

Hot Tools, Cool Results: Putting Assessment to Work

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Abstract:

Assessment is valuable in showing how the library supports the parent institution's mission and goals by generating changes based on evidence-based decision-making; outcomes assessment focuses on how libraries impact its users. Assessment is not a one-time task but an attitude, a culture, and an ongoing process that can be successfully accomplished with full support and cooperation from the library administration, employees, and patrons. Learn the value, procedures, tools, and tips for doing your own assessment and generating meaningful results. Attendees will be given a chance to apply some of the principles learned.

INTRODUCTION

Andrews Experience

Two years ago when Andrews University embarked on an active assessment program under a new institutional assessment director, I was asked to represent the library at the University Assessment Committee. Sometime later, I was asked to be the library assessment coordinator.

The University Assessment Committee looks at the whole university's assessment program and conducts university-wide surveys. The university subscribed to Weave since many of the universities and colleges that fall under the north Central Accrediting Association were using it.

The acronym Weave stands for:

W-Write expected outcomes/objectives

E-Establish criteria for success

A-Assess performance against criteria

V-View assessment results

E-Effect improvements through actions

Weave calls for the mission, goals, objectives/outcomes, measures, targets, findings, supporting documents, and action plans. Data entered into Weave can be tracked from year to year. This software is a very sensitive program and it takes a while to get used to it, as I've had several hand-holding sessions with someone from the Institutional Assessment Office. (<http://app.weaveonline.com//default.aspx>)

The University Assessment Committee met in June 2010 and we were expected to enter data for the school year that just ended. In Nov. 2010, I called for a meeting of the Library Assessment Committee which was composed of the library dean, the chair of strategic planning, and myself. We looked at the University's mission and goals; the library's mission and goals; and laid out eight measures to match our goals and objectives/outcomes. I followed the advice of the institutional director to start with whatever data we had. Because of the timing, I entered the data into Weave for the previous school year 2009-2010. I had two eager librarians who were interested in submitting their data.

For the following year, we were advised to involve the faculty in entering data. The Library Assessment Committee increased the measures which came up to 19 by the end of the year. The library faculty had a training session on Weave and I offered one-on-one training to those who made appointments.

Observations

Attitude: Assessment does not seem to be something that people are excited about. Questions that popped up during the orientation period were: "How can we measure outcome—we cannot tell how much the library changes our students/faculty?" "There are so many things that change our students and where does the library fit into that change?" Reading chapter 5 of *Library Assessment in Higher Education* by Joseph R. Matthews can be quite discouraging when several tables show that there was weak or little support for the relationship between student outcomes and library use.

This boils down to the two negative perceptions: (a) one cannot measure what the library does, and (b) libraries have no control over its outcomes. Why are librarians afraid of doing assessment? Because librarians alone cannot receive credit for the changes that occur in students' lives! It is only through collaboration with the faculty that we can measure the impact that the library has on students.

Matthews further said that libraries are not ready to adopt a culture of assessment because of the following reasons:

- Library directors/deans do not know how to use the outcome measures.
 - Fear that such information will be used against the library.
 - Fear that they don't have the necessary skills to do it effectively.
 - Lack of interest to change—they are happy with the status quo.
 - Lack of interest in determining the library's impact on their users through outcome measures.
- (Matthews, pp. 6-7)

Weave: While I understand that Weave is used by several universities that are doing institution-wide assessments, I notice that it locks the user down to its own pattern and flow of data entry. It can be a very sensitive database because there were times when I had to call the Office of Institutional Assessment to undo something that I did.

Slant towards Classroom: The major observation I have of the last two years is the fact that all of the presentations, training, and even examples given were all geared to the classroom. They talk about classes, courses, program reviews, and curriculum. Now that I find myself in this position of library assessment coordinator, how do I apply this to a library setting? I can see that some of them are applicable in a library instruction setting, but what about the rest of the library?

This two-year experience triggered me to prepare for this presentation. I hope that together we will learn to VALUE assessment, CARRY out a comprehensive assessment program, and DEVELOP a culture of assessment. Our main focus will be on outcomes assessment.

