Evidence Based Practice for Library Instruction

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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.”

Andrew Booth
Example Question

Is either face-to-face instruction or online tutorials significantly more effective in teaching first-year students information literacy skills?
Formulate question → Find Evidence → Appraise Evidence → Apply Evidence → Evaluate impact → Formulate question
The Search
Journal Titles

- Journal of Academic Librarianship
- Portal
- College & Research Libraries
- Communications in Information Literacy
- Evidence Based Library & Information Practice
- Journal of Education for Library & Information Science
- Research Strategies
Practitioner-Observed Evidence

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

Is either face-to-face instruction or online tutorials significantly more effective in teaching first-year students information literacy skills?
Evidence Based Library and Information Practice

Evidence Summary

Face-to-face Training is the Preferred Modality of Professional Continuing Education for Librarians of All Ages, but More Evidence is Needed

A Review of:

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Whoa.
Take Action!
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)
Applying EBP at 4 Levels
Using EBP in Course Integrated Instruction

Everyone knows learning must be serious and difficult and you must remain seated at all times. No fun allowed.
Traditional

The Three Perceptual Channels

AUDITORY
Spoken words, sounds... what is **heard** and **said**

KINESTHETIC
Emotions, actions, movement, taste, smell... what is **felt**

VISUAL
Printed materials, facial expressions, body language... what is **seen**
Cognitive Styles

- Perceptual modality preferences
- Field independence/dependence
- Constricted/flexible
- Tolerance for incongruous or unrealistic experiences
- Reflective/impulsive
- Abstract/concrete
- Innovator/adapter
- Broad/narrow
- Leveling/sharpening
- Converging/diverging
- Serialist/holistic
Cultural Diversity
Affective Styles

- Structural needs
- Curiosity
- Perseverance
- Frustration tolerance
- Anxiety
- Internal/external locus of control
- Intrinsically/extrinsically motivated
- Risk taking
- Competition/cooperation
Physiological Styles

- Gender-related behavior
- Health
- Time of day rhythms
- Mobility needs
- Environmental factors
- Hemispheric factors
Adult Learning

Andragogy: Core Adult Learning Principles
1. Learner's Need to Know
   • why
   • what
   • how
2. Self-Concept of the Learner
   • autonomous
   • self-directing
3. Prior Experience of the Learner
   • resource
   • mental models
4. Readiness to Learn
   • life related
   • developmental task
5. Orientation to Learning
   • problem centered
   • contextual
6. Motivation to Learn
   • intrinsic value
   • personal payoff

WHAT'S THE POINT?
EBP

Formulate question

Find Evidence

Evaluate impact

Appraise Evidence

Apply Evidence

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Using EBP in Curriculum Integrated Instruction
% of Students Required to Find Specific Resources Types When Complete Course Assignments Are Known

% of Students Required to Find Multiple Resource Types When All Course Assignments Are Known

EBP at the Program Level

What’s a program?

• Instructional structures
• Facilities
• Human resources
• Financial resources
• Support for professional development
EBP with an Institutional Perspective
The Value of Academic Libraries
Comprehensive Research Review & Report

Freely available online: http://www.acrl.ala.org/value/
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Student Enrollment, Retention, & Graduation Rates

What do we know about the library’s impact on these things?

How might we document & increase existing library impact?

Graduation rates

Recommendation of current students

Fall-to-fall retention

Matriculation of admitted students

Recruitment of prospective students
Some studies correlate library use and retention, but no causative links.

One facilities study links libraries to student recruitment.

- Increased librarian-student contacts → increased student retention & graduation
- Increase level of interaction in instructional activities?
- Increase expenditures?
- Court best admits → best matrics.
What do we know about the library’s impact on these things?

How might we document & increase existing library impact?

Internship success

Professional/graduate school acceptance

Job placements

Marketable skills

Job salaries

Student Success
Not many significant studies to date connecting libraries to student success.

Employers want their employees to have the skills librarians teach:

- critical thinking and analytical thinking skills (81% of employers);
- ability to analyze and solve complex problems (75%); and
- ability to locate, organize, and evaluate information from multiple sources (68%).

Support job placement?
Student Achievement & Learning

What do we know about the library’s impact on these things?

Learning assessments

GPA

Professional/educational test scores

Faculty judgments

How might we document & increase existing library impact?
Many, many micro-level studies.

One study – Used control groups to demonstrate that information literacy instruction resulted in higher GPAs, more semester hours completed, and more persistence.

The easy-to-collect data is not revealing enough.

Connect individual student library interactions with increased GPA or test scores?

Conduct test audits?

Employ assessment management systems to “roll up” what students learn by outcome?
Student Experience, Attitude, & Perception of Quality

What do we know about the library’s impact on these things?

How might we document & increase existing library impact?

- Self-report engagement studies
- Help surveys
- Senior/alumni studies
- Alumni donations

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Studies have identified “library-related” NSSE & CSEQ items.

- Some majors, demographic groups, and seniors engage in more library-related activities
- Library-related activities “go hand-in-hand” with engagement in other areas
- Academic support expenditures (including library expenditures) tend to correlate with increased engagement
- Greater library resources correlates with critical thinking skills
- Institutional academic challenge correlates with library use

No obvious causal relationships between libraries & these areas of institutional mission/interest.

Include more library-related items on student experience surveys?

Conduct “help” studies? (i.e., Trinity University study, forthcoming)
Research Agenda
WHAT'S THE POINT?
EBP

- Find Evidence
- Evaluate impact
- Formulate question
- Apply Evidence
- Appraise Evidence
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
How are you making decisions now?
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 EBP... what?

Cognitive Bias

Biases Common to Libraries
Hiller and Self (2008)

- **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 possible negative outcomes disproportionate to all possible outcomes.
How do you combat cognitive biases?
How is EBP Like IL?
EBP

1. Formulate question
2. Find Evidence
3. Appraise Evidence
4. Apply Evidence
5. Evaluate impact

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Formulate a research question

Find sources that help answer the question

Appraise (evaluate) the sources

Apply information gleaned from sources

Evaluate research product
Thank you!

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