

Revisiting a Library Impact Map

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For almost 30 years the collection, use, and dissemination of data within libraries have been used as tools to inform strategic planning and to describe the library's value in terms of how well the library aligns with the university's mission in regards to teaching, research, and outreach activities.¹ In the intervening years, library assessment efforts have evolved to assist librarians in developing and promoting the library's value to the university community. This effort includes promotion of library services and resources in a way that emphasizes patrons' needs and their understanding of what the library has to offer.² Periodic review of library programs and services helps to develop what the library develops and how each service assists in student success.³ Data collection, use, and dissemination enables librarians to better communicate their contribution toward student success to university leadership in a compelling way that describes the library's value to the university.⁴ In recent years, data collection has expanded to collecting and sharing library data with university analytics to assist the university in identifying factors that are critical to student success and to monitor for needed interventions to assist student success at the university and beyond.⁵

In 2012, Megan Oakleaf formalized the data collection process with the development of a library impact map (LIM), wherein the degree and use of data collected by library services was aligned with university areas of focus. While her model listed potential library services and university areas of focus, the intent was for each university library to adapt both LIM categories to their specific institution. In 2013 the Lee Library at BYU modified Oakleaf's LIM by sorting university levels of focus by the associated library goals and by specifying library services by division and those primarily responsible for the library service.⁶ The result was an assessment tool that allowed strategic planners to view trends and patterns at various levels within the library. It became a roadmap to indicate where collaboration and cooperation between librarians and those outside of the library did and could occur to accomplish university-level goals. It provided a broad view of library data collection, use, and dissemination activities that allowed users to zoom into specific divisions and departments within the library.

In the last six years library assessment has grown and developed in ways that promote the collection, use, and sharing of data to indicate the library's value, improve all that the library has to offer, and promote connections to the university aims and goals while supporting student learning and research activities. The 2019 re-administration of the 2013 LIM added another level to the collection, use, and dissemination of data. The LIM became one factor in determining what, if any, changes have occurred in the Lee Library's assessment and data use as the library strives towards a culture of assessment.

Method

A quick review of the LIM is offered for those not familiar with it before discussing changes to the 2019 LIM, and then the procedures for collecting and analyzing data are explained.

2013 LIM

The LIM used a grid where university areas of focus were the row headers and library services were the column headers. The revised 2013 LIM modified Oakleaf's original design by sorting the university areas of focus by library goals and the library services by division and department (see Figure 1).⁷ The adjusted library services and university areas of focus resulted in 29 university areas of focus and 46 library services, totaling 1,334 intersecting data points. At each intersecting data point, library employees chose one of five levels of data collection, use, and dissemination:

- Y++ = Yes, there is an impact, we have evidence/data, and we've communicated the impact to stakeholders.
- Y+ = Yes, there is an impact, and we have evidence/data of the impact.
- Y = Yes, we believe there is an impact relationship between this institutional focus area and this library service, expertise, or resource.
- CB = There could be an impact if we did something better or differently.
- N = No, there is no impact.

Figure 1
A Partial 2013 LIM with Ratings between the Library Service and University Area of Focus

AUL		Public Services					
Department Head		Subject Librarians				Learning Commons, Reference Librarians, Family History	
Library Goals	University Areas of Focus	Reference, Physical	Reference, Digital	Reference, Subject Guides	Liaison Services	Facilities, Learning Commons	Facilities, GSRs
FDC	Faculty Teaching	Y	Y	Y	Y	Y	CB
FDC	Faculty Innovation, Entrepreneurship	CB	CB	CB	Y	N	N
FDC	Faculty Research Productivity	Y	Y	Y	Y+	N	N
FDC	Character Building	N	N	N	Y	Y	Y
FDC	Student-Faculty Academic Report	N	N	N	Y	N	N
IDAR	Student GPA, Test Achievement	Y	Y	Y	Y	CB	Y
IDAR	Student Learning Outcomes	Y	Y	Y	Y	Y	Y
IDAR	Spiritually Strengthening	Y	Y	Y	Y	CB	CB
IDAR	Student (Retention, Completion, Graduation)	Y	Y	Y	Y	N	N
IDAR	Institutional Athletics	N	N	N	CB	N	N
IDAR	Undergraduate Research	Y	Y	Y	Y+	Y	Y
PSTF	Student Career Success	Y	Y	Y	Y	Y	N
PSTF	Institutional Efficiencies	N	N	N	Y	Y	Y

