Using Evidence to Make Strategic Decisions for Your Library

Megan Oakleaf, MLS, PhD

www.meganoakleaf.info

moakleaf@syr.edu

Schedule

8:30-9:45

Introduction to EBL Process

Finding Evidence

Judging Evidence

10:45-12:00

Applying Evidence to Decision Making

If not EBL? Cognitive Biases!

Introduction to the EBL Process

Research & Practice

MIND THE GAP

Definition

"Evidence-Based Librarianship (EBL) is 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. The best available evidence, moderated by user needs and preferences, is applied to improve the quality of professional judgements."

Booth

EBL Process

- Formulate a question
- Find evidence
- Appraise evidence
- Apply evidence
- Evaluate

Possible Questions

- Does user instruction result in improved user information-seeking behavior?

- What features do librarians most value in retrieval systems? Users?

- What librarian errors lead to poor answers to reference questions? Which strategies lead to good answers?

- As a profession, how to we demonstrate our impact on the communities we serve?

Hypothesis, 20(2),2008

Brainstorming Questions

EBL Process

- Formulate a question
- Find evidence
- Appraise evidence
- Apply evidence
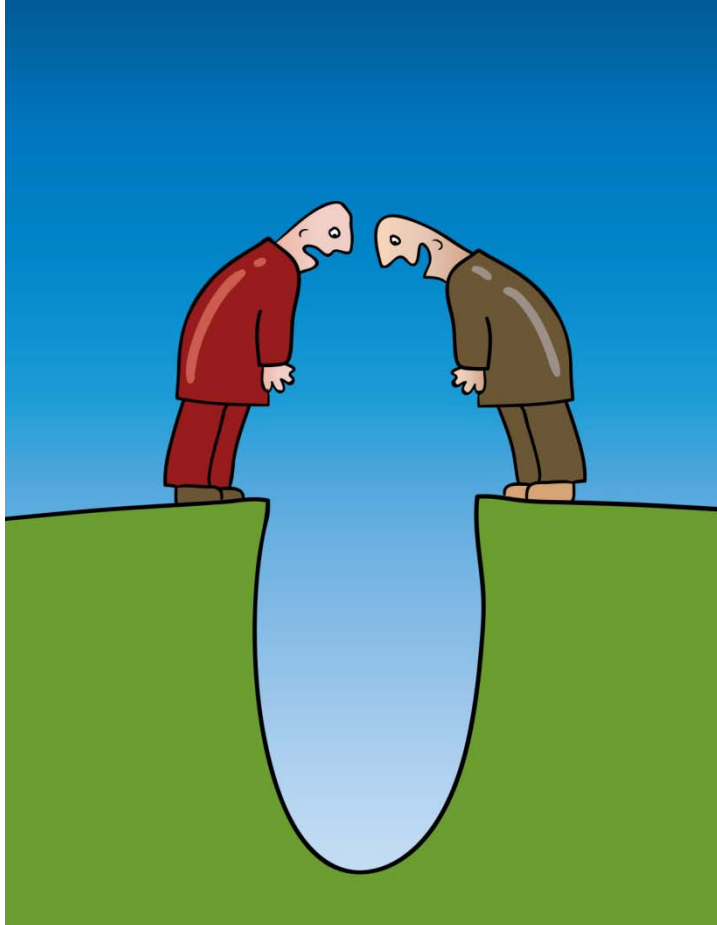- Evaluate

Brainstorming the Search

Database Examples

- LISA
- LISTA
- Library Literature
- Web of Science
- ERIC
- Education Full Text
- ABI Inform
- Business Source Elite or Premier

Database Challenges to Overcome

- Unstructured abstracts
- Uncertain search terms
  - Subject headings
    - Use studies
    - Survey
    - Evaluation or Assessment
  - Titles without expected keywords
- Uneven coverage
- Incomplete indexing

Journal Titles

Collections

- Collection Management
- JASIST
- Serials Librarian
- Library Collections, Acquisitions and Technical Services
- Evidence Based Library & Information Practice

Koufogiannakis, Slater and Crumley (2004)

Journal Titles

Education

- Journal of Education for Library and Information Science
- Journal of Academic Librarianship
- Portal
- College and Research Libraries
- Journal of the Medical Library Association
- Evidence Based Library & Information Practice
- Research Strategies

Koufogiannakis, Slater and Crumley (2004)

Journal Titles

Information Access & Retrieval

- JASIST
- Information Processing and Management
- Journal of Documentation
- Journal of Library Administration
- Cataloging & Classification Quarterly
- Evidence Based Library & Information Practice

Koufogiannakis, Slater and Crumley (2004)

Journal Titles

Management

- College and Research Libraries
- Library Management
- Library Review
- Journal of Library Administration
- Evidence Based Library & Information Practice

