

**Measuring What Matters: A Library/LRC Outcomes Assessment Manual**

**By**

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## Introduction

Measuring what matters is not just a strategic and data collection activity. Indeed, the most important reason that any library and learning resource program (LLRP) has to conduct assessment is to learn more about how students, faculty and others use, feel about, and benefit from their services and programs. The whole point of assessment is to use the findings and data to confirm, to question further, to revise plans, and to publicize the effects of LLRP services to the campus community. When assessing the impact of information literacy programs, the question is even more direct: have our instructional services and programs made a difference and if so how?

The external influences are also important. Several national reports directed to the needs of the workforce have identified the importance of developing and assessing actual performance of skills, such as the SCANS Competencies (Secretary of Labor's Commission for Achieving Necessary Skills) and the National Research Council's Commission on Physical Sciences, Mathematics and Applications report, *Being Fluent with Information Technology* (1999). Accreditation agencies, professional organizations' standards and guidelines, and increasingly local campus program reviews that may be connected to planning and budgeting cycles emphasize the need for measuring and assessing the effects of teaching, learning and other student support services on student success and other desired student outcomes.

Academic libraries and learning resource centers, one of the key players in providing and structuring instructional resources and services, are also expected to document how their activities and resources contribute to institutional priorities and student learning outcomes. Indeed, an increasingly important concern for community college librarians is how to document and measure the ways that the library, learning resources, and computer services make a real difference in the academic quality of life for students and faculty. This concern was expressed clearly by Sarah M. Pritchard:

The future vitality of libraries in academia will be dependent on whether they can dynamically and continually prove their value to the overall educational endeavor. This value must be documented at a level that transcends specific formats of information, locations of collections and location of users, and that clearly links that investment in campus-wide information resources to the effectiveness of particular disciplinary programs.<sup>1</sup>

Community college librarians generally face three problems when trying to describe the impact of their services and resources on important institutional outcomes and goals:

- They are not sufficiently strategic or externally focused when determining which measures to use as evidence of the LLRP's contributions;
- The data they collect and report for national, state-wide community college LLRP annual data surveys, and state annual data surveys do not by themselves capture the range of services and resources that have impacts on student learning and other campus priorities. The 1998 survey conducted by Wanda K. Johnston of members of ACRL's Community and Junior College Libraries Section (CJCLS) revealed that primarily quantitative measures are used for program reviews and evaluations. In fact, circulation of resources was the most frequently cited.<sup>2</sup>
- They often do not organize their data and other supporting documentation in ways that are accessible or meaningful to academic administrators, discipline-based faculty and visiting accreditation teams. Nor, do they often use language that reflects what is used in campus-wide planning documents and educational program reviews. Typically, all sorts of data are presented in LLRP annual reports, accreditation self-studies and program reviews in a "laundry-list" fashion, but these data do not explicitly address how the resources and services make a qualitative difference to student learning, staff development, teaching effectiveness, and other campus-wide goals.

This publication seeks to offer suggestions and guidance for improving the measurement and documentation of the impact of community college library and learning resources programs, using California community colleges as an example. Specifically, the publication:

- presents a framework of assessment categories that reflects the primary teaching-learning role of LLRPs;
- identifies key institutional outcomes and outputs that are important to all community colleges along with examples of LLRP performance objectives that contribute to the attainment of campus-wide goals;
- specifies performance indicators that are illustrative of the types of activities and services that library and learning resource units can use to describe and assess their impact on key campus-wide outcomes and outputs;
- recommends useful publications that describe in more detail techniques and instruments for measuring LLRPs inputs, outputs, impacts and outcomes.

To accomplish this purpose a six-step process, represented by the acronym ADICAC, is detailed with examples of how each step can be carried out. ADICAC stands for Align, Define, Identify, Chart/Collect, Analyze and Communicate. Chapter 2 explains the overall process and each subsequent chapter details with examples how the process works. Reproducible worksheets for local use or modification are included in “Chapter 8: Using the Worksheets to Implement ADICAC” and in the “Appendix.”

The results of the ADICAC process can serve as the core of an assessment plan that can be used for a number of purposes, such as

- preparing a self-study for WASC or another accreditation agency;
- preparing a required program review (i.e., academic audit, annual effectiveness report) for campus planning and/or budgeting purposes; (see “Appendix” for “Model Program Review...”)
- re-thinking current evaluation and data collection;
- preparing or revising some type of planning document, such as a LLRP strategic plan;
- gathering data to support grant applications.

The author hopes that this manual will prove useful to community college librarians and professional staff and administrators of learning resource centers. A secondary audience might be other campus or district administrators involved with planning, institutional research, and program review, as well as college faculty and members of accreditation teams.

Several documents have been used to ground this process with current regional accreditation standards, Association of College and Research Libraries (ACRL) “Standards for Libraries in Higher Education” (2004), annual California data surveys (as an example of state surveys), and pertinent California Community College Chancellor’s Office reports and documents that are illustrative of what may be available in other states. These publications are referenced in the “References Cited” and/or the “Bibliography.”

Tables are located at the end of the chapters where they are discussed. The “Appendix” contains reproducible copies of all the worksheets, copies of selected survey instruments and other documents that directly relate to ADICAC’s six steps. For this publication **LLRP** is understood to include such instructional support areas as libraries, media centers, public access computers labs, but not tutorial services.

## Chapter One: Why Focus on Outcomes and Outputs?

The primary reason to focus on outcomes and outputs, rather than traditional measures of inputs (e.g., collection size, number of staff, size of budget, space, etc.), is because it's what LLRPs **do** with the fiscal and human resource inputs that most matters to students and other users of LLRP services and resources. Certainly, the driving reason behind any assessment activity is the common desire to improve services and resources and to be accountable and responsive to the changing needs and priorities of stakeholders at the local campus level. Traditionally, LLRPs have kept quantitative data about their operations, but not as often do they use qualitative data or a multi-methods approach to bring more than one type of evidence together to demonstrate the impact of specific services and resources on student learning and other outcomes. Johnston's 1998 survey of 85 community colleges across the U.S. revealed that for the purpose of program review, the three most used data sources were "annual statistical data (86%), user satisfaction/output measures (67%) and goal accomplishment (58%), followed by comparative statistics using ACRL/AECT standards (44%), longitudinal statistics (35%) and comparative statistics from other colleges (33%)."<sup>3</sup>

When a LLRP adopts an external view to the campus-wide outcomes and goals, the range of services and resources to be assessed comes into clearer focus. Not everything is equal in its need to be measured. Indeed, once an LLRP promotes itself as fulfilling two major roles – as an instructional unit and as an important academic support unit – it should become clearer to both LLRP staff and external constituents what services and resources contribute to desired campus-wide outcomes. Teaching information literacy skills is probably the service that has the greatest potential of affecting student learning outcomes because these skills also support such general/liberal education outcomes as critical thinking, computer and multi-media literacy, problem-solving, and lifelong learning.

Another important reason to redirect attention to focusing on measuring and documenting outcomes and outputs is the continuing emphasis on outcomes assessment by regional accrediting and professional/vocational accrediting associations, community college boards of governors and legislative bodies that oversee them. Many grant-funded projects require evidence of impact on state-defined outcomes for students. Often, such desired outcomes



include an increase in the number of degrees and certificates awarded; number of students who transfer to baccalaureate institutions; an increase in course completion rate; an increase in the number of students improving their basic skills; and an increase in the number of students successfully prepared for the workforce. LLRPs can document their contributions to some of these desired system-wide outcomes, especially how their information competency programs contribute to the improvement of basic skills and improved preparation for the workplace.

All the regional higher education accrediting agencies' standards have been revised since 1999 and their current standards emphasize outcomes assessment. All but one of the accreditation agencies' standards (Higher Learning Commission of the North Central Association) refer to the teaching role of libraries via information literacy or library instruction/training programs. Moreover, all require that institutions provide evidence of how students and faculty access information resources and services.<sup>4</sup>

### **What About Virtual Libraries and Electronically-Delivered Educational Programs?**

In this era of run-away technological change, with growing distance education programs and increasing access to library and learning resources being provided to off-campus learners, the need to provide evidence of the importance of library and information resources to the success of the institution may seem even greater. The refrain heard by some colleagues is that some academic administrators are questioning library and learning resource centers' need to maintain collections and physical space when online databases and the Web provide virtually everything students need.

According to the July 1999 report on California library space standards by consultant Linda Demmer, the physical space issue is not solved, at least not for the next decade, by the increase in online resources delivered to off-campus learners. Three notable recommendations from the report are particularly relevant for assessing outputs dealing with access and the promotion of learning environments conducive to study and research: one recommends the use of FTEs for calculations; the second relates to increasing the space per user station to accommodate ADA requirements and desktop technology; and the third recommends that instructional and collaborative space be included in the proposed revisions to the *California Code of Regulations, Title Five*.<sup>5</sup>

The Western Association of Schools and Colleges (WASC) Accreditation Commission for Community and Junior Colleges has published *“Policy on Distance Learning, Including Electronically Mediated Learning,”* which establishes requirements for formal interaction designed for learning in which any portion of the interaction is conducted through electronic means. Every regional accreditation association has a similar policy or document. Selected examples are listed below of requirements and “Questions to Aid Development of the Self Study” relevant to both a library’s online information literacy tutorials, courses and faculty training programs and to their instructional support roles:

### **Principles**

“Institutions are expected to demonstrate that their students meet these objectives through application of rigorous outcome measures.”

### **Curriculum and Instruction**

“Student experiences result in achievement of intended learning outcomes whether electronically-delivered courses provide for synchronous or asynchronous interaction between faculty and students and among students.

### **Institutional Context and Commitment**

**Learning Resources** - “Appropriate learning resources are available to student who take electronically delivered courses.”

**Commitment to Support** - “The institution provides faculty training and support services specifically related to teaching via electronic means.”

### **Evaluation and Assessment**

“The institution evaluates the educational effectiveness of electronically-delivered course work, including assessments of student learning outcomes, student retention, and student and faculty satisfaction. ...”

### **Questions to Aid Development of the Self Study**

#### **Library and Learning Resources**

- “How does the institution ensure that students have access to and can effectively use appropriate information resources?”
- “How does the institution monitor whether students make appropriate use of learning resources?”
- “How does the institution provide laboratories, facilities and equipment appropriate to the courses or programs?”<sup>6</sup>

### **No Need To Reinvent the Wheel**

What’s already been published to help community college LLRPs with assessment of outcomes and outputs? While a great deal of literature exists about evaluation models,

measures and methods, not as many publications deal in length with the assessment of outcomes. The “Bibliography” includes a categorized, selective list of useful publications that offer field-tested output measures, data-gathering techniques, examples of instruments and guidance in preparing for accreditation self-studies. Particularly helpful for assessing student learning and outcomes assessment concepts, methods and examples are these authors’ publications: Avery; Banta; Gratch Lindauer (1998); Hernon & Dugan (2001 and 2004); Nelson & Fernekes; Nichols & Nichols; and Palomba & Banta.

