Information Literate Students: Faculty and Librarians collaborate on a shared commitment

Anne Fullerton,
Biology & Chemical Engineering Librarian

Kathy MacDonald,
Optometry Librarian,

University of Waterloo

We* both want our students to:

- understand and respect intellectual property
- be literate, particularly information literate
- become writers, problem solvers, critical thinkers, and self-directed, lifelong learners.

* Faculty and Librarians

Injecting IL into curriculum:

- **Champion** - Enthusiastic faculty committed library user, sensitive to student research issues

- **One shot** – designed and delivered on demand – opportunity - reactive

Faculty Attitudes and Pedagogical Practices Towards Information Literacy

2 Canadian Surveys showed:

"Faculty across the disciplines believe students should be information literate, yet many of them are doing nothing about it."

Cannon, 1994 – social science & humanities

Leckie & Fullerton, 1999 – SciTech, medicine, math

When Faculty and Librarians Collaborate They:

- View/respect each other as colleagues with special skills
- Have realistic views of students' IL
- Value teaching and learning
- Have ongoing communication

Topics for Ongoing Communication

- Student IL levels before
- Assignment Learning objectives
- Timing
- Realistic assignment
- Evaluate IL – process
- Quality of student work
- Student questions/help

55% faculty missed the IL class

Collaboration Models and IL

- Enterprise wide solution to an enterprise wide problem (e.g. plagiarism tutorial)
- Office of Teach. Develop. courses for TAs & faculty
- Mandated by higher ed institutions e.g. Middle States Commission (outcomes measured)
- Earlham College – 40 yrs. IL in curriculum

Collaboration Models, Top Down

- **Academic teams** – Mellon Project – UC Berkley – faculty funded to revise course curriculum – Faculty, Librarian, Educational Tech. and others. 2 wk institute+

  http://www.lib.berkeley.edu/mellon/index.html

- **CSU** campuses – Information Competence grad requirement

  http://www.calstate.edu/LS/Overview.shtml

Hannelore Rader*: students will become information literate if essentials met:

1. Library Administration makes commitment to integrate IL into the curriculum

2. Librarian and Faculty develop curriculum collaboratively

3. University commitment to student learning outcomes

* University Librarian, University of Louisville; Miriam Dudley Instruction Award,

In an Information Literate University:

Management

- Head of library involved in strategic decision
- Mentioned in strategic documents
- IL strategy seen as USP for university
- Common understanding of IL
- Talk of IL “education”
- All stakeholders have clear idea of roles

Librarians

- IL education a key part of job desc for many
- Majority enjoy education role, may have qualifications, are reflective practitioners
- Discussion of teaching & channels for this
- Good collaboration and mutual respect
- Key part of strategy

Conclusions & Questions

- Can librarians sustain one by one advocacy of faculty to open the curriculum to Information Literacy?

- Can the Earlham College scenario exist at large research universities?

- Will a shift towards active and reflective learning *(problem based, inquiry based, evidence based)* persuade faculty to collaborate with librarians on IL?

References

Cannon, Anita. (1994) Faculty Survey on Library Research Instruction. RQ 33 (Summer): 524–541.

Leckie, Gloria J. and Anne Fullerton. (1999) Information literacy in science and engineering undergraduate education: faculty attitudes and pedagogical practices. *College & Research Libraries*, 60(1), p. 9-30.

Leckie, Gloria J. and Anne Fullerton. (1999) The roles of academic librarians in fostering a pedagogy for information literacy. pp. 191-201 in *Racing Toward Tomorrow: Proceedings of the 9th National Conference of the Association of College and Research Libraries, April 8-11, 1999*, ed. by Hugh Thompson. Chicago: ACRL.

Leckie, Gloria J. (1996) Desperately seeking citations: uncovering faculty assumptions about the undergraduate research process. *Journal of Academic Librarianship*, 22(3), p. 201-15.

