What, So What, Now What

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Introduction

   In the fall of 2003, the director of the Mardigian Library at the University of Michigan-

Dearborn (UM-D) announced that the library would be working with a consultant to create an

evaluation plan for continuous feedback and improvement of library operations and services.

The process described in this chapter shows how the consultant, Formative Evaluation Research

Associates (FERA), enabled library staff members to move from simply gathering data toward

analyzing that data and taking action.

   Formative Evaluation Research Associates (FERA), http://www.feraonline.com/, provides the

non-profit sector with guidance to plan and develop the evaluation process, facilitates the

strategic planning process, and provides workshops on both processes. With FERA's help,

library staff members identified issues to be evaluated, participated in the development of

evaluation tools and analyzed the results.

   The process included gathering findings, understanding the implications of these findings and

making actionable recommendations based on the findings.   Stated simply:

      What = findings (data)

      So What = implications

      Now What = recommendations

The methodology section describes the various instruments utilized to gather data, and the results

section describes how the library acted on the recommendations revealed by the data in order to

increase its effectiveness.

   The library did not set out to conduct evidence-based librarianship (EBL), but upon reading

definitions and principles of the practice, the process the library utilized does fit the descriptions

of EBL in the literature. According to Koufogiannakis and Crumley, EBL is defined as "an

approach to information science that promotes the collection, interpretation, and integration of valid, important and applicable user-reported, librarian observed, and research derived evidence."[1] Using three different assessment instruments described in the methodology section, the library collected and interpreted feedback from its users. Koufogiannakis and Crumley go on to say that EBL "involves asking questions, finding information to answer them (or conducting one's own research) and applying that knowledge to our practice."[2] FERA helped the library articulate the questions it wanted to ask its users, designed three assessment instruments, gathered the responses, and assisted the library in interpreting the results so that library staff members could take action.

Setting

   The University of Michigan-Dearborn is located in the heart of Michigan's industrial and business core, the Detroit Metropolitan area in southeast Michigan. The campus is non-residential, with a student population of approximately 8,600, of which 25% are graduate students, and has 500 full and part-time faculty members. Approximately 80 percent of graduating students remain in the area after graduation. The Mardigian Library is the only library serving the campus community and supports the curricula for the four colleges on campus, Engineering and Computer Science, Education, Management and the College of Arts, Sciences and Letters (CASL).

   The Mardigian Library is an open-stack facility housing a book collection of over 356,000 volumes, an electronic journal collection of approximately 15,000 full-text titles, 125 databases, 563 print subscriptions and more than 8,000 electronic books. All library materials are selected by faculty members and librarians to support the undergraduate and graduate curricula. There is

a staff of 28 people, of which 13 are librarians. The Library Research Center (LRC) has a staff

of four full-time librarians and one part-time librarian. In 2004/05 they conducted 86

bibliographic instruction classes, the average number of classes taught in the last five years. In

2004/05, the ILL Department handled 4,052 requests, a 105% increase since 2000/01. At the

same time, the library's circulation decreased by 15% from 67,626 in 2000/01 to 57,271 in

2004/05.

    The library maintains a web site, http://library.umd.umich.edu, providing access to the online

public access catalog and to electronic indexes, journals and reference sources. Most of these

resources are accessible both on and off campus. The library provides approximately 1,200

study spaces for students including both group study and silent study areas. Wireless computer

access is available throughout the building.

Objective

    When the library decided to move forward on developing an evaluation program, library

managers wanted to accomplish two things: document the library experience of students and

faculty members and acquire actionable data.   To acquire actionable data, the library set two

objectives. The principal objective was to develop a process that would enable library managers

to obtain reliable data evaluating library effectiveness, to make informed decisions for allocating

human and financial resources, and to improve quality of service.   The secondary objective was

to develop data collection instruments that library managers could replicate independently on a

regular cycle.

    The library elected to work with FERA to develop original evaluation instruments rather than

employ an off-the-shelf instrument (e.g., LIBQUAL).   Participation by library managers in the

design and implementation was critically important in order to develop the in-house expertise needed to weave ongoing evaluation of operations and services into the fabric of the library's day-to-day management.

