUAL+, MISO, Ithaka S+R, and ECAR. The full assessment cycle will repeat every four years in the same order as long as the assessment value of the data supports the work of the library (see table 3).

Data Collection and Initial Findings
Data collection is currently ongoing due to the longitudinal aspect of the assessment plan. To date, the UH Libraries has collected data from the 2014 ECAR student survey, the 2015 LibQUAL+ survey, and the 2016 MISO survey. At the time of this writing, the library is preparing to launch Ithaka S + R survey to the undergraduate and graduate student population in March 2017. The library has received raw data files and variable codebooks for each survey implemented on campus along with response rates. Individual codebooks for each survey and population were created as a further resource to help organize information as well as further library-specific coding that would support mapping datasets and creating customized reports per department. For each survey, there was a sampling plan created with the guidance from each survey organization. The assessment coordinator then worked with the University Information Technology (UIT) group to create distribution lists that met the population parameters outlined by each survey (see table 4). Depending on the survey implementation plan, the survey link was sent either from UIT or from the survey organization.
<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
<th>Topics Covered</th>
<th>Population</th>
<th>Dissemination Time</th>
</tr>
</thead>
</table>
| MISO    | Measuring Higher Education Library and IT Services Outcomes: The survey is designed to measure the academic impact of library and IT services | • Course Management System  
• Instructional Technology  
• Reference Services  
• Computing Services  
• Collections  
• EBook Usage  
• Institutional Repository Use  
• Research Services  
• Digital Scholarship  
• Liaison Support  
• Technology Support  
• Library Subject Guides  
• Interlibrary Loan Services | Undergraduate Graduate Faculty                                                                | Spring Semester 2016 |
| Ithaka SR | Identifying trends across higher education as well as environmental changes                                                                         | • Research Lifecycles  
• Research Practices  
• Instructional Practices  
• Online Learning  
• Discovery and Access  
• Role of the Library  
• Student Expectations  
• Student Extracurricular Activities  
• Student Resource Use  
• Student Future Goals | Undergraduate Graduate Faculty                                                                | Spring Semester 2017 |
| ECAR    | Understanding student and faculty experiences and expectations of technology on campus                                                               | • Technology Ownership  
• Course Management System  
• Device Use  
• Platform Use  
• Technology Use in the Classroom | Undergraduate Faculty                                                                     | Spring Semester 2018 |
| LibQUAL+ | Understanding library users’ perceptions of core services                                                                                           | • Library Space  
• Information Control  
• Affect of Service | Undergraduate Graduate Faculty                                                                | Spring Semester 2019 |
Data Analysis and Complementary Data

The UH Libraries received raw data from each survey organization in multiple forms (.xls, .csv, .sav). Also, an initial report of findings, including demographic and variable frequency counts, was delivered to the library shortly after data collection was complete. The UH Libraries is now using the institutional raw data provided from the survey organizations for further analysis. Since the raw data is provided to the library, further types of analyses can be done such as cross-tabulations. Depending on the type of data in the survey, the assessment librarian can field requests for cross-tabulations from library departments that may be useful in identifying meaningful differences between groups. For example, the web services department wanted to look at whether user status (freshman, sophomore, junior, senior) changed the importance of being able to access library material from handheld devices (see figure 4). We saw from the data that use was distributed fairly similarly across user status groups, leading us to conclude that importance didn't vary by user status. Another identified benefit seen in the multi-instrumental approach is that there are often complementary variables across surveys. Mapping the variables is currently underway, but some mapping work has been done to date between the four assessment instruments in the assessment cycle (see figure 5, figure 6).

