Library Program Assessment

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Assessment of academic library programs has taken on a new dimension with the concept of outcomes assessment, which has been promoted by the regional accrediting agencies. The field of library assessment has evolved from looking strictly at resource inputs (e.g., budgets, staffing levels) to an examination of organizational processes (i.e., efficiency), levels and quality of service outputs (e.g., number of circulations, reference questions) and library impact on institutional goals (e.g., student achievement, user satisfaction). Today, there is a plethora of approaches to library assessment with considerable controversy about just what outcomes assessment means, how it relates to older forms of assessment and how such assessment might be carried out. The question of what is appropriate outcomes assessment for academic library programs remains largely unanswered. This general discussion of theory and recent development in the field of assessment serve as background for a discussion of some of the practical issues associated with the utility of assessment results in improving library programs. Assessment is often viewed as an "add on" research effort or special project rather than as something integral to the operation of the library and management of its programs. This leads to a dysfunctional assessment program because it does not meet the ultimate goal of improving library services. The paper concludes with a brief description of one institution's efforts to develop an assessment program using a number of approaches to outcomes assessment. The successes, challenges and unfinished agenda of this effort are reviewed as examples of the issues surrounding outcomes assessment.

Introduction

Assessment of academic library programs has taken on a new dimension with the concept of outcomes assessment. The field of library assessment has evolved from looking strictly at resource inputs (e.g., budgets, staffing levels) to an examination of organizational processes (i.e., efficiency), levels and quality of service outputs (e.g., number of circulations, reference questions) and library impact on institutional goals (e.g., student achievement, user satisfaction). Today, there is a plethora of approaches to library assessment with considerable controversy about just what outcomes assessment means, how it relates to older forms of assessment and how such assessment might be carried out.

In addressing these issues, this paper has two purposes. One is to provide an overview of the concept of academic library assessment in the context of our current understanding of organizational effectiveness. As a special aspect of academic library assessment, the paper defines and places outcomes assessment within the larger enterprise. The paper's second purpose is to describe the assessment program of an individual college library with special attention to how the program helps

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to guide the organization, and the limits of outcomes assessment.

This review of our understanding of academic library assessment is based on what I believe are three essential documents. The three publications include:

1) The thorough and insightful review of the literature on academic library assessment written by Sarah Pritchard, formerly Library Director at Smith College and now director of the University of California-Santa Barbara, which appeared in *Library Trends* in 1996.[1]

2) Kim Cameron's "Measuring Organizational Effectiveness in Institutions of Higher Education," which appeared in *Administrative Science Quarterly* in December 1978. Despite its age it is still the source for much original thinking about assessment in higher education generally and could be very useful in academic library assessment specifically.[2]

3) The report of the ACRL Task Force on Academic Library Outcomes Assessment that appeared in June 1997.[3]

Following my discussion of these three publications, I want to suggest a model for academic library assessment which I have called ALAM, Academic Library Assessment Model. Then I will explore how this model creates a context for academic library assessment activities. Finally, I will illustrate aspects of the model by describing Earlham's assessment program with special attention to two specific activities we have undertaken in the past couple of years.

Cameron's Organizational Effectiveness

Kim Cameron's "Measuring Organizational Effectiveness in Institutions of Higher Education," is a seminal work on assessment in higher education. It has had a major impact on the direction of assessment in higher education in the twenty years since its publication.

Cameron's work has had high visibility in the field of contingency theory as applied to organizational effectiveness and assessment of higher education. In addition to the 1978 article, Cameron has written a number of important articles on the subject that together, according to the *Social Sciences Citation Index* on DIALOG, were cited 639 times between 1978 and January 2, 1999.

Because the library and information science literature is not covered in much depth by SSCI, I cannot accurately reflect the importance of Cameron's work in the field of library assessment using the same process.

However, a sample checking of the items in Sarah Pritchard's bibliography suggests that this important work is not widely cited in the library and information science literature. Therefore I feel it is appropriate to review his major ideas here.

First, it is important to recognize that Cameron's work is very consistent with the development of ideas about assessment of other types of organizations and Cameron acknowledges and takes into account the difference between institutions of higher education and other types of organizations such as for-profit businesses.

Cameron's 1978 piece is a review of literature which reports efforts to measure organizational effectiveness in higher education. We are most interested in the excellent summary and analysis of the concept of organizational effectiveness and the then new framework Cameron brings to the discussion. He identifies two sets of issues that he believes are critical to defining organizational effectiveness: types of assessment criteria and sources or originators of the criteria. Cameron's overriding point is that the criteria used to measure effectiveness is the central issue.