### **Measuring Impacts and Outputs: Defining Terminology**

Although some writers define “performance measures” more narrowly, the author has adopted the following definition by McClure and Lopata:

“Performance measures are a broad, managerial tool that encompass measurement of inputs (indicators of the resources essential to provide service); outputs (indicators of the services resulting from the use of those resources); and impacts (the effects of these outputs on other variables or factors)... “<sup>7</sup>

The author is using the phrase “performance objectives” rather broadly to mean statements of what the LLRP does, or plans to do, with its services and resources to address campus-wide goals. “Performance indicators” refers to measures of inputs, outputs and impacts that may be used by LLRPs to document their roles and contributions to important campus outcomes. Thus the word “outcomes” is reserved for the campus-wide goals and objectives desired by stakeholders and made known in educational or strategic planning documents. Developing information literate students is an example of a desired campus-wide outcome if information literacy has been included in general education requirements or in some other curriculum. The word “impact(s)” is reserved for those direct effects the LLRP has on institutional outcomes, or if more indirect, the enabling effects that contribute to these outcomes. The terms “evaluation” and “assessment” are used interchangeably.

What is the difference between measurement and assessment? Measurement is the process of collecting data and quantifying this data, but no judgment or interpretation is implied. However, assessment involves judgment and interpretation of data. The following definition of student outcomes assessment best reflects the process and purpose:

“Student outcomes assessment is the act of assembling, analyzing and using both qualitative and quantitative evidence of teaching and learning outcomes, in order to examine their congruence with stated purposes and educational objectives and to provide meaningful feedback that will stimulate improvement.”<sup>8</sup>

## **Chapter Two: Align, Define, Identify, Chart, Collect, Analyze and Communicate ADICAC : An Overview of the Process**

This section lays out a six-step process to align, define, identify, chart, collect and analyze data and communicate how LLRPs contribute to specific campus goals and desired outcomes. Of course, the extent and scope of assessment efforts depend on the purpose. If an accreditation self-study or program review is the driving force, an LLRP benefits from implementing most of these steps. If data is needed to support a grant application or complete a required state statistical survey, few, if any, of these steps need be followed, if the LLRP has a database of appropriate performance measures. If an LLRP does not yet have a database of performance measures, it will be able to create one as a result of working through this process. Thus, the ADICAC process can be used to develop an assessment plan and multi-measures database of evidence useful for a variety of purposes.

An overview of the process is outlined below. Each subsequent chapter contains detailed explanations with examples of how each step might be carried out. Chapter 8 contains a flow-chart of the steps, the major tasks required to accomplish the steps and reproducible worksheets that can be used or modified. Working through this process with a small group of LLRP staff and/or discipline-based faculty, administrators and students should provide the framework and much of the content of an assessment plan and database of measures.

### **ADICAC Process Overview**

**Step One: Align** with relevant campus-wide goals - Start with the college's planning document or statement of educational goals and objectives to identify those outcomes and goals to which the LLRC contributes. It may be necessary to supplement these with accreditation agencies' and/or professional associations' standards and guidelines.

**Step Two: Define** these further by restating them as performance objectives that place the emphasis on the LLRP's core services and resources that contribute to the desired outcome/output.

**Step Three: Identify** performance indicators from the objectives which generate data and documentation to show how the LLRP actually contributes to the campus-wide outcomes or outputs.

**Step Four: Chart** the performance indicators, connecting them to the performance objectives that are aligned with campus-wide goals. As part of this step, inventory the data and documentation, listing data already available and connecting the available data and documentation to the performance indicators in the chart. Review the chart to decide what types of data are still needed. This step might also result in the decision to stop keeping data which is not being used. Decide how the data/documentation will be collected and who will be responsible.

**Step Five: Collect, Analyze** and organize data and other needed documentation according to purpose and schedule. Group multiple measures to enhance evidence.

**Step Six: Communicate** to external audiences by organizing and publicizing the data and other evidence in ways that are meaningful and accessible. This most likely will mean repackaging the data to emphasize certain statistics and findings of interest to targeted campus groups.

### **Using This Manual and the Worksheets**

It is recommended to read the entire manual to understand the overall process. Then review more carefully “Chapter 8: Using the Worksheets to Implement ADICAC.” The flow-chart and key assessment activities listed on the flow-chart will guide your local Assessment Team and LLRP managers through the process. Each ADICAC step has one or more worksheets and/or tables that facilitate the successful completion of that step. These worksheets follow the flow-chart in Chapter 8 and are also found in the “Appendix.”

### Chapter Three: Align LLRP Core Services and Resources to Campus-Wide Outcomes and Outputs and Define LLRP Performance Objectives

Prior to assembling and reviewing your institution's major planning documents, consider establishing a small group of LLRP staff, academic administrators, discipline-based faculty, and/or students. This assessment team will carry out the task of identifying the institutional goals and desired outcomes to which the LLRP's programs contribute; developing LLRP performance objectives that align with these institutional goals and outputs; and determining the performance indicators that will be used to measure and assess the progress toward and accomplishment of these performance objectives (steps one through three of the ADICAC model).

#### **Step One: Align with relevant campus-wide goals.**

Use the team to identify and review current copies of your institution's planning documents to identify those campus-wide goals and outputs to which the LLRP contributes. These might be strategic plans, technology plans, or educational goals and objectives from the various divisions/schools at your campus. If your LLRP has recently completed some type of strategic planning process, you may only need to list the pertinent campus performance goals and objectives that were identified in that document.

The following examples of campus-wide goals are taken from two different community college planning documents.

#### **Example 1: Campus-Wide Goals**

From *City College of San Francisco Strategic Plan 2003-2008*:

"Promote student success in achievement of educational goals: The college is a learner-centered environment encouraging the acquisition of essential learning skills, civic engagement, and relevant knowledge that students need to achieve their educational goals."<sup>9</sup>

From Bellevue Community College's (Washington) *Strategic Plan 2004-2011*:

"BCC will advance diversity programs that promote pluralism, inclusion, and global awareness."<sup>10</sup>

In addition to your campus's educational goals and other priorities, you will want to become familiar with those professional association standards that accredit your academic and vocational programs and with your regional accrediting agency's standards to ensure that

what you have identified includes the expectations expressed by these standards. ACRL has published several potentially useful standards and guidelines documents that might strengthen or expand campus institutional goals.<sup>11</sup> The full text of ACRL's 2004 "Standards for Libraries in Higher Education" is included in the "Appendix." Every academic library should review these new standards, which are different from previous ones in several ways: they are designed to help libraries develop goals within their institutional context; they focus on documenting the library's contribution to institutional effectiveness and student learning outcomes; and they apply to all types of academic libraries.

WASC's Commission for Community and Junior Colleges (CCJC), one of the six regional accreditation agencies, issued new standards in 2002. The "Appendix" contains the text of "Standard II. Student Learning Programs and Services, section C. Library and Learning Support Services," along with questions and suggested evidence that the Commission has provided in the *Guide to Evaluating Institutions Using the 2002 Standards*. In addition to the specific standard for libraries and learning support services, readers are encouraged to review the other sections of their institution's regional accreditation standards, since often they contain statements relevant to a LLRP's programs, such as sections about the educational program and student services. These examples come from three different sections of the WASC-CCJC standards:

Standard II. Section A. "Instructional Programs" 2.d. The institution uses delivery modes and teaching methodologies that reflect the diverse needs and learning styles of its students."

Standard II. Section B. "Student Support Services" 3.d. "The institution designs and maintains appropriate programs, practices, and services that support and enhance student understanding and appreciation of diversity."

Standard I. B. "Improving Institutional Effectiveness" 2. "The institution sets goals to improve its effectiveness consistent with its stated purposes. The institution articulates its goals and states the objectives derived from them in measurable terms so that the degree to which they are achieved can be determined and widely discussed..."<sup>12</sup>

**Step 2: Define** further the campus-wide goals by restating them as performance objectives that emphasize the LLRP's core services and resources that contribute to the desired outcomes.

Once these desired campus-wide outcomes, outputs and accreditation and/or professional association standards have been identified, the Assessment Team drafts performance

objectives. The idea is to restate the important campus-wide outcomes and outputs by putting the emphasis on the LLRP's role and contributions. If your LLRP has a current strategic or technology plan, you can probably take many of these statements of performance objectives from these documents. This step serves two purposes: it clarifies exactly how the LLRP contributes to the institutional outcomes and outputs and it draws attention to the key LLRP services and resources that will need to be measured and documented.

Using two examples, one from the *CCSF Strategic Plan* and the second from the 2002 WASC Standards, here is how the restatements might look:

<b>Example 2: LLRP Performance Objectives</b>	
<b>Institutional Goal/Outcome</b>	<b>LLRP Performance Objective</b>
The college is a learner-centered environment encouraging the acquisition of essential learning skills, civic engagement and relevant knowledge that students need to achieve their educational goals.	LLRP staff work with disciplinary faculty to provide a variety of effective learning opportunities for students to develop information literacy skills, which are among the learning skills important for student success.
<b>WASC Standard</b>	<b>LLRP Performance Objective</b>
II. Bd. Student Services – “The institution designs and maintains appropriate programs, practices, and services that support and enhance student understanding and appreciation of diversity.”	LLRP offers a variety of information resources, services, programs, exhibits that directly promote student understanding and appreciation of diversity.

If your institution has not yet included language about the role of information literacy in the success and education of students, it's important that the librarian who coordinates library and information literacy instruction works with the appropriate LLRP staff, campus committees and academic administrators to get such language placed in educational plans, academic program student learning outcomes documents, and course outlines and syllabi.



## Chapter Four: Identify LLRP Performance Indicators That Document Impact

**Step Three: Identify** performance indicators from the objectives which will generate data and documentation to show how the LLRP actually contributes to the campus-wide outcomes.

Performance indicators represent features or characteristics known to be important in contributing to the accomplishment of the performance objectives. They are called “indicators” because their measures indicate aspects of how progress is to be determined in the accomplishment of the performance objective. What’s most important is to identify and use several different measures to document and assess progress toward the accomplishment of the performance objectives. Using multiple measures generates different types of data and documentation that, taken together, provide evidence of the LLRP’s effects. No single measure can adequately demonstrate the impact of LLR services and resources.

On the next page are examples of potential performance indicators for two typical LLRP objectives. It’s not necessary for the Assessment Team to use all of these performance indicators, nor do these examples represent the totality of what might be measured. Each institution will decide which measures and sources of documentation to use based on what is compelling, what is already available and what’s feasible to collect. Notice that not all indicators reflect something that can be quantified or measured. Sometimes, the documentation might be qualitative, such as a copy of a policy; description of tangible outcomes of librarian and discipline-based faculty partnerships; other times user satisfaction or student performance data are good indicators of whether or not a desired effect has been realized. However, the key point is that it is always desirable to have multiple measures, both quantitative and qualitative, to document the effects of services and resources.