AUL		Public Services					
Department Head		Subject Librarians				Learning Commons, Reference Librarians, Family History	
PSTF	Student Experience, Engagement	Y	Y	Y	Y+	Y	Y
PSTF	Student Recruitment, Enrollment	N	N	N	N	Y	N

FDC = Facilitate Deep Collaboration, IDAR = Improve Discoverability and Access to Resources, PSTF = Provide Spaces That Facilitate collaboration

2019 LIM Modifications

In 2019, the following changes to the LIM and its administration were made. First, both the university areas of focus and the library services were updated. There was one less university area of focus for a total of 28. New library services were added and discontinued services deleted. In some instances, library services that were listed as a single service in 2013 were split into different services (e.g., library IT services were split into its four units). This change resulted in 12 more library services for a total of 58 services and 1,624 intersecting data points.

Second, an additional code was added that indicated that data could be collected and that the person responsible wanted to start collecting that data (CBW). Third, in the 2013 administration records there was no mention of which 15 library employees populated the LIM. For the 2019 LIM, 34 non-student library employees who had direct responsibility over specified library services were identified. Each employee indicated the level of data collection for each university area of focus for their respective area of responsibility. For 15 library services, two or three library employees in different departments shared responsibility for the library service. In these instances, each employee responsible for the service was asked to complete the rating. Where ratings differed among these employees, only the highest rating was used. For example, if one employee rated a university area of focus CB and the other rated it Y, we used the Y rating.

Procedures

As with the 2013 LIM, all library employees with responsibilities over library services were contacted with the purpose of the LIM, and procedures for completing the LIM were described. Each employee was asked to participate in the assessment, but in one instance, the original person who was asked to populate the LIM declined and was replaced with another library employee who had experience and background in the service, but the service was not one of the replacement employee's primary responsibilities. No deadline was made to complete the population of the LIM as some library employees only had one service to populate while others had multiple library services to populate. Reminders were periodically provided and questions answered as needed. Data collection was completed over a four-week period.

The CBW code was only used individually on part of the analyses, but otherwise the CB and CBW codes were combined into a CB code to facilitate comparisons between the two years. Likewise, library services that were split for the 2019 administration were recombined, with the highest rating being used. As mentioned earlier, for some library services two or more library employees provided a rating at the intersecting data point. When these ratings differed because of department differences, the higher rating for the library service was used. Finally, the total number of data points for 2013 and 2019 differed. To

account for these differences, the total number of intersecting data points for each LIM administration were reported, but the percent of total was used to compare changes between 2013 and 2019.

The change patterns were compared in three ways. First, shifts (negative, positive, and no shift) in how data was collected and used for each code category were compared, and the total number of intersecting data points and percent of total for each code were reported. Second, patterns of change in codes assigned to the intersecting data points were examined. For example, how many codes that were assigned an N in 2013 were assigned to a Y++, a Y+, a Y, a CB, or an N in 2019. Finally, change patterns for each code option by each library service or university area of focus were examined. New library services were not included in this analysis. Split library services were recombined. In all analyses significant changes were not calculated but only trends and patterns reported. Each of these perspectives were combined to help determine the degree to which the library was moving towards or away from a culture of assessment.

Findings

The 2013 LIM assessment discussed ways the LIM could be used to promote and encourage data collection, use, and dissemination within the library. While each of these options continues to be relevant for the 2019 LIM, they are not specifically discussed here with the exception of the CBW code. For a discussion of these options please refer to “Using a library impact map to assist strategic planning in academic libraries .”⁸ Instead the focus is on the results that help to indicate the degree to which a culture of assessment is developing within the library. For convenience, the codes are repeated here:

- Y++ = Yes, there is an impact, we have evidence/data, and we’ve communicated the impact to stakeholders.
- Y+ = Yes, there is an impact, and we have evidence/data of the impact.
- Y = Yes, we believe there is an impact relationship between this institutional focus area and this library service, expertise, or resource.
- CBW = There could be an impact if we did something better or differently, and we want to collect data.
- CB = There could be an impact if we did something better or differently.
- N = No, there is no impact.

Coding Shifts

Table 1 shows the total number of intersecting data points and percent of total for 2013 and 2019. The CB, Y, and N codes had respective decreases of 8%, 1%, and 1%. The Y+ and Y++ codes had respective increases of 4% and 1%. The net result indicates a slight shift towards collecting, using, and sharing more data. There were 25 instances or 2% of all codes in 2019 where librarians indicated that data could be collected and that they wanted to start collecting and using data.