<table>
<thead>
<tr>
<th>Survey</th>
<th>Year</th>
<th>Population</th>
<th>Sample Size</th>
<th>Number of Respondents (Partial and Complete)</th>
<th>Response Rate</th>
<th>Approximate number of variables in dataset</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECAR</td>
<td>2014</td>
<td>Undergraduates</td>
<td>2000</td>
<td>160</td>
<td>8.0%</td>
<td>162</td>
</tr>
<tr>
<td>LibQUAL+</td>
<td>2015</td>
<td>Undergraduates</td>
<td>7000</td>
<td>399</td>
<td>5.7%</td>
<td>188</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>Graduates</td>
<td>1500</td>
<td>151</td>
<td>10.0%</td>
<td>188</td>
</tr>
<tr>
<td></td>
<td>2015</td>
<td>Faculty</td>
<td>500</td>
<td>123</td>
<td>24.0%</td>
<td>188</td>
</tr>
<tr>
<td>MISO</td>
<td>2016</td>
<td>Undergraduates</td>
<td>2194</td>
<td>230</td>
<td>32.9%</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>Graduates</td>
<td>29108</td>
<td>505</td>
<td>25.3%</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>2016</td>
<td>Faculty</td>
<td>3648</td>
<td>428</td>
<td>42.8%</td>
<td>173</td>
</tr>
</tbody>
</table>

**TABLE 4**
Populations, Sample Sizes and Response Rates from ECAR, LibQUAL+, MISO Survey

<table>
<thead>
<tr>
<th>How important is it that you are able to do the following activities from a handheld mobile device (e.g., smartphone or tablet)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all important</td>
</tr>
<tr>
<td>Freshman or first-year student</td>
</tr>
<tr>
<td>Sophomore or second-year student</td>
</tr>
<tr>
<td>Junior or third-year student</td>
</tr>
<tr>
<td>Senior or fourth-year student</td>
</tr>
<tr>
<td>Other type of undergraduate student</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
FIGURE 5
Complementary Variables from Three Surveys
Mapping Instruments for Complementary Validation

ECAR
How important is it to you to be able to access library resources from a handheld tablet?
1. Not at all
2. Not very
3. Moderately
4. Very
5. Extremely

LibQUAL
How often do you access library resources through a library web page?
1. Daily
2. Weekly
3. Monthly
4. Quarterly
5. Never

MISO
(Use, Importance, Satisfaction)
Over the course of a semester, on average, how often do you use access to online resources from off-campus?
1. Never
2. Once or twice a semester
3. One to three times a month
4. One to three times a week
5. More than three times a week

FIGURE 6
Findings from complementary variables from ECAR, LibQUAL+, and MISO

ECAR 2014
Undergraduate Students
How important is it that you are able to access library resources from a handheld mobile device?
(n=148)

LibQUAL+ 2015
Undergraduate Students
How often do you access library resources through a library Web page?
(n=999)
FIGURE 6
Findings from complementary variables from ECAR, LibQUAL+, and MISO

MISO 2016
Undergraduates
Over the course of a semester, how often do you access to online resources from off-campus? (n=457)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>26%</td>
</tr>
<tr>
<td>Once or twice a semester</td>
<td>22%</td>
</tr>
<tr>
<td>One to 3 times a month</td>
<td>15%</td>
</tr>
<tr>
<td>One to 3 times a week</td>
<td>13%</td>
</tr>
<tr>
<td>More than 3 times a week</td>
<td>23%</td>
</tr>
</tbody>
</table>

MISO 2016
Undergraduates
How important is access to online resources from off-campus? (n=433)

<table>
<thead>
<tr>
<th>Importance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Important</td>
<td>3%</td>
</tr>
<tr>
<td>Somewhat</td>
<td>5%</td>
</tr>
<tr>
<td>Important</td>
<td>21%</td>
</tr>
<tr>
<td>Very Important</td>
<td>71%</td>
</tr>
</tbody>
</table>

MISO 2016
Undergraduates
How dissatisfied or satisfied are you with access to online resources from off-campus? (n=389)

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied</td>
<td>74%</td>
</tr>
<tr>
<td>Somewhat dissatisfied</td>
<td>26%</td>
</tr>
<tr>
<td>Somewhat satisfied</td>
<td>2%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>0%</td>
</tr>
</tbody>
</table>
Aligning the Multi-Instrument Data with Strategic Planning Implementation