### Example 3: Potential Performance Indictors for Two Performance Objectives

LLRP Performance Objective	Selected Performance Indicators
LLRP staff work with disciplinary faculty to provide a variety of effective learning opportunities for students to develop information literacy skills.	<ol style="list-style-type: none"> <li>1. extent and use of independent learning opportunities, such as Web pages with links to online tutorials;</li> <li>2. data about curricular integration of information literacy instruction;</li> <li>3. data and comments from students &amp; faculty about the benefits of info. literacy learning opportunities;</li> <li>4. qualitative information about extent and outcomes of librarian-disciplinary faculty collaborations;</li> <li>5. information literacy course completion data and GPAs;</li> <li>6. data correlating student retention and graduation rate with successful completion of info. literacy courses or non-credit workshops;</li> <li>7. performance data from course-embedded research assignments/projects;</li> <li>8. performance on tests/quizzes.</li> </ol>
All members of the campus community have access to quality information and learning resources and services, regardless of location.	<ol style="list-style-type: none"> <li>1. user opinions about the convenience and ease of access to learning resources and Web information resources and services, both on- and off-campus;</li> <li>2. quantitative and qualitative description of how access to information and learning resources is provided to campus community and how access has been increased or improved to targeted groups, such as distance learners and disabled users;</li> <li>3. data and description of the types of information and learning resources available;</li> <li>4. data representing the availability and access to reference service</li> <li>5. percentage of students and faculty who rate reference/information service and online information as good or excellent.</li> </ol>

Again, the point is made that performance indicators should be interpreted broadly to include more than quantitative data; for example the following qualitative documentation that requires little or no special data collection:

- policy statements
- descriptions of the results of librarian and faculty collaborations
- summary of faculty and student comments about quality and effects of exhibits, Web-based tutorials, classroom information competency instruction
- summary of “Suggestion Box” comments with actions taken
- graphic presentation of the curricular integration of library/media usage in specific academic/vocational programs
- data collected from an institution’s use of LibQUAL or one of the national college student experience surveys, such as the Community College Student Experiences Questionnaire (CCSEQ) or the Community College Survey of Student Engagement (CCSSE)<sup>13</sup>

### Sources of Evidence

There is no one set of ideal or “best” performance indicators, but certainly combining data from more than one measure strengthens the evidence. This chapter provides several examples of potential sources of data/documentation on the tables located at the end of this chapter.

**Table 1** compares the three statistical surveys that California community college LLRPs currently complete. Typically, state-wide and national library statistical surveys include many types of input measures such as, collection size, number of staff, amount of budget, and physical space. They also require measures of outputs, such as number of reference transactions, number of orientation/instruction sessions, and the number of students completing library instruction credit courses. The 2003 ACRL Academic Library Trends and Statistics survey included for the first time several items which could provide indirect measures relating to information literacy instruction and collaboration with course instructors. Table 1’s example illustrates how any community college might reduce the data collection workload by first identifying the data already being collected for state and/or national surveys. The main point of this comparison is to underscore the potential usefulness of some data already being collected and reported if they are grouped with other measures and documentation to show support for broader campus goals and desired outcomes.

For example, to document the LLRP’s effects on “improving basic skills” of students, an LLRP could combine selected data from **Table 1** with such measures as:

- results of student self-assessment and faculty assessment of students' ability to perform specific information literacy skills
- scores, grades and written evaluations of performance on course assignments requiring library/Web research (comparison to classes whose students have not yet been involved in much information literacy instruction would be even more revealing).

Readers will notice that **Table 1** includes three Chancellor's Office categories of performance measures -- staff composition, fiscal condition and workforce development -- for which there are no equivalent library survey items. Indeed, the state and national library surveys do require information about staffing and operating expenditures, but not the types of measures used by the Chancellor's Office. The point of the Chancellor's Office's measures is to provide evidence of the effects of desired policies and goals. While LLRPs may not want to model all their measures on these state and national ones, the message should be clear: reporting data on the number of certificated, classified and student staff unconnected to any context is not compelling to campus stakeholders or to accreditation agencies. But by adding a context, such as comparing your materials budget or staff size to carefully selected peer institutions, or documenting your lack of ability to meet demonstrated demand because of staff or budget limitations is more compelling. The "Appendix" includes an example of peer comparisons made by Pasadena City College.

Two other sets of performance measures listed in **Table 2** and **Table 3** (at the end of this chapter) are offered as additional examples of potentially useful measures. **Table 2** describes output measures that were developed and field-tested by 38 California community college LLRP administrators, who responded to a survey about their clarity and usefulness. Only one of these twelve measures -- the library/information competency skills course completion rate -- is an indicator of student learning outcomes. The library/LRC orientation participation rate and the user success satisfaction rate are useful indirect measures of the effects of LLRP services. An advantage of these measures is the standardization achieved by using "full-time equivalent user." This allows for benchmarking and comparisons with peer institutions, if desired. What is missing from these indicators, though, are measures for the use of electronic services and resources, such as number of online transactions (in-house and remote); number of broadcast instructional programs; number of hits LLRP-maintained Web pages receive, and so forth.

**Table 3's** measures reflect a different approach to determining the most useful measures. These indicators, based on research carried out by Cullen and Calvert in New Zealand

academic libraries, come from random samples of **all** the campus stakeholder groups: faculty, students, librarians, administrators, library directors, and other staff. **Table 3** presents the indicators that were rated 3.8 or higher on a scale where 5 is “very important.” Comparing **Table 2** to **Table 3** reveals many differences, most likely reflecting the priorities of students, faculty and administrators. In fact, several of these measures reflect user satisfaction, availability/access, and quality of resources or services, as opposed to the measures of usage in **Table 2**.

Having these examples of measures that have been field-tested and highly rated by user groups should at least make the task of selecting measures somewhat easier. **Worksheet 3** in Chapter 8 combines most of these performance indicators from **Tables 1** through **4** and provides space for the addition of others that reflect institutional differences.

Other examples of field-tested measures used by academic libraries include those found in the publications listed in the “Bibliography” by Avery; Hernon and Altman; Hernon and Dugan; Nelson and Fernekes; Poll and VanHouse; Weil and McClure.

**Table 1: Comparison of California Library Survey Items to CCC System Performance Measures Categories**

CCC Chancellor's Office Categories of Performance Measures +	Library/Learning Resources Survey Items	CCC-LLRP 2003 survey*	Calif..State Library 2002-2003 survey	ACRL Academic Library Statistics 2003
<b>Student Success</b> • Improving Basic Skills  • Credit Courses Enrollment/students served and  <b>Successful Completion</b>	# of lectures/presentations and # of participants	X	---	X
	# of courses/sections for bibliographic instruction	X	---	---
	# of courses/section for “non-LLRP” courses	X	---	---
	# of students who completed courses/sections	X	---	---
• Transfers and Degrees & Certificates	None of the 3 surveys request data related to this category.	---	---	---
<b>Student Access to Community College (equate to LLRP resources/services)</b>	# of hours open/week	X	X	X
	access to electronic resources/equipment	---	---	---
	e-mail reference/research assistance provided	---	---	X
	# of public access computers	X	---	---
	# of audio, film and video equipment (# of pieces)	X	---	X
	measures of participation and use: # using facility (e.g., gate count)	X	---	X
	# community borrowers	X	---	---
	# of circulation transactions	X	X	X
	# of in-house use	X	---	---
	ILL/document delivery	X	X	X
	# of reference transactions provided	X	X	X

**X denotes the item is included; --- denotes the item is not included on the survey.**

+ These CCC categories are derived from: The Effectiveness of California Community Colleges on Selected Performance Measures (1999) and the “System Goals” from the documentation for The Partnership for Excellence program.

\* Many of the use measures request the data separately for “Library” and “Media Services”

**Table 1: Comparison of California Library Survey Items to CCC System Performance Measures Categories**

<b>CCC Chancellor's Office Categories of Performance Measures +</b>	<b>Library/Learning Resources Survey Items</b>	<b>CCC-LLRP 2003 survey*</b>	<b>Calif..State Library 2002-2003 survey</b>	<b>ACRL Academic Library Statistics 2003</b>
<b>Staff Composition</b>	All three request the number of staff positions by categories (e.g., certificated, student, classified); ACRL requests the number of campus faculty positions	<b>X</b>	<b>X</b>	<b>X</b>
<b>Fiscal Condition</b>	All three require data for various categories of operating expenditures (e.g, salaries, collections, other), but none require the types of measures used by the Chancellor's Office	<b>X</b>	<b>X</b>	<b>X</b>
<b>Workforce Development</b>	None of the LLRP surveys request any data that relate to this category, from the Partnership for Excellence "System Goals"	----	----	----
<b>Category/Measures not Included in the Chancellor's Office Categories</b>	Collections -All three surveys request quantitative data for holdings of various types of collections, (e.g., books, videos, serials) and for materials added.	<b>X</b>	<b>X</b>	<b>X</b>
	State Library asks for the number of students served and then calculates librarians and staff in relation to FTE. ACRL also requests student enrollment statistics and a variety of yes/no items about collaborating with course instructors; developing information literacy integrated instruction in courses; integration of information literacy (IL) throughout the curriculum of one or more programs; assessing IL as part of campus or dept. assessment of student learning; and whether evidence is gathered that students are information literate when they graduate.			

**Table 2**

**Output Measures for Community College Libraries and Learning Resource Programs  
from Tobin de Leon Clarke's *Output Measures Manual***

<b>Output Measure</b>	<b>Definition</b>
1. Circulation per FTE User	The average number of circulation transactions per FTE user for the academic year.
2. In-House Use per FTE User	The average number of items used in the Library/LRC per FTE user for the academic year.
3. Facilities Use per FTE User	The estimated (based on gate count or some other count) number of users who come into the facility per week and/or year to use one or more of the services/facilities.
4. Reference Transactions per FTE User	The average number of reference transactions per FTE user for the academic year.
5. Library/LRC Orientation Participation Rate	The number of students receiving orientation (e.g. "a planned activity whereby students receive an overview of either the full range of the collections and services available, or some aspect of the LRP at the college, such as group instruction on how to do library research...") as a percentage of the student population.
6. Library/LRC Skills Course Completion Rate	The number of students completing a Library/LRC skills/research course in proportion to the FTE student population.
7. Faculty Audiovisual Services (Hardware)	The number of hardware items delivered or charged out to faculty by the Library/LRC for instructional purposes in proportion to the FTE faculty population.
8. Faculty Audiovisual Services (Software)	The number of items delivered or charged out to faculty for instructional purposes in proportion to the FTE faculty population.
9. Media Production per FTE	An estimate of media production in proportion to the FTE faculty and administrative staff population.
10. User Success/Satisfaction Rate	An indicator of how successful users think they are in finding the information or physical item they need and how satisfied they are with what they find. Based on six-item survey (survey form included in the Manual).
11. Turnover Rate	Average number of uses per cataloged item in the collection.
12. Interlibrary/LRC Loan and Delayed Fill Rate	The number of items the LLRC makes available to the user within two weeks of request, compared to the total number requested. Items include those requested via hold, recall, search, ILL, etc.