Table 1
Comparison of Total LIM codes and Associated Percentage in 2013 and 2019

	Y++	Y+	Y	CBW	CB	N	Total
2013	15	40	429	-	346	504	1,334
	1%	3%	32%	-	26%	38%	
2019	27	116	543	25	279	634	1,624

Y++	Y+	Y	CBW	CB	N	Total
2%	7%	33%	2%	17%	39%	

Three shifts (negative, positive, and no shift) were examined based on the 1,567 intersecting data points (new services were not included). The negative shift occurred when a code shifted from a more identified, used, and shared code to a less identified, used, and shared code (e.g., from Y+ to CB). A positive shift was the opposite, and the no shift indicated the same code was assigned in 2019 as was assigned in 2013. Negative shifts accounted for 23% of all codes while positive shifts represented 27% of all codes. The no shift represented 51% of all codes (see Table 2).

Of interest is the simultaneous increases and decreases where some codes increased while other codes decreased. The Y code experienced the largest positive shifts from the CB and N codes and negative shifts to the CB and N codes. Similar shifts also occurred between the CB and N codes. Just over half of all codes placed in the intersecting data points did not change. These results support a small overall change towards data collection, use, and dissemination.

Table 2
Comparison of Change for all Intersecting Data Points Total Number and Percent of Change
2019 Percentage of

Rating	Y++	Y+	Y	CB	N	Negative Shift	Positive Shift	No Shift
2013 Y++	5	2	7	<i>1</i>	<i>0</i>	1%	-	0.3%
Y+	0	11	<i>17</i>	3	<i>10</i>	2%	0%	0.7%
Y	13	38	267	<i>50</i>	<i>131</i>	12%	3%	17%
CB	6	37	126	164	<i>130</i>	8%	11%	11%
N	3	24	106	74	342	-	13%	22%
Total Percent						23%	27%	51%

Italicized indicates negative change. Normal font indicates positive change. Boldface indicates the code did not change. Percentages are out of total possible data points. The total of data points differs because of LIM changes from 2013 to 2019. Rounding errors resulted in a total of 101%.

Library Services

Next, comparisons were made for changes in the codes placed in the intersecting data points for each library service, using all university areas of focus. For example, the percentage of all university areas of focus for “Reference, Physical” for each code (Y++, Y+, Y, CB, and N) was calculated for the 2013 and 2019 LIMs. The 2019 percent totals were subtracted from the 2013 percent totals for each code to determine if there was a net increase or decrease for each code. These changes were placed into one of five groups—no change, 0–10% increase, more than 10% increase, 0–10% decrease, and more than 10% decrease, as represented by the respective symbols =, +, ++, - and --.

While there were both increases and decreases in the amount of data collected, used, and disseminated, the increases were slightly higher than the decreases. This analysis indicates that the Y++, Y+, and Y

codes indicated the similar pattern of increases and decreases in data collection, use, and dissemination, but there were moderately more gains than decreases. Similarly, there were decreases in CB and N codes, indicating that data is not collected but in some cases could be collected. The Y++ and Y+ codes also had the least amount of no change in codes. That is, the code assigned in 2013 was identical to the code assigned in 2019. Further examination would be needed to determine why the decreases happened and how they may be reversed.

Table 3
Summary of Change in Library services by Intersecting Data Point Code from 2013 to 2019
Change in Codes

Library Services	Y++	Y+	Y	CB	N
Acquisitions	=	=	++	=	--
Archives	--	--	+	++	+
Cataloging	=	-	+	=	-
Circulation (FDS, Pickup, Holds added in 2019)	=	-	-	--	++
Collection Development	=	=	+	-	=
Collections, Data/Statistics	=	=	=	+	-
Collections, E-Books	=	=	+	-	=
Collections, E-Resources	=	=	+	-	=
Collections, General	=	+	++	--	+
Collections, Government Documents	++	++	++	--	--
Collections, Multimedia	=	+	++	--	-
Collections, Popular	=	+	++	-	--
Collections, Reference	=	+	++	--	-
Collections, Special Topics (Area Studies added in 2019)	=	+	++	--	+
Collections, Technology	=	++	+	--	--
Copyright Services	+	=	-	=	+
Data Repositories	=	++	--	++	-
Disability Services	=	=	++	=	--
Embedded/Mobile Services	=	-	--	--	++