In describing types of criteria, Cameron enumerates four characteristic domains: (1) aspects of the organization, (2) the universality/specificity of the criteria, (3) whether the criteria are normative or descriptive, and (4) the static/dynamic dimension of the criteria. Let me explain what Cameron means by each of these types of criteria. Cameron's aspects of the organization refers to such elements as organizational goals and their achievement, the organization's resource acquisition or inputs, the internal processes of the organization, or its outputs. The universality/specificity continuum recognizes that criteria of assessment may be universal to all organizations of the same type or even multiple types or they may be highly focused on specific dimensions of an individual organization. The normative/descriptive characteristics of criteria are based on whether the criteria used have been identified as typical or common to organizations of the same type or are generated from the assessment of one particular organization. An example will make the idea clearer. Library circulation is a widely accepted measure of library activity and therefore the level of circulation is regularly included in an assessment of library activities. This is a normative characteristic. In contrast, a particular library, while studying circulation levels, might note a shift in the level of circu-

lation when the institution changed from ten-week terms to fourteen-week semesters. This data is descriptive of the library and there is no basis for a comparison with other libraries. Cameron's fourth characteristic of criteria is whether the criteria are static or dynamic. In all assessment, there is an element of the static since the data must be collected at a particular point in time. However, data collected over time demonstrate change in the organization and therefore the criteria are dynamic.

Cameron's second set of concerns are the sources or origins of the assessment criteria. The first, and perhaps most obvious, is the constituency who sets the criteria. Constituencies include all the groups that interact with the organization either directly or indirectly. Each constituency will have a set of criteria they believe is the appropriate yardstick for measuring effectiveness. For example, students, faculty, administration and alumni are the four primary constituencies of an academic library and each of the four groups may have different ideas about the nature of an effective academic library. The second criteria source issue is the level of analysis. The organizational analysis can be at the super system level (e.g., all of higher education), the system level (e.g., the individual institution), or the subsystem level (e.g., the libraries of an academic institution). If the academic library is the level of analysis, then the super system level might be libraries of the ARL or the libraries of the private colleges of Indiana. The system is the individual library, and the subsystems would be, for example, cataloging, reference or acquisition units within a particular library. Third, Cameron points to the nature of the data collection as another source of assessment criteria. The data may come from internal records of the organization or can come from the perceptions of observers of the organization. This dichotomy, unfortunately, has often been mislabeled as objective vs. subjective measurement.

Cameron concludes his analysis by looking at a set of twenty research studies on organizational effectiveness in light of the nature and sources of the criteria. The grid he developed clearly shows that the field of organizational effectiveness suffers from the lack of comparable data. A problem that continues today— some twenty years after Cameron wrote his analysis.

In summary, Cameron provides us with the concepts of organizations as systems, and defines effectiveness contingently to depend on the types and sources of the criteria used to measure effectiveness.

Pritchard's "Determining Quality in Academic Libraries"

Sarah M. Pritchard's review article in *Library Trends,* "Determining Quality in Academic Libraries," surveys the literature on academic library assessment which reflects Cameron's analysis of types and sources of criteria. I want to highlight several key points that elaborate on Cameron's work.

In describing the historical context for determining quality, Pritchard points out how the terms quality and effectiveness, and evaluation and assessment are two pairs of equivalent terms. The first pair, quality and effectiveness, represent the performance of the organization, while the second pair, evaluation and assessment, refer to the process of determining performance. Over time, these and other terms have been used, often confusingly, to describe Cameron's two aspects, the criteria of evaluation and the process of evaluation. These two aspects should remain distinguishable regardless of the terminology used.

Pritchard goes on to point out that despite the heavy reliance on certain kinds of measures to compare academic libraries, the criteria have not been well defined and consistently applied and therefore comparisons are problematic.

In a further discussion of the challenges that academic library assessment faces, Pritchard comments that:

> Academic librarians do not have concrete ways to assess what the library contributes to the delivery of effective educational and research services by the campus itself.[4]

This issue is especially critical because the regional accrediting agencies in their recent efforts to strengthen the accountability of institutions, have formulated accrediting processes that call on each part of the institution to demonstrate how it contributes to the overall goals of the institution. Pritchard rightly points out that while we may know what we would like the contribution to be, i.e., we have goals, there are as yet no good assessment processes that concretely demonstrate the relationship between library activities and the achievement of the institutions goals.

A third key point that Pritchard makes in her critique of the state of academic library assessment is the lack of linkage between assessment and planning. Assessment is often done not to satisfy the library's need

for information on which to base planning and program development, but rather to meet the demands of outside constituencies such as accrediting agencies, commissions of higher education or state legislatures.

Pritchard has identified three critical issues: the shortage of agreed upon definitions of criteria that can be used to do comparative measurements among academic libraries, the inability to demonstrate how library programs concretely influence achievement of the parent institution's goals, and the lack of linkage between assessment and planning.

ACRL Task Force on Academic Library Outcomes Assessment

These two articles by Cameron and Pritchard were important sources of ideas for the ACRL Task Force on Academic Library Outcomes Assessment which was appointed in June 1996 and issued its final report in June 1998. The Task Force was charged to:

1) Develop a philosophical framework for assessing libraries in terms of desired campus outcomes;

2) Develop prototypes for such assessment; and

3) Develop a recommendation for one or more processes for implementation of the former (#2) with a time frame for completion.

The Task Force was not asked to propose a new form for library standards, but rather to address the confusion that appeared to exist within the profession over the nature of assessment and how standards might relate to assessment.