What and Why of Assessment

What

What does it mean to assess? To assess, in general, is to determine the importance, size, or value of; to evaluate. (Wright and White, p. 11) Assessment involves several terminologies that lack precise meaning because of the changing approaches to education—from objective-based to competency-based to outcomes-based. (University of Connecticut, Assessment Primer: Goals, Objectives and Outcomes) Assessment can be considered research—a study which you undertake to prove a point and find out what needs to be done to improve a situation.

There are two types of assessment:

- Formative - collection of data and feedback of results on ongoing basis, e.g. enhancing the teaching and learning process
- Summative – production of information that can be used to make a decision about a project or process, e.g. accountability to external organization (Rogers and Sando, p. 1; Matthews, p. 124)

Why

Institutions perform assessment for two reasons: one is to be compliant with accrediting bodies, and another is commitment to the institution, their patrons, and the community. Another set of reasons given for doing library assessment is to improve, prove, or inform. Let's look at these reasons from different angles.

Institution:

- To link to the institution's mission/vision/goals/ strategic plans (prove)

- To be more effective (improve)
- To gain visibility on campus (inform)
- To document library's contribution to the university's learning/teaching/research (inform/prove)

Library:

- To bring about positive change (improve)
- To enhance the growth & development of employees (improve)
- To keep the staff informed of the library's services and their goals (inform)

Patrons:

- To keep us focused on our patrons—the reason for our existence (inform/improve)
- To find ways of improving student learning (improve)

Community:

- To be relevant to the current needs and changing environment (improve)
- To be maintain awareness (inform/improve)

The current trend in education is to be sure that the library and every school/department/unit in the university carries out the mission and goals of the university, and to prove that they are doing so by implementing an assessment plan and assuming a culture of assessment. In short, comprehensive assessment should be able to show how effective the library is by making improvements based on studies conducted.

Usual Library Data

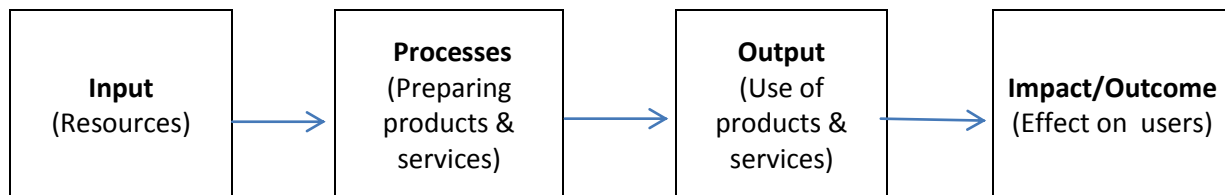
Libraries are good at collecting data many of which are classified as either inputs or outputs. *Inputs* are raw materials of the library program, i.e. money, space, collection, equipment, and staff out of which a program can arise. (Task Force on Academic Library Outcomes Assessment Report, p.2) There are two types of input: *resource input* such as database subscription, staff members; and *program input* such as bibliographic instruction, interlibrary loan service. (Task Force on Academic Library Outcomes Assessment Report, p.2)

Outputs, on the other hand, are results of inputs applied, usually quantifiably measured (Dugan and Hernon, p. 376) When we count the number people in the library, the number of classes taught, the number of books checked out, we are measuring outputs. "It is important to track the library's outputs, but insufficient for assessing outcomes." (Task Force on Academic Library Outcomes Assessment Report, p.2)

Let's look at two web sites that contain some examples. In the National Center for Education Statistics (<http://nces.ed.gov/surveys/libraries/compare/default.aspx>), libraries can be compared by salaries,

holdings, digitization, electronic services, information literacy, etc. Our own ASDAL website (<http://www.asdal.org/images/pdf/2008-09asdalstats.pdf>) contains statistics for collections, services, demographics of staffing/student enrollment, finances such as salaries, operating expense, cost of collections, etc.

While inputs and outputs show how busy the library is, they do not show in measurable terms how the library supports the missions and goals of the university, nor how they impact their end users. It is possible to have several hundreds of volumes to meet a certain requirement, but if these books were purchased and cataloged only to sit on the shelves but never used because they were irrelevant to the users' needs, academic libraries have failed to be what they are supposed to do. Data collected from inputs and outputs however can be used to show outcome. We need to move from inputs and outputs to outcomes to show our impact on the university, its students and faculty as beautifully illustrated by Poll and te Boekhors, p. 31:



PROCESS

Please follow along with me as we learn the process of assessment as each of you will be given a chance to do a short exercise at the end of this presentation.