Library Services	Change in Codes				
	Y++	Y+	Y	CB	N
Facilities, Carrels	=	=	-	-	++
Facilities, Computing Space (computers, printing, photocopier added in 2019)	=	=	--	+	++
Facilities, General	=	=	+	++	--
Facilities, GSRs	=	=	--	--	++
Facilities, Learning Commons	+	=	++	--	--
Facilities, Study Space	=	+	--	--	++
Friends of the Library	=	-	=	=	+
Institutional Repositories	++	+	+	--	-
Instruction, Course-Integrated	+	-	++	-	--
Instruction, Curriculum-Integrated	-	--	++	-	--
Instruction, Drop-In	++	+	--	++	--
Instruction, Embedded	=	=	++	--	--
Instruction, One-shot (“not consultation” added in 2019)	++	-	+	--	+
Interlibrary Loan	=	-	--	--	++
Liaison Services	=	--	+	=	+
Library Communications	=	++	+	++	--
Library Information Systems	=	-	-	--	++
Library Social Media	+	++	--	+	-
Library Website	=	=	--	-	++
Outreach	=	-	--	++	++
Reference, Consultations	=	+	-	++	--
Reference, Digital	=	+	+	++	--
Reference, Embedded	=	+	++	++	--

Library Services	Change in Codes				
	Y++	Y+	Y	CB	N
Reference, Physical	=	+	-	++	--
Reference, Subject Guides	=	+	+	+	--
Reserves	-	-	-	=	++
Special Collections	--	++	--	=	++

++ represents > 10% change, + represents 0% < change < 10%, = represents no change, - represents -10% < change < 0%, and -- represents < -10% change. Does not include library services added or removed after the 2013 LIM. Services are alphabetical for convenience.

University Areas of Focus

Using the same methods, the change in the university areas of focus were examined (see Table 4). Similar to library services, there were simultaneous increases and decreases in the amount of change in data collection, use, and dissemination. There were moderate overall increases in how data is collected, used, and shared, but this is offset by increases in data not being collected at all. As with library services, each of these areas of focus could be further examined to determine the reason for increases and decreases.

**Table 4
Summary of Change in University Areas of Focus from 2013 to 2019**

University Area of Focus	Change in Codes				
	Y++	Y+	Y	CB	N
Alumni Lifelong Learning	=	+	++	--	+
Character Building	-	+	-	=	+
Faculty Grant Seeking	=	-	+	-	+
Faculty Innovation, Entrepreneurship	=	+	+	--	-
Faculty Patents, Technology Transfer	=	+	+	-	+
Faculty Recruitment, Tenure, Promotion	=	+	+	-	-
Faculty Research Productivity	+	-	+	-	=
Faculty Service	=	+	++	--	--
Faculty Teaching	+	+	-	--	++
Institutional Accreditation, Program Review	+	-	-	-	++
Institutional Affordability	+	+	+	--	=

University Area of Focus	Change in Codes				
	Y++	Y+	Y	CB	N
Institutional Athletics	=	=	+	-	-
Institutional Brand	+	++	+	+	--
Institutional Development, Funding, Endowments	-	+	+	-	+
Institutional Prestige	=	++	--	--	++
Intellectually Enlarging	+	+	+	--	+
Lifelong Learning & Service	=	+	-	-	++
Local, Global Economic Growth	=	+	=	++	--
Local, Global Engagement, Community-Building, Social Inclusion	+	+	-	-	+
Spiritually Strengthening	-	+	++	--	+
Student Career Success	+	++	--	--	++
Student Experience, Engagement	+	+	-	-	+
Student GPA, Test Achievement	=	-	-	-	+
Student Learning Outcomes	+	+	-	--	+
Student Recruitment, Enrollment	=	+	--	++	-
Student Retention, Completion, Graduation	+	+	+	--	+
Undergraduate Research	=	++	--	--	+

++ represents > 10% change, + represents 0% < change < 10%, = represents no change, - represents -10% < change < 0%, and -- represents < -10% change. Does not include university areas of focus removed after the 2013 LIM. University areas of focus are alphabetical for convenience.

Limitations

While the 2019 LIM provided further insights into how library data is collected, used, and disseminated, several limitations should be noted. First, there was no record of who populated the first LIM, nor could any library employees recall participating. As a result, an approach was adopted that ended up more than doubling the number of library employees participating. This larger group of raters may have led to rating inconsistencies and greater variance in codes. However, this limitation is offset by each rater having direct experience with and knowledge of the library service and who it would affect.

Second, several employees did not understand what some of the university areas of focus meant. To compensate for this we provided better descriptions of university areas of focus for any employee who asked for more clarity.