Before they started working with FERA, library staff members had been working for many years to improve their understanding of users' needs and had developed a fairly good understanding of the challenges and issues in providing excellent service to users. Activities to increase understanding and awareness included:

- Working with consultants Peter Carlson[3] and Judy Sorum Brown[4] in 1998 to apply "Organizational Learning" concepts;

- Conducting a library self-study in 2001 based on the questions found in *Standards for College Libraries 2000 Edition*[5] to collect data in preparation for an external peer review of the library's operations and services;

- Undergoing an external peer review of the library in 2002[6];

- Participating in Richard M. Dougherty's RADAR"[7] data gathering process in 2002 to illuminate student and faculty awareness and perceptions of library resources and services.

Library managers and staff members learned a great deal from these efforts about what students and faculty members know about library services and resources, how they use them and how they perceive the library. While useful in terms of understanding students' and faculty members' perceptions, the information obtained from these efforts was incomplete. The managers wanted to know more than merely the users' level of satisfaction or dissatisfaction with existing library services. Instead, they wanted qualitative data that would enable them to know what faculty members and students found about library services that added or did not add

value. They were also looking for a process to gain a deeper understanding of student and faculty perceptions and needs than the approaches employed in the past had been able to yield.

The partnership with FERA is helping build the capacity and the practice of regularly and systematically conducting evidence-based research, first with coaching from FERA but ultimately by library managers alone.

It is the expectation that regular application of the data collection processes described below, employed over time, will enable the library to:

- Regularly collect and analyze useful data,

- Regularly assess the library's performance,

- Recognize what is being done well,

- Make informed decisions about what needs to be done differently,

- Exceed users' expectations.

Methods

Brice, Booth and Bexon in their 2005 IFLA presentation state, "the evidence based practice process can be described as consisting of the following stages:

- Define the problem or question

- Find the best evidence to answer the question

- Appraise the evidence

- Apply results of appraisal

- Evaluate change

- Redefine the problem"[8]

The original research conducted by the library utilized most of these stages. However, the final

phase concluded in the spring of 2006, so it is too early to fully evaluate the changes and

redefine the questions.

In the initial planning meeting with FERA, library managers discussed evaluation methods

and expressed hopes, concerns and curiosities. FERA shared their approach to program

evaluation:

- Design (e.g. clarify information needs, select appropriate research methods)

- Implementation (data gathering, organize data)

- Data Analysis/Interpretation (code data, facilitate interpretation/learning)

- Reporting (report findings, gather and incorporate reactions)

- Utilization (deliver reporting product, facilitate strategic/operational planning)

FERA's approach is very similar to the EBL process described above, except for evaluating

changes and redefining the problem.

At the beginning of the design phase, FERA interviewed library staff members and

department heads to understand the library and to identify areas to assess. Based on these

interviews, the library identified three key areas on which to question users:

1. Library web page accessibility

2. Research education (bibliographic instruction)

3. Awareness, use and value of the library

Library managers and FERA determined that each of these areas would be assessed separately,

and that the instruments would be shaped by the nature of the information sought. For example,

to better understand student searching behavior, observations and diaries seemed more

appropriate than a survey. FERA then began developing questions for each key area. During the

design phase, library staff members reviewed drafts and recommended changes that FERA

implemented. The results of the first two instruments contributed to the design of the third. The

instruments included a combination of demographic, open-ended, and coded questions. The

participants included students and faculty from all levels and schools on campus. To facilitate

data interpretation, FERA compiled, coded and sorted the responses for analysis. The

instruments are not included in this chapter in their entirety due to their length; however, selected

pages appear in figures 1 through 3.

   During the several year assessment process, library staff members also read research in the

field including two OCLC membership reports, *Environmental Scan: Pattern Recognition,*[9] and

Perceptions of Libraries and Information Resources.[10] The data and conclusions drawn in these

reports supported the data collected from users at the Mardigian Library.