In its work, and in the final report, the Task Force carefully distinguished between terms such as inputs, processes, outputs and outcomes. Inputs refers to the resources (financial, staffing, etc.) which the academic library uses in carrying out its work. Processes are the operations within the organization (e.g., technical services operations, staffing the reference desk) that result in outputs—circulations, reference questions, books cataloged, instruction sessions held, archival manuscripts processed. But none of these are outcomes. The Task Force defines outcomes as "the ways in which library users are changed as a result of their contact with the library's resources and programs."[5]

It seems to me that it is also important to distinguish the different kinds of outcome, a distinction the Task Force did not make. Outcomes could be as basic as changes in attitude toward libraries, and information gathering activities. Outcomes could also be a body of knowledge about libraries and the research process, and the topic being researched. Finally, outcomes could be changes in behavior. In all three cases, Cameron's characteristics and sources of criteria create a wide variety of possible outcomes assessment. If you review the library assessment literature, you see only a few examples of this variety of possibilities.

The Task Force goes on in its report to suggest ways in which such outcomes assessment might be carried out. In this suggested methodology, an outcome is selected, "indicators" of that outcome are defined, and a data collection method is developed. For example, an outcome might be "students can develop a quality bibliography on a topic they wish to study." The indicators of that outcome might be defined in terms of the criteria of quality—up-to-dateness, inclusion of a variety of types of sources, etc. The third step is the development of a methodology for collecting data such as gathering research papers in senior seminars and subjecting them to analysis based on the indicators.

Academic Library Assessment Model (ALAM)

Based on the work of the Task Force, the ground breaking research of Cameron and the helpful synthesis of the history of library assessment I have developed what I will call the Academic Library Assessment Model (ALAM) (see figure 1).

Essential Elements of the ALAM Model
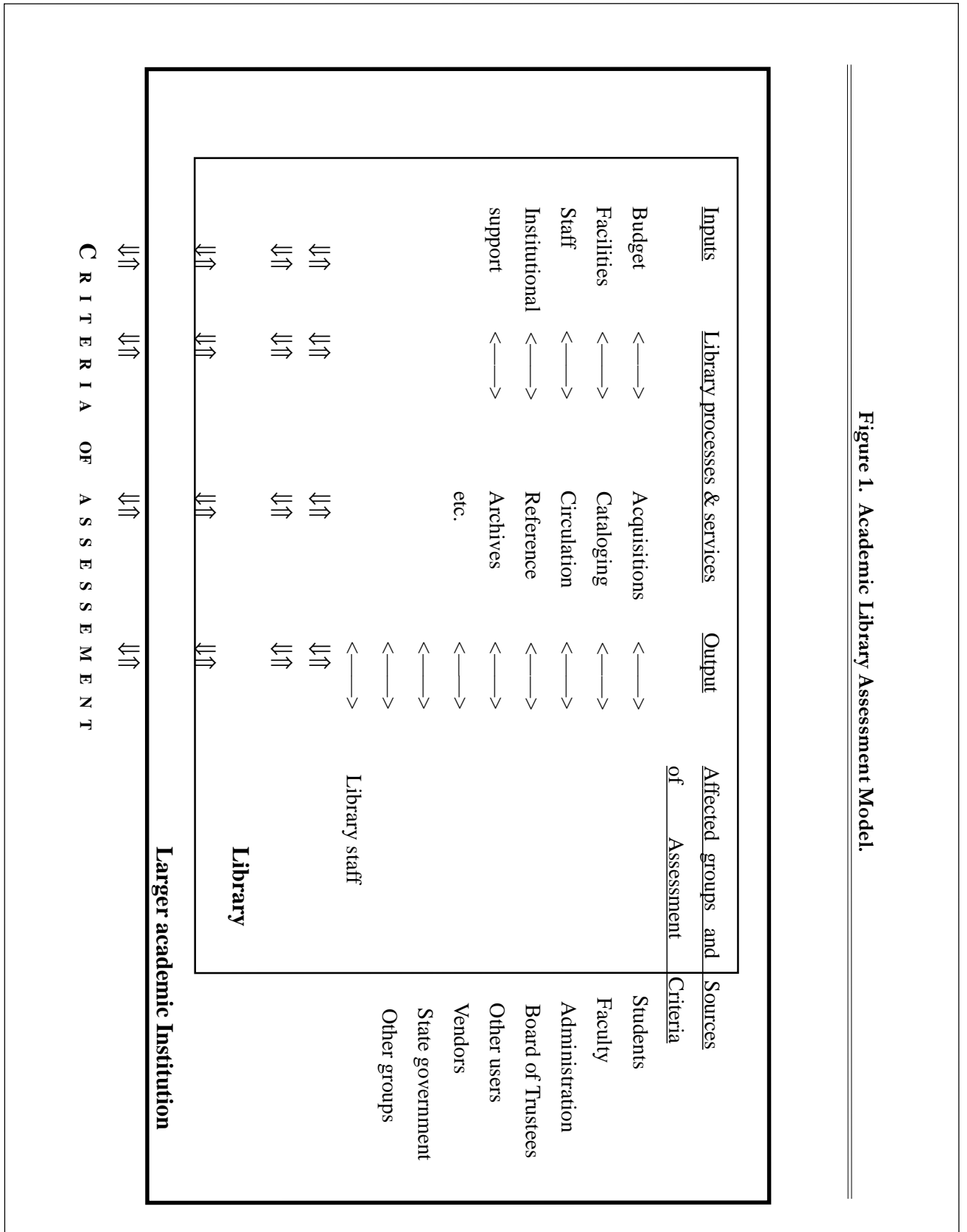
This model has five essential characteristics:

1) The academic library organization is a system which has both complex internal operations and external relationships and impact. This system concept recognizes the inter-relatedness of the organization and acknowledges that assessment is therefore a complex process. Any assessment is limited by its ability to measure and evaluate portions of the system. Therefore, an overview assessment of the system will most likely be based on generalized measures.

