

REDUCING DIGESTIBLE TIDBITS FROM MEATY STOCK: SATISFYING VARIED TASTES WITH AN ATTRACTIVE INSTRUCTIONAL ASSESSMENT MENU

ERIKA BENNETT, JENNIE SIMNING AND KIM STALEY

INTRODUCTION

Library instruction is not ontologically valued. With the increased pressure on institutions of higher education to prove their value through evidence-based practices, busy administrators are more likely to invest in a department with clear assessment sight-lines over another with muddled ones. Whether answering queries from helicopter parents, pragmatic adult students, or marketing representatives pulling data for National Library Week, library instruction data should be as well organized and as quick to access as your resource collections. Just like a library's collection, instruction data is continually in flux, but at a bare minimum it should be accessible to a wide variety of stakeholders.

Like most assessment in education, the ultimate goal of assessing a library's instruction program is to improve student learning and the learning process (Motiwalla, Tello, & Carter, 2006). The purpose of assessing instruction and information literacy (IL) initiatives in the academic library is actually three-fold: to increase student learning, to strengthen instructional programs, and to answer calls for accountability (Oakleaf & Kaske, 2009), with accountability being a major driver of assessment initiatives in libraries.

HOW WE ARRIVED AT DASHBOARDS

Educators have traditionally challenged the validity

Bennett (Information Literacy & Instruction Librarian),
Simning (Reference & Instruction Librarian) and
Staley (Reference & Instruction Librarian)
Capella University [Minneapolis, MN]

of business assessment tools in measuring learning. However, several trends have caused a significant integration between these methods in the literature. First, in the library instruction world, assessment practices are trending toward larger scale value assessments of the library's impact on students' actual research and information literacy skill development (Oakleaf, 2011). Second, the move to asynchronous online instructional resources means that data are being generated from numerous platforms that need to be aggregated into a centralized, accessible format (Chiu, Chieh-Chung & Chen, 2008). Finally, assessment queries from accreditation and government accountability organizations drive the need for faster and more transparent measures (Thompson, 2002).

SCORECARDS VERSUS DASHBOARDS

Business intelligence tools have recently been appearing in the assessment plans of many non-business sectors, like government, nonprofit organizations, academia and even libraries (Matthews, 2008). Originally developed for the for-profit business sector, scorecards and dashboards prove value and facilitate data-based decision making from myriad data sources.

The terms scorecards and dashboards have often been used interchangeably in the business world, but it is important to distinguish between the two (Snow, 2006; Person, 2009). Scorecards are used to track assessment data and dashboards are used to display assessment results to stakeholders (Snow, 2006), allowing organizations to systematically pull together data from different areas, analyze it, share it with others, then use it evaluate performance (Galloway, 2010; Weiser, 2007).

Scorecards are the entree of the assessment meal (Matthews, 2011, p. 105). An effective scorecard takes the

strategic goals and outcomes of the organization and translates them into carefully selected “key performance indicators” (KPIs) – the measures most critical to determining the success of your library instruction programs and initiatives (Lyddon & McComb, 2008; Person, 2009).

Once KPIs are identified, the library should determine which data need to be collected and tracked to effectively measure whether the KPIs were achieved and what targets will equal success. The end product is a data-based (and with enough validation, evidence-based) picture of the library’s success or failure in meeting the strategic goals of the department and the organization (Abdullah, 2010).

If implemented correctly, the scorecard will help establish a culture of data-based discussions and decision-making within the library (Lyddon & McComb, 2008). Scorecards provide a clear, transparent consensus of the most important goals and keys for improving library instruction programs and consequently student learning. This results in “more people working more often toward the same targets or goals” (Lyddon & McComb, 2008, p. 168).