McGuinness, C. (2007) 'Exploring strategies for integrated information literacy ' From 'academic champions' to institution-wide change' *Communications in Information Literacy* 1 (1) :26-38.

McGuinness, C. (2006) 'What faculty think: Exploring the barriers to information literacy development in undergraduate education'. *Journal of Academic Librarianship*, 32 (6):573-582.

Webber, S. & Bill Johston (2004) Perspectives on the information literate university SCONUL Focus: 33-35

A UW example: OPTOM 342A: Case Analysis and Optometric Therapies 1

Kathy MacDonald

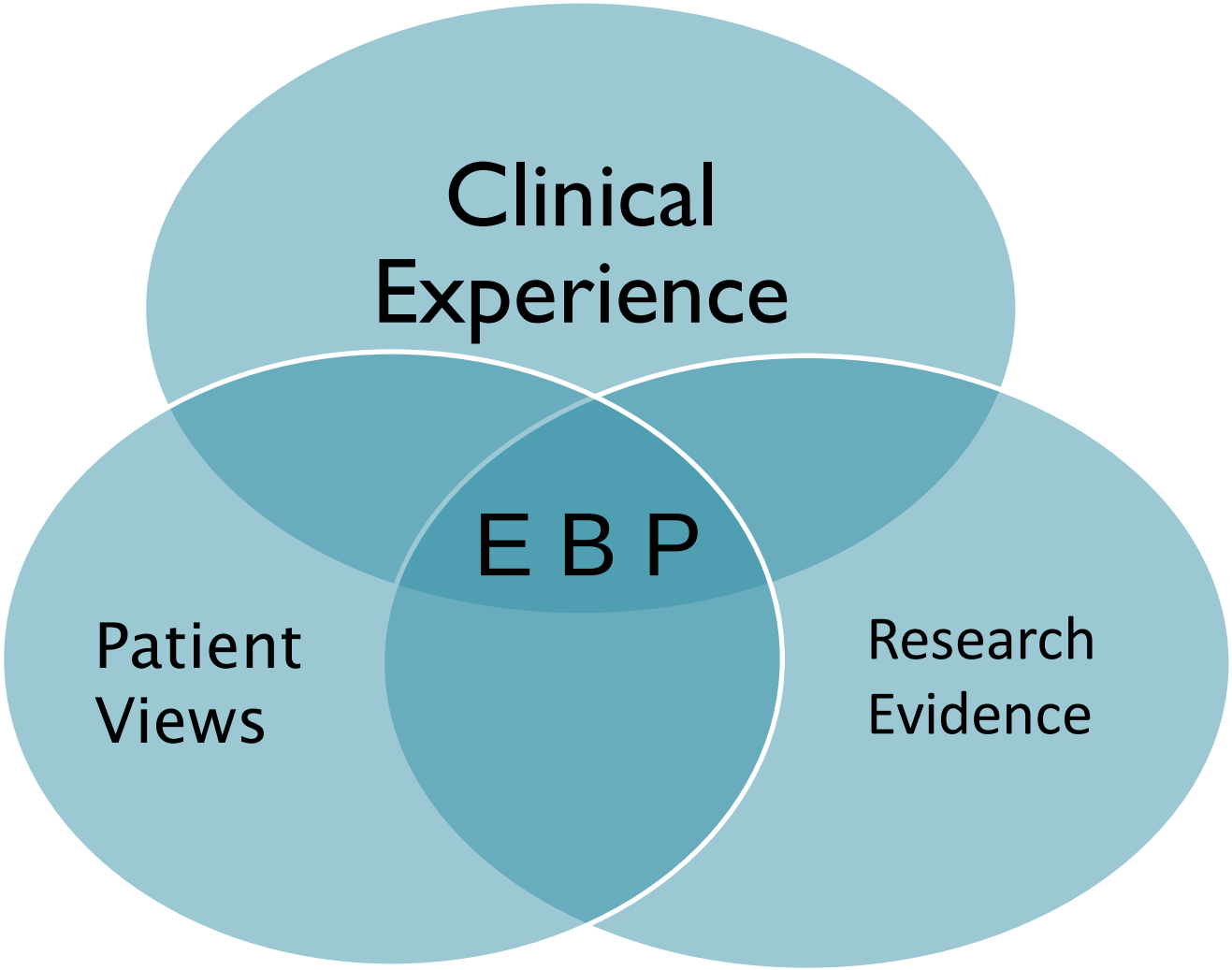
Liaison Librarian - Optometry

Evidence-based medicine

- Evidence-based medicine:"The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of EBM means integrating individual clinical expertise with the best available external clinical evidence from systematic research." (Sackett DL 1996)

- Health professionals need to be life-long learners.

Evidence-based Practice (EBP)



Mondash University:Centre for Effective Practice Logo. 2008

Steps in EBM process

- Step 1: Converting the need for information into an answerable question
- Step 2: Tracking down the best evidence with which to answer the question
- Step 3: Critically appraising the evidence for its validity, impact and applicability
- Step 4: Integrate the evidence with clinical expertise and patient values
- Step 5: Evaluate our effectiveness and efficiency in this process

Staus S et al (2005) *Evidence-based Medicine: How to Practice and Teach EBM 3rd Ed.*

Step 1. The question

- There are two types of questions

1. Background questions = understanding context, general knowledge
2. Foreground questions = decision making –course of action

Staus S et al (2005) *Evidence-based Medicine: How to Practice and Teach EBM 3rd Ed.*

Step 1. Background Questions

Background questions are general knowledge questions that contain two components:

- A question root (who, what, where, when, why, how) with a verb
- An aspect of the condition or thing of interest

Examples:

"What causes glaucoma?"

"How does iritis cause a decrease in IOP?"