2) The effectiveness of an academic library can be viewed very differently depending on (a) who is setting the criteria of the assessment, (b) which criteria are being used to measure effectiveness, and (c) which part or parts of the organization are being assessed.

3) The library's assessment cannot be isolated from the institution's assessment program when the effect of the library, i.e., outcomes, is being examined.

4) For assessment to be more than an exercise, it

Figure 1. Academic Library Assessment Model.

Inputs	Library processes & services	Output	Affected groups and Assessment	Sources of Criteria
Budget	Acquisitions			Students
Facilities	Cataloging			Faculty
Staff	Circulation			Administration
Institutional	Reference			Board of Trustees
support	Archives		Library staff	Other users
	etc.			Vendors
				State government
				Other groups

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must be an integrated part of library and institutional planning and management. While there may be external pressures to carry out some assessment, it behooves those who assess libraries to use their assessment for more than just political purposes.

5)   Different aspects of assessment require different types of data gathering from different sources. These include, for example,

• Bench marking which is the collection of data from other institutions that is used to make comparisons.

• Collection of process indicators such as flow charts and measurement of production levels.

• Counting of library service activities such as number of books circulated.

• Attitudinal and feedback surveys of various constituent groups.

• Tests of user knowledge.

• Portfolios of both teaching materials used in bibliographic instruction and students' work based on library research.

• Techniques for measuring behavior.

• Focus groups

Assessment should not be viewed as an applied research project that has as its end goal the collection of data in order to prove or disprove a hypothesized relationship. While there are elements of research methodology in assessment, there is a tension between the demand for rigor in the protocols of research, and the needs of assessment. Often assessment attempts to look at phenomenon that are not well understood and for which there is little research basis. This means there is a very incomplete understanding of coincidental or causal relationships between library programs and criteria of assessment.

Finally, assessment needs to be placed in the context of the library's needs and therefore plans should be developed for how assessment results will be used to improve effectiveness.

Earlham's assessment
Earlham's library assessment program is not a fully planned and developed program. It is in process and in some respects groping for answers to questions. It emerged out of the same factors and pressures that all academic libraries are facing—institutional accountability, accrediting agency requirements and library staff interest in improvement. It emerged without any special expertise or extra funding.

The program has developed in an atmosphere which expects that in the library's operations and programs an effort will be made to develop ways of collecting information on the quality, effectiveness, or performance of the library's programs and activities. The nature of the assessment varies greatly depending on what is being assessed, who is doing it, and for what purpose. In each case, those aspects must be determined first.

We have consciously said that everything does not have to be measured quantitatively; qualitative assessment has a valid place. Furthermore, there is a recognition that doing assessment does have considerable costs in staff time. We therefore take a minimalist approach to assessment and design the process to make it as easy to carry out as possible.

The library staff is cautious not to over reach in our approach to *assessment* of *outcomes*. We recognize our limitations in measuring the causal relationships between what we do and how students perform, what they have learned and attitudes change,. We are focusing on bench marking inputs, measuring performance and cautiously measuring outcomes in limited ways.

Despite the recognized limits we have engaged in a variety of assessment enterprises over the past five years. The activities include:

1)   Development of a set of broad goals. These goals act as guiding principles to help us choose the focus of our assessment efforts. However, whenever we conduct an assessment activity, we establish specific goals for that activity in the assessment design.

2)   Administration of a library test to incoming first-year students that measures a few basic library research and information literacy skills. The test provides us with an indication of the baseline skills of our entering students. We have not yet taken the next step, which is to use the test as a measure of the skill level of graduating students. We are working towards it.

3)   Benchmarking library inputs and processes using input and output data. This data is important as we present annual budgets and make other management decisions.

4)   Analysis of operations and revision of processes as a result of the analysis. Some of this has been internal, such as revision of routines associated with implementation of an integrated electronic library system. Other analysis has been external, such as the ARL national study of interlibrary loan services[6] and the surveys associated with ACRL's Clip Notes publications.[7]

5) Measuring the level of instruction activity to ascertain the status of our bibliographic instruction program. This was a study of the level and reach of the instruction program in the early 1990's based on a complete inventory of library instruction and library related assignments experienced by graduates of the class of 1993. We reported the results of this study at the last ACRL National Conference.[8]

6) Seeking feedback from focus groups to determine (a) effectiveness of individual projects or (b) directions in program development. An example of (a) is web site development where we used a focus group of student workers and paraprofessional staff to react to plans for organizing pages that provide access to web based commercial databases. An example of (b) is a survey and focus group of students we used in making decisions about the location of an after-hours study room and our instructional computer lab.

