Learning About Library Users: Traditional Approaches

Focus groups & opinion surveys to examine changes, make improvements

Use surveys & data to show value, outcomes, ROI

Usage logs to inform collection decisions & growth

Methods to learn about users and usage work together to show explicit and implicit value
Study’s Objective

• Articulate value in terms of institutional objectives
  • Measurable effects
  • Replicable
  • Meaningful & compelling
Derived Measures

Return on Investment (ROI) is a quantitative measure expressed as a ratio of the value returned to the institution for each monetary unit invested in the library.

For every $ spent on the library, the university received ‘X’ $ in return.

Demonstrate that library collections contribute to income-generating activities.
UIUC Administration Values

- Focus on new intellectual directions
- Strengthen interdisciplinary work
- Find resources
- Connect with community, state, nation, globally
- Efficiency in all we do

“Funding does not regenerate funding. But reputation does.”
- Charles Zukoski, Vice Chancellor for Research

- Increase impact of university’s research
  - Attract & retain outstanding faculty

Faculty = Funding
Quantifying for the University

**ROI:**
Income as a proportion of the amount invested in an asset.

Faculty generate income for the institution. Faculty use the library and its collections. What role do information resources serve in the income generation process?

\[
\frac{\% \text{ of grant } \$ \text{ using library resources}}{\text{Library budget}} = \text{“X”}
\]
Explaining the Study

- **Not**
  - trying to claim an allocation back to library!
  - a budget argument
  - a cost/time savings exercise
  - creating a predictive model
- **Demonstrate** that library research collections contribute to income-generating activities
- **Quantify** a return on University’s investments in its library
- **Focus** on library’s role in externally funded research process
- **Show** “correlations” rather than prove “cause-&-effect”
# Types of Data:
## Reliable, accessible, clearly defined

<table>
<thead>
<tr>
<th>Data types</th>
<th>Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Faculty</td>
<td>Survey: quantitative and qualitative</td>
</tr>
<tr>
<td>Grant Proposals</td>
<td>University-supplied data; survey</td>
</tr>
<tr>
<td>Grant Income</td>
<td>University-supplied data</td>
</tr>
<tr>
<td>Library</td>
<td>Total budget (including collection, facilities, personnel, etc.)</td>
</tr>
<tr>
<td>Administrators’ Priorities</td>
<td>Personal interviews (with library leadership, university executives, and research managers)</td>
</tr>
</tbody>
</table>
ROI for University of Illinois Grants

$4.38 grant income for each $1.00 invested in library

(\% of faculty who rated citations in proposals from library as important to the proposal \times \% of proposals funded)
ROI Model for UIUC: Details

78.14% faculty w/ grant proposals using citations from library

50.79% award success rate from grants using citations from library

$63,923 average grant income

$25,369 avg. income generated from grants using cites from library

6232 grants expended

$36,102,613 library budget

$4.38 grant income for each $1.00 invested in library
(ROI value expressed as 4.38:1 ratio)
94% report using library resources in grant proposals

75% of references accessed through library

94% obtain proposal citations via campus network/Library Gateway

For every reference cited in 2006, faculty estimate they read 4-5 more articles or books … Many more abstracts are scanned
Administration Values: Measuring Up

- **Attract & retain outstanding faculty**
- **Increase impact**
  - 28.8% more articles per tenured faculty
  - “Faculty with more publications and citations have higher propensity of obtaining more grants.”*
  - “Faculty who read more articles tend to receive awards.” (Donald W. King, UPitt Study, 2004)

“I would leave this university in a microsecond if the library deteriorated …”

* Ali & Bhattacharyya, “Research Grant and Faculty Productivity Nexus: Heterogeneity among Dissimilar Institutions.” Academic Analytics
Phase 2: Institutions
Phase 2: Narrow Focus, Broad Range of Institutions

- Focus remained on ROI for grants income
- Extended the Phase I model
  - 8 more institutions in 8 countries
- Identified similarities and differences across the countries and institutions
- Tested the model for replication
Phase 2: ROI Findings

