Against the Grain

Library Analytics: Shaping the Future — Communicating Library Impact through Annual Reports

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Library Analytics: Shaping the Future — Communicating Library Impact through Annual Reports

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Academic libraries, like other units of higher education institutions, need to demonstrate value to their institutions. This is accomplished through a variety of methods, from formal publications and presentations to informal one-on-one conversations and social media posts. As discussed elsewhere about library assessment websites,[1] annual reports are another key method of communicating library value to stakeholders.

Annual reports are formal documents for an organization. They may be for internal or external purposes and provide a forum for communicating the goals, accomplishments, and directions of a unit or organization. At **Stony Brook University Libraries**, the Research & User Engagement division — which encompasses or oversees liaison activities (information literacy instruction and research support), access services, and campus outreach — publishes annual reports on its activities, accomplishments, and goals. For over a decade, the primary purpose of the report was to inform the Dean of Libraries as well as RUE members of its output. It served as a handy source of statistics when University Administration requested certain data points, but mostly, it was an internal document. Over the years, with the intent to make the Libraries, and especially RUE divisional work — because of its outward-facing mission — more visible and relevant to external stakeholders (such as University Administration), we tried to make it more user-friendly with graphics and charts that added some data visualization, but it continued to be very jargony and inward-focused. **ACRL's** 2010 *Value of Academic Libraries* and 2017 *Academic Library Impact* reports, which clearly describe the imperative to communicate to our external stakeholders in deliberate, intentional ways, helped us reconceptualize the entire report in concrete and effective ways. We also drew from theories such as multimedia learning and cognitive load theory to design the annual report.

ACRL has identified specific areas of institutional missions that academic libraries can and do impact, and should explore to further increase their value: student enrollment, retention, graduation rates; student success, achievement, learning, experience, engagement; faculty research productivity, grant proposals, grant funding, teaching; and institutional reputation and prestige. These research agenda areas should be used to shape or revise library missions, visions, and strategic directions in collections, services, and programming to ensure that academic libraries contribute maximum value to institutional outcomes (ACRL, 2010).

The *Impact Report* outlines six priority research and action areas that can help libraries more effectively communicate their contributions to institutional missions. **1). Communicating the library's impact** to the institution requires libraries to present the library's contributions using terminology that is easily understandable by the institutional/higher education stakeholders, raise awareness of the library's participation in missional areas to those outside of the library, and leverage the library's unique position of serving all students and majors. **2). Matching library assessment** to the institution's mission requires libraries to work with campus partners and departments to collaborate on common issues and goals, work with teaching and learning support services as well as faculty and students to build a culture of assessment, and align assessment activities to the institution's strategic directions. **3). Including library data** in institutional data collection requires libraries to have their data included in the systematic data collection processes and analyses of the institution to better connect the library with research, teaching, learning, and student success. **4).** Impact on student success has become the most significant way for institutions to demonstrate their value to their stakeholders, and libraries can **quantify their impact** in this area with data and assessment of library resources, programs, spaces, library instruction for student success, and other data points. **5).** Libraries must show the ways they contribute to critical thinking, student learning and engagement, and use spaces, collections, and programs to **enhance learning and engagement**. **6).** And libraries must **collaborate with other partners** and units on campus and at other institutions to improve student learning and success.

The *Impact Report* stresses that the first priority area — communicating the library's contribution to the institution — is the most important, and that the other five areas support this priority area in more specific ways (46). Indeed, a library that is adequately achieving the other five priority areas, but isn't communicating its value effectively, through reports and other methods, may still fail to demonstrate its value to its stakeholders, which would be extremely unfortunate. **Lewin** and **Passonneau** (2012) noted that "[i]nstitutions will not place high value on libraries if stakeholders cannot discern the positive impact library activities have on scholarship and teaching activities" (p. 91). Moreover, at least half of the 10 "next steps" identified in the white paper, *Library Integration in Institutional Learning Analytics* (Institute of Museum and Library Services, 2018, p. 7), involve communicating value or prioritizing user stories or impact narratives to further facilitate greater library integration with institutional data and analysis of student learning and success.

