HYPOTHESIS

THE JOURNAL OF THE RESEARCH SECTION OF MLA

Contents

Assessing the Efficacy of EBM Teaching in a Clinical Setting

Gardois P.*, Grillo G**., Lingua C*., Jourdan A.***, Piga A*., Fronteddu S*.
—submitted by Anne Brice

Background

The popularity of EBM practice has led to a growing number of EBM courses. There are many methods for teaching and learning evaluation, but limited data exists on the application of EBM skills in clinical practice, especially where the working environment is not EBM-oriented, and where there is an interest in long-term results. This study aimed to evaluate the effectiveness of Information Retrieval and EBM skills in a clinical setting.

Objectives

To assess the long term effect of an educational program for health professionals, based mainly on information retrieval and EBM principles. Secondary goals identified within the research were:

- to understand the role of EBM methods and instruments in clinical practice
- to assess users' perception of the main barriers to EBM practice

Methods

An educational program was developed at the Pediatrics and Gynecology Departments of Turin University (Italy). Six courses were organized (five with CME credits). Four focused mainly on medical information retrieval (theory of databases, basics of information retrieval, basic and advanced use of medical databases and search engines, bibliographic software), and two were specifically EBM oriented (advanced IR skills, basic statistics, study design, critical appraisal). The courses were offered from Spring 2001 to Spring 2003; their average duration was 16.5 hours (min 11, max 28) and seven teachers and six tutors (librarians, clinicians, statisticians, epidemiologists) were employed. A further set of courses are being offered from Spring 2003 – 2006.

Chapter Research Committees Report
— submitted by Priscilla Stephenson

The Institutional Review Board Process:
A Brief Overview
— by Hanna Kwasik and Pauline Fulda

Conducting a research study at a health sciences center often requires compliance with various procedures within the university's office of research services before the study can begin. Medical researchers are usually familiar with the oversight process for the protection of human subjects. Librarians, however, frequently have little experience in this area. Our recent funded study* used an anonymous survey distributed to all members of our regional medical library association. Navigating the Louisiana State University Health Sciences Center's (LSUHSC's) Institutional Review Board (IRB) requirements provided us with many learning opportunities.

The compliance process began with a meeting with the IRB coordinator, where we presented the details and documents from our study proposal. We received an outline of the campus' IRB requirements and the forms to be submitted. There are variations in requirements from institution to institution, but most of those we discuss here are considered essential to any IRB program.

We completed a self-certification on human subject protection as specified by the LSUHSC - New Orleans IRB policy. We read the following requisite materials:

- IRB Guidebook (<http://www.lsuhsc.edu/no/Administration/rs/irb/>)
- Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research. (<http://ohsr.od.nih.gov/guidelines/belmont.html>) (The report summarizes the basic ethical principles identified by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.)
- LSUHSC multiple project assurance document
- Protecting Study Volunteers in Research; A Manual for Investigative Sites, by Cynthia McGuire Dunn and Gary L. Chadwick, 3rd edition, (Boston, MA: CenterWatch, c2004).

Next, we adapted the draft of the cover letter to accompany our study instrument, and included information disclosing the IRB's eight required elements. These elements are specified in the Code of Federal Regulations (45CFR46 Sec. 46.116) (<http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi>) and are as follows:

- Research description
- Risks to participants
- Benefits to subjects

- Alternative procedures or courses of treatment (if any, that might be advantageous to the participants)
- Maintenance of confidentiality
- Explanation of compensation (if more than minimal risk involved)
- Contact information (for questions about participants' rights)
- Voluntary participation statement

Usually the IRB process requires a period of time for review. Depending on the complexity of the study, some protocols can be reviewed more quickly and expedited. This was the case with our project.

Our final application packet consisted of the following required documents:

- IRB application form (<http://www.lsuhsc.edu/no/Administration/rs/irb/>)
- Waiver of documentation of informed consent
- Copy of cover letter and survey instrument
- Grant application

We had to submit the appropriate documents within the timeframe of the IRB's meeting and review schedule and to obtain its approval before the study could begin. After completing our study, the IRB process also required a final written report and a formal memo requesting an official closure of the study.