7) Conducting surveys for individual classes and user groups about bibliographic instruction activities. These are usually done with a specific question or issue in mind. For example, with the revision of the calendar, we had an opportunity to revise the introductory instruction in Humanities, a core course taken by all first year students. There had always been some question about whether an exercise we used in the instruction was useful. The survey results helped us decide to continue to use the exercise and determine ways to improve it.

8) Conducting attitude surveys of faculty and students to determine user perceptions of the quality of the libraries services, facilities and collections.

9) Conducting alumni attitude surveys to determine graduates' attitudes towards the library program and their library experiences while students at Earlham.

This list of assessment activities is probably not unique. In fact, some of the items seem pretty pedestrian and common place. However, listing all the assessment activities highlights the points Cameron made in his 1978 article. There are many dimensions to assessment. At times, one form of assessment is touted as the most important. As the ALAM model indicates, there are many perspectives on what are the important criteria for assessment. Academic libraries need to develop a *balanced* assessment program and communicate the results to a variety of library constituencies.

Attitude surveys

I would like to describe in more detail the last two ac-

tivities and project our future plans. I am not going to give you a full blown research report on these two surveys. As I indicated earlier, assessment is not a research project. While it should use good methodology, the end product is not to provide a research paper. What I want to explore here is how the results were used as feedback to improve library services, and I would like to critique the approaches in terms of their usefulness for outcomes assessment.

The first example I want to discuss is a survey of alumni. The college's institutional research office regularly does a one-year-after and a five-year-after survey of our graduates. Since the library had studied the class of 1993's exposure to library research assignments and formal bibliographic instruction it seemed appropriate to survey that class after they had been away from Earlham for five years. However, to pilot the survey we started a year earlier and surveyed the class of 1992 in the summer/fall of 1997. The library items were incorporated into the larger institutional survey. The library portion of the survey results are presented in Table 1. This type of data provides an outcomes assessment that focuses on attitudes which the program encourages.

Certainly, the results demonstrate the respondents have a very strong positive attitude towards Earlham and the library experience. We can, therefore, I believe, make a solid claim that for a significant portion of the student body, the library experience is positive. A look at the data on academic majors of the respondents indicates this positive attitude is not limited to certain majors.

We also know that such a survey is of limited usefulness. For example, we fully expected those who feel strongly positive about the institution are most likely to reply. We might expect that those who liked the institution least might also respond to demonstrate their displeasure, but the results indicate that did not happen. We probably only have those who feel positive about the institution. Therefore, the results do not provide a very good overall indicator of the level of satisfaction. However, individual items can be compared with one another to get a sense of satisfaction with specific aspects of Earlham. For example, the library's reference service (#6) and the preparation for library research in graduate school (#10) are distinctly thought of as "very satisfying." Both of these characteristics of the library's program appear to be especially important in contributing to an overall positive alumni impression of their Earlham undergraduate experience.

Table 1. Sample alumni survey results.	
Question	Mean score* n=113 (38% response)
1. What is your current, general attitude toward Earlham College? (4 point scale)	1.45
2. Compared to other college graduates in my graduate/professional program I feel/felt well prepared (3 point scale)	1.30
3. Compared to other college graduates in my work, I feel well prepared. (3 point scale)	1.29
In retrospect how satisfied are you with the following aspects of your Earlham Library experience (4 point scales)	
4. The ability of the library's collections to meet your academic needs.	1.67
5. The ability of the library's collections to meet your general information needs.	1.52
6. The help provided by individual staff members during your use of the library	1.31
7. The *quality* of formal instruction you received about using information resources.	1.39
8. The *quantity* of formal instruction you received about using information resources.	1.57
9. The formal instruction in your major you received about using information resources.	1.70
10. The preparation the Earlham program provided for doing library research in graduate school.	1.36
11. The preparation the Earlham program provided for the information gathering you do in your work.	1.45
* Mean scores from Likert scales where 1 is highest and 3 or 4 is lowest depending on the question.	

As part of the survey, we asked alumni how often they used their academic or work related library and their public library. The question design is based on a national survey conducted by the Benton Foundation for the American Library Association.[9] The results are provided in Table 2. Over all the results do not suggest a meaningful difference between Earlham alumni and the national survey population in the frequency with which they use the public library, with the exception that a much smaller percentage of Earlham graduates never use the public library. The results for use of academic or employment related libraries is substantially higher and more frequent, but there are no national figures for comparison.

How should we interpret the results of this alumni survey? On the one hand, the library experience and what they got from it while students at Earlham was highly satisfying and, in their opinion, prepared them well for graduate school and work related information research. However, the results of the library use portion of the survey suggest that the Earlham program has not made much of a difference in the level of public library use.

The problem with the library use data is that we, the profession, do not have a good research base or conceptual grounding for *relating a positive academic library experience with the level of library use by adults*.