1.   Library Web Page Accessibility

   A few years ago, the library had conducted a web site usability study, and based on this

experience it seemed natural to utilize observations rather than a survey to understand students'

searching behavior. FERA suggested adding diaries to document how students search when

unobserved. During the fall of 2004, library staff members posted announcements around

campus, in the library and on the library web site seeking student volunteers for the first

evaluation. Finding enough student volunteers to obtain an appropriate sample took longer than

expected, even though volunteers were offered a $10 bookstore gift certificate for participating.

   The study was conducted with the assistance of two reference librarians and a library science

intern who observed and interviewed the student volunteers. Ten students participated: one

freshman (Sociology): one sophomore (Engineering); two juniors (Education, International

Studies); two seniors (Management, Engineering); and four graduate students (Management,

Management education, Masters of Liberal Studies (MALS), and Engineering).

The observers noted the students' search behavior and asked interview questions while the

student volunteers searched the Internet and answered questions about their searching. The

sessions were recorded using screen and audio capture software and lasted between 30 and 60

minutes.   The interview questions sought background information about the students' Internet

use, such as how long they had used it, their comfort level with computers, the number of hours

they spent searching, and the place of access. The majority of questions probed how students

find information online, their search patterns, use of specific library services, facilitators and

barriers to use, and overall satisfaction and recommendations. Interview questions included:

- How often do you find yourself guiding others in how to do online research?

- To what extent do you use the library web site, search engines, electronic reserves and
  course materials?

- Over the last few years has there been any significant change in how you go about
  finding information for a research paper online?

Following the interviews, the student volunteers kept search diaries for several weeks. See

figure 1 for a sample page from the observation guide.

FERA *Formative Evaluation Research Associates*

University of Michigan Mardigian Library
"Student Use of Computer for Online Research"
July –August 2004
OBSERVATION (with dialogue) GUIDE

Student Name:_____
Observer Name: _____
Date:_____   Location:_____ Beginning Time:_____   End Time:_____
Special Circumstances/Notes (Note any refusals here and list reason if possible):

Student's academic status and major area of study, if declared: _____
General topic of research: _____

Research conducted for: ☐ coursework ☐ non-course academic research ☐ work-related ☐ personal ☐ other: _____
If for coursework, were there any limitations/requirements regarding the research approach? ___Yes __No
If yes, explain: _____

Activity Codes:

Library catalogue	**LC**		Research Databases (for journals and articles)	**DataB**		Other Internet Resources (Michigan eLibrary 'MEL', encyclopedias, image databases, etc…)	**Other IR (be specific if possible)**
Search engine (don't need to name the specific one)	**SE**		Electronic Reserves and course materials	**ER**		Direct to specific known website address	**WEB add.**

• **START activity, OR ...Next significant activity/sub activity** • **Any trigger conditions (dependence on previous task)** • **General objective(s) of the activity**	• **Key problems/frustrations/confusions** • **Key successes** • **Note of any significant time spent with this activity**	• **Factors influencing choices on how to proceed/not proceed (incl. content issues, tech'l, environ, personal factors, etc…)** • **Info used in decision-making** • **Any significant ignored/avoided options**

FIGURE 1. Library Web Page Accessibility: Sample Observation Page

2.   Research Education

   The library wanted to assess the effectiveness of research education sessions and to explore

why more professors did not take advantage of this service. Library managers and FERA agreed

that telephone interviews of students and faculty would best provide this information.

   In the spring of 2005, the library contacted students and faculty members who participated in

fall and winter Research Education classes to find volunteers.   Faculty names were compiled

from those who regularly scheduled Research Education classes (participating), and from those

who usually did not (non-participating). Eight participating and seven non-participating faculty

members were interviewed. Of the 42 students who were contacted, ten agreed to be

interviewed. It was a struggle to find enough volunteers for an appropriate sample, even though

student participants were offered a $5 gift certificate to the library coffee shop.