Third, for the 15 library services that had two or more people responsible for that service, not all ratings were the same. For example, the level for data collection, use, and sharing codes from the person in the Humanities Department differed from the codes from the person in the Social Sciences Department. In these instances only the highest level of code was used. The results do not reflect the lowest codes assigned or service differences between departments. Only 15 of the 58 library services had multiple raters and ratings only differed on 11 of those 15 services.

Finally, the use of more and new library employees to rate the library services may have also led to the simultaneous increases and decreases found in the assessment as it was their first time rating the level of data collection, use, and sharing. This effect was anticipated but not something we could account for and counter.

Discussion

The addition of the CBW category provides a starting point to determine where data can be collected and used. This added code was helpful to know who to contact and what data to start collecting, using, and sharing.

The data supports a small shift towards collecting, using, and sharing data with stakeholders within and outside of the library. This mild increase indicates a slow shift towards increasing a culture of assessment within the library. However, it is also apparent that data identification, use, and dissemination within the library is quite fluid. While there were many shifts toward collecting, using, and sharing data more, there were similar shifts toward collecting, using, and sharing data less. Ensuring that gains in data collection, use, and dissemination are maintained would further the development of a culture of assessment in the library.

There are also multiple instances where the pattern of data collection, use, and dissemination did not change between the two studies. For the instances where data was collected and used, this is good news, but not so great for areas where data still could be collected or wasn't collected. It should be noted that any given library service will not meet the needs of all university areas of focus. For this reason the N code is and will remain common in any LIM. Those conducting a LIM should ensure that, where possible, data is collected, used, and shared within the library and among university colleagues.

Each aspect of a LIM and its re-administration provides for a means whereby librarians can better understand their library's value and communicate that value to others outside of the library.⁹ Additionally, the LIM provides a means whereby library employees indicate how well they follow university leadership, but also how they lead efforts for the university to accomplish its aims and goals.¹⁰ The result is a library that both leads and follows in its efforts to describe its value and improve its service to the broader university community.

Future LIMs

Repeating LIMs more frequently than once every six years may provide momentum when building and maintaining a culture of assessment. It would allow for fewer changes in regards to library services and personnel assigning the ratings. It would also be helpful, where possible, to have university leaders identify what their areas of focus are and which areas of focus are of greatest importance. This process would also include definitions or explanations of university areas of focus. Hopefully this process would also reduce or consolidate the university areas of focus to simplify the process. Where applicable,

differences between multiple raters and departments should be highlighted. Doing so provides a clearer picture of where and how data is being collected and used within the library.

As the LIM is only one indicator of the development of a culture of assessment, it would be helpful to conduct the LIM with other assessments such as a data inventory. In this way, library employees would not only be identifying data and the degree of its use, but they would also be identifying where that data is so that it may be better used. There may be other assessments that would fold into the LIM to assist in the description of library value and to inform library decisions.

Conclusion

The LIM is a powerful tool for determining if data is collected and used and how it is shared with others. It serves as a guide to improve data collection and use within an academic library, but it also helps to provide connections to university areas of focus. These connections not only serve to promote the value of libraries, but they assist decision-making and planning within a library to better serve its patrons.

Administered over time a LIM has an additional benefit of showing the ebb and flow of data collection, use, and sharing within a library that reflects the development and maintenance of a culture of assessment. For some library employees, seeing the importance of data collection, use, and dissemination, especially when it runs counter to your perceptions, is difficult. For those focused on promoting a culture of assessment it is important to remember that movement towards a culture of assessment requires patience and understanding. The repeated administration of a LIM is one tool that assists in indicating the directionality and speed at which a culture of assessment is developing.

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Endnotes

- ¹ Eaton, “Inserting the library into a broader campus planning process”; Watson, “Transforming the library”; and Schwieder and Hinchliffe, “A multi-level approach for library value assessment.”
- ² Germano and Stretch-Stephenson, “Strategic value planning for libraries.”
- ³ Fazal, “Library strategic planning for middle states accreditation: A 10-year road to success.”
- ⁴ Murray and Ireland, “Provosts’ perceptions of academic library value and preferences for communication” and Walter, “Communicating value through strategic engagement.”
- ⁵ Oakleaf, “The problems and promise of learning analytics for increasing and demonstrating library value and impact.”
- ⁶ Zaugg, “Using a library impact map to assist strategic planning in academic libraries.”
- ⁷ Oakleaf, *Academic library value*.
- ⁸ Zaugg, “Using a library impact map to assist strategic planning in academic libraries.”
- ⁹ Schwieder and Hinchliffe, “A multilevel approach for library value assessment.”
- ¹⁰ Wayne, “The academic library strategic planning puzzle: Putting the pieces together.”

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