The alumni survey typifies the problems we face in trying to measure certain types of outcome. The tools available, including the conceptual frameworks for relationships between program content and desired outcomes, are inadequate to answer the questions we ask. Therefore, if we are to move forward in building stronger outcomes assessment, we need a much better un-

Level of use	Earlham Alumni Academic or Empl. Related Library Use	Earlham Alumni Public Library Use	National Survey Public Library Use
Not all	11%	16%	32%
1 to 5 times a year	9%	28%	29%
6 to 10 times a year	10%	13%	13%
11 to 20 times per year	11%	18%	10%
over 21 times in the last year	56%	26%	27%

Table 2. Alumni use of libraries.

derstanding of how library programs affect the life-long skills, knowledge and behaviors of our graduates. Understanding those effects and building assessment tools that will demonstrate the effects are a challenge we must address. In the meantime, we should recognize that library outcomes assessment which links specific programs to achievement of desired long-term outcomes is a problematic goal.

The second assessment activity I want to discuss in detail is a user survey of current faculty and students.

We developed a survey instrument based on the work of Joseph A. McDonald,[10] John Budd and Mike DiCarlo[11] and Kristen Smith.[12] These instruments ask respondents to rank a statement about library service, facilities or collections on a Likert Scale in terms of its *importance* to their use of the library and the library's *performance*. We were attracted to these survey instruments because they address one of Cameron's key elements of assessment criteria: the origin of the criteria. While the survey questionnaire might include items the library staff viewed as important, there is no certainty that they are important elements of library quality from the faculty or students' perspective. The survey results determine not just perceptions of the level of performance but also how divergent perceptions of performance are from the sense of the importance of the service, facility or collection to the user. While we made some modifications in the wording of the questions, we tried to keep them similar in order to have a basis for comparison with the earlier studies. A copy of the survey instrument is available in Appendix A.

We used the results (Table 3) in several ways. The median scores on performance gave us some indication of how well our patrons thought we are doing. We can say that on a scale of 5 to 1, our students believe the library is performing well. Converted to the academic coin of the realm, grades, we are, on average, doing A-

to B+ work. But we were interested in more than a general sense of how well we were doing.

To dig deeper, we did a number of things with the results. First, we looked at the difference between performance and importance. In almost all cases, the performance scores were lower than the importance scores. The exceptions were statements about local and out-of-town newspapers and recreational reading material where the scores on importance were lower than the performance scores, (e.g., item 2). While we did not take any specific action, the results did indicate that in budget allocations we could reduce, or at least not increase greatly, support for those purchases. The results also confirmed an earlier decision to hold back on the purchase of additional out-of-town and international newspapers and, as an alternative, depend on the Internet for access to newspapers for recreational reading.

We also noted differences between importance and performance that were strongly negative such as "8, circulation loan period is long enough." While we had heard grumbling from the graduate seminary students, we had not received many complaints from undergraduate students about the circulation loan period. Since we had changed academic calendars from a ten-week term to a fourteen-week semester, it appeared we needed to revisit the length of loan periods. Following a review of what other similar undergraduate residential liberal arts colleges' loan periods are, a form of benchmarking, and weighing the advantages and disadvantages of longer loan periods, we changed the length for students.

There were other questions, e.g., "6. On-line library catalog is easy to use," where the results indicated, at least comparatively, that the performance could be better. We knew from experience at the reference desk that some students are having navigational problems and during this past fall that students' negative attitudes towards non-graphical interfaces has grown. These survey results provide systematic data that indicates the need to implement a graphical interface to our catalog and we hope to implement it this summer.

Finally, results from many questions do not pro-

vide clear direction for ways to improve library services. For example, "7. Adequate journals and magazines supporting your major," has a difference of means between importance and performance that is strongly negative. We asked ourselves what these results tell us. Are there specific journals (or books) that students really need that we lack? Or are there mitigating circumstances that might lead students to feel the collection is insufficient for their needs? For example, students may not be getting adequate instruction in the use of periodical indexes, or perhaps they are having difficulty knowing what we have out of the myriad of items identified thorough an index. Perhaps their expectations are unreasonable. Therefore, we have decided to follow-up with student focus groups to see if we can get beyond the superficial survey results and get a fuller sense of what is needed. It is not clear what the specific outcomes of those focus group sessions will be, but, in general, we hope to clarify the meaning of the survey results on question #7 by identifying the problems that explain the responses on the survey.

In concluding discussion of this assessment methodology, I want to emphasize that the results are not simply examined with the goal of ascertaining some general sense of the quality of the library. Neither are we using the results as evidence of the need for bold actions or significant increases in resources. The responses to the results are more varied and nuanced. The results where appropriate, have been used as evidence

of a need for change. But the survey results alone are never the basis for a decision. The results are being used to focus attention on the specific areas of library services, facilities and collections where our users have told us we should perform better because the enterprise is important to overall academic library service.

Conclusion

In concluding this paper, I would like to summarize the characteristics of Earlham's assessment program. Our program recognizes the four-part nature of assessment: inputs, processes, outputs and outcomes. We have been most successful in looking at inputs through benchmarking efforts and process assessment through internal analysis associated with the implementation of an integrated library system and other analysis of operations. We have also used focus groups and surveys to get students and faculty perspectives on the quality of our services. In this way, we respect the multiple origins and attitudes towards what criteria should be used and how well we perform on those criteria. We have made a significant effort to assess outputs through the earlier study of the amount and diversity of bibliographic instruction that our students receive.