   Participating and non-participating faculty represented a cross-section of schools on campus,

rank, and length of employment.   The participating faculty included members from History,

Biology/Environmental Studies, Microbiology, Computer Science, Political Science,

Writing/Humanities, and the School of Education. The non-participating faculty included

members from Natural Sciences, Special Education, Psychology, Philosophy,

Accounting/Finance, Spanish and Industrial Engineering.

   The participants were contacted by phone and asked a series of questions including research

education usefulness, impact on use of library services, impact on other research skills,

improving research education, barriers and facilitators and helping students learn to do research.

Interview questions included:

- Do you feel that you received enough information about the library's services when
  you started your academic work at UM-D?

- Are you aware that you can use the library's web site on your own to seek information for research through the catalog, electronic journals or databases or other resources?

- What motivated you to schedule a Research Education session for your students?

- How do you gauge the success or failure of a particular Research Education workshop?

See figure 2 for selected questions from the student telephone interview script.

1. Prior to the Research Education Session had you had any formal training in how to do college-level research?
___No   ___Yes   If "Yes," what kind of training?

2. Did you feel that the Research Education Session was appropriate for your level of academic work?

Definitely (5)	Probably (4)	Maybe (3)	No, probably Not (2)	No, Definitly Not (1)

Explain.

IMPRESSION OF THE RESEARCH EDUCATION SESSION
We are interested in learning your impressions of the session you attended.

3. In general how satisfied were you with the Research Education Session…?

Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	No Opinion
4	3	2	1	

Comment:

4. What particular topic in the Research Education Session, if any, has been most helpful to you?

5. What particular topic in the Research Education Session has been least helpful to you? Why?

6. Was there anything about the way the Research Education Session was conducted that was especially helpful to you?

IMPACT OF THE RESEARCH EDUCATION SESSION
We are interested in learning what kind of impact, if any, your participation in the Research Education Session had on you and your research activity.

Several methods of conducting research using the library resources were discussed during the Research Education Session. I'd like to talk briefly about some of those methods.

For each of them, I'm going to ask if before you participated in the Research Education Session you already used the particular method.

If you had used the method before, I'll then ask if the Research Education Session helped you use it more effectively.

If you had not used the method before, I'll ask if you have started using it as a result of participating in the Research Education Session.

a) **Use of the UMD library homepage**

Had you used the UMD library homepage before attending the Research Education Session?

___Yes   If "YES" how much more effectively are you using the homepage as a result of attending the Research Education Session?

A Lot More Effectively (5)	Somewhat More Effectively (4)	A Little More Effectively (3)	Not At All More Effectively (2)	Don't Know (1)

___NO   If "NO," Have you started using the homepage as a result of participating in the Research Education Session? ___Yes   ___No
Comments: [*Probe: successes, confusions/frustrations*]

FIGURE 2. Research Education: Selected Questions from Student Interview Script

3.   Awareness, Use and Value of the Library

An online survey instrument was created in order to reach as many students as possible. The library decided not to conduct a mailed survey because students often do not live at their official home address. Non-library users' opinions were important, so an in-library survey was not appropriate. Telephone surveys proved to be too labor-intensive and costly for a large sample, suffer from high refusal rates, and past experience showed that not enough people would participate.   The results of the first two instruments helped to shape the questions asked in the online survey. For example, in the first instrument the library learned that marketing efforts needed improvement; therefore questions were included in the third instrument to learn where changes could be made.

The library adhered to university policies regarding testing of human subjects, which changed between the implementation of the second and third instrument. With assistance from the University's Institutional Advancement department, a random sample of 100 students was invited to test the online instrument during the fall of 2005. The return rate for the test was 20%. After the test survey was completed, FERA was satisfied with the results and only a few minor changes were made. Next, the Registrar's office sent an email inviting currently enrolled students to participate in the online survey.

The online survey instrument contained 37 questions about the library, including awareness and use of library services, methods of informing patrons about new services, satisfaction with existing services and collections, and the role and value of the library. Survey questions included:

- If you knew more about how to use the library, either on-site or online, would you use it more frequently?