- Research STM
  - 13.2:1 to 15.5:1

- Research and Teaching STM/Hum/SS
  - 1.3:1 to 3.4:1

- Research and Teaching
  - Under 1:1
## Phase 2: Aggregated Survey Results

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>References in proposals are essential, very important, important</td>
<td>90%</td>
</tr>
<tr>
<td>Average number of citations in proposals</td>
<td>15</td>
</tr>
<tr>
<td>Percent of citations in proposals (recognized) from library</td>
<td>50%</td>
</tr>
<tr>
<td>For every article cited, average number of more that are read</td>
<td>18</td>
</tr>
</tbody>
</table>
Administration Values: Measuring Up

1) Attract outstanding faculty
   • Faculty with more publications and citations obtain more grants.*
   • Faculty who publish more read more
   • Faculty who receive awards read more

2) Retain outstanding faculty
   - “I would leave this university in a microsecond if the library deteriorated” - U.S. University

---

*Ali & Bhattacharyya, “Research Grant and Faculty Productivity Nexus: Heterogeneity among Dissimilar Institutions.” Academic Analytics
Administration Values: Measuring Up

3) Foster innovative research
   - “I am now able to explore and trace back topics and check the developments that arose along the topic history making connections that were only dreams a few years ago.” Western European Research Institute
   - For every article cited, 27-40 more are read

4) Build research reputation of institution
   - In 1 university, over 10 years a 1% increase in library budget correlates with a 1.07% increase in grant funding
   - In another, over 10 years a 1% increase in library budget correlates with a 1.21% increase in grant funding
5) Promote seamless integration of the library with institutional research activities

- A doubling in article downloads, from 1 to 2 million, is statistically associated with dramatic increases in research productivity**

Faculty Survey Comments: Value of e-resources

"With the current workload, I could not continue with research without the convenience of access from my own computer."
–Africa

"You have access to many more articles and ... you are more aware of what is going on in the field."
–Western Europe

"A sure way to kill a proposal is not to give proper credit or to not update new developments."
–North America

"Access has made collecting research resources infinitely more efficient; and facilitated interdisciplinary research."
–North America
Faculty Survey Comments: Library value to research

“Such access has become an essential research tool.” – Asia-Pacific

“I would leave this university in a microsecond if the library deteriorated ...” – North America

“It would be impossible to be competitive internationally without electronic access to publications.” – North America

“It has helped me open or discard lines of research at the very beginning by knowing what other researchers have published or are soon going to publish.” – Western Europe
Phase 2: Summary

- Grants ROI varies from 15.5:1 to under 1:1
- ROI depends on institutional mission
  - Research focus is higher; teaching focus is lower
  - Be cautious when comparing ROI among institutions with differing missions
- ROI is one of other measures of the library’s value
  - Usage = implied value
  - Stakeholder testimonials = explicit value
  - Time & cost savings = contingent valuation
Phase 3: Broaden Focus
From ROI to LibValue; From One Measure to Many
And Anticipate Change..

New Scholarly Endeavors That Cut Across the Library’s Functional Areas

- Teaching / Learning
- Research
- Social / Professional

Scholarly Endeavors:

- e-science
- Collaborative Scholarship
- Institutional Repositories

Functional Areas
What We Can Show So Far

- E-collections are valued by faculty
- E-articles are read for many purposes
- Academic library e-collections help faculty be productive and successful
- Libraries help generate grants income
- ROI for grants varies by mission and location of institution
- Value can be measured in many ways
What We Can Show So Far

- Faculty use library resources to support scholarship, research, and teaching
- Library collections help faculty be productive and efficient, and increase interdisciplinary and international perspectives
- University administrators rely on the library to help recruit, evaluate, and retain faculty and students, and increase international reputation
- Majority of faculty consider library resources an important part of their research and integral to the grants process
- For every monetary unit invested in the library, the university receives grants income that ranges from 15:1 to less than 1:1
What Phase 3 Hopes to Show

The library’s products and services ...

- Help faculty be successful
- Help students be successful
- Generate both immediate and future income
- Provide a good return for the investment to the institution
Challenges

• Incorporating all inputs from all stakeholders
• Considering the entire range of possible values
• Developing transportable tools
Some Final Thoughts on Measuring Value

- Tie what you measure to your university’s mission
- Measure value and outcomes
  - Quantitative data shows ROI and trends
  - Qualitative information tells the story
- No one method stands alone
- Need to develop ways to measure value of all library services
- Enhanced access to information increases your library’s value to your university
Paula Kaufman
University of Illinois at Urbana-Champaign
ptk@illinois.edu