If scorecards are the entree on the assessment platter, then dashboards are the condiments and garnishes. Dashboards use graphical displays, similar to the gauges on the dashboard of a car, to summarize a select few key performance measures from the scorecard that are deemed most crucial to the library’s achievement of its strategic goals (Schiff, 2008; Hursman, 2010). This makes them both more accessible and more easily consumable to a large variety of stakeholders, including administrators and executives (Oakleaf & Kaske, 2009; Brown, Lovett, Bajzek, & Burnette, 2006).

METHODOLOGY: OUR SCORECARDS AND DASHBOARDS

During our research for this paper, we found significant parallels between IL assessment and balanced scorecard methods in the literature. Of the balanced scorecard literature, nearly all was focused on whole assessment of the library (or the wider university). Our focus is on using scorecards to assess one aspect of the library-instruction. We decided not to limit our assessment to the classic balanced scorecard method as it involves developing several defined perspectives not relevant to our library instruction program.

However, there were many best practices from both the scorecard and the assessment literature that we have incorporated into our scorecard development process, such as strategic alignment, customer focus, a responsive system with drill-down capabilities (Kaplan & Norton, 2005), and a plan of reflection, action and flexibility. As our scorecards continue to grow and develop, we may refine our metrics toward more of a multi-perspective based, balanced scorecard approach, changing aspects of the balanced scorecard to best fit our needs as other academic institutions have done (Matthews, 2008).

While Capella’s accreditor, the North Central Association of Colleges and Schools offers the least regional direction regarding Information Literacy program development

(Saunders, 2007), Capella University itself is a recognized leader in the Transparency by Design learning outcome movement. Its systematic learning outcome development, assessment and publication of the results has been featured by the National Institute for Learning Outcome Assessment. It is also a founding member of the President’s Alliance. Information Literacy is one of the nine university-wide curriculum outcomes.

Because Capella already has a network of learning outcome metrics and departmental goals as an institution, and we had completed our Information Literacy plan last year, we could skip the initial stages of scorecard development, such as background research on needs assessment, developing an institutionally balanced scorecard, and defining information literacy as a university outcome. Additionally, the IL plan already covered concept and process mapping and creating a mission alignment.

Thompson (2002) points out that in Information Literacy instruction today, responsibility for most competencies of Information Literacy are mutually shared with faculty. It is even more difficult to assess initiatives that are outside your scope of responsibility. At some point, we will perform Information Literacy curriculum mapping alignment by discipline, but we would want that level of assessment to be a collaborative interdepartmental affair. At this point, we need a scorecard that speaks to our current instruction network. Person (2009) also points out that scorecards are most efficiently implemented within one service unit.

Defining/Using Modes of Instruction

Capella librarians decided that our modes of instruction would serve as the key ingredients of our assessment menu. Like other libraries, we have developed many modes of instruction. This includes face-to-face or online synchronous instruction sessions; asynchronous instruction in the online courseroom; online tutorials; subject-, course-, or assignment-specific research guides; and physical and digital reference (Oakleaf, 2011; Lillard, 2003)

With all these modes of instruction, it’s necessary to assess how each one is impacting student learning. For example, if the same concept is being taught in two different modes of instruction, yet students are consistently performing better on assessment measures within one mode over the other, we need to be able to determine why and how we can improve (Brown et al., 2006).

We created process and concept maps, guided by the works of Person (2009) and Gilchrist & Zald (2008), to determine the causal links between our instruction and local learning outcomes:

- Who is receiving instruction? How much or how often is instruction happening?
- What type of instruction is most often used?
- What is the content of the instruction that is most often

used?

- What is the content of the instruction that is least often used?
- What IL concepts and skills are being learned?
- For those who receive multiple IL sessions, are all competencies being addressed over a reasonable amount of time?
- Who isn't receiving instruction, and why?
- Where should we direct our energies?

Developing Our Scorecards

Metrics can often hold people back as they are searching for the perfect ones, but they are worth devoting considerable time to defining. The number of metrics should be few, however. Person (2009) and Matthews (2008) both recommend focusing on a short list of most important measures before scientifically testing the behaviors you are driving at regular intervals. We rooted our metrics in the assessment literature by each different modes of instruction. We tried to keep a balance of the pragmatic data collection with the ideal and will continue to evaluate each metric for its strengths and weaknesses.