- Are you aware that you can get research help from a reference librarian on the telephone through the "Ask-A-Question" service?

- Can you suggest any other ways the library should try to reach students with information about the library's services?

See figure 3 for a selected page from the online survey.

4. UM Dearborn students can first learn about the general library services in many ways. I'm going to list ways that students might learn basic information about the library. Please tell me if you learned basic library information (such as the location, hours, its on-site and online resources, the library workshops) in any of the ways I mention.

Did you learn basic information about the library through...
___   one of your classes?
___   the library's publicity (newspaper, fliers, ads, etc.)?
___   the library's orientation?
___   information provided during the New Student Orientation?
___   the library's website?
___   a "Research Education" session provided by a librarian at the library
___   a friend?
___   a brochure?
___   campus newsletter/newspaper?
___   a faculty/staff member?
___   phone call to the library to learn more
___   someone who came to my class and spoke about the library
___   campus TV or radio
___   information provided when I attended a campus activity
___   other (specify) _____

5. Which of these ways for learning about the library was <u>most</u> helpful to you?

6. Can you suggest any <u>other</u> ways the library should try to reach students with information about the library's services?

7. Do you feel that you received enough information about the library's services when you started your academic work at UM Dearborn?   _____ Yes   _____ No
    a. Comments:

8. If you think back to how you've learned to use Mardigian Library for specific academic research, who - or what - has <u>most</u> influenced how effectively you've been able to use the library for your academic work?
                    [Probes: instructors, fellow students, librarians, resources etc.]

9. How frequently do you use the library resources either on the campus <u>or</u> online?
    ____ a. one or more times a week   ____ d. once a semester
    ____ b. every couple of weeks   ____ e. have never used the library
    ____ c. once a month

    f. If you do not use the library's resources much or at all, *[Interviewer Note: 9c, d, e]* do you obtain research information for your academic work elsewhere? ___Yes   ___No
        ⇒ g. If "**Yes**," where?

FIGURE 3. Awareness, Use and Value of the Library: Selected Page from Online Survey

Respondents were given seven days to complete to the survey.   Due to a low return rate in the first several days the survey deadline was extended three days; however, no significant surge in the responses occurred. Based on the test survey, the library anticipated a 20% return, but the final response was about 14%. The library managers and FERA agreed that this percentage was sufficient. Students who participated were entered into a drawing for a $50 bookstore gift certificate.

FERA's expertise and assistance in designing and implementing the three instruments was essential to the success of the project. None of the library staff members had the necessary qualifications, previous experience or time to conduct the project in house.

Results

FERA delivered the results of each assessment instrument and conducted data interpretation workshops. Library managers and FERA representatives examined the data to determine the major findings (what), implications (so what) and recommendations (now what). FERA divided the data into manageable sections, and the group typically examined four to five data sets per 3-hour workshop. During each workshop, participants examined the findings and made recommendations individually and then shared these with the group. FERA staff summarized the findings and recommendations from the data interpretation workshops and library staff members began implementing the recommendations. This phase of the assessment focused on stage three and four of the EBL process, appraising the evidence and applying the results.

1.   Library Web Page Accessibility Results

   In February 2005, FERA and the library managers held the first data interpretation workshop

to examine responses collected during student interviews, observations and search diaries. See

figure 4 for selected findings.