With these **ACRL** recommendations in mind, we then applied multimedia learning theory to guide the visual redesign and presentation of our divisional annual report. We wanted to present a report that external stakeholders could view, process and easily understand the impact the University Library had on the University community.

Multimedia Learning Theory

Multimedia learning theory developed by **Richard Mayer** (2009) is based on several assumptions including what **Mayer** calls the active processing or SOI framework (selecting, organizing and integrating information), limited capacity of working memory and dual coding. This theory is guided by several principles with the fundamental belief that individuals learn better with words and pictures than with words alone. It guides the creation of multimedia materials to help foster learning while reducing extraneous processing.

The **SOI framework** developed by **Mayer** (2009) is a way to describe active processing during learning. This includes selecting relevant information, organizing this information in a meaningful way and integrating this new knowledge into existing schemas. When learning new information, our *working memory* has a limited capacity in what it can process at one time. Research has found the average person can hold seven plus or minus two pieces of information in working memory at any one time (Miller 1956). When there is too much information to process beyond what an individual's working memory can handle, they can experience a cognitive overload (Sweller, 1988). This is especially true when the viewer has limited background knowledge (in this case, academic library work) and when information is unorganized. The viewer is using their working memory to figure out the meaning and/or organize the information in a way that makes sense to them. If this is too complicated, the viewer may overlook important information or possibly give up reviewing the material completely. This cognitive load can be reduced by organizing information

for the viewer, grouping relevant information together (chunking), drawing attention and emphasizing important information, and removing any information that is not essential.

The third assumption of **Richard Mayer's** theory is **Dual Coding**. This means presenting information using words and visuals (whether this is spoken or written words and static or moving images). Dual coding helps the viewer process and retain information more effectively.[2] When the presenter uses meaningful words and appropriate images together, they are organizing and chunking information for the reader which can help the viewer process information better.

Organization of information in a meaningful way was essential. We organized each area within the division focusing on the mission, vision and goals outlined in the Libraries' strategic plan. Each area highlighted their accomplishments for the year for each goal and provided statistics and images to support these accomplishments in the higher education language of student and faculty success. Each section was set up in the same way so the areas were easily recognizable as the viewer turns the pages. This design was intentional so the viewer does not use valuable working memory trying to figure out where to find information or have to unpack library jargon. (See Figure 1.)

Icons were created and used throughout the annual report. These icons allow the viewer to easily recognize each area including academic engagement, access and user services, research and emerging technologies, campus engagement and assessment. (See Figure 2.)

Icons were also used on the back cover of the report to maximize the impact of the report's highlights and to reinforce the dual coding utilized throughout the report. (See Figure 3.)

Another aspect of organizing information for the viewer is to **emphasize** important information. This was shown throughout the report by using larger font, bold colors and strategically placing

Figure 2. Use of icons and dual coding to brand the unit titles.

Figure 1. Consistent organization in all sections, linking accomplishments back to the Libraries' strategic plan.
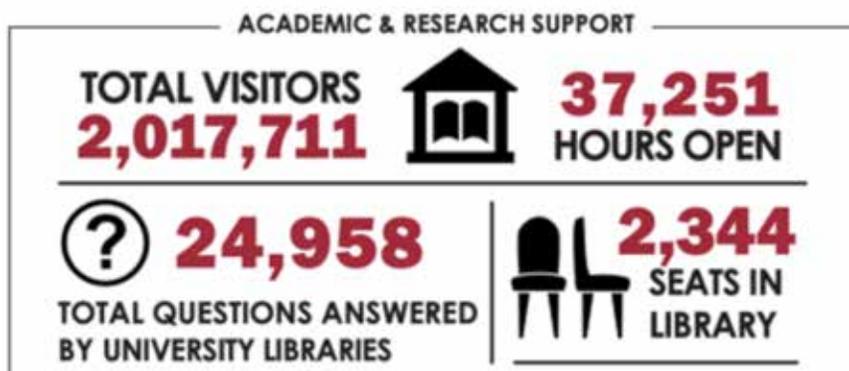

Figure 3. Strategic use of icons and dual coding principles on the back cover of report for additional emphasis.

this information where viewers would be drawn. Rather than listing all of our statistics, we organized and emphasized the numbers that we knew were important for our external stakeholders to recognize. (See Figure 4.)