Planning (STEP 1)

Framework:

The following documents are useful in building the framework for the library assessment program:

1. University Mission, Goals, Assessment Plan, Strategic Plan
2. Government /Accreditation Requirements
3. Standards and Guidelines
 - a) ACRL - U.S.-based libraries may want to check the following sites:
 - i. The 2011 revision of the Standards for Libraries in Higher Education (<http://www.ala.org/acrl/sites/ala.org.acrl/files/content/standards/slhe.pdf>) is now outcomes-based. The standards are broken down into the following principles: institutional effectiveness, professional values, educational role, discovery, collections, space, management/administration, personnel, and external relations.

Performance indicators are given under each principle. The standards also give examples of outcomes for performance indicators.

- ii. Here are two useful sites for information literacy:
Information Literacy Competency Standards for Higher Education (<http://www.ala.org/acrl/standards/informationliteracycompetency>) , and
Guidelines for Instruction Programs in Academic Libraries (<http://www.ala.org/acrl/standards/guidelinesinstruction>).

- b) IFLA - Libraries outside the U.S. may want to refer to the International Federation of Library Associations book by Poll, Roswitha and Peter te Boekhorst, *Measuring Quality: Performance Measurement in Libraries*, 2nd revised edition, IFLA Publications 127. Munchen: K.G. Saur, 2007. This book contains four indicators as follows: resources, infrastructure; use; efficiency; and potentials and development. Each of these indicators has subsections, methods for collecting data, and interpreting results.

- 4. Library's Strategic Plan - The recommendations in your library's strategic plan are a good place to start!

Write the Assessment Plan:

Library's Mission: This is a statement of the purpose, values and principles that guide the practices of an institution (University of Connecticut, Assessment primer and how to write mission statement). The structure of a statement usually followed this pattern: "The mission of (name of your program or unit) is to (your primary purpose) by providing (your primary functions or activities) to (your stakeholders.)" (University of Connecticut, How to Write a Mission Statement) Remember to refer to the University's Mission.

Library's Goals: Identify the goals. Ask these questions: What is to be achieved? How does it relate to the university's goals? Goals are usually broad, general statements of what the library intends to accomplish. (University of Connecticut, Assessment Primer)

Objective/Outcome/Evidence: Under each goal is an objective, outcome, or evidence. Our focus will be on outcomes. Remember to refer to standards/guidelines.

Objectives are library-centered; they describe the intended results of activities. (University of Connecticut, How to Write Program Objectives/Outcomes). Objectives can either be descriptive or relational.

- A *descriptive objective* looks at the *theme* and *who* of the logical structure. This easily translates into a research question. Verbs such as depict, identify, determine, describe, etc. are used in this type of objective. Here is an example of an objective:
e.g. To (action verb--do) (object--what)
To identify the frequency of use of online databases
(Hernon, p. 84)

- A *relational objective* compares or contrasts both segments of the logical structure. This can translate into a hypothesis. See the example below:
e.g. Top compare (what) with (what)
To compare pretest with posttest
To compare frequency of library use with faculty rank (Hernon and Dugan, p. 84)

Outcomes on the other hand are user-centered—showing in particular how the users have been changed as a result of their contact with the library’s resources, services, and programs; they describe the achieved results. We will look at two specific types of outcomes.

- *Learning outcomes* are specific types of outcomes that easily tie into information literacy or library instruction. This is the library’s contribution to learning.
- *Research outcomes* involve the evaluating of honors papers, seminar papers, theses, and dissertations. When looking at research outcomes, we should ask questions such as: What types of resources were used? How were the resources evaluated and selected? What types of problem-solving skills or critical thinking skills were involved? What is the quality of the end product? (Hernon and Dugan, p. 67) This is the library’s contribution to research.