What	So What	Now What
The majority of students used Google to start their search and were satisfied with the results 92% of the time. They found the "one search box" easy to use.	Students like the ease of Google. Searching library databases one at a time is cumbersome. Library databases are not being maximized.	Implement a metasearch product so multiple databases can be searched at the same time. Include Google or Google Scholar in the groups of databases being searched. Market the new product to students. UPDATE: A metasearch product is being implemented and will be available fall 2006.
6 of the 10 students reported wanting help but only 3 actually sought help; only 1 person asked a librarian. Comments indicated that some students thought they could get help only when in the building.	Students are not aware of the multiple methods of asking for help. Most students that do seek help are not asking a librarian.	Web page needs to highlight the multiple methods of asking for help. More marketing is needed to inform students about the choices available to them. Online searching tips or tutorials might be helpful. UPDATE: Web page is being redesigned in connection with new metasearch product. Online tutorial being planned. Marketing Instant Messaging option. Investigating virtual reference services in collaboration with other regional academic libraries.
5 of 10 students reported learning how to search library resources from a professor or librarian.	Connecting to the students through the faculty is crucial.	Focus on building relationships with faculty and marketing to them more effectively. Encourage more research education classes. UPDATE: A committee was established to focus on faculty outreach, such as hosting faculty events, improving communication with faculty, and training library staff on how to build relationships with faculty.

FIGURE 4. Library Web Page Accessibility Selected Results

The comments were very helpful in understanding the user perspective. When asked what prevented them from seeking help, students replied, "I was home alone," "I was not in the library so I was not able to ask the research librarians for help," and, "The librarians were busy and I had to leave." These comments bring to light the importance of communicating how librarians can help students via telephone, email or instant messaging, and of providing online help for students who research when the library is closed and live help is not available.

When students were asked the benefits of using the library's research databases, they answered that the results were reliable, free, trustworthy, peer-reviewed, scholarly, and that searching was efficient. One student reported, "I love researching from home." Other comments highlight the disadvantages of using article databases such as, "sometimes you can't get full text," and, "if you don't know how to search, you won't find what you are looking for."

Overall recommendations from this data interpretation workshop included:

- Provide meta-search engine software to simplify searching of library resources.

- Develop the library's ability to work with faculty members.

- Improve marketing of library services and resources.

- Continue to develop library web site to include instructional information, such as online searching tips and/or tutorials.

- Broaden research education teaching techniques.

These recommendations were delegated to departments and committees to implement. Much progress has been made, but some of these recommendations involve an ongoing focus as opposed to a finite end product. Several new committees were formed, one to investigate meta-search engines and one to discuss outreach to faculty.

The Meta Search Task Force, an ad hoc committee, researched available software and brought in several vendors to demonstrate their products.   They selected and installed a product and as of July 2006 the software is undergoing usability testing.

Another ad hoc committee, the Faculty Outreach Group, examined ways to cultivate relationships with faculty members. This committee consisted of interested librarians who developed a list of library talking points as well as guidelines for interacting with faculty at university events. Several librarians have remarked how the talking points make it easier for them to inform faculty members about library services and resources.

The Working Group on Research Education (WGORE) has been meeting since the fall of 2004 to examine the mission of research education, try different teaching methods and share experiences.

The Campus Relations committee has examined various ways to market library services and resources. This committee created an annual marketing calendar, revised faculty orientation handouts, purchased giveaways including library mugs and pens, created templates for PowerPoint presentations and handouts, and created publications and communications guides.

2.   Research Education Results

In May 2005, FERA and library managers held the second data interpretation workshop to examine data collected during student and faculty telephone interviews specifically about research education classes. See figure 5 for selected findings.

What	So What	Now What
The majority of students used Google to start their search and were satisfied with the results 92% of the time. They found the "one search box" easy to use.	Students like the ease of Google. Searching library databases one at a time is cumbersome. Library databases are not being maximized.	Implement a metasearch product so multiple databases can be searched at the same time. Include Google or Google Scholar in the groups of databases being searched. Market the new product to students. UPDATE: A metasearch product is being implemented and will be available fall 2006.
6 of the 10 students reported wanting help but only 3 actually sought help; only 1 person asked a librarian. Comments indicated that some students thought they could get help only when in the building.	Students are not aware of the multiple methods of asking for help. Most students that do seek help are not asking a librarian.	Web page needs to highlight the multiple methods of asking for help. More marketing is needed to inform students about the choices available to them. Online searching tips or tutorials might be helpful. UPDATE: Web page is being redesigned in connection with new metasearch product. Online tutorial being planned. Marketing Instant Messaging option. Investigating virtual reference services in collaboration with other regional academic libraries.
5 of 10 students reported learning how to search library resources from a professor or librarian.	Connecting to the students through the faculty is crucial.	Focus on building relationships with faculty and marketing to them more effectively. Encourage more research education classes. UPDATE: A committee was established to focus on faculty outreach, such as hosting faculty events, improving communication with faculty, and training library staff on how to build relationships with faculty.