**TABLE 3 - Performance Indicators Ranked Important By All  
Campus Stakeholders\***

**I. Management/Administration**

- +Match of goals and objectives to user group needs
- +Competence of library management
- #Total amount of library budget

**II. Collections and Learning Resources Adequacy**

- # Provision of multiple copies of items in high use
- + Currency of Library Materials
- +Flexibility of budget to respond to new subject areas)
- +Speed of acquisition of new materials
- +Adequacy of library collection compared with other institutions
- # Frequent evaluation of collection

**III. Access, Availability and Use**

- + Match of hours open with user needs
- + Proportion of library materials listed on computer catalog
- +Proportion of items wanted by user finally obtained
- +Access to library catalogues, via networks throughout the campus
- + Ease of use of public catalogs
- # Speed and accuracy of reshelving of materials
- # Provision made for disabled users
- # Access to CD-Roms, databases, via networks throughout campus
- # Speed of recall of items out on loan requested by other users
- # Speed of recall of reserved items
- # Availability of periodical indexes on CD-ROM

**IV. Instructional and Research Services**

- + Expert staff assistance to users available when needed
- + Helpfulness, courtesy of staff
- + Expertise of reference staff
- + Availability of reference staff when needed
- + Success in answering reference questions

**V. Facilities/Infrastructure**

- + Quietness of study environment
- + Number of seats per full-time student equivalent
- +Equipment (e.g. photocopiers) kept in service by good maintenance

- 
- **Source:** The author worked with data provided by Rowena Cullen and Philip Calvert from their study, "Stakeholder Perceptions of University Library Effectiveness." *Journal of Academic Librarianship* 21 (November 1995). The + before an indicator indicates all six stakeholder groups had means of 3.8 or higher out of a possible 5 and a # before an indicator shows that five of the six groups' means were 3.8 or higher.

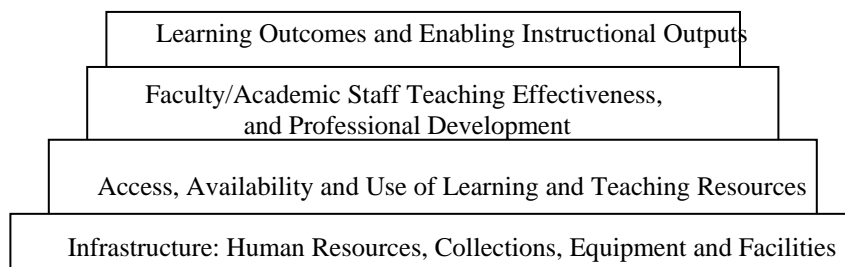
## Chapter Five: Chart the Performance Objectives, Indicators and Sources of Data

**Step Four: Chart** the performance indicators connecting them to the LLRP performance objectives.

This part of the process involves the LLRP management group and begins to make tangible the who, what, when and why of assessment. Indeed, charting all of this will spark the need to inventory the types of data already being collected. It may also generate the need to develop a database of performance measures. The involvement of the LLRP management group to review the Assessment Team's work at this point in the ADICAC process will clarify which performance indicators and data sources are feasible to use now and which will need to be phased in.

**Figure 1** below represents broad domains or categories for assessment. The author suggests that LLRPs put the emphasis on measuring and documenting their contributions for the top three assessment domains. While this figure depicts the foundation role that infrastructure inputs play, it also illustrates the priority of student learning outcomes by placing them at the top. Another intent of this schema is to communicate that each layer depends on the layers underneath, although in reality there is an interplay of performance indicators represented by these layers.

**Figure 1: Assessment Domains for the Teaching-Learning Library**



The primary teaching-learning role is reflected by the six broad performance objectives in **Table 4** at the end of this chapter. Examples of performance indicators and data sources are

provided to illustrate how multiple measures can be grouped. “Check-off” boxes are connected to each data/documentation source. **Table 4** may not be totally applicable at every community college because it was designed to reflect the breadth, not necessarily depth, of the unique missions and goals of specific community colleges. Even though the six core performance objective statements are broad, they do reflect regional accreditation standards and many higher education priorities.

Of course there are other potential performance measures that can be used to provide evidence of progress or achievement of objectives. As mentioned previously, **Worksheet 3** in Chapter 8 presents many others, along with space for local additions.

### **Charting Your Work**

**Worksheet 4** in Chapter 8 can be used to generate a similar chart. Columns have been added for local use to indicate who is responsible for collecting the data and a time (e.g. annual, once every 4 years, weekly, etc.) for the gathering of data and documentation. Noting which data are available and which are not will help the decision about what new data are feasible to collect at a given time. Since assessment needs to become part of “doing business,” it’s normal and to be expected that not all of the more useful or compelling data will be collected in year one. As a LLRP incorporates assessment activities into the organization, the inventory of useful measures will grow.

What goes on **Worksheet 4’s** chart should be the performance indicators and data sources that would be useful and compelling in providing evidence of the effects of the LLRP’s services and resources on campus-wide goals and priorities. Of course, items may be listed for which data may not be collected until year two or three. In addition, it may make sense at some institutions to include statistics required by annual surveys for a possible performance measures database, even though they may not be used for outcomes assessment purposes.

The tasks involved in this step need not be done by the entire Assessment Team. The Assessment Team chairperson might complete the chart with input from the LLRP management group. Indeed, this would be the time for negotiation regarding the decisions made by the Assessment Team, especially if data collection for certain performance indicators is not feasible.

Before progressing to the collection and analysis of data, it's important for the Assessment Team chairperson and the LLRP management group to review the annual statistical surveys that the LLRP is required to complete. The purpose of this review is to identify other data items that might be useful as part of the performance measures database. Even if these other measures will not always be used for accreditation self-studies or campus program/annual review purposes, it's important to coordinate procedures for collecting and storing these data. Also, having these data organized in one place facilitates their use as part of a multiple-measures approach.

**Table 4: Community College LLRP Core Contributions and Performance Indicators for Assessment**

<b>Core Service/Resource Contributions (Performance Objectives)</b>	<b>Performance Indicators</b>	<b>Data Sources</b>	<b>Data Available?</b>
1. Information Literacy instruction and faculty/staff training contribute to student success and excellence in teaching.	a. reach of instruction program (fully integrated across curriculum, required IC course, drop-in sessions, etc.)	a. program statistics about number of courses/students receiving instruction or doing library/Web assign; syllabi study	<input type="checkbox"/>
	b. quality of instructional & training services	b. student, faculty & librarian-trainer surveys, focus groups, unsolicited feedback from letters, e-mail	<input type="checkbox"/>
	c. student self-confidence rating doing library or Web research;	c. entrance/exit student survey items; self-assessment instruments (online or paper)	<input type="checkbox"/>
	d. grades, scores, satisfactory performance on assignments or electronic tutorials (info. literacy courses/assignments and other courses and assignments)	d. assignments, papers/projects, tests, search logs, portfolio analysis, computer based self-assessments	<input type="checkbox"/>
	e. extent of independent learning opportunities and usage data	e. description of Web-based and independent learning options and who uses them	<input type="checkbox"/>
	f. sufficiency, availability and helpfulness of reference staff	f. user surveys, extent of access to reference staff in-person and online	<input type="checkbox"/>
	g. extent of LLRP training options for instructors and LLRP staff with participation and satisfaction data.	g. description of training options with # of participants per dept. and satisfaction data.	<input type="checkbox"/>
2. The information and learning resources and equipment needed to use them are sufficient and their use is integrated into the curriculum.	a. percentage of courses by academic program requiring info. and learning resources beyond textbooks	a. syllabi analysis; summary of program review documents that describe use of info. & learning resources; analysis of reserve materials put on reserve	<input type="checkbox"/>
	b. rating by librarians, instructors, students and others of collections/equip. for currency relevancy and availability	b. surveys; collection analyses; equipment inventory & evaluation; focus groups	<input type="checkbox"/>

Core Service/Resource Contributions (Performance Objectives)	Performance Indicators	Data Sources	Data Available?
	c. usage data connected to academic areas and/or specific groups of learners as a % of total FTEs; increase in total use data	c. circulation & in-house use data of local materials and use data of electronic & Web information resources; media bookings	<input type="checkbox"/>
3. The physical and virtual space promotes learning, study and research.	a. user perceptions about benefits and quality of individual and group study and instruction; spaces; about exhibits, displays and other independent learning opportunities (Web pages)	a. user surveys; comments from Suggestion Box/electronic comments; focus groups; program/exhibit surveys	<input type="checkbox"/>
	b. relationship of exhibits, programming and Web-based learning opportunities to institutional goals and values (e.g. multicultural diversity awareness)	b. number and description of exhibits, programs, and Web-based learning opportunities created or sponsored by LLRP in relation to curriculum and goals	<input type="checkbox"/>
4. All members of the campus community have convenient access to all the information and learning resources.	a. user perceptions about the convenience and ease of access to learning resources and electronic/Web information resources, both on-campus and off-campus	a. user surveys/focus group data for: ease of access to online resources; obtaining desired material when needed; match of service hours with user needs, etc.	<input type="checkbox"/>
	b. quantitative & qualitative description of how access to information & learning resources is provided to campus community shows increase in access and/or improved access to targeted groups, such as disabled learners.	b. data from inventories and network services; statistics about service hours and online reserves access; turn-around time for materials; provision for disabled users; entrance/exit data and fill rate	<input type="checkbox"/>
5. Library and information resources assist students with career, employment needs and other priorities in college mission, such as citizenship, ESL education.	a. student, faculty/staff perceptions about the LLRP and Web-based career, job-seeking, ESL, and citizenship resources	a. data from student/faculty surveys about awareness, use and usefulness of resources	<input type="checkbox"/>
	b. extent and currency of specific information & learning resources and services focusing on careers, job-seeking, ESL, citizenship.	b. number and brief description of major resources/databases and services (e.g. handouts, Web pages, exhibits, lib/technology internships) focusing on these areas	<input type="checkbox"/>
6. Library & Learning Resources staff make significant contributions to campus governance, technology planning, fund-raising and other desired institutional activities.	a. description of LLR staff memberships and outcomes from campus committees; number & dollar amount of successful grants/fundraising activities; description of staff awards, publications, and major community service	a. staff annual performance reports; copies of reports/documents authored or co-authored by LLR staff; copies of successful grants/fundraising efforts.	<input type="checkbox"/>

## Chapter Six: Data Collection and Analysis

**Step Five: Collect, Analyze** and organize data and other documentation according to purpose and schedule. Group multiple measures to enhance evidence.

Perhaps one difference in the ADICAC process is that data collection and analysis are intermingled in such a way that the decisions about what and how data are collected are influenced by data analysis considerations. The author suggests that the key decisions relate to how the various data findings and documentation are organized and presented to the intended audience.

The chart generated during step four should make clearer which data and other documentation exist and which data are lacking. At this step, decisions are being made about which data to bring together to show how the LLRP's services and resources have contributed to the desired campus-wide outcomes and outputs. The key phrase here is "bring together." All the literature on assessment agrees that using data and documentation from a variety of sources is the best way to demonstrate effects or impact. This is called "triangulation," a term coming from navigation sciences in which a location of an unknown point is determined by forming a triangle by using the unknown point and two known points.<sup>14</sup> Because some outcomes are complex student learning situations, bringing together data and other forms of documentation that directly and indirectly support the outcome strengthens the evidence. Therefore, grouping data and documentation from multiple measures recognizes the complexity of input and output variables that are known to be important to achieving the desired outcomes.