Evidence/Impact provides proof or documentation on how the library supports or contributes to the institution’s goals through the following its services, instruction, resources, access, staff, facility, communication, administration, and budget. (Nelson and Fernekes, p. 42)

Outcomes

In assessing the library, the personnel should ask the following questions: What should the students learn? What is the library doing to help them learn it? How and to what extent is the library doing it? How can the library sustain and improve its efforts? (Hernon and Dugan, p. 67)

The library personnel should also find out how they are impacting the teaching faculty by asking these questions: Do the teachers consider the library an integral part of their courses? Does faculty use of the library improve their teaching and research? (Matthews, p. 124)

The students should be the main focus of assessment in an academic library. Relevant questions that should be asked are as follows: Does the students’ academic performance improve through contact with the library? Does students’ use of the library improve their chances of having a successful career, doing well in graduate school, or leading fuller lives? Does attendance in library instruction sessions result in the students’ high level of information literacy? (Task Force on Academic Library Outcomes Assessment Report, p. 2; Matthews, p. 124; Hernon and Dugan, p. 67)

Learning Outcomes

This cartoon helps us see the difference between an objective and a learning outcome. The objective is to teach the dog to whistle vs. the learning outcome is the dog's ability to whistle. The objective could have been met (he taught) but it did not result in a positive learning outcome (the dog did not learn to whistle).



<http://assessment.uconn.edu/why/index.html>

To evaluate learning outcomes, start with the Information Literacy Competency Standards (<http://www.ala.org/acrl/standards/informationliteracycompetency>). Look at the examples below from that site and bear in mind that this can only be done through faculty-librarian collaboration.

“Standard 1: The information literate student determines the nature and extent of the information needed.

“Performance Indicator 2: The information literate student identifies a variety of types and formats of potential sources for information.

“Outcome: Differentiates between primary and secondary sources, recognizing how their use and importance vary with each discipline.”

“Standard 2: The information literate student accesses needed information effectively and efficiently.

“Performance Indicator 3: The information literate student retrieves information online or in person using a variety of methods.

“Outcome: Uses various search systems to retrieve information in a variety of formats.”

(<http://www.ala.org/acrl/standards/informationliteracycompetency>).

Practice/Program: Determine which practice/program will achieve the goals. Some choices could be collection development, instruction program, circulation service, interlibrary loan, personnel, reference, facility, etc. If the Goal is to provide a collection that meets the needs of a graduate theological program,

it will most likely fall under the Practice of Collection Development. One way of stating the outcome is: Seminarians will check out 75% of the seminary collection. Note that the outcome is stated in measurable terms. If you use Weave, that measurable outcome would fall under Target. Many of the examples in the literature do not have a Target.

Let us review the process. The assessment plan includes the (a) Mission (b) Goals (c) Objective/Outcome/Evidence, and (d) Practice/Program. The next step is to determine what assessment tools to use.

Measures/Tools: Select appropriate data collection tools to match the objective/outcome/evidence and the practice. There are two types of measures, the indirect and the direct. Below is a suggested list of tools. (Weave software; Wright and White, pp. 16-17; Hernon and Dugan, pp. 104).

- Indirect Measures

- Statistics

- Collections

- Collection vs. circulation

- Reserves vs. students enrolled in the class

- Personal copies on reserve vs. titled held in the library

- Required readings vs. library holdings

- Circulation

- Budget allocation vs. usage

- % of students who checked out materials

- % of faculty who checked out materials

- Reference

- Frequency of directional questions vs. signage

- Facilities

- Gate counts vs. seating

- Electronic Resources

- Database clicks vs. cost of database

- Feedback – interviews, focus groups, suggestion box

- Benchmarking – compare with other libraries

- Observation

- Secret Shopper

- Facilities Use

- Unit cost analysis

- Usability testing

- Surveys

- Direct Measures – based on performance or actual work of student/faculty; especially useful in measuring information literacy

In-class assignments/activities
 Self-directed tutorials
 Journals
 Capstone Projects/Theses/Dissertations
 Publications
 Portfolios
 Tests/Exams
 Student performance in internships

Here is a select list of standardized surveys/ tests for libraries that can afford to invest in them:

- *LibQual* - <http://www.libqual.org/home> (accessed 5/15/12) – users’ opinion of library service
- *iSkills Assessment*- www.ets.org/iskills/about (accessed 4/26/12)) – measures ability to use information through digital technology
- *Collegiate Assessment of Academic Proficiency* – <http://www.act.org/caap/> (accessed 5/2/12) - evaluates student learning outcomes and general education program
- *College Student Experiences Survey* – <http://www.surveyconsole.com/college-student-experiences-questionnaire.html> (accessed 5/8/12) - surveys student use of time during college (Matthews, p. 49)