FIGURE 5. Research Education Selected Results

Once again the student and faculty comments about research education were very informative. One student reported, "I was able to get more information faster after the session." Another said, "I'm using journals online more as opposed to going from web site to web site." Yet another reported, "My new confidence prevented me from dropping out of a sociology course early in the semester." Several students said that the research education sessions contained information they already knew, but not in as much detail. One student said the session was "boring and bland. They could spice it up a little."

When faculty members were asked about their experiences with research education sessions, one said, "The library needs a teaching lab with computers." Another reported, "The most effective part is the hands-on part when they actually go on the computer and find the information." Another faculty member said, "The students cannot absorb long boring sessions." One faculty member recommended that the librarians "force people to pay attention by challenging them, asking them questions, and getting them involved and participating."

The overall recommendations from this data interpretation workshop included:

- Gear each research education session to the level of the students, adapting to the needs of the class, customizing classes on the spot.

- Team-teach and divide classes into beginning and advanced groups.

- Assess library collections to make sure they are meeting the needs of students and faculty.

- Simplify access on web page, reducing the number of clicks needed to get to information.

- Add student quotes from surveys to marketing materials.

- Seek funding for a library instruction lab with more computers.

- Share teaching techniques with each other.

- Create standardized handouts as "take-aways" from all classes.

- Build education and research into the web site, such as tutorials and searching tips.

- Host an all faculty open house. Build personal relationships with faculty members.

- Market library services and resources to faculty.

- Enrich quality of book information in the catalog by subscribing to a service providing

  book jacket images, reviews, tables of contents, etc.

Most of these recommendations were delegated to the Library Research Center to implement. A proposal has been created seeking external funding for a new library instruction lab. Student quotes have been added to the research education brochure. The LRC tested instant messaging (IM) chat reference during the summer of 2005 and fully implemented it during the fall of 2005. WGORE continues to discuss a variety of teaching methods. The Campus Relations committee continues to improve library marketing, and discussions are underway to host a faculty open house with help from the LRC and Events committee. The library managers decided to purchase enhanced book content for the library online catalog.

The New Events committee was created to brainstorm and implement new library events as a way to bring existing and new users to the library. The committee hosted the first annual Faculty Salon, a student scavenger hunt and a workshop on budgeting for retirement co-sponsored with the university credit union. They also initiated an ongoing faculty and staff book club called R.E.A.D. (read, eat and discuss) held four times a year during the lunch hour.

3.   Awareness, Use and Value of the Library Results

   In February 2006, FERA and library managers held the third data interpretation workshop to

examine data collected during the student online and faculty telephone surveys. See figure 6 for

selected findings.

What	So What	Now What
The most popular use of the library is for studying: • 67% of the responding students visit the library once a month or more • 36% use the library once a week or more	It's important that the physical space be inviting, comfortable, and designed for how students prefer to work and study. Comments indicated a need for more group study.	Consider reallocation of areas no longer highly used. Provide more seating options; provide more group study. UPDATE: Budget proposal written seeking funding from donor to add group study space. Library committee established to look at the physical environment. One area has been re-designed for fall 2006 with new beanbag chairs, small group tables, etc. to be more inviting.
The second most popular use for library is the web site: • 68% use it once a month or more • 20% use it once a week or more	The web site is our most visible and important service. It needs to be easy to use and informative.	Redesign the web site to simplify it and add more content. UPDATE: RSS feeds were added, the new metasearch engine is being implemented for fall 2006 and the web site re-designed. Handouts have been added to web; online tutorial being designed.
74% of students prefer to learn about library services via email	Concentrate marketing efforts and resources around email.	Utilize campus resources to identify target populations. Send message near beginning of each term about services/resources and what's new. UPDATE: Worked with Admissions/Registrar to create target groups. Incoming freshmen sent message about summer privileges; Campus Relations Committee established timeline for sending emails to students.