We have been able to use our assessment results to make changes in the program and to identify issues that need more thorough and careful study. Our assessment program is helpful to us and not an annoying activity forced upon us.

Table 3. Examples of questions and results from student survey results.	Level of Importance*	Level of Performance*	Difference
1. Check-out procedure is handled efficiently in Lilly [Main] Library.	4.50	4.56	.05
2. Access to local newspapers	3.66	4.36	.70
3. Instruction sessions make research easier	4.20	4.17	-.03
4. Instruction adequate for understanding and using print resources	4.38	4.13	-.25
5. Instruction adequate for understanding and using on-line resources	4.38	4.16	-.22
6. On-line library catalog is easy to use	4.61	4.01	-.50
7. Adequate journals and magazines supporting your major	4.44	3.71	-.73
8. Circulation loan period is long enough	4.46	3.53	-.93
*Based on a five point scale where 5 is highest and 1 is lowest.			

We have been less successful in assessing outcomes. Our initial efforts were in concert with other institutional assessment activities, and our assessment has benefitted from that co-operation. One benefit is that the work of conducting the survey is undertaken by the Institutional Research Office, whose staff are better organized to handle such activities. A second benefit is the ability to use related data to compare with the library specific

section of the survey. But we also know that there are limits to this approach.

In the future, we intend to work closely with faculty committees and academic programs as they conduct their assessment. A member of the library staff sits on the College's Assessment Committee, and another sits on the Curricular Policy Committee which will be doing the assessment of the General Education program. Furthermore, we are already planting seeds by talking with departments about looking at senior seminar and other major research projects as ways to assess outcomes. However, like our bibliographic instruction program itself, an effective outcomes assessment will not be created in a year or two. It will take several, if not many, years of hard work in the trenches working with individuals and groups of faculty to see that assessment of the library outcomes is viewed in the larger context of the college program and how the concept of organizational effectiveness informs the assessment program.

Obviously, these are only our current plans. Circumstances may change. However, what I hope will not change is our recognition of the several essential ingredients of the Academic Library Assessment Model (ALAM). They are:

1. Different people associated with an organization have different perspectives on the effectiveness of an organization.

2. The criteria for measuring effectiveness are highly variable.

3. Outcomes assessment is not a simple measurement of either student learning or long term changes in behavior. Outcomes assessment is an attempt to understand the relationship between what a library does in its program and how it effects, either directly or indirectly, students' lives during college and afterward.

Notes

1. Sarah M. Pritchard, "Determining Quality in Academic Library," *Library Trends* 44 (winter 1996), 572–94.

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Appendix A

HOW WOULD YOU RATE EARLHAM'S LIBRARIES?

Are you a: First Year_____ Sophomore_____ Junior_____ Senior_____
       ESR student_____ Bethany student_____?

What is your major?_____

Which libraries do you use? Lilly_____ Wildman_____ Friends/Archives_____

To help us evaluate Earlham's libraries please rate both the IMPORTANCE to you of each item and the libraries' PERFORMANCE (quality of library service) in each.

Use 1 as the lowest rating and 5 as the highest. You may circle DK, for Don't Know, if you have no opinion about, or experience with, that item.

	IMPORTANCE low high	PERFORMANCE low high
1. Materials available in the Libraries		
Adequate books to support your major	1 2 3 4 5 DK	1 2 3 4 5 DK
General books supporting your interests	1 2 3 4 5 DK	1 2 3 4 5 DK
Journals and magazines supporting your major..........................	1 2 3 4 5 DK	1 2 3 4 5 DK
Journals and magazines supporting your interests	1 2 3 4 5 DK	1 2 3 4 5 DK
Adequate out of town newspapers...	1 2 3 4 5 DK	1 2 3 4 5 DK
Access to local newspapers...	1 2 3 4 5 DK	1 2 3 4 5 DK
Adequate reference collection..	1 2 3 4 5 DK	1 2 3 4 5 DK
Adequate map collection..	1 2 3 4 5 DK	1 2 3 4 5 DK
Interlibrary loan service is able to provide needed materials.....	1 2 3 4 5 DK	1 2 3 4 5 DK
Interlibrary loan service provides materials promptly................	1 2 3 4 5 DK	1 2 3 4 5 DK
2. Finding materials in the Libraries		
Online library catalog (PALNI) is easy to use..............................	1 2 3 4 5 DK	1 2 3 4 5 DK
Books are shelved correctly in Lilly Library.................................	1 2 3 4 5 DK	1 2 3 4 5 DK
Books are shelved correctly in Wildman Science Library............	1 2 3 4 5 DK	1 2 3 4 5 DK
Books and journals are reshelved quickly in Lilly.......................	1 2 3 4 5 DK	1 2 3 4 5 DK
Books and journals are reshelved quickly in Wildman...............	1 2 3 4 5 DK	1 2 3 4 5 DK