Redesign Outcomes

Using the **ACRL's** *Impact Report* as a roadmap, then, the principal goal of the newly redesigned report was to **communicate the library's contribution** to the University's mission of student success, faculty research and productivity, and diversity. These contributions are clearly out-

lined first, strategically framing the rest of the document (Stony Brook University Libraries, 3). In addition, the new design accomplished the following:

- We highlighted data points and library assessment that **matched or resonated with the University's mission**, such as campus partnerships that accomplished mutual goals for student and faculty success.

- We included **data points that directly contributed to the University's data collection**, such as

the library's direct role in high impact educational practices such as the general education learning outcomes.

- We **quantified the Libraries' impact** by highlighting data points that could be easily understood by external stakeholders.
- We showed the Libraries' year-round **efforts at campus engagement**, highlighting new programming and increased attendance at events.
- We recognized new campus and external **partnerships** to demonstrate the Libraries' active engagement with the communities it serves.

Challenges

As with any project, there were some procedural and technical challenges in creating the annual report. There were some obstacles in obtaining and/or gaining access to data. Different units had different ways of reporting and there was inconsistency in the way information was reported (example: health sciences instruction statistics vs. main campus instruction statistics). This required us to edit and rewrite some areas to obtain a cohesive report. In addition, connecting the report to our strategic process required reflection and time that we didn't always have to invest. Technically, conceptualizing and creating the report was time-intensive. We were fortunate to have a member of our staff with a design background to layout this report in Adobe InDesign. However, this posed another difficulty in that all editing fell to this one staff member. We plan to explore design tools that are more familiar to more staff.

Conclusion

We are pleased with the improvements of the report's content and visual presentation. Going forward, we would like to incorporate impact narratives that can further integrate library data with institutional data and analysis of student learning and success. We would also like to use this report as a template for other levels of reporting, vertically and horizontally across the library organization, so that we are all intentionally and consistently incorporating **ACRL's** recommendations for communicating library value into our reporting practices. A link to our full annual report can be found here: *https://library.stonybrook.edu/wp-content/uploads/2019/06/RUEAnnualReport-FinalSinglePages.pdf*.

TOTAL VISITORS 2,017,711 ↑ **9.5% INCREASE FROM 2016-2017**

Visitors By Location

Library Location	Gate Count
Central Reading Room	422,712
North Reading Room	768,923
Main Stacks	159,828
Music Library	98,433
Math/Physics Library	62,427
Chemistry Library	18,537
MASIC	8,858
Southampton Library	39,747
West Campus Total	1,579,465
Health Sciences Library	438,246
SBU Libraries Total	2,017,711

2018-2019 Goals

Principle 1: Promote Academic Engagement

- Maintain emphasis on uniform user experience based on equitable and consistent policies and procedures throughout the Stony Brook University Libraries.
- Promote and market Access & User Services through strategic partnerships with other library and university departments, community groups, using social media along with other marketing efforts so patrons are aware of the resources available to support their academic and research interests.
- Create internship opportunities for library school students interested in user services

Principle 2: Build, Preserve, and Provide Access to Rich and Diverse Collections

- Make data-driven decisions regarding user services and policies
- Review policies and procedures to ensure that they are in

Figure 4. Example of emphasizing important information with font, colors, and placement on page.

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Endnotes

1. **Hall** and **Clarke**, "Communicating Library Impact through the Assessment Website" in the *2018 Library Assessment Conference Proceedings* (forthcoming).
2. For a more in-depth review of dual coding theory, see *Mind and Its Evolution: A Dual Coding Theoretical Approach* by **Allan Paivio**.