Koufogiannakis, Slater and Crumley (2004)

Journal Titles

Reference Enquiries

- College and Research Libraries
- Journal of Academic Librarianship
- Reference & User Services Quarterly
- Library and Information Science Research
- Journal of Library and Information Science
- Evidence Based Library & Information Practice

Koufogiannakis, Slater and Crumley (2004)

Practitioner-Observed Evidence

- professional judgment and expertise
- interaction with colleagues
- communities of practice
  - Conference papers & posters (grey lit)
  - Institutional/subject repositories
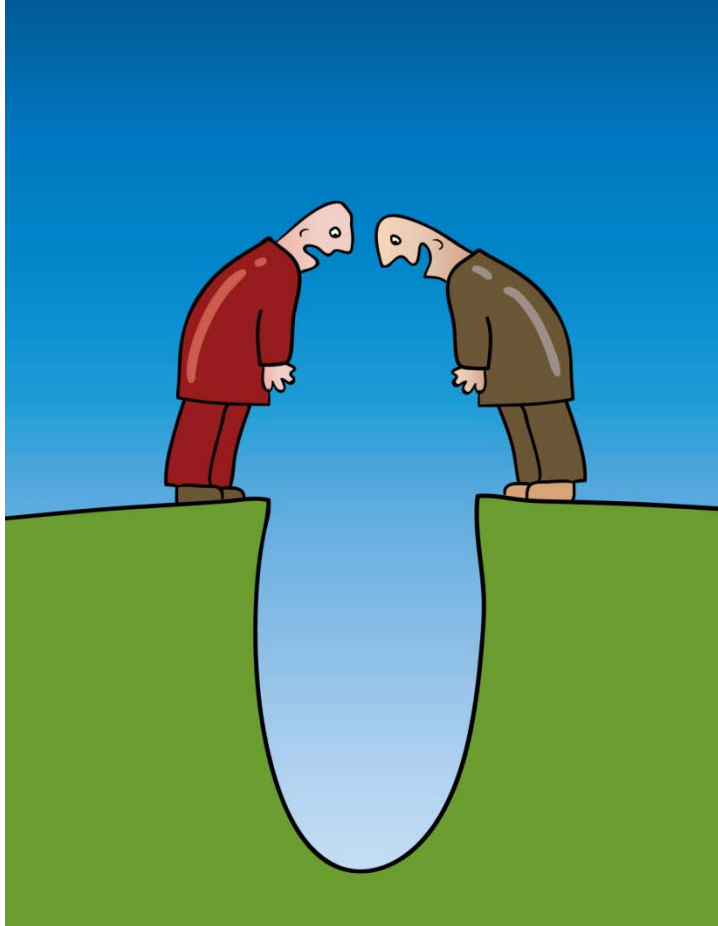 - Listservs
  - Blogs
  - Wikis

User Reported Evidence

- surveys
- usability testing
- exit interviews
- informal feedback
- library statistics
- transaction log analysis
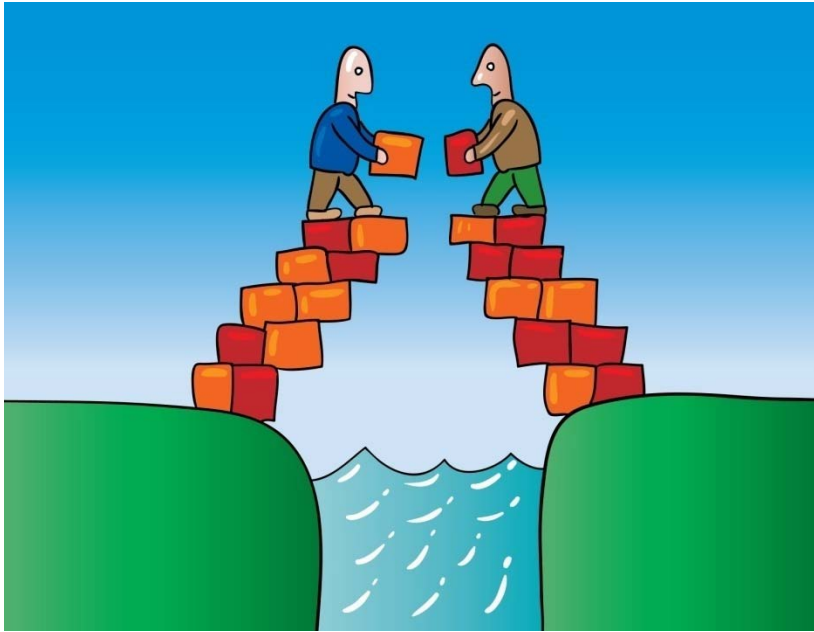
Research Challenges to Overcome

- Not enough:
  - Funding
  - Time
  - Experience
  - Support
  - Access

(Koufogiannakis & Crumley, 2006)

What Can YOU do? Advocate for…

- Culture of evidence & evidence based decision making
- Research agendas
- Better research, rooted in previous research
- Better indexing of research, better access to LIS db's
- Time to produce research
- Funding for research
- Better LIS research education & professional development

(Koufogiannakis & Crumley, 2006)

Publish & Present…
then make sure you're indexed!