For example, trying to "prove" that students have become information literate is not a simple task. One cannot use just the results of one test to show that this outcome was reached. Indeed, it is difficult to even identify most of the variables that may work together to develop students' information literacy skills, such as library and information competency instructional activities, discipline-based faculty efforts, student peers, their independent learning, and so on. In this situation, the first step is to carefully define the component skills and abilities understood to be part of information competency, and then decide which measures to use to provide evidence, rarely proof, that these separate skills and abilities have

been developed and/or improved. Fortunately there are several examples of locally-developed information literacy tests and two standardized tests under development. One example of a two-part test developed by librarians at six California community colleges is the Bay Area Information Competency Assessment. The cognitive and performance-based test and all project documentation and reports are available at <http://www.topsy.org>. For more information about locally developed tests and test development projects, such as Project SAILS and the Educational Testing Service's information and communications technology assessment, see this author's chapter "Selecting and Developing Assessment Tools," pages 28-35, in the Avery publication listed in the "Bibliography" and the specific citations to Project SAILS and the ETS initiative in the "Bibliography."

**Worksheet 3's** "Information Literacy and Faculty Support" category (see Chapter 8) provides a good example of how quantitative and qualitative measures from a variety of sources generate evidence about the reach and effectiveness of information literacy learning opportunities. Notice how indirect measures of use data, user satisfaction, and self-assessment indicators are combined with direct measures of student learning from tests and grades and scores on courses and assignments.

### **Strategies for Obtaining Assistance With Data Collection & Analysis**

Don't assume that you'll need to collect all of the data. Look for departments and offices on campus which are already conducting surveys or some other type of student assessment. The following suggestions will greatly lighten the data collection load:

1. make contact early with staff in the campus institutional research office or some equivalent unit that conducts college surveys and studies. Find out what surveys are conducted or being planned and ask if a few LLRP items can be included in these surveys. For example, the Community College Student Experiences Questionnaire (CCSEQ) and the Community College Survey of Student Engagement (CCSSE) are used by many institutions, and both allow the insertion of locally-developed items. See the "Appendix" for more information about the CCSSE. Volunteering to serve on campus committees that plan these surveys may ensure that LLRP items get included.
2. make contact with student government leadership to find out if they are planning any surveys or focus groups in which a few LLRP items could be included. They may also have suggestions for the language of survey items about the library, or a particular method for obtaining a good response;
3. obtain and review copies of recent college reports and studies relating to important campus goals, such as statistics/research on transfer students or student placement in the workforce, for possible connections to LLRP services;



4. consider using students from sociology, business and/or statistics courses to help with the design and administration of surveys and other qualitative assessment methods;
5. consider seeking assistance from the LLRP's Advisory Council or its Friends Group for tasks and costs related to developing and administering a survey;
6. include in the budget for program review or self-studies the cost of hiring student assistants to help with administering surveys or other types of data collection.

The "Appendix" material for Step 5 contains examples of several survey instruments, in-house statistics collection forms, and helpful information about conducting focus groups. There are examples of on-site and online user survey instruments from several academic libraries. The City College of S.F. survey was administered online and in paper-copy.

There are many excellent publications with examples of surveys, such as the following three authors' publications, which are included in the "Bibliography": Adams, Johnston, and Shonrock. Readers will also find many examples of online surveys and focus group questionnaires from the results of a Web search-engine query

As an alternative, or in addition to collecting your own data, look for existing data you can use, such as student surveys in courses which have incorporated the SCANS competencies, or items from college entrance and exit student surveys, or surveys of student learning in particular departments, or items from national student experience surveys, such as the CCSEQ or CCSSE questionnaires. If there aren't any items addressing the effects of information competency instruction or library use, meet with the individuals who have developed these instruments to recommend such items in the next revision.

## **Multiple Measures**

An example of a library assessment plan that recognizes the importance of multiple measures for information literacy assessment in a curriculum-integrated environment is from Weber State University Library. The "Information Literacy Across WSU" diagram charts learning levels from orientation through lifelong learning, all connected to student learning opportunities and assessments and to partners responsible for the instruction and assessment. It includes student self-assessment, scores/grades on course-integrated assignments and research projects, online tutorial assessment, and information literacy credit courses.<sup>15</sup> **Example 4** illustrates how the use of multiple measures can document how library collections support curricular programs. Traditionally, quantitative input measures

have been used for this purpose, such as statistics on new acquisitions, collection analyses and comparisons to ACRL-CJCLS's collection size standards. These measures are still useful, but not by themselves. It's more convincing to show how these learning resources are being used to support specific campus-wide educational goals, such as "to internationalize the curriculum" or to prepare students in a specific vocational program to be "current and competitive in the marketplace." Thus, it's imperative to group input data with use data and qualitative user satisfaction measures about the currency, availability and quality of information and learning resources. Combining these measures strengthens the evidence for the LLRP's contributions.

**Example 4** shows collections input data, use data and user survey data clustered to document the impact of how the collections support students in a vocational program such as biotechnology or multi-media studies.

<b>Example 4: Clustering Evidence To Document Collection Use and Quality</b>		
Performance Objective	Performance Indicators	Data Sources/Collection Methods
LLRP's collections adequately prepare students in vocational programs for their coursework and the workplace.	a. usage data connected to LC classification and/or specific "majors" as a % of FTEs in that program or % increase in use	a. circulation & in-house use data from local statistics analyzed by LC class/patron program code; use data for electronic & Web information resources; media bookings by academic program
	b. rating by librarians, faculty and students of collections and equipment needed to use them for currency, relevancy, availability; collection analysis data compared to standards and/or peer institutions; collection analysis data shows improvement for specific programs	b. surveys/focus groups of faculty, librarians and students; collection analysis; equipment inventory
	c. % of courses in specific vocational program requiring use of LLRP's various collections shows increase	c. syllabi analysis; summary of program review documents that describe collection use; analysis of reserve materials for specific vocational programs

**Worksheet 6** in Chapter 8 offers another example of clustering results of multiple measures.

In summary, it's very important to think of data collection broadly to include collecting such unobtrusive data and documentation as are described below in **Example 5**.

### **Example 5: Unobtrusive Data and Documentation**

1. copies of policies and plans (e.g. an instructional services plan, a collection development or access services policy)
2. anecdotal evidence such as informal comments from LLRP student workers; e-mail and "suggestion box" communication and letters from disciplinary faculty and administrators commending LLRP staff; (some of these anonymous comments may be constructively critical, but it's also important to include some of these with the corrective action that has been taken to address the perceived lack or weakness);
3. unobtrusive data that your online systems can provide that show how the library and learning resources are being used, both on-site and remotely, such as:
  - a. number of hits specific Web pages receive, such as information literacy tutorials or online exhibits sponsored by LLRP;
  - b. total number of electronic transactions in a given week;
  - c. number of periodical articles printed, e-mailed or downloaded in a given week;
  - d. number of remote log-ons to specific information sources in a given week;
  - e. number of items circulated by LC classification letters/numbers that roughly correlate to academic and vocational programs;
  - f. number of items circulated by student characteristics, such as academic program code or grade level;
  - g. number and percentage of faculty by department putting materials on reserve correlated with number of students using these materials;
  - h. number of electronic reference questions received and handled;
4. unobtrusive data about use of on-site resources that you may or may not be collecting that demonstrate how the LLRP is used, such as:
  - a. number of students scheduling group study space and number of hours scheduled in a given week;
  - b. number of reshelvings of in-house use of books and periodicals;
  - c. number of audio-visual bookings and broadcasts;
  - d. number of information literacy instructional sessions and professional development training sessions, analyzed by department/program and by type of instruction (e.g. basic skills, opac searching; new faculty orientation, etc.);
  - e. number and type of in-person and telephone reference transactions;
  - f. number of instructional exhibits mounted and description of how they connect to campus-wide goals and priorities.

What is also occurring during this step are decisions about how to change data collection, possibly eliminating certain measures and adding or modifying others because it becomes clearer that analysis would be stronger if certain data were available. This on-going modification of data collection methods and measures is a characteristic feature of the operational "culture" of assessment. Going back to a statement made in Chapter One, the real goal and benefit of assessment is learning about how the LLRP is being used in relation to demand and need so that improvements can be made. This on-going feedback loop comes from the students, faculty and other academic staff who either do or do not use the LLRP's services and resources. Of course, it's important to determine why students do not use library and learning resources and to include these findings in the grouping of data and documentation.

What if a LLRP is starting from ground zero and has very little formal data collection going on? Or, what if some of the survey findings reveal weaknesses or problems? That's quite normal and to be expected. Not all the types of measures which might be desirable will be feasible to collect in any given year. Assessment is an evolutionary process, so each year the inventory of measures and documentation will probably grow or become more focused. The idea is to get started and have some benchmark data so that subsequent years can show changes, and after a few years, trends and patterns may become visible. As mentioned earlier, peer comparisons may also be useful if these peer institutions are carefully selected and appropriate measures are compared. Weaknesses and problems should never be buried or hidden in assessment reports, as it may be possible to make a strong case for increased funding or staffing based on high user demand correlated with mediocre measures of satisfaction or turnaround time. The author cites a reference service evaluation study she once coordinated whose findings documented that students, while generally quite positive about the quality of reference assistance provided, criticized the amount of time that librarians could spend with them. As a result, the reference department gained an additional position.

To summarize here are the key aspects of steps 4 and 5:

- decide which measures and documentation to use to show support or progress toward the accomplishment of the LLRP performance statements;

- take a broad view so that multiple measures will bring data and documentation to bear on demonstrating how the LLRP has contributed or directly affected the desired campus-wide outcome or output;
- decide how the data will be collected and by whom; also make notes about the need for data/documentation not currently being collected;
- collect the data and other documentation;
- analyze the results by “triangulating” or grouping complementary evidence and documentation collected from different sources.

## Chapter Seven: Presenting Your Case: Communicate, Promote and Publicize

**Step Six: Communicate** to external audiences by organizing and publicizing the data and other evidence in ways that are meaningful and accessible.

Contrary to what some may think, assessment and its findings are all about how your campus constituents perceive the benefits and value of LLRP resources and services. Ideally, perception comes close to reality; however, in many cases the reality of a situation isn't well understood by campus constituent groups. That means that the LLRP not only needs to do a good job communicating the range and details of its resources and services, it also has to communicate its commitment to assessment and the results of assessment. Even if some results are negative, what is important is that students, faculty, and administrators perceive that library and learning resources programs are responsive to assessment findings. Accreditation teams also want to see evidence that campus programs are using the results of their evaluations to improve and modify their programs. That said, how can the LLRP effectively communicate its message and assessment findings?

There are many ways to effectively communicate to campus-wide stakeholders. Indeed, each institution offers some unique communication channels, but the chart below probably covers outlets common to most community colleges. The way your message is presented is obviously influenced by the target audience and purpose of your communication, but the best strategy is to include news items and results of surveys and other kinds of user feedback on a regular basis and via different communication channels. For example, when you publicize the information literacy instructional offerings, you can add a few sentences which indicate that more sessions are being added due to the "popularity of last semester's response," or "demand for additional workshops," or "Academic Senate's resolution that all transfer and certificate students will be competent using information technology," and similar statements.