LIMITATIONS

Measuring the learning impact of a student's interaction with the library is neither easy or clear cut, as there is no true way to "separate library impact from other influences and to prove that changes in competencies or behavior are indeed an effect of using library services" (Poll & Payne, 2006, p. 550). Additionally, assessing impact is time-consuming, labor-intensive work (Poll & Payne, 2006).

A major obstacle for us as librarians in an online institution is that there are limits to the types of data we can collect. Currently, we are capturing mainly quantitative data, but there are mixed opinions on whether using both qualitative and quantitative measures is better or if simple numerical data will suffice, especially since it tends to be preferred by stakeholders.

Based on the literature, then, in an ideal world of information, we would have both "standardized tools for gathering quantitative data and methods for gathering qualitative data" (McMillen & Deitering, 2007, p. 12). Currently educational assessments are trending toward qualitative measures (Oakleaf, 2008). However, before we start collecting qualitative data, we need to get more training to understand both how to best collect and analyze qualitative information for e-learning resources (Poll & Payne, 2006).

For our data to be meaningful, we have to develop baseline measurements for IL and IL services. Baseline measurements are "known level[s] of student achievement

against which new measurements can be compared" (Oakleaf & Kaske, 2009, p.279). However, Matthews (2008) points out that it can take a while to develop any type of baselines, including program measurements, especially if the data you are collecting is new.

Finally, dashboards rarely live up to their potential because of poor design and execution (Hursman, 2010). For instance, studies have shown that many who use dashboards do not update them frequently enough and also lack the ability to drill down to data details (Galloway, 2010; Snow, 2006).

THE FUTURE FOR US - BASED ON BEST IL PRACTICES

As we look toward the future of our Information Literacy assessment plan, there are several critical components of our assessment menu that need to be defined and put into practice.

Responsibility Matrix

Data analysis can be difficult and time consuming and could become a barrier to information literacy assessment plans (Oakleaf, 2008). Because of this we intend to create a responsibility matrix to streamline our data collection processes and parcel out the workload of analyzing assessment results, defining who will be responsible for which data within our assessment plan.

Communication Plan

As assessment data are collected and analyzed, the packaged results (dashboards) should be shared with key staff and decision makers inside and outside the library (Matthews, 2011; Lloyd, 2006). Whether the results derived are favorable or unfavorable, this kind of transparency will drive informed decision-making by top-level executives and administrators, create awareness around library activities and initiatives, assist in library marketing efforts, and "build trust with the community the library serves" (Lloyd, 2006, p.359). We intend to create a communication plan for regularly sharing our assessment data with the appropriate members of our university community.

Action Plan

Currently, we are working on defining targets for our metrics. If our metrics are specific and measurable, "an observer can say with certainty whether the organization was successful with a given metric- whether it met the target" (Lloyd, 2006, p. 358).

Once we have collected and reflected on our data, we need to act on it. Making decisions based on factual data and implementing strategic change with the library and the university is vital to the life of our assessment plan and our instruction scorecard (Oakleaf, 2009; Abdullah, 2010). Without action, the scorecard "loses credibility and becomes an exercise instead of a working tool" (Lloyd, 2006, p. 360).

Refreshment Plan

It is essential that the metrics for measuring library value and impact are regularly reviewed and revised. As time progresses, we may find that our initial assessment measures are either too labor intensive for regular data collection or are not measuring appropriate targets (Bielavitz, 2010; Lyddon & McComb, 2008). To create an iterative, cyclical instructional assessment process, metrics and benchmarks should be reviewed at least annually, though quarterly or biannual updates may be more appropriate (Lyddon & McComb, 2008). We intend to review our metrics biannually, ensuring that we have selected the most relevant indicators and most appropriate targets.