Don't Go It Alone

- Partner with those *required* to publish research
    - LIS Faculty
    - LIS doctoral students
    - LIS masters students

Sources of Evidence - Summary

- scholarly journals and databases
- your professional expertise
- your users' feedback
- any resource relevant to the question
- grey literature such as reports and conference proceedings
- government/institutional websites
- listservs, blogs, wikis

EBL Process

- Formulate a question
- Find evidence
- Appraise evidence
- Apply evidence
- Evaluate

Evidence…
What makes for good evidence?
What makes for bad evidence?

What is critical appraisal?

- Putting aside personal opinion and judging a research study on its own merits
- Reading a paper with a questioning mind
- Thinking critically
- Using a structure/set of questions

Denise Koufogiannakis (2009)

Appraisal Elements

- Validity
- Reliability
- Applicability

Validity Questions

- Were the research methods appropriate and clearly described?

- Were those involved in the collection of data also delivering a service to the user group? (Check for conflict of interest.)

- Was the population appropriate for the study, and was the sample representative? Was the population described in sufficient detail?

- Was the data collection instrument tested/validated, and was it used appropriately?

Denise Koufogiannakis (2009)

Reliability Questions

- What was the response rate?
- Were appropriate data analysis strategies used depending upon the research approach used and reported?
- Do the results address the original research question?
- Are the results clearly explained? Were they analysed in an easily interpretable way? Are data presented in a clear manner, giving true numbers rather than just percentages?
- Were limitations of the study discussed?
- Were conclusions based on honest and objective interpretation of the results? Does the data support the author's conclusions?

Denise Koufogiannakis (2009)

Applicability Questions

- Is the evidence relevant to you?
  - Are implications for practice reported?
  - Can the results be applied to your local population? Is the population studied similar to yours?
  - If not the whole study, what aspects of a study can be used to inform your practice?

Denise Koufogiannakis (2009)

Hierarchy of Evidence

Prediction	Intervention	Exploration
Systematic Review	Systematic Reviews	Systematic Reviews
Meta-analysis	Meta-analysis	Summing Up*
Retrospective Cohort study	RCTs	Qualitative studies**
Prospective Cohort study	Retrospective Cohort study	Survey
Survey	Prospective Cohort study	Case study
Case study	Survey	
	Case study	

Eldredge (2002)

What types of studies are best?

- Depends on the type of question
- The type of study that makes the most sense for answering your question

Denise Koufogiannakis (2009)

Who to Read

- Jon Eldredge
- Andrew Booth
- Denise Koufogiannakis

Break for Exhibits

Schedule

8:30-9:45

  Introduction to EBL Process

  Finding Evidence

  Judging Evidence

10:45-12:00

  Applying Evidence to Decision Making

  If not EBL? Cognitive Biases

How are you making decisions now?

EBL Process

- Formulate a question
- Find evidence
- Appraise evidence
- Apply evidence
- Evaluate

Evidence Summaries

- Critical appraisal synthesis of recently published research
- Objective critique with the goal to help practitioners make more informed decisions about the quality of the research that they may be considering
- Structured abstract gives an overview of the article
  - Objective, Design, Setting, Subjects, Methods, Main Results, Conclusion
- Commentary section critically appraises the research
- Considers questions of validity, reliability, applicability

Denise Koufogiannakis (2009)

Practice Exercise

Questions to answer:

- Can we replace some of our face-to-face instruction with online tutorials?

- About VR…should we join a consortium? Should we transfer complex questions to face-to-face reference desks?

- Should we be trying to teach at the reference desk? Or just give answers?

- Do we really need a written confidentiality policy?

EBL Process

- Formulate a question
- Find evidence
- Appraise evidence
- Apply evidence
- Evaluate

Evaluating Impact & Performance

- Evaluation will determine whether the change you introduced, modified, or cancelled made a difference and if it made the difference you expected.

- Evaluation will help you reflect on your performance as an evidence-based practitioner and hone your skills.

Denise Koufogiannakis (2009)

Dissemination

- Write it up!

- Talk about it

- Blog about it

- Share your process or instruments with others

- Look for partners to replicate the study

Using Data in Decision Making

What makes it hard to be evidence-based?