Staus S et al (2005) *Evidence-based Medicine: How to Practice and Teach EBM 3rd Ed.*

Step 1. Foreground Questions

- Foreground questions ask for specific knowledge to inform clinical decisions or actions with the following components:
  - Population/patient
  - Intervention
  - Comparison
  - Outcome

Paul Glasziou, University of Queensland & Oxford

Step 1. The question

- Population/patient – includes the population, patient situation or problem of interest
- Intervention – includes an exposure, a diagnostic test, a prognostic factor, a treatment, a patient perception, etc.
- Comparison – includes a comparison intervention if relevant
- Outcome – A clinical outcome of interest including a time if relevant

Staus S et al (2005) *Evidence-based Medicine: How to Practice and Teach EBM 3rd Ed.*

Step 2: Current best evidence

Step 2A: Select an evidence source

Step 2B: Execute a search strategy

Step 2C: Examine the evidence for relevance to question

Staus S et al (2005) *Evidence-based Medicine: How to Practice and Teach EBM 3rd Ed.*

Step 3. Appraising the Evidence

- Is the evidence valid?
- Is the valid evidence important?
- Can we apply this valid, important evidence to our patient?

Staus S et al (2005) *Evidence-based Medicine: How to Practice and Teach EBM 3rd Ed.*

Step 4: Integration

- Integrate the evidence with clinical expertise and patient values
  - Incorporating new evidence into clinician's existing understanding
  - Using clinical expertise to determine if evidence relevant, useful and appropriate in this case

Step 5: Evaluation of Self

Step 1 (question) examples:

1. Am I asking any clinical questions at all?
2. Am I asking well-formulated questions?

Step 2 (evidence) examples:

1. Do I know the best sources of current evidence for optometry?
2. Am I becoming more efficient in my searching?
3. Am I using MeSH headings, thesaurus, limiters, and intelligent, free text when searching MEDLINE?

References

- Staus S, Richardson S, Glasziou P, Haynes B. (2005) *Evidence-based Medicine: How to Practice and Teach EBM 3rd Ed.* Toronto: Elsevier.

- McKibbon A, Eady A, Marks S. (1999) PDQ *Evidence-based Principles and Practice*. Hamilton: B.C. Decker.