According to O'Neil (1999) it may take 4-5 years before we can determine whether or not our scorecard can prove the library's impact on student learning and information literacy skill development.

CONCLUSION

Choosing measurements and creating a scorecard can be intimidating as they are time and labor intensive, but gaining an understanding of where your organization stands and where you want to go will make it worth it, especially when your stakeholders come knocking. Your tasty assessment menu should provide all the ingredients to make a satisfying meal. Remember, while the search for the freshest assessment ingredients and meaningful data can take time, at some point you need start to start cooking.

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APPENDIX

Goals for our Scorecard/Dashboard: Based on best practices from the Literature

In creating our Information Literacy (IL) assessment plan, we read many articles about best practices for both assessing information literacy as well as for creating and implementing assessment tools, such as scorecards and dashboards, in business, education, and libraries.

Here are the best practices we intend to implement:

- A theoretical framework on which to hang our assessment goals (McMillen & Deitering, 2007).
 - The “Assessment for Learning” theory, and its two components (“Assessment as Learning” and “Assessment as Learning to Teach”) are a natural fit for IL assessment (Oakleaf, 2009).
- We have already worked to align our assessment strategy and short- and long-term goals with the larger institution (Schiff, 2008). However, as we develop our actual IL scorecards, we want it to have the following features:
 - The ability to drill down to the raw data of each metric so we could pinpoint performance issues and take corrective measures (Butler, 2007; Dagan, 2007; Lyddon & McComb, 2008; Weiser, 2007).
 - Additional tabs for related information, such as promotional vehicles and pathways for quick-reference.
- In developing the dashboard displays for our scorecard, we intend to implement the types of user-centered design principles outlined by Hursman (2010), so that our performance measures remain digestible and understandable to stakeholders. This includes:
 - Only displaying the most important metrics from our scorecard.
 - Plenty of what space for visual rest.
 - Consistent type face.
 - Tasteful graphics, limiting the amount of color used.
- In defining the Key Performance Indicators (KPIs) and metrics that would populate our scorecards/dashboards, we are striving to take the following best practices to heart:
 - Selecting indicators that follow the SMART principle: specific, measurable, achievable, relevant, and time-phased (Matthews, 2011).
 - Creating metrics that are simple, strategic, meaningful, flexible, accurate, cost-effective, support comparisons with other institutions and permit analysis over time. (O’Neil, Bensimon, Diamond, & Moore, 1999; Matthews, 2008; Matthews, 2011).
 - Limiting ourselves to six to ten KPIs for each mode of instruction. This will keep our scorecards from becoming too granular (Dagan, 2007; Dollar & Stief, 2010).
 - Balancing the number of leading and lagging indicators in our scorecard. Leading indicators being small, often numerical inputs (i.e. timeliness, quality) that affect lagging indicators, or outcomes, such as customer satisfaction (Lyddon & McComb, 2008; Lloyd, 2006; Matthews, 2008; Matthews, 2011).

- Establishing targets or benchmarks for our metrics is sure to be one of the most time-consuming parts of our scorecard development process, not only because it can take years to determine the most appropriate benchmarks (Matthews, 2008), but also because they are critical for defining what success will look like for us (Oakleaf, 2008), and determining where improvements are needed (Lyddon & McComb, 2008; O’Neil, 1999). In establishing our targets and benchmarks, we intend to:
 - Involve other library staff in our target selection process. Their participation and input is important for shared understanding and achievement of our goals (Matthews, 2008).
 - Choose targets that are neither too easy nor too difficult to attain (Lyddon & McComb, 2008; Matthews, 2008).
 - Use the signal values for our benchmarks judiciously. Signal values may include traffic lighting or symbols indicating how the metric is currently trending, but if overused can draw the eye away from the poorly performing measures that require the most attention (Lyddon & McComb, 2008; Hursman, 2010).