When campus-wide or department surveys or focus groups are conducted, the results should be written up and communicated in a more formal report that is distributed to the appropriate group(s) by paper-copy and/or electronic means. Highlights of such larger studies can be easily incorporated into news stories disseminated in a variety of ways. Examples of communication channels are listed in boxed **Example 6** on the next page.

### Example 6: Typical Communication Outlets

Communication Outlets	Primary Target Audience
student newspapers/newsletters or online listserv or website	students
campus faculty/staff newspaper	faculty and staff
specific department/program newsletter	faculty and staff
LLRP website	all target groups
LLRP paper-copy newsletter	faculty and staff
Suggestion Binders/Bulletin Boards/FAQ's (onsite and electronic)	all target groups
LLRP and college annual reports	all target groups
accreditation self-study reports	all target groups
broadcast media (brief "info-bytes" featuring interviews or major accomplishments)	students

There are other ways to publicize and increase awareness of the important contributions that LLRPs make. Some examples include exhibits, programming sponsored or co-sponsored by LLR units, outreach efforts made by subject selectors and librarian-instructors, and membership on campus committees. A look back at **Table 4** reveals that performance indicators are included for exhibits, educational programming, and the results of LLR staff memberships on campus committees. Indeed, the LLRP's role in sponsoring or co-sponsoring educational exhibits and programs needs to be emphasized, both by focusing attention on it for assessment purposes, and also for publicity purposes. Publicizing events sponsored by or held in a library/learning resources unit is not difficult, and the rewards may be great in terms of attracting different people who may not be regular users. The best exhibits and programs always have a tie-in to the collections and information resources.

Some of the best promotion of LLRP's services and resources is carried forward by librarians and other staff involved in outreach and campus committee work. These individuals offer a personal touch that is tailored to a particular instructor or academic program's needs. Based on the impressions they make, these LLRP staff might embody for faculty and administrators the characteristics and image of the library or media center. This aspect of committee work should not be overlooked, as even though LLRP staff serve on

committees for a variety of specific reasons, they also represent and communicate LLRP's service and resources contributions.

In summary, the time is ripe for campus and broader professional association initiatives to emphasize the measurement and documentation of the impact of LLRPs on teaching-learning outcomes. Assessing impact becomes a way of organizational thinking about how academic libraries are linked to the overall educational enterprise. The resulting linkages, relationships, and benefits to the institution strengthen and help transform the LLRP for its place in the twenty-first century.



## **Chapter 8: Using the Worksheets to Implement ADICAC**

This final chapter presents on the next page a flow-chart of the ADICAC process with a checklist of the major implementation tasks that correspond to each step. Steps in the flow-chart reference specific reproducible worksheets, tables and boxed examples. The worksheets are located at the end of this chapter. Each worksheet contains an example or two to illustrate how the results of doing each step might look. Additional copies of the worksheets without the examples are located in the “Appendix.”

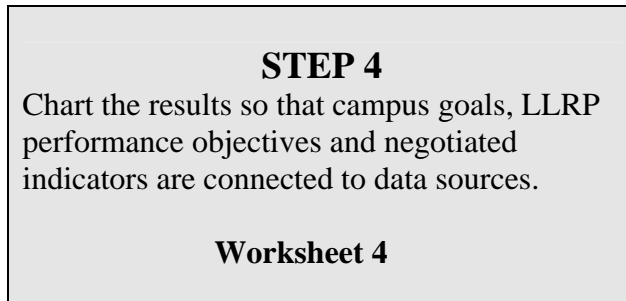
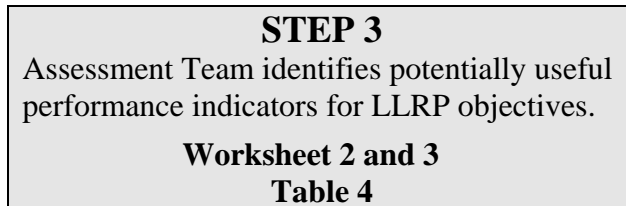
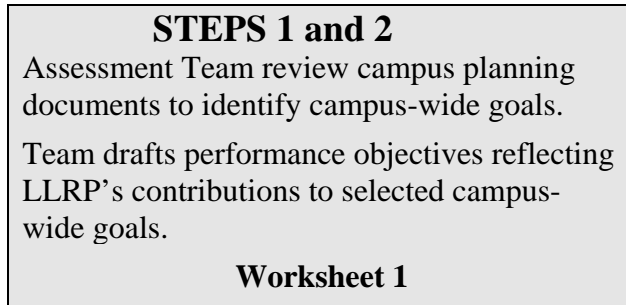
The actions described in the “To Do” column include the major activities that would be required to carry out the six steps. Certainly, there are many more detailed actions and variations that reflect institutional differences.

Hopefully, readers will be effectively guided through the ADICAC process by reviewing the flow-chart and using the worksheets. It may also be helpful to review some of the chapter sections which explain in more detail each part of the process.

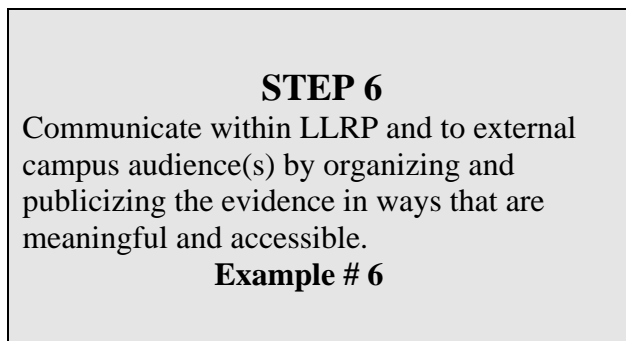
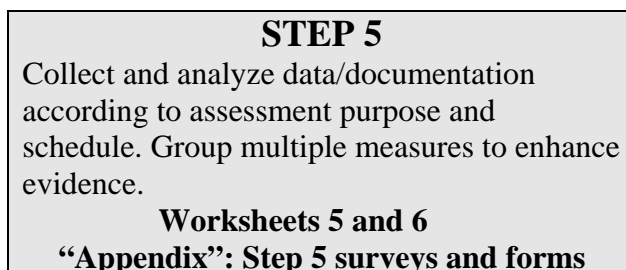
Step 5 involves the collection, analysis and organization of data and documentation. The worksheets for this step structure data collection planning/scheduling and organization or grouping of the data. Readers are referred to “Step 5” in the “Appendix” for sample copies of user survey instruments, internal data collection forms, a practical document titled “How to Do Focus Groups,” and to the “Bibliography” for sources of information about other types of data collection instruments. As there are numerous types of data collection instruments, readers are encouraged to review the suggested sources made in Chapter 6.

There is no worksheet for Step 6, as there are so many ways that librarians can communicate and publicize the results of assessment activities. Example #6 on page 29 identifies many of the communication outlets. The “Appendix” contains a typical press release form that community college public relations/marketing offices use. Also relevant for Step 6 is the example in the “Appendix” of how one community college (Pasadena Community College) presented data findings for collection and budget in their “Peer Comparison Charts.”

## ADICAC PROCESS FLOWCHART



OPTIONAL:



### TO DOs

- ☐ Form Team and clarify charge.
- ☐ Assemble the key planning documents for review.
- ☐ Schedule meeting(s) to accomplish Steps 1 and 2
- ☐ Distribute list of potential performance measures in advance of meeting.
- ☐ Schedule meeting to accomplish Step 3.
- ☐ Team chair transfers team's work to Worksheet 4.
- ☐ Schedule meeting of LLRP managers to review Assessment Team's work and make final decision about perf. indicators and data sources to use and details of data collection activities.
- ☐ Decide the structure and components of a performance measures database.
- ☐ LLRP managers and Assessment Team chair prepare timeline and action plan for data collection activities.
- ☐ Carry out data collection and analysis\*
- ☐ Schedule meeting of Assessment Team and LLRP managers to share findings and decide how to organize and disseminate internally and externally.
- ☐ Delegate the writing and dissemination process to appropriate staff.
- ☐ Modify process based on experience.

\* For accreditation self-study and campus program reviews, most of these activities will occur over a year or so and will involve all LLRP units and possibly other campus staff.

### Worksheet 1: ADICAC Steps 1 and 2

**Step 1:** Align with relevant campus-wide goals by identifying those desired outcomes in the college's planning documents.

**Step 2:** Define these by restating them as performance objectives that place the emphasis on how the LLRP's services and resources contribute to the desired outcome/output.

Institutional Goal/Outcome	LLRP Performance Objective
Ex. The college is a learner-centered environment. Students develop the learning skills and knowledge they need to achieve their educational goals.	Ex.: LLRP staff work with discipline-based faculty to provide a variety of effective learning opportunities for students to develop information literacy skills, which are among the skills important for student success.
1.	1.

**Worksheet 2: ADICAC Step 3**

**Step 3:** Use the performance objectives to identify performance indicators which can generate data and documentation that provide evidence of the LLRP’s contributions to specific campus-wide outcomes or outputs.

Performance Objectives	Performance Indicators	Data/Documentation Sources
<p>Ex: The LLRP professional staff work with disciplinary faculty to provide a variety of effective learning opportunities for students to develop info. literacy skills.</p> <p>1.</p>	<p>--description with use data and user opinions of variety of info. literacy learning opportunities --information literacy course completion data correlated to GPAs</p> <p>1.</p>	<p>--BI annual report; faculty comments from letters; student/faculty surveys --course grade sheets</p> <p>1.</p>

### WORKSHEET 3: ADICAC Step 3: Compilation of Potential Performance Indicators

#### I. Core Service/Resource Contribution: Information Literacy Instruction and Faculty Support

Performance Indicator/Measure	Data Source(s)	Data Available?
<b>1. Reach</b> of information literacy learning opportunities*		
a. # of courses/students attending IL sessions and drop-in sessions	IL program statistics	
b. # of faculty/staff training workshops & # of attendees	IL program statistics	
c. # of IL courses/# of students successfully completing	course grade sheets	
d. # of courses requiring IL assignment and % of curriculum integration per broad disciplinary area	syllabi study or faculty survey	
e. description and use data for independent IL learning opportunities (e.g. Web tutorials)	Web page counters reference statistics	
f. # of consultations with faculty for IL-related course or assignment support	IL program statistics	
g. description of IL outcomes from collaborations with faculty and other academic staff.	librarian monthly performance forms	
h.		
<b>2. Effectiveness/Benefits</b> of IL learning opportunities		
a. student and faculty evaluation of librarian teaching effectiveness and components of IL program	course evaluation, surveys, focus groups, unsolicited feedback	
b. student self-assessment of IL skills	paper & electronic self-assessment; surveys	
c. grades and scores for IL courses, assignments, online tutorial quizzes, etc.	course grade sheets, assignment scores, online "grade book"	
d. scores and grades from IL tests/exams	locally developed or standardized tests	
e. description with data of the sufficiency, availability and helpfulness of reference service onsite and electronic	reference schedules, surveys	
f. faculty/staff satisfaction rating of IL training and course/assignment support	surveys, interviews	
g. description of faculty and staff professional development opportunities with data on number of attendees and their rating of effectiveness and benefits.	IL program statistics, workshop eval. forms	
h.		