Going back to the example we had earlier, the most appropriate tool to use is the circulation statistics:

Goal: To provide a collection that meets the needs of a graduate theological program.
 Practice: Collection Development
 Outcome: A majority of the seminary students will use the seminary collection.
 Target: Seminarians will check out 75% of the seminary collection.
 Tool: *Circulation statistics*

Implementation (STEP 2)

After selecting the tools, the next steps are as follows: (a) use the tools or measures selected, and (b) gather and collate the data.

Evaluation (STEP 3)

Once the data have been collected, the findings should be interpreted by asking the following questions:

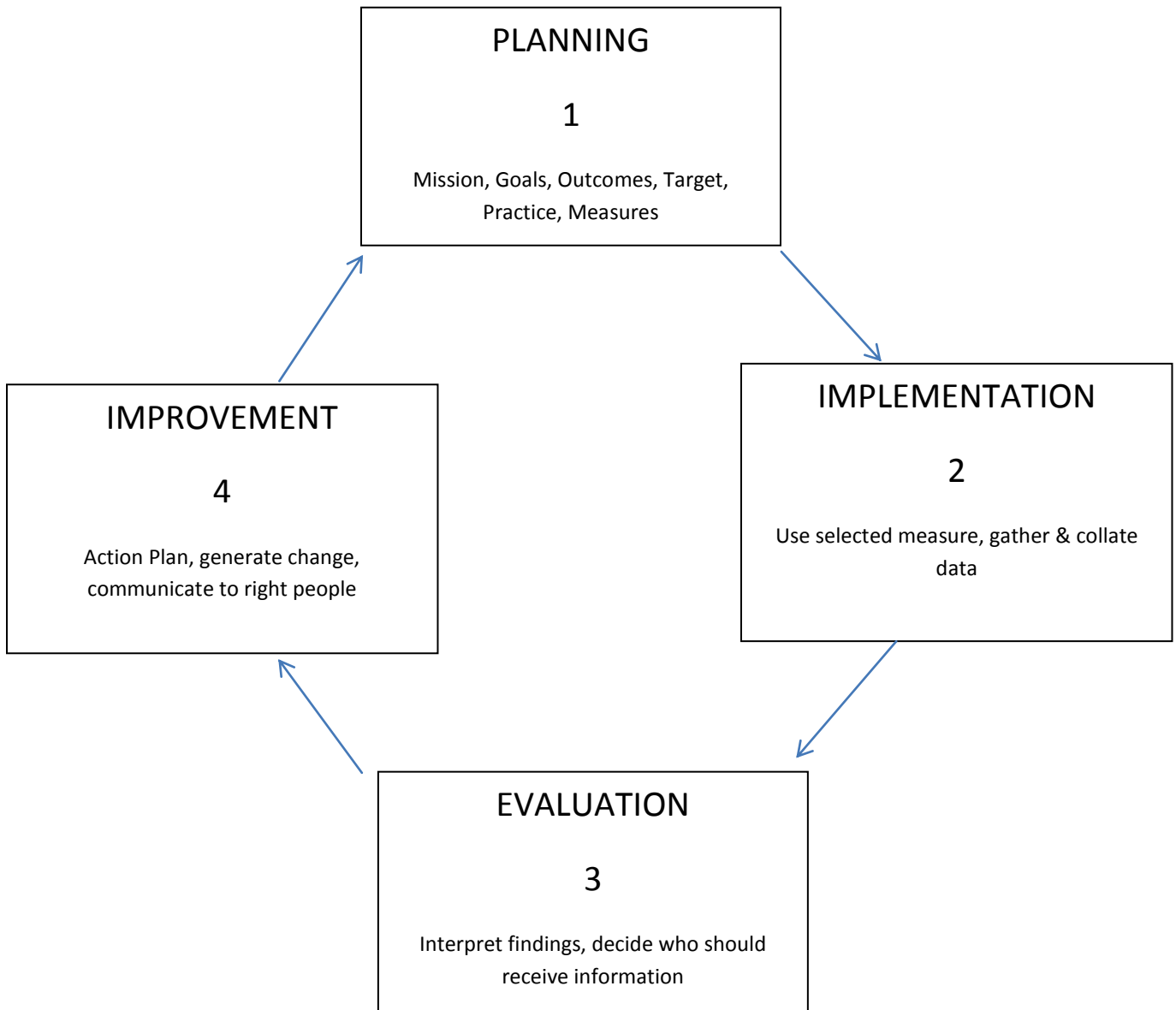
- What is the library's impact on student learning, and faculty research and teaching?
- How do these evidences show that the library supports the university's mission and goals?
- Who should receive the findings?

Improvement (STEP 4)

Close the loop by designing an action plan and generating a change that will lead to improvement. While improvement within the library is good, communicating the resulting change to the right people is a better way of making assessment work. We should not be content at making one change and then remaining stagnant. Assessment is an ongoing process with the goal of continuous improvement.

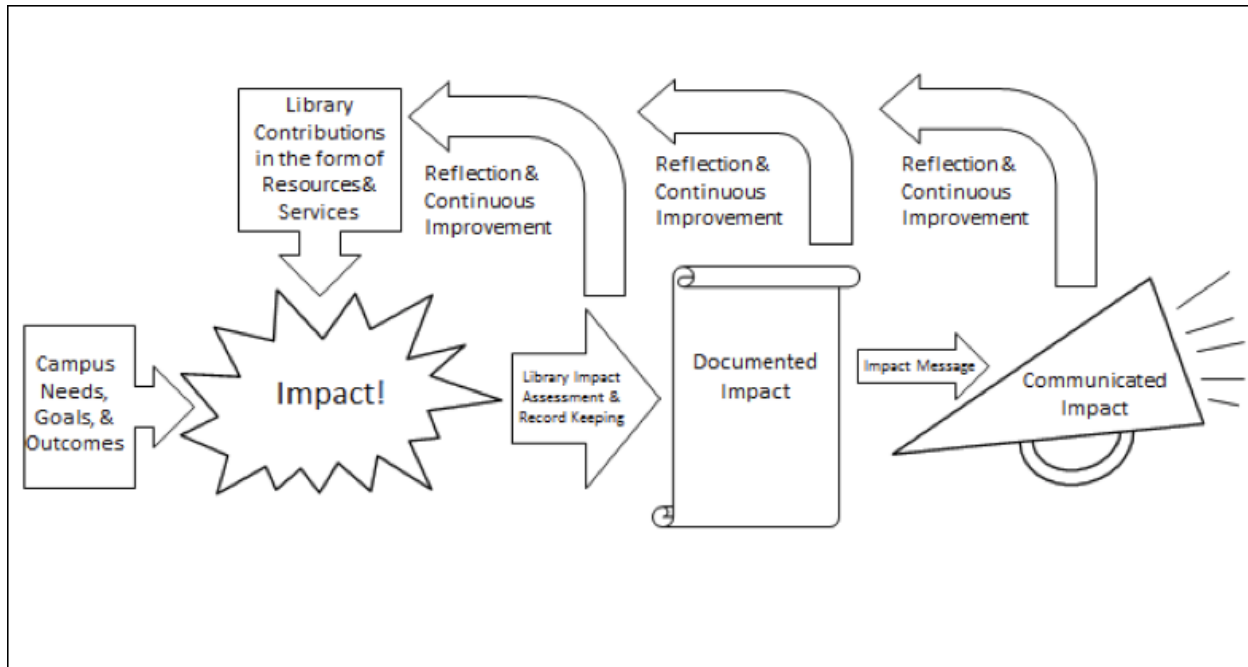
SUMMARY

Assessment follows the diagrams shown below. (Matthews, p. 121.)



Library Impact Model

Follow this Library Impact model to show “how good” the library is but also “how much good” the library does for the institution. (Gilchrist and Oakleaf, p. 18)



http://learningoutcomesassessment.org/documents/LibraryLO_000.pdf, p. 18

Tips for Success

Here are a few tips for carrying out a successful library assessment. Use the results to improve the library, make your case known to the administration, and create a positive impact on the library user.

- Align with parent institution
- Supportive and involved administrator and staff
- Focus on users
- Small number of outcomes
- Frequency of measurement. Ongoing.
- Measures/tools – easy to administer, reliable results
- Constituencies – students, faculty, staff, etc.
- Relate back to inputs

(Task Force on Academic Library Outcomes Assessment Report, p.3)

APPLICATION

We will spend the last few minutes applying what we covered today. Assuming that you know your College or University's Mission and goals, write an assessment plan for your particular line of work using the worksheets distributed. Share what you've done with your seatmate and critique each other's work.

Fill out the following in the worksheet: University, Practice, Your Name, Department, Date, Goal, Outcome, and Measures. The last three columns are to be filled after the data have been collected.

_____ College/University

Practice/Program: _____

Completed by : _____

Department: _____

Date: _____

Goal: _____

Outcomes	Measures/Tools	Findings	Reviewed by & when	Actions

BIBLIOGRAPHY

ACT. "Collegiate Assessment of Academic Proficiency." <http://www.act.org/caap/> (accessed May 2, 2012)

Association of Seventh-day Adventist Librarians. "Statistics Reports."
<http://www.asdal.org/images/pdf/2008-09asdalstats.pdf> (accessed May 17, 2012)

"College Student Experiences Survey." Survey Analytics. <http://www.surveyconsole.com/college-student-experiences-questionnaire.html> (accessed May 2, 2012)

Dugan, Robert E. and Herson, Peter. "Outcomes Assessment: Not Synonymous with Inputs and Outputs." *Journal of Academic Librarianship*. Vol. 28, No. 6, Nov. 2002, pp. 376-380.

Educational Testing Service. "iSkills Assessment." www.ets.org/iskills/ (accessed April 26, 2012)

Gilchrist, Debra and Megan Oakleaf. *An Essential Partner: The Librarian's Role in Student Learning Assessment*. Occasional Paper #14. National Institute for Learning Outcomes Assessment)
<http://learningoutcomesassessment.org/occasionalpaperfourteen.htm>;
http://learningoutcomesassessment.org/documents/LibraryLO_000.pdf (accessed May 15, 2012)

"Guidelines for Instruction Programs in Academic Libraries", American Library Association , Sept. 6, 2006,
<http://www.ala.org/acrl/standards/guidelinesinstruction> Document ID: acd2ce00-853a-92f4-198a-c3b504d8b12b (accessed May 17, 2012)

Herson, Peter and Robert E. Dugan. *Outcomes Assessment in Your Library*. Chicago; American Library Association, 2002.

"Information Literacy Competency Standards for Higher Education", American Library Association, September 1, 2006. <http://www.ala.org/acrl/standards/informationliteracycompetency> Document ID: efeb57df-7090-e1d4-558f-d59c7537f9c7 (accessed May 17, 2012)

LibQual. Association of Research Libraries, Statistics and Assessment Program.
<http://www.libqual.org/home> (accessed May 15, 2012)

Matthews, Joseph R. *Library Assessment in Higher Education*. Westport, Connecticut: Libraries Unlimited, 2007.

National Center for Education Statistics. "Library Statistics Program; Compare Academic Libraries."
<http://nces.ed.gov/surveys/libraries/compare/default.aspx> (accessed May 17, 2012)

Nelson, William Neal and Robert W. Fernekes. *Standards and Assessment for Academic Libraries: a Workbook*. Chicago: Association of College and Research Libraries, 2002.

Poll, Roswitha and Peter te Boekhorst. *Measuring Quality: Performance Measurement in Libraries, 2nd revised edition*. IFLA Publication 127. Munchen: K. G. Saur, 2007.

Rogers, Gloria M. and Jean K. Sando. *Stepping Ahead: An Assessment Plan Development Guide*. Terre Haute, Indiana: Rose-Hulman Institute of Technology, 1996

"Standards for Libraries in Higher Education", Approved by the ACRL Board of Directors Oct. 2011. <http://www.ala.org/acrl/sites/ala.org/acrl/files/content/standards/slhe.pdf> (accessed May 17, 2012)

"Task Force on Academic Library Outcomes Assessment Report", American Library Association, July 25, 2006. <http://www.ala.org/acrl/publications/whitepapers/taskforceacademic> Document ID: f9843912-6bb9-c9b4-513e-e1db0c5c992b (accessed May 17, 2012)