	IMPORTANCE	PERFORMANCE
	low high	low high

3. Electronic resources

	IMPORTANCE	PERFORMANCE
Libraries' web page leads to useful sources for research............	1 2 3 4 5 DK	1 2 3 4 5 DK
Libraries provide adequate electronic indexes to journal articles...	1 2 3 4 5 DK	1 2 3 4 5 DK
Software used by electronic indexes is easy to learn.................	1 2 3 4 5 DK	1 2 3 4 5 DK
Enough workstations for electronic indexes to journal articles available in <u>Lilly</u> <u>Library</u>..	1 2 3 4 5 DK	1 2 3 4 5 DK
Enough workstations for internet searching available in <u>Lilly</u> <u>Library</u>..	1 2 3 4 5 DK	1 2 3 4 5 DK
Workstations and software function properly in <u>Lilly</u>	1 2 3 4 5 DK	1 2 3 4 5 DK
Printers are available and functioning in <u>Lilly</u> <u>Library</u>................	1 2 3 4 5 DK	1 2 3 4 5 DK
Enough workstations for electronic indexes to journal articles available in <u>Wildman</u> reference area........................	1 2 3 4 5 DK	1 2 3 4 5 DK
Enough workstations for internet searching in <u>Wildman</u>...........	1 2 3 4 5 DK	1 2 3 4 5 DK
Workstations and software function properly in <u>Wildman</u>.........	1 2 3 4 5 DK	1 2 3 4 5 DK
Printers are available and functioning in <u>Wildman</u>.....................	1 2 3 4 5 DK	1 2 3 4 5 DK

4. Help available from library staff

	IMPORTANCE	PERFORMANCE
<u>Lilly</u> <u>Library</u> professional staff available and able to help when needed...	1 2 3 4 5 DK	1 2 3 4 5 DK
Lilly <u>student</u> staff responsive and courteous................................	1 2 3 4 5 DK	1 2 3 4 5 DK
<u>Wildman</u> <u>Science</u> <u>Library</u> professional staff available and able to help when needed.....................................	1 2 3 4 5 DK	1 2 3 4 5 DK
Wildman <u>student</u> staff responsive and courteous........................	1 2 3 4 5 DK	1 2 3 4 5 DK
<u>Friends</u> <u>Collection/Archives</u> professional staff available and able to help when needed.....................................	1 2 3 4 5 DK	1 2 3 4 5 DK
Friends Collection/Archives <u>student</u> staff responsive and courteous...	1 2 3 4 5 DK	1 2 3 4 5 DK

5. Instruction in library use

	IMPORTANCE	PERFORMANCE
Instruction sessions make research easier....................................	1 2 3 4 5 DK	1 2 3 4 5 DK
Instruction adequate for understanding and using <u>print</u> <u>resources</u>..	1 2 3 4 5 DK	1 2 3 4 5 DK
Instruction adequate for understanding and using <u>on-line</u> <u>resources</u>.......................................	1 2 3 4 5 DK	1 2 3 4 5 DK
Library instruction is a worthwhile use of class time..................	1 2 3 4 5 DK	1 2 3 4 5 DK

	IMPORTANCE low high	PERFORMANCE low high
6. Circulation of materials		
Check-out procedure is handled efficiently in <u>Lilly</u> <u>Library</u>.......	1 2 3 4 5 DK	1 2 3 4 5 DK
Check-out procedure is handled efficiently in <u>Wildman</u>...........	1 2 3 4 5 DK	1 2 3 4 5 DK
Loan period is long enough..	1 2 3 4 5 DK	1 2 3 4 5 DK

7. Library facilities

	IMPORTANCE	PERFORMANCE
Adequate <u>variety</u> of seating and work areas in <u>Lilly</u> <u>Library</u>.......	1 2 3 4 5 DK	1 2 3 4 5 DK
Adequate control of noise in <u>Lilly</u> <u>Library</u>..................................	1 2 3 4 5 DK	1 2 3 4 5 DK
Conference and group study areas are available in <u>Lilly</u>...........	1 2 3 4 5 DK	1 2 3 4 5 DK
Temperature in <u>Lilly</u> <u>Library</u> is comfortable................................	1 2 3 4 5 DK	1 2 3 4 5 DK
Adequate <u>variety</u> of seating and work areas in <u>Wildman</u>...........	1 2 3 4 5 DK	1 2 3 4 5 DK
Adequate control of noise in <u>Wildman</u> <u>Science</u> <u>Library</u>..............	1 2 3 4 5 DK	1 2 3 4 5 DK
Conference and group study areas are available in <u>Wildman</u>....	1 2 3 4 5 DK	1 2 3 4 5 DK
Temperature is comfortable in <u>Wildman</u> <u>Science</u> <u>Library</u>...........	1 2 3 4 5 DK	1 2 3 4 5 DK

8. Library hours

	IMPORTANCE	PERFORMANCE
Libraries are open sufficient hours during the <u>weekdays</u>...........	1 2 3 4 5 DK	1 2 3 4 5 DK
Libraries are open sufficient hours on <u>weekends</u>.......................	1 2 3 4 5 DK	1 2 3 4 5 DK
Libraries are open sufficient hours during <u>breaks</u>.......................	1 2 3 4 5 DK	1 2 3 4 5 DK

COMMENTS: