



Evidence-Based Librarianship and Information Practice: Applications for Information Professionals in the Population Field

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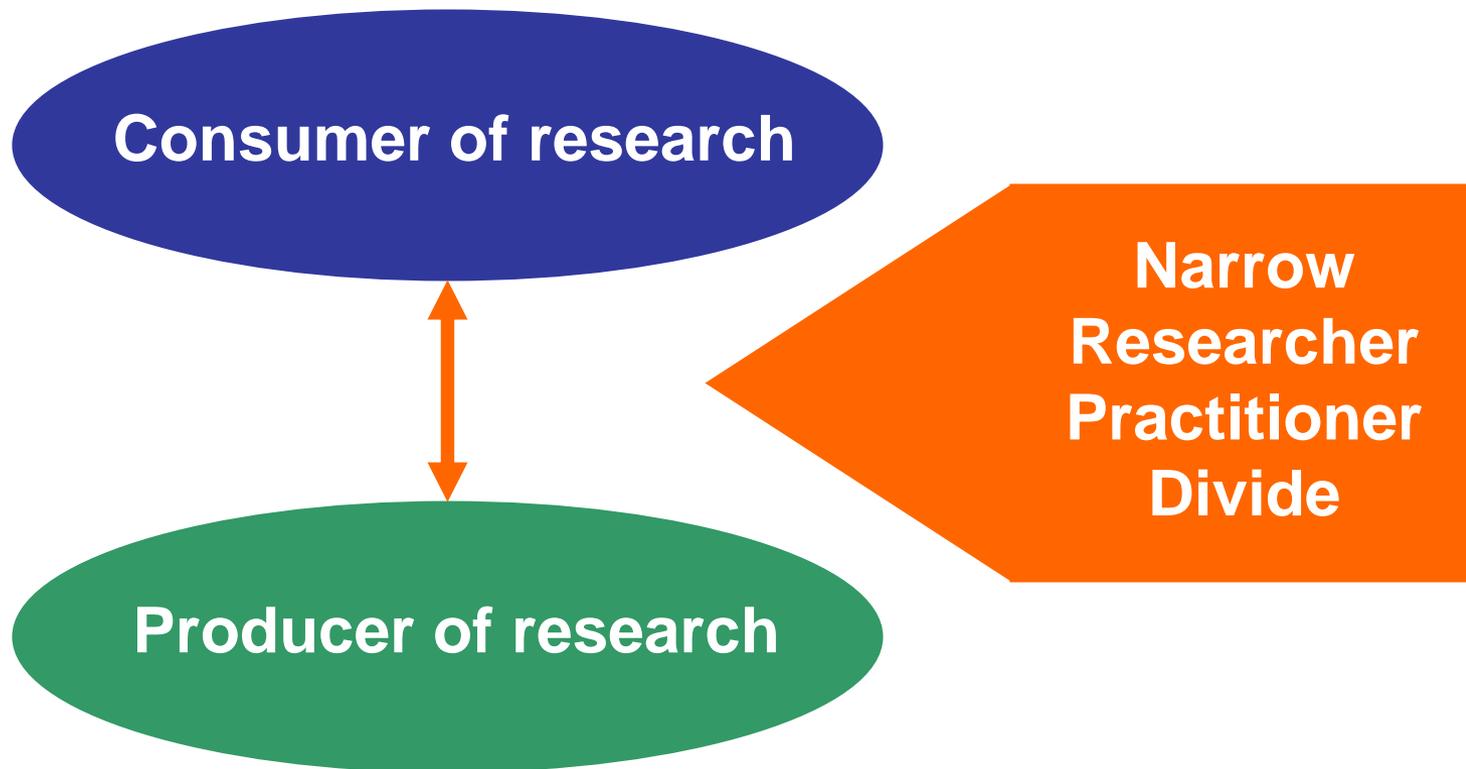


Primary aims of EBLIP

- Help you do your work better
- Base decisions on sound research
- Develop literature base
- Utilize findings in the literature
- Put the “science” back into LIS
- Narrow researcher-practitioner divide



Dual and distinct purposes





Applications

- Effectiveness of delivery of information to users
- Planning and assessment
- Inform decision-making
- Improve cost effectiveness
- Evaluate services
- Streamline routine processes
- Support collection development decisions
- Introduce new initiatives
- Contribute to promotion



Examples of EBLIP

- Emphasis of certain information services
- Information seeking behavior of users
- Staff training needs
- Usability of library or organizational website
 - How can we best measure usability of our library's webpages? (Crumley and Koufogiannakis, 2002)
- Collection development decisions
 - Does weeding increase subsequent circulation of a collection? (Crumley and Koufogiannakis, 2002)
- E-learning or workshops for instruction
 - Is online instruction alone more effective than online instruction combined with in-person class time? (Crumley and Koufogiannakis, 2002)



Benefits

- Can save time and money
- Improve efficiency and effectiveness
- Data on your side with supervisor, administration, funder
- Professional development
- Contribute to knowledge base
- Research as a professional responsibility



EBLIP origins in health sciences

- Evidence-based
 - Medicine (EBM) – early 1990s
 - Health Care (EBHC) – mid 1990s
 - Practice (EBP) – late 1990s
- Health sciences librarians conducted literature searches for medical professionals



EBLIP emerges as its own

- Global initiative: UK, Canada, US, Australia
- First appeared in literature in 1997
- Spans special, academic, public libraries
- LIS is rooted in the social sciences and EBM, EBHC, and EBP are rooted in the health sciences
- Debate in application of research methodologies



Phraseology

Evidence-based librarianship (EBL)

Evidence-based librarianship and
information practice (EBLIP)

Evidence-based information
practice (EBIP)

Evidence-based practice?



Booth's definition

- 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 judgments." (Booth, 2000)
- User-centered definition
- Author is from the UK



Crumley and Koufogiannakis' definition

- A means to improve the profession of librarianship by *asking questions as well as finding, critically appraising and incorporating research evidence from library science (and other disciplines) into daily practice*. It also involves encouraging librarians to conduct qualitative and quantitative research. (Crumley & Koufogiannakis, 2002)
- Focuses on improving the profession
- Specifies quantitative and qualitative research
- Authors are from Canada



Eldredge's definition

- Seeks to improve library practice by *utilizing the best available evidence in conjunction with pragmatic perspectives developed from librarians' working experiences*. The best available evidence might be produced from either quantitative or qualitative research designs...[though] EBL encourages using more rigorous over less rigorous forms of evidence...while making decisions (Eldredge, 2002a)
- Focuses on improving everyday library practice
- Author is from the USA



Conceptual framework (Eldredge, 2000)

EBL

1. Seeks to improve library practice by using evidence
2. Applies the best available evidence
3. Encourages the pursuit of increasingly rigorous research strategies
4. Values diverse research and dissemination of findings
5. Global approach to information seeking and knowledge development, values non-research as well
6. Adopts guidelines and standards of practice
7. Adheres to the hierarchy of evidence



EBL Process (Eldredge, 2000)

- Develop the question
- Search the literature for best-available evidence
- Evaluate validity and relevance of evidence
- Assess benefits and costs of action plan
- Evaluate the effectiveness



Other EBL processes

- Booth (2004)
 - Added a last step of “redefining the problem”
- Booth developed RESolutions model (2006a)
 - Diagnostic phase (5 steps)
 - Intervention phase (3 steps)
 - Implementation phase 5 steps)
- Practical framework by Crumley and Koufogiannakis (2002)
 - primary difference of assigning a “domain” to narrow search



EBL Process

- **Develop the question**
- Search the literature for best-available evidence
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Question is the key

- Formulate a “well-structured” question
- Iterative process at the outset determining data you need and the question needed to gather that data
- Use PICO (developed for EBM)
 - Population, Intervention, Comparison, Outcome
- Use SPICE (developed for LIP)
 - Setting, Perspective, Intervention, Comparison, Evaluation
- Assign domain to narrow search



Examples of well-structured questions

- In academic libraries, how do electronic subscriptions affect usage of the print monograph collection? (Crumley & Koufogiannakis, 2002)
- In reference transactions, do librarians, as compared to library technicians, provide a more complete answer? (Crumley & Koufogiannakis, 2002)
- How can the usability of [our] intranet site be improved to enhance the site's effectiveness as a gateway to the library's services and resources, for the staff and students of the organization? (Booth, 2006b)



EBL Process

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Assign domain

- **Domains** (Crumley & Koufogiannakis, 2002)
 - Collections
 - Education
 - Information Access & Retrieval
 - Management
 - Professional Issues
 - Reference
- **Benefits**
 - Decide which discipline may also have literature
 - Help with selecting search terms and databases
 - Focus the question
 - Improve retrieval of relevant literature



The Structured Abstract

- Objectives and goals of research are clearer when formulated as a structured abstract
- Improves standardization
- Improves retrieval
- Sections:
 - Subjects, Intervention, Outcomes, Methods, Results, Conclusions
 - Background, Aims, Methods, Results, Conclusions
- Structured abstract: An essential tool for researchers:
http://research.mlanet.org/structured_abstract.html



Structured abstract example

Changes in information behavior in clinical teams after introduction of a clinical librarian service

Christine Urquhart, PhD; Janet Turner, MA; Jane Durbin, MBA; Jean Ryan, MLIS

See end of article for authors' affiliations.

Objectives: The eighteen-month evaluation of a clinical librarian project (October 2003–March 2005) conducted in North Wales, United Kingdom (UK) assessed the benefits of clinical librarian support to clinical teams, the impact of mediated searching services, and the effectiveness of information skills training, including journal club support.

Methods: The evaluation assessed changes in teams' information-seeking behavior and their willingness to delegate searching to a clinical librarian. Baseline (n = 69 responses, 73% response rate) and final questionnaire (n = 57, 77% response rate) surveys were complemented by telephone and face-to-face interviews (n = 33) among 3 sites served. Those attending information skills training sessions (n =

130) completed evaluations at the session and were surveyed 1 month after training (n = 24 questionnaire responses, n = 12 interviews).

Results: Health professionals in clinical teams reported that they were more willing to undertake their own searching, but also more willing to delegate some literature searching, than at the start of the project. The extent of change depended on the team and the type of information required. Information skills training was particularly effective when organized around journal clubs.

Conclusions: Collaboration with a clinical librarian increased clinician willingness to seek information. Clinical librarian services should leverage structured training opportunities such as journal clubs.



EBL Process

- Develop the question
- Search the literature for best-available evidence
- **Evaluate validity and relevance of evidence**
- Assess benefits and costs of action plan
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Research methodologies

- Tension in use of research methodologies
- Health sciences/quantitative research
 - Randomized controlled trials, systematic reviews, cohort studies
- Social sciences/qualitative research
 - Case studies, focus groups, observational studies, surveys, ethnographies
- Library science
 - Descriptive surveys, case studies, qualitative methods



Levels of evidence

- Eldredge, 2000:
 - Systematic reviews (as gold standard)
 - RCTs
 - Controlled comparison studies
 - Cohort studies
 - Descriptive surveys
 - Case studies
 - Decision analysis
 - Qualitative research
- More elaborate framework published in 2002 (Eldredge, 2002b)



Levels of evidence

- Crumley and Koufogiannakis, 2002:
 - Core centered approach
 - Librarianship as discipline in center
 - Types of studies most likely to be conducted by librarians are near the center
 - “more equitable view of a model for research in the profession”



Literature evaluation criteria

- Quantitative article
 - Valid, reliable, applicable
- Qualitative article
 - Credible, transferable, dependable, confirmable



Literature evaluation tools

- CRiSTAL
 - Critical Skills Training in Appraisal for Librarians
 - User study: <http://www.shef.ac.uk/scharr/eblib/use.htm>
 - Information needs:
<http://www.shef.ac.uk/scharr/eblib/needs.htm>
- ReLIANT
 - Reader's guide to the Literature on Interventions Addressing the Need for education and Training
http://eprints.rclis.org/archive/00007163/01/RELIANT_final.pdf



Literature evaluation tools

- EBL Critical Appraisal Checklist

- <http://www.newcastle.edu.au/service/library/gosford/eb/toolkit/docs/EBL%20Critical%20Appraisal%20Checklist.pdf>

EBL Critical Appraisal Checklist		Yes (Y)	No (N)	Unclear (U)
	Is the study population representative of all users, actual and eligible, who might be included in the study?			
	Are inclusion and exclusion criteria definitively outlined?			
	Is the sample size large enough for sufficiently precise estimates?			
	Is the response rate large enough for sufficiently precise estimates?			

- Evidence summaries



EBL Process

- Develop the question
- Search the literature for best-available evidence
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- **Assess benefits and costs of action plan**
- **Evaluate the effectiveness**



PEBL

- Project methodology for EBL in development
- “...maximize the synergies between traditional project management and evidence based library and information practice, to show that projects underpinned by the EB-Lip framework are achievable for all library professionals.”
- <http://www.eblip.net.au/seminar/PEBL.pdf>



CPC serials review study

- Collection development analysis
- Case study using mixed methods
- Resulted in cost savings of 45%



CPC serials review study

- 90 serial titles in 2005
- Quantitative data
 - Cost per title: previous and current year, rate of increase
 - Usage statistics
 - Available in print at campus libraries, electronic access via databases, or publisher's website
 - # of articles written by CPC researchers



CPC serials review study

- Qualitative data
 - Review by Reference Librarian and me
- Proposal developed
 - Titles to renew and cancel
 - Financial implications
- Qualitative data
 - Review by Director, Deputy Director, Advisory Council resulted in revised proposal
 - Proposal sent to all CPCers for input



CPC serials review study

These recommendations are based on usage statistics, cost per title, availability at other UNC libraries, electronic accessibility, and CPC Library staff input. Upon request, I can provide this information on any of the titles listed below.

Please send feedback to Lori Delaney, lori_delaney@unc.edu, by Friday, August 5th.

Proposed Journal Titles to Cancel	Proposed Journal Titles to Renew
Ageing and Society Applied Demography	Adolescent and Family Health African Journal of Reproductive Health



Similarities with other methods

- Assessment and benchmarking
- Critical reflection
- Reflective practice
- Applied research
- Action research
- Project management



Drawbacks

- Reporting failures unusual
- Checklist fever
- Tools not always quickly, easily applied
- Limitations of research skills
- Time



Support by professional associations

- Medical Library Association
 - Research Policy Statement, 1997
 - Developed leading and important LIS questions (Eldredge, 2001)
- Special Libraries Association
 - Research Statement, 2001
 - Putting OUR Knowledge to Work: Building a Culture of EBP
- ALA and ACRL
 - Competencies include the ability to understand and conduct research
- Campbell Collaboration
 - Cochrane Review of social interactions in crime and justice, education, and social welfare



APLIC and EBLIP

- Encourage APLIC members to:
 - Utilize existing literature, including from other disciplines
 - Conduct research
 - Share findings
- Is anyone currently facing an operations or management decision that can be informed by EBLIP?



APLIC and EBLIP

- Can the EBLIP process be used for a review of APLIC listserv's effectiveness?

APLIC Listserv Review

	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06
<i>Type of Requested Item</i>							
Journal Articles	88	59	72	103	68	99	89
Book Chapters	1	0	0	1	1	4	6
Books	0	0	0	6	2	0	0
Dissertations	0	0	0	2	0	5	0
Videotapes	0	0	0	2	0	2	0
Newsletters	0	0	0	8	0	0	0
Total	87	59	72	122	71	110	95



EBLIP conferences

- International conferences
 - 2001: Sheffield, UK
 - 2003: Edmonton, Canada
 - 2005: Brisbane, Australia
 - 2007: Chapel Hill, NC



Resources: journals

- Select journals that publish EBLIP articles
 - [Evidence Based Library and Information Practice Journal](#)
 - [Hypothesis: The Journal of the Research Section of MLA](#)
 - [Journal of the Medical Library Association](#)
 - Health Information and Libraries Journal



Resources: websites

- Libraries Using Evidence Website
 - <http://www.newcastle.edu.au/service/library/gosford/eb/>
- EBLIP Toolkit
 - <http://www.newcastle.edu.au/service/library/gosford/eb/toolkit/>
- EBL Interest Group Listserv (Canada)
 - <http://lists.mun.ca/archives/eblig.html>
- EBL Listserv (UK)
 - <http://www.jiscmail.ac.uk/archives/evidence-based-libraries.html>
- Facebook
 - <http://unc.facebook.com/group.php?gid=2241110129> (need subscription)



References

- Booth, Andrew. (2006a). Route maps for Evidence-based problem Solutions (RESolutions): What's the evidence for journal cancellation? *Health Information and Libraries Journal*, 23, 298-303.
- Booth, Andrew. (2006b). Australian supermodel?: a Practical example of evidence-based library and information practice (EBLIP). *Health Information and Libraries Journal*, 23, 69-72.
- Booth, Andrew. (October 2000). *Exceeding expectations: achieving professional excellence by getting research into practice*. Presented at LIANZA 2000, Christchurch, New Zealand.
- Booth, Andrew. (2004). Evaluating your performance. In A. Booth & A. Brice (Eds.), *Evidence-based practice for information professionals: A handbook*. London: Facet Publishing.
- Booth, Andrew & Brice, Anne. (2001). Research. *Health Information and Libraries Journal*, 18, 175-177.
- Crumley, Ellen & Koufogiannakis, Denise. (2002). Developing evidence-based librarianship: practical steps for implementation. *Health Information and Libraries Journal*, 19, 61-70.
- Eldredge, Jonathan. (2000). Evidence-based librarianship: an Overview. *Bulletin of the Medical Library Association*, 88, 289-302.
- Eldredge, Jonathan. (2001). The most relevant and answerable research questions facing the practice of health sciences librarianship. *Hypothesis*, 15, 9-14, 17.
- Eldredge, Jonathan. (2002a). Evidence-based librarianship: What might we expect in the years ahead? *Health Information and Libraries Journal*, 19, 71-77.
- Eldredge, Jonathan. (2002b). Evidence-based librarianship: Levels of evidence. *Hypothesis*, 16, 10-13.
- Given, Lisa. (2006). Qualitative research in evidence-based practice: a Valuable partnership. *Library Hi Tech*, 24, 376-386.