FIGURE 6. Awareness, Use and Value of the Library Selected Results

There was an overwhelming number of comments from the online survey. FERA helped library managers examine these by sorting them into broad categories. When asked what other services the library could offer that would motivate the students to visit the library more often, the replies included: offer additional resources (best sellers, textbooks, more journals, book delivery); increase hours; add more computers and outlets for laptops; provide more information about library (floor plan map, email updates, advertise services); offer more food variety in the privately owned coffee shop located in the library; create study rooms; purchase comfortable furniture and provide more aesthetic surroundings; hire more staff; and improve the parking.

While 76% said nothing was holding them back from taking full advantage of the library's resources, the 24% who said they were held back reported that there wasn't enough information about how to use the library's services and resources; the entrance of the building is too far from the parking lot; library hours weren't long enough; and that they needed more or different resources (full text, better book selection, more power outlets, more computers). Some of these recommendations are beyond the library's control, such as the location of the entrance and the distance from the parking lot, however library staff members can take action on many of these suggestions.

The overall recommendations from this data interpretation workshop included:

- Create targeted email messages to be sent in the early fall and early winter semesters to students and faculty members informing them of new and existing services and resources. Maintain an online archive of these messages.

- Create an RSS feed or subscription service for a library tip of the week/month.

- Examine ways to more effectively communicate library information during orientation (video, floor plan map).

- Contact bookstore manager about distributing library brochures with book purchases.

- Continue efforts to improve comfort and ambience.

- Continue efforts to improve web site usability.

- Create online searching tips and/or tutorials for students to use when library is closed, such as tips for using the new meta-search engine.

- Investigate the possibility of circulating laptop computers.

Members of the Campus Relations Committee developed a floor plan map and implemented a current library news blog with RSS feed.   Plans are already under way to draft targeted email messages, to create an orientation video, and to investigate the possibility of circulating laptops.

The Library as Place committee was created to make recommendations and prepare budget proposals for improving the building's appearance, comfort and ambience. The committee has examined ways to create comfortable seating areas, improve appearance through the use of color, and create display areas. One obstacle to overcome is the lack of power outlets for laptop usage.

The library managers presented the findings and recommendations to the entire library staff and solicited their input for additional action steps. Library staff created an internal web site to organize all the documents from the project for easy access. FERA provided the library with an executive summary to use in presentations to the university administration, customers and potential donors.

Conclusion

Library staff members have implemented many recommendations and others are in process, however it is too early to evaluate the impacts of these changes. It is important to point out that

two recommendations appeared in all three data collections – improve marketing and create online searching tips and/or tutorials especially for use when the library is closed.

   The research findings have confirmed many things for the library. First, the majority of respondents are satisfied with the library's services and resources.   Second, faculty members are the gateway to the students. A motivating factor in student library use is the requirement to use the library for their coursework.   Third, both students and faculty members learn about the library through the library's web site. Providing a web site that is easy to use and that includes quality information and resources is essential. Fourth, students who attend a research education class express satisfaction with the class and utilize what they have learned.   Efforts to address the differing experience levels of the students in the research education classes and to broaden teaching techniques will continue.

   It is rewarding to provide new or improved services and resources based on actual data about library users' needs. Regular application of these three data collection instruments, one per year on a 3-year cycle, will enable library managers to respond quickly to changing user needs and expectations. As the library redefines the questions it wants to ask, the focus of the instruments will vary to understand these changing user needs. Library staff may eventually be able to take over much of the work, however for the near future FERA's expertise will be needed to collect and analyze the data, and to help library mangers create actionable recommendations. The data (what) and the implications (so what) are meaningless without the final step of acting on the recommendations (now what). Acting on a continuous stream of user feedback will enable the library to remain a relevant campus service and resource.

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