\*Whenever possible organize data by dept/program, as well as totals.

## II. Core Service/Resource Contribution: Access to and Use of Collections

Performance Indicator/Measure	Data Source(s)	Data Available?
<b>1. Adequacy of Collections and Learning Resources</b>		
a. currency of materials	opac MIS	
b. flexibility of budget to respond to new subj. areas	budget reports	
c. comparison of targeted collection areas to peers	IPEDS, state reports	
d. results of collection analysis study	collection analysis report	
e. rating by students, faculty and librarians of collections and equipment needed to them	surveys, focus groups, equipment inventory report	
f.		
<b>2. Access, Availability and Use of Collection</b>		
a. amount of time from order to shelf	LLRP dept. reports	
b. provision of multiple copies of high use items	opac MIS	
c. matrix of access to all collections and resources by user group and availability, including disabled users	dept./director's annual report	
d. average # of circulation transactions/per FTE user for specific user groups, organized by type of media and/or broad LC classification or user dept. code	circulation MIS	
e. average # of items used on-site/per FTE user for specific user groups, organized by type of media	LLRP dept. reports	
f. estimated (based on gate count or equivalent) # of users who enter/exit LLRP facility per week/year	LLRP dept. report	
g. # of broadcast programs, organized by dept/program	LLRP dept. report	
h. # of AV items checked out for use with courses organized by dept/program (if not already included in circulation system data).	LLRP dept. report	
i. user success/satisfaction rate in finding and obtaining desired materials and how satisfied with what they obtain	user surveys	
j. description of benefits to students/faculty of cooperative resource acquisition & sharing agreements	LLRP dept. report	
k. # of on-campus and off-campus log-ins to specific networked information sources	system data reports	
l. # of times subject/resource-specific LLRP-maintained Web pages accessed	Web page counters	
m. faculty use data and perceptions about benefits of online and Web-based resources for teaching	survey, interviews unsolicited feedback	
n. match of hours open with user needs	survey	
o. proportion of LLRP materials in opac	opac MIS	
p. ease of use of opac and other electronic resources	user survey, focus groups	

Performance Indicator/ Measure	Data Source(s)	Data Available?
<b>2. Access, Availability and Use of Collections (continued)</b>		
q. speed and accuracy of re-shelving of material	LLRP dept. report	
r. provision made for disabled access to physical items	policy statement	
s. turnaround time for recalled items	LLRP dept. report	

### **III. Core Service/Resource Contribution:     Facilities and Other Services**

Performance Indicator/Measure	Data Source(s)	Data Available?
<b>1. Availability, Use and Quality of Facilities</b>		
a. appropriate adaptive technology equipment available for disabled users with usage data and user satisf. data	LLRP dept. report user survey	
b. availability and users satisfaction with photocopiers, printers, computers, fax machine, etc.	equipment inventory; survey	
c. use and quality of the study environment (e.g. user satisfaction with such features as quietness, # of seats per FTE,# and availability of group study/discussion space, cleanliness, safety)	LLRP dept. report, survey, focus groups	
d. # of hours students spend studying in library and/or doing library/Web-based assignments	Survey	
<b>2. Availability, Use and Quality of Other Services</b>		
a. availability, use and user satisfaction of on-site and off-site reference assistance	LLRP dept. report, survey	
b. # of and description of relationship of exhibits, programming, targeted collection development and Web-based pages to campus-wide goals and events(e.g. diversity, career fair)	LLRP dept. report	
c. quantitative & qualitative description of LLRP's public network (e.g. # of public stations with functionalities; # and % of classrooms , faculty offices, & student labs with access to LLRP's networked info. resources)	LLRP dept. report, equipment inventory	
d. use, turnaround time, user satisfaction for ILL/doc.delivery	LLRP dept. report	

**IV. Core Service/Resource Contribution: Staff Contributions to Campus-wide Goals and Governance**

Performance Indicator/Measure	Data Source(s)	Data Available?
a. # and description of LLRP staff memberships and contributions/outcomes on campus governance committees, technology planning, curriculum, student services.	staff performance forms copies of reports by LLRP staff	
b. # and description of LLRP staff publications, awards and major community service activities	staff performance forms	
c.		
d.		

**V. Core Service/Resource Contribution:** \_\_\_\_\_

Performance Indicator/Measure	Data Source(s)	Data Available?



#### Worksheet 4: ADICAC Step 4

**Step 4:** Chart the results so that campus goals, performance objectives and negotiated performance indicators are connected and reflect final decisions about data collection activities.

Campus wide goal \_\_\_\_\_

Performance Objective	Performance Indicators	Data Source & Collection Methods	Data Available?	LLR Dept. Responsible	Frequency of Collection

## Worksheet 5: ADICAC Step 5: Scheduling Data Collection/Analysis Activities

**Step 5:** Collect and analyze data and documentation according to assessment purpose and schedule. Group multiple measures to enhance evidence.

**LLR Dept.** \_\_\_\_\_

<b>Due Dates</b>	<b>Data/Documentation to Collect (Be specific)</b>	<b>Person Responsible</b>	<b>Resources Required</b>
<b>Example:</b> 2/1/2001	develop user surveys for students and faculty	Ref. Coord. and Institutional Research	\$350.00 for printing
2/23/01	pre-test surveys	Reference Coordinator	0
3/15/02	revise surveys and administer	Ref. Dept. technician & student assistants	\$250 for 30 student hr.

## Worksheet 6: ADICAC Step 5

**Step 5:** Collect, analyze and organize data and other needed documentation that relate to each performance indicator. Group multiple measures to enhance evidence.

**Performance Objective #1: Ex:** LLRP professional staff work with disciplinary faculty to provide a variety of effective learning opportunities for students to develop information literacy competency, which is among the skills important for student success.

**Organization of Data and Documentation Using Multiple Measures: Ex:** “Impact of Information Literacy (IL) Learning Opportunities for General Education Courses/Program -- 2008/2000”

- A description of the reach and impact on students of IL learning opportunities in the general education program as evidenced by:
  1. Number of course-related and course-integrated IL sessions with number of students reached, organized by course and accompanied with student survey findings for such items as: “How would you rate the benefit of learning IL skills for your academic success?” or “As a result of the instructional session and assignment, how do you rate your ability to find and evaluate suitable information ?”
  2. Findings from faculty survey and/or unsolicited letters about the benefits of IL instructional sessions.
  3. Performance data for IL courses and GE course-related assignments/papers; sample of student portfolios showing grades and assessment of papers/projects that required IL skills; IL course grades; etc.
  4. Description of the independent learning opportunities and usage data for such things as Web tutorials; performance data on Web tutorial quizzes.
  5. Description of online reference/research assistance provided, especially data for instructional reference transactions on-site and for distance learners, along with student self-assessment data about specific IL skills.

**Performance Objective #2:**

**Organization of Data and Documentation:**

## References Cited

1. Sara M. Pritchard, "Determining Quality in Academic Libraries," *Library Trends* 44 (Winter 1996): 591.
  2. Wanda K. Johnston, *Library and Learning Resource Programs: Evaluation & Self Study CJCLS Guide #3* (Chicago: Community and Junior College Library Section, ACRL, 1998), 4.
  3. Ibid.
  4. Bonnie Gratch-Lindauer, "Comparing the Regional Accreditation Standards: Outcomes Assessment and Other Trends," *Journal of Academic Librarianship* 28 (Jan. – Mar. 2002): 17-19.
  5. Linda Demmer, "An Analysis of the California Community Colleges Library Space Standards with Proposed Revisions to the California Code of Regulations, Title 5: A Working Paper," July 1999. [http://www.cccco.edu/divisions/esed/aa\\_ir/llrp/attachments/Demerweb.doc](http://www.cccco.edu/divisions/esed/aa_ir/llrp/attachments/Demerweb.doc). Accessed 15 Aug. 2004.
  6. "Policy on Distance Learning, Including Electronically Mediated Learning," in *Accreditation Reference Handbook* (Santa Rosa, CA: Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges, 2003), 33-38. <http://www.accjc.org/> Accessed 15 Aug. 2004.
  7. Charles R. McClure, and Cynthia L. Lopata, *Assessing the Academic Networked Environment: Strategies and Options* (Washington, D.C.: Coalition for Networked Information, 1996), 9.
  8. *Characteristics of Excellence in Higher Education: Eligibility Requirements and Standards for Accreditation*, (Philadelphia: Commission on Higher Education of the Middle States Association of Colleges and Schools, 2002), 65. <http://www.msache.org>. Accessed 15 Aug. 2004.
  9. *City College of San Francisco Strategic Plan 2003-200* (San Francisco: Office of Research, Planning, and Grants, City College of San Francisco, 2003), 8. [http://www.ccsf.edu/Offices/Research\\_Planning/pdf/strpln3.pdf](http://www.ccsf.edu/Offices/Research_Planning/pdf/strpln3.pdf). Accessed 15 Aug. 2004.
  10. *Bellevue Community College Strategic Plan 2004-2011*. 2003. <http://bcc.ctc.edu/about/goals/strategicplan/default.asp#goals>. Accessed 15 Aug. 2004.
  11. See for example, (all accessed 15 Aug. 2004): "Standards for Libraries in Higher Education (June 2004). <http://www.ala.org/ala/acrl/acrlstandards/standardslibraries.htm>. The questions listed under each section (e.g. "Outcomes Assessment," "Services," "Resources," "Instruction") are excellent suggestions for data collection and documentation.
- "Information Literacy Competency Standards in Higher Education" (2000). <http://www.ala.org/ala/acrl/acrlstandards/standards.pdf>. These standards have been endorsed by the American Association of Higher Education and the Council of Independent Colleges.

“Objectives for Information Literacy Instruction: A Model Statement for Academic Libraries” (2001). <http://www.ala.org/ala/acrl/acrlstandards/objectivesinformation.htm>.

“Guidelines for Distance Learning Library Service” (2004).  
<http://www.ala.org/acrl/acrlstandards/guidelinesdistancelearning.htm>

“Guidelines for Media Resources in Academic Libraries” (1999).  
<http://www.ala.org/ala/acrl/acrlstandards/guidelinesmedia.htm>

12. “Accreditation Standards,” in *Accreditation Reference Handbook* (Santa Rosa, CA: Accrediting Commission for Community and Junior Colleges, Western Association of Schools and Colleges, 2003), 14, 16, and 20. <http://www.accjc.org/> Accessed 15 Aug. 2004.

13. LibQUAL or LibQUAL+TM is a web-based survey developed by the Association of Research Libraries in conjunction with Texas A&M University Libraries to define and measure library service quality across institutions. It measures four broad aspects of library service: 1. Affect of Service items assess how well staff serve patrons in terms of responsiveness, assurance, and empathy; 2. Library as Place items seek input about the perception of the physical facilities and the impact of that environment; 3. Personal Control questions measure patron’s independent understanding and use of services; and 4. Access to Information items address the adequacy and timeliness of resources and services. Libraries can add some of their own items to this survey.