The UH Libraries developed a new five-year strategic plan in spring 2016. The strategic directions include four major areas of focus: 1) Position UH Libraries as a Campus Leader in Research Productivity, 2) Assure the Quality and Relevance of Collections for Campus and Global Communities, 3) Position UH Libraries as a Campus Leader in Student Success Initiatives, 4) Transform Library Spaces to Reflect Evolving Modes of Learning and Scholarship. Subsequently, the implementation team developed or identified seventeen projects across the four areas of focus outlined in the five-year plan. After the development of the strategic plan, the assessment librarian and the strategic planning committee were tasked with creating an implementation plan along with performance indicators to measure progress related to the identified strategic goals. As a way of supporting the strategic planning process and the implementation project teams, I created variable codebooks for each survey in our assessment cycle and mapped each variable to the relevant strategic directions and individual project teams. For example, I pulled data from the ECAR 2014 and MISO 2016 for the Tech Everywhere Project which is tasked with evaluating the current configuration of computers and printers (see table 5). I created specific MISO datasets with only variables from the space questions as well for two other strategic implementation projects, the First Floor Feasibility Study Team and the Digital Research Commons Engagement Team. At the start of the strategic directions planning process, I presented data from LibQUAL+ and ECAR to provide population-specific university-wide data to provide a jumping off point for the committee.

<table>
<thead>
<tr>
<th>TABLE 5</th>
<th>Example of coding assessment data for strategic planning implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECAR 2014—Undergraduate</strong></td>
<td><strong>Answer</strong></td>
</tr>
<tr>
<td>How important is each device to your academic success?</td>
<td>( ) Not at all important  ( ) Not very important  ( ) Moderately important  ( ) Very important  ( ) Extremely important</td>
</tr>
<tr>
<td>Desktop</td>
<td></td>
</tr>
<tr>
<td>Laptop</td>
<td></td>
</tr>
<tr>
<td>Tablet</td>
<td></td>
</tr>
<tr>
<td>Smartphone</td>
<td></td>
</tr>
</tbody>
</table>

Using Variability to Diversify Library Assessment and Maximize Value of Assessment Data
Challenges
The main challenges to sustaining this assessment cycle are the logistics related to project management of the survey implementation process. In 2006, Hinchliffe and Chrzastowski also noted this in their review of the three-year assessment plan at UIUC Libraries. However, each of the surveys in the four-year cycle follow similar implementation steps allowing the process to become somewhat automated in nature: 1) Opt-in Registration and/or contract agreement, 2) Survey customization (if applicable), 3) IRB protocol development and submission, 4) Develop sampling methodology, 5) Creation of email distribution lists and communication with the UIT group, 6) Implementation of the survey. Of course, the first survey implementation takes the longest time as each step is new in the implementation process such as navigating the university's IRB submission process, but the logistical time needed for preparation gets substantially less each subsequent year.

Conclusion
Benchmarking against peer institutions, validating similar assessment variables from multiple surveys, and gathering a greater total number of assessment variables has helped provide wider assessment coverage and support to the library and the multiple departments the assessment coordinator supports to date. This has been evidenced by the assistance the multi-instrumental approach has provided to the strategic plan implementation team and the projects identified to move the plan forward. Using multiple assessment surveys has had a two-fold benefit of 1) supplying complementary and validation data on a yearly basis since variables from each survey were often similar and, 2) providing unique variables per survey to broaden assessment coverage to multiple departments. Project teams from the multiple prioritized projects are currently requesting data, and a data repository of assessment variables mapped to specific strategic planning implementation teams was created in late 2016. Despite budgetary constraints, library administration is committed to providing the funding needed to continue the assessment cycle as the benefit has been seen to date from this effort. Also, the UH Libraries witnessed the value of the multi-instrumental approach by providing both informative and baseline data for the strategic planning committee. The value of the data extended beyond the library to the Office of the Provost and the Deans’ Council. Data from the assessment plan has been presented outside the library to university-wide collaborators and is also being used to support budgetary narratives and requests for funding. Our assessment data repository continues to grow with each yearly survey instrument implementation and the assessment coordinator is continually getting requests to create customized reports for multiple departmental and strategic implementation projects. At this time, the focus is shifting to creating a more robust data repository infrastructure on the UH Libraries intranet; continuing to map the data from multiple surveys together to form customized reports; and uploading the data to Tableau Server to create customized dashboards for all library staff to interact with at will. The mapping of variables across datasets also continues and is expected be finalized in 2017–2018.

Notes
5. Ibid.
7. Fred Heath, Martha Kyrillidou, Duane Webster, Sayeed Choudhury, Ben Hobbs, Mark Lorie, and Nicholas Flores. "Emerging

8. Ibid.