University of Connecticut. Assessment Primer. <http://assessment.uconn.edu/primer/> (accessed May 17, 2012)

University of Connecticut. How to Write a Mission Statement. <http://www.assessment.uconn.edu/docs/HowToWriteMission.pdf> (accessed May 17, 2012)

University of Connecticut. How to Write Program Objectives/Outcomes. <http://assessment.uconn.edu/docs/HowToWriteObjectivesOutcomes.pdf> (accessed April 12, 2012)

University of Connecticut. Why Assessment. <http://assessment.uconn.edu/why/index.html> (accessed May 21, 2012)

Weave ONLINE. <http://app.weaveonline.com//default.aspx> (accessed May 17, 2012)

Wright, Stephanie and Lynda S White. *Library Assessment*. SPEC Kit 303. Wash. D.C.: Association of Research Libraries, 2007. (pp. 16-27)

RECOMMENDED READINGS

Association of College and University Libraries. *VALUE: Valid Assessment of Learning in Undergraduate Education*. http://www.aacu.org/value/rubrics/index_p.cfm?CFID=29426231&CFTOKEN=65531329. "Reprinted [or Excerpted] with permission from *Assessing Outcomes and Improving Achievement: Tips and tools for Using Rubrics*, edited by Terrel L. Rhodes. Copyright 2010 by the Association of American Colleges and Universities." (accessed May 21, 2012)

Covey, Denise Troll. *Usage and Usability Assessment: Library Practices and Concerns*. Council on Library Information Resources, 2002. <http://www.clir.org/pubs/reports/pub105/reports/pub105/pub105.pdf> (accessed May 15, 2012)

Dudden, Rosalind F. *Using Benchmarking, Needs Assessment, Quality Improvement, Outcome Measurement, and Library Standards: a How- to- do- it Manual with CD-ROM*. New York: Neal-Schuman Publishers, c2007.

Hinchliffe, Lisa J. and Tina E. Chrzastowski. "Getting Started with Library Assessment: Using Surveys to Begin an Assessment Initiative" In *Proceedings of the Library Assessment Conference: Building Effective*,

Sustainable, Practical Assessment, Sept. 25-27, 2006, pp. 63-68. Association of Research Libraries, 2007
<http://libraryassessment.org/bm~doc/proceedings-lac-2006.pdf> (accessed May 18, 2012)

Iannuzzi, Patricia. "We are Teaching, but are They Learning: Accountability, Productivity, and Assessment." *Journal of Academic Librarianship*, Vol. 25, No. 4, July 1999, pp. 304-305.

Koltay, Zsuzsa and Xin Li. *Impact Measures in Research Libraries*. SPEC Kit 318. Washington, DC : Association of Research Libraries, c2010.

Merz, Lawrie H. and Beth L. Mark, comp. *Assessment in College Library Instruction Programs*. Chicago : College Library Information Packet Committee, College Libraries Section, Association of College and Research Libraries, 2002.

Oakleaf, Meagan. "Are They Learning? Are We? Learning Outcomes and the Academic Library." *The Library Quarterly*, Vol. 81, No. 1, Jan. 2011, pp. 61-82. Also available from JSTOR, Feb. 26, 2012.
<http://meganoakleaf.info/aretheylearningoakleaf.pdf> (accessed May 18, 2012)

Oakleaf, Meagan. *Getting Started with Learning Outcomes Assessment: Purposes, Practical Options, & Impact*. Association of Research Libraries Library Assessment Conference, 2010.
http://libraryassessment.org/bm~doc/oakleaf_megan_workshop.pdf (accessed March 19, 2011)

Oakleaf, Megan. *The Value of Academic Libraries: A Comprehensive Research Review and Report*. Association of College and Research Libraries, 2010.
http://www.ala.org/acrl/files/issues/value/val_summary.pdf (accessed May 18, 2012)

Radcliff, Carolyn J., et al. *A Practical Guide to Information Literacy Assessment for Academic Librarians*. Westport, Conn.: Libraries Unlimited, 2007.

Shulenburg, David. *The Relationship between University Assessment and Library Assessment*. Association of Research Libraries Library Assessment Conference 2010.
http://libraryassessment.org/bm~doc/shulenburg_david.pdf (accessed May 18, 2012)

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