The Community College Student Experiences Questionnaire (CCSE) and the Community College Survey of Student Engagement (CCSSE) are self-report instruments that provide information on student experiences, use of campus services, and behaviors, such as amount of time spent studying, making presentations, working with students in groups, etc. The idea behind these surveys is one of quality of effort, assuming student learning benefits from the types and amount of involvement in campus life and its resources and services. A copy of the 2004 CCSSE is in the “Appendix.”

14. *American Heritage Dictionary of the English Language*. Boston: Houghton Mifflin, 1976.

15. See “Weber State University Library Information Literacy Program,” 2003.  
<http://library.weber.edu/il/ilprogram/default.cfm>. Accessed 20 Aug. 2004.

## Bibliography: Selected Publications

### Assessment of Library Services

Adams, Mignon S., and Jeffrey A. Beck. *User Surveys in College Libraries: CLIP Notes #23*. Chicago: Association of College and Research Libraries, 1995.

Many useful examples of surveys and supporting documents developed by college librarians. Also included are scripts for focus groups and interviews, sample cover letters, and examples of summary reports.

Avery, Elizabeth Fuseler, ed. *Assessing Student Learning Outcomes for Information Literacy Instruction in Academic Institutions*. Chicago: Association of College and Research Libraries, 2003.

Contains chapters on assessment planning, statistics and one by Bonnie Gratch Lindauer entitled "Selecting and Developing Assessment Tools," as well as many chapters describing case studies of librarian-faculty partnerships in developing assessments for specific courses or programs. Copies of instruments are included.

Bertot, John C., and Charles R. McClure. "Outcomes Assessment in the Networked Environment: Research Questions, Issues, Considerations and Moving Forward." *Library Trends* 51(Spring 2003): 590-615.

Identifies research issues and considerations related to outcomes assessment.

Blandy, Susan, Lynne M. Martin, and Mary L. Strife. *Assessment and Accountability in Reference Work*. New York: Haworth Press, 1992.

Includes discussions about general assessment requirements and methodologies and more specific applications for reference service, library instruction, and facilities

Clarke, Tobin de Leon. *Output Measures Manual for Community College Learning Resource Programs and Libraries*. Suisun, CA: Learning Resources Association of California Community Colleges. 1992.

Using data from a survey of California LLR administrators, twelve output measures are identified and detailed definitions and directions for data collection are provided.

Cullen, Rowena, and Philip Calvert. "Stakeholder Perceptions of University Library Effectiveness." *Journal of Academic Librarianship* 21 (Nov. 1995): 438-448.

Using New Zealand academic libraries, this study details the process and results of including all campus stakeholders in the identification of evaluation measures.

Educational Testing Service. *Digital Transformation: A Framework for ICT Literacy: A Report of the International ICT Literacy Panel*. Princeton, NJ: Educational Testing Service, 2002. Also available at <http://www.ets.org/research/ictliteracy/ictreport.pdf>. Accessed 10 Aug. 2004.

This report documents the information and communication technology (ICT) skills needed by college graduates and proposes strategies for an ICT exam, which is currently under development by ETS. Monitor the ETS website for the latest information about the exam.

Gratch Lindauer, Bonnie. "Defining and Measuring the Library's Impact on Campuswide Outcomes." *College & Research Libraries* 59 (November 1998): 546-571.

Identifies institutional outcomes for libraries; describes specific performance indicators, and offers an assessment framework for the teaching-learning library.

Hernon, Peter, and Ellen Altman. *Service Quality in Academic Libraries*. Norwood, NJ: Ablex Publishing, 1996.

Provides strategies and examples of how service quality can be assessed quantitatively and qualitatively.

Hernon, Peter, and Robert E. Dugan. *An Action Plan for Outcomes Assessment in Your Library*. Chicago: American Library Association, 2001.

Provides a chart of direct/qualitative, direct/quantitative, indirect/qualitative, and indirect/quantitative measures, among many useful sections on planning and methods.

Johnston, Wanda K. *Library and Learning Resource Programs: Evaluation and Self-Study. CJCLS Guide #3*. Chicago: Association of College and Research Libraries, 1998.

Based on a survey of community college libraries, Johnston includes samples of statistical reports and user satisfaction surveys, along with other documentation.

Maki, Peggy L. "Developing an Assessment Plan to Learn About Student Learning." *Journal of Academic Librarianship* 28 (Jan.-Mar. 2002): 8-13.

A succinct guide to preparing an assessment plan for assessing learning outcomes.

McClure, Charles and Cynthia L. Lopata. *Assessing the Academic Networked Environment: Strategies and Options*. Washington, D.C.: Coalition for Networked Information, 1996. Based on a research study of colleges and universities, the authors present principles for assessing online resources and services, as well as offer specific measures to use.

Nelson, William Neal, and Robert W. Fernekes. *Standards and Assessment for Academic Libraries: A Workbook*. Chicago: ACRL, 2002.

Using the 2000 edition of the ACRL College Library Standards as a framework, practical examples and applications with worksheets for evaluating college libraries are included.

Powell, Ronald R. "Impact Assessment of University Libraries," *Library and Information Science Research* 14(1992): 254- 257.

Describes impact measures of academic library use and library skills instruction correlated to attrition rates, grades, GRE scores, student persistence and savings in faculty time.

Pritchard, Sara M. "Determining Quality in Academic Libraries." *Library Trends* 44 (Winter 1996): 572-594.

Provides an excellent summary of the issues and models related to assessing quality in academic libraries.

Project SAILS: Project for the Standardized Assessment of Information Literacy. 2004.  
<http://sails.lms.kent.edu/index.php>. Accessed 15 Aug. 2004.

A national project to develop a primarily multiple-choice, standardized test for information literacy. Still in development as of 20 August 2004.

Sacks, Patricia Ann, and Sara Lou Whildin. *Preparing for Accreditation: A Handbook for Academic Librarians*. Chicago: American Library Association, 1993.

Step-by-step manual helps librarians complete their self-study and evaluation tasks. Good examples of types of performance measures, although dated in regards to new standards.

Shonrock, Diana, ed. *Evaluating Library Instruction: Sample Questions, Forms, and Strategies for Practical Use*. Chicago: American Library Association, 1995.

Handbook of model questions for user surveys with examples of evaluation instruments to assess teaching, class work, and instructional materials related to library instruction.

Van House Nancy A., Beth T. Weil, and Charles R. McClure. *Measuring Academic Library Performance: A Practical Approach*. Chicago: American Library Association, 1990.

A practical manual of measures with examples of instruments to measure primarily the efficiency and effectiveness of library activities.

### **General Institutional Assessment and Higher Education Outcomes Assessment**

Banta, Trudy W., ed. *Community College Assessment: Assessment Update Collections*. New York: Wiley, 2004.

Compilation of good practices from the newsletter, *Assessment Update*.  
Com



Internet Resources for Higher Education Outcomes Assessment. North Carolina State University. 12 Aug. 2004. <http://www2.acs.ncsu.edu/UPA/assmt/resource.htm>. Accessed 20 Aug. 2004.

Metasite of links to assessment handbooks, conference sites, accrediting bodies, etc.

Nichols, Karen W., and James O. Nichols. *The Department Head's Guide to Assessment Implementation: Administrative and Educational Support Units*. New York: Agathon Press, 2000.

Includes a model assessment plan for libraries with outcomes related to services and student learning outcomes.

Palomba, Catherine A., and Trudy W. Banta. *Assessment Essentials: Planning, Implementing and Improving Assessment in Higher Education*. San Francisco: Jossey-Bass, 1999.

Comprehensive treatment of assessment planning, methods, assessment of general education and reporting and using results.

#### **Standards and Guidelines** (all accessed 15 Aug. 2004)

Association of College and Research Libraries. *Standards for Libraries in Higher Education* June 2004. <http://www.ala.org/ala/acrl/acrlstandards/standardslibraries.htm>.

Association of College and Research Libraries. *Guidelines for Distance Learning Library Service*. 2004. <http://www.ala.org/acrl/acrlstandards/guidelinesdistancelearning.htm>.

Association of College and Research Libraries. *Information Literacy Competency Standards for Higher Education*. Chicago: ACRL. 2000.

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Association of College and Research Libraries. *Guidelines for Media Resources in Academic Libraries*. 1999. <http://www.ala.org/ala/acrl/acrlstandards/guidelinesmedia.htm>

Association of College and Research Libraries. *Characteristics of Programs of Information Literacy that Illustrate Best Practices: A Guideline*. June 2003.

<http://www.ala.org/ala/acrl/acrlstandards/characteristics.htm>.

Middle States Commission on Higher Education. *Developing Research and Communication Skills: Guidelines for Information Literacy in the Curriculum*. Philadelphia: Middle States, 2003.

Based on the standards, provides information for librarians and faculty working in collaboration to evaluate information literacy skills across the curriculum.

Western Association of Schools and Colleges. Accrediting Commission for Community and Junior Colleges. *Accreditation Reference Handbook*. Santa Rosa, CA: WASC-CCJC, 2003.

<http://www.accjc.org/> Accessed 15 Aug. 2004.

Contains standards for community and junior colleges under the jurisdiction of the Western Association of Schools and Colleges, as well as policy statements and a Guide to using the standards.

## **Appendix: List of Documents**

The documents in the “Appendix” are arranged in the following order which corresponds to the steps in the ADICAC process: *(These documents are only available from the print publication or contact author.)*

### **Introduction**

California Community Colleges, Council of Chief Librarians “Model for Program Review of CCC Libraries/LRCs”

City College of San Francisco “Program Review: Self Study Framework for Instructional Units” 1999-2004

### **Steps 1 and 2 – Align with Campus Goals and Define Performance Objectives**

Western Association of Schools and Colleges Accrediting Commission for Community and Junior Colleges – “Standard II. Student Learning Programs and Services” 2002 (See II C. for the standards for “Library and Learning Support Services”)

“ACRL Standards for Libraries in Higher Education” (June 2004)

Worksheet 1

### **Step 3 – Identify Performance Indicators for the Objectives**

Table 4: Community College LLRP Core Contributions and Performance Indicators for Assessment

Worksheets 2 and 3

### **Step 4 – Chart Performance Indicators**

Worksheet 4

### **Step 5 – Data Collection and Analysis**

Worksheets 5 and 6

**On-site survey examples:** CCSF Faculty and Student surveys; Schenectady Community College

Faculty Survey; Pasadena City College User Survey

**Online survey examples:** Waycross College Library Survey; Frazar Memorial Library; Durham Technical Community College; Community College Survey of Student Engagement (CCSSE)

“How to Do Focus Groups”

Rosenberg Library Monthly Statistics form

Librarian Monthly Performance Report form

### **Step 6 – Communicating Results**

Example 6

Peer Comparison Charts, Pasadena City College, “Collection and Budget Comparisons – California and Out-of-State Benchmarks”  
City College of San Francisco News Release form