- There's too much evidence
- There's not enough good evidence
- The evidence doesn't quite apply
- People are trying to mislead you
- You are trying to mislead you
- The side effects outweigh the cure
- Stories can be more persuasive

Some Reasons Why Libraries Aren't Evidence-Based
Hiller and Self (2008)

- **Don't know what evidence to collect**
  - Few libraries understand or are skilled in basic research methods
- **Don't understand the evidence**
  - Few library staff have experience in data analysis
- **Don't know how to present the evidence**
  - Difficulty in identifying what is important and actionable
- **Don't want to use the evidence**
  - "We know what's best for our customers"
- **Difficulty using the evidence for positive change**
  - All of the above and organizational structure/culture

If not EBL...
What?

Cognitive
Biases

Anchoring

Relying on a single fact or a small number of facts disproportionate to all facts when making a decision.

Jon Eldredge (2008)

Attribution

Over-emphasizing the effect of someone else's personality in a situation while under-estimating the actual in-context role and power of that person in this situation.

Jon Eldredge (2008)

Authority

Deferring to expert or other authority disproportionate to the extent of the expertise or the range of that authority.

Jon Eldredge (2008)

Confirmation

Reaching a conclusion prior to reviewing a situation and then focusing only upon those facts that confirm the prior conclusion.

Jon Eldredge (2008)

Expectancy Effect

When a person with some authority or control manipulates the situation so that an expected outcome actually occurs (self-fulfilling prophecy).

Jon Eldredge (2008)

Groupthink

Believing in the autonomy of a group, stereotyping of those outside the group, self-censoring, censoring of dissenters, maintaining the illusion of unanimity, and enforcing a group "consensus" viewpoint.

Jon Eldredge (2008)

Halo or Horns Effect

Allowing another person's positive or negative characteristics to affect one's perception of this person in other unrelated contexts.

Jon Eldredge (2008)

Naïve Realism

Believing that one perceives the world accurately without considering that one's prior experiences have shaped one's unique perception of the world.

Jon Eldredge (2008)

Outcome Bias

Viewing an outcome retrospectively (hindsight) based on the specific outcome rather than by how events occurred leading up to this specific outcome.

Jon Eldredge (2008)

Perseverance of Belief

To persist in believing previously acquired information even after it has been discredited.

Jon Eldredge (2008)

Positive Outcome Bias

Accentuating only the positive events or outcomes in a project rather than taking a more balanced view.

Jon Eldredge (2008)

Primacy Effects

Placing disproportionate importance upon information initially provided in a sequence of far more information rather than giving equal consideration to all information.

Jon Eldredge (2008)

Professional Deformation

Viewing a situation through the common perceptions of one's profession rather than by taking a broader perspective. Sometimes known as "Déformation Professionnelle."

Jon Eldredge (2008)

Question Framing

Causing a decision to be directed by the way that "the question" has been phrased, the range of those alternatives considered, or the permitted outcomes.

Jon Eldredge (2008)

Recency Effects

Placing disproportionate importance upon information provided at the end of a sequence of far more information rather than giving equal consideration of all information.

Jon Eldredge (2008)

Selective Perception

Prior expectations cause one to filter how one perceives a situation despite the existence of facts that should contradict these prior expectations.

Jon Eldredge (2008)

Status Quo Bias

Desiring to keep conditions relatively similar to one's present state and therefore predictable.

Jon Eldredge (2008)

Stereotype

Forming rigid perceptions based upon incomplete information about another individual or about a group.

Jon Eldredge (2008)

Storytelling

Granting more importance to a compelling anecdote rather than weighing all of the pertinent information when making a decision.

Jon Eldredge (2008)

Wishful Thinking

Assessing a situation incompletely according to a desired rather than a likely outcome.

Jon Eldredge (2008)

Worst Case Scenario

Emphasizing or exaggerating those possible negative outcomes disproportionate to all possible outcomes.

Jon Eldredge (2008)

Which cognitive biases do you encounter most often?

Biases Common to Libraries

- **Professional Deformation**
  - Viewing a situation through the common perceptions of one's profession rather than by taking a broader perspective.
- **Halo or Horns Effect**
  - Allowing another person's positive or negative characteristics to affect perception of this person in other unrelated contexts.
- **Perseverance of Belief**
  - To persist in believing previously acquired information even after it has been discredited
- **Wishful Thinking**
  - Assessing a situation incompletely according to a desired rather than a likely outcome
- **Worst-Case Scenario**
  - Emphasizing or exaggerating those possible negative outcomes disproportionate to all possible outcomes

How do you combat cognitive biases?

Using Evidence to Make Strategic Decisions for Your Library

Megan Oakleaf, MLS, PhD

www.meganoakleaf.info

moakleaf@syr.edu

Extra Slides

Formulating the Question

PICO
- Population
- Intervention
- Comparison
- Outcome

SPICE
- Setting
- Perspective
- Intervention
- Comparison
- Evaluation