Discussion

At first glance, complying with the university's IRB requirements seemed to be a daunting task, when all we wanted to do was submit a survey to 335 association members. IRB rules are designed to protect the confidentiality and safety of human subjects in a wide variety of campus projects. For library and educational research, confidentiality is typically the primary issue.

The IRB consultant wanted us to tighten our statement regarding confidentiality. In the original cover letter we had simply stated, "We ask your assistance in our research study by completing the enclosed anonymous survey on mentoring." We had to use a more strongly worded paragraph to comply with the campus IRB requirements.

> "To ensure your anonymity, please do not put your name or return address on the survey or en-

velope. All information will be treated confidentially, and no one will see the individual handwritten survey. There will be no attempt to link you with a particular library or place of employment. After all data entry is completed, the handwritten surveys will be destroyed. Only aggregate data will be released. If you have questions about the rights of study subjects, you may contact the Chancellor of the LSU Health Sciences Center at (504) 568-4801."

To ensure anonymity, we included an unmarked envelope for returning the survey. In addition, so that no respondent would have to provide a name or other identifying information, we sent research study results to all who were asked to participate in the study.

The IRB consultant also required us to add a sentence stating that the survey could be submitted even if it were only partially completed. We were reluctant to use this statement, because we wanted to encourage completeness, rather than hinder it. Nonetheless, the following statement accompanied our survey, "Your participation in the survey is very important. Please complete as many of the questions as you feel comfortable, and remember not to include your name." Fortunately, we had a high rate of returned surveys, and the great majority were fully completed.

Overall, the wording in our documents was stronger than we had originally envisioned. We would have preferred that our documents had had a friendlier tone; however, the changes were required. After much perseverance, several revisions, and assistance from coordinators in the IRB office, we successfully navigated the process, received IRB approval, and completed our study!   ●

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Continuing Education Update
—submitted by Kristine Alpi (kalpi@att.net)

The 2005 MLA Annual Meeting offers several continuing education opportunities to develop research skills. Two of these are in the 700s: Research, Analysis, and Interpretation area and are taught by Research Section members.

- **Evidence-based Librarianship (CE 701)** : *Sunday, May 15, 8:00 a.m.-5:00 p.m.*
  Instructor(s): Jonathan Eldredge, AHIP, coordinator and associate professor, Academic and Clinical Services, Health Sciences Library and Informatics Center, University of New Mexico-Albuquerque

- **Qualitative Evidence: Practical Methods to Gather and Analyze Information Behavior and Attitude Data (CE 700)** : *Sunday, May 15, 8:00 a.m.-5:00 p.m.*
  Instructor(s): Michelynn McKnight, AHIP, assistant professor, School of Library and Information Science, Louisiana State University-Baton Rouge

Other classes of interest include:
- **Benchmarking Boot Camp for Beginners: Putting Benchmarking to Work for Your Library (CE 203)** : *Sunday, May 15, 8:00 a.m.-5:00 p.m.*
  Instructor(s): Michelle Volesko Brewer, director, Library and Corporate Information Services, J. Harold Johnston Memorial Library, New Jersey Hospital Association-Princeton

- **Grant Writing (CE 206)** : *Sunday, May 15, 8:00 a.m.-Noon*
  Instructor(s): Ruth Holst, AHIP, FMLA, associate director, National Network of Libraries of Medicine, Greater Midwest Region, University of Illinois-Chicago, and Angela B. Ruffin, head, National Network of Libraries of Medicine, National Network Office, National Library of Medicine, Bethesda, MD

LIS/TEN UP: Research News from the Groves of Academe
— submitted by Ellen Detlefsen, DLS

Who's Teaching?

This LIS/ten up column features a small research project for which I solicit your help. MLA's Professional Development department has asked me on several occasions if I could come up with a list of individuals who teach medical librarianship and medical informatics in LIS schools in North America. I have compiled the following list from a variety of sources (ranging from formal lists to webscanning to hearsay!), and I invite your input now. I would like the names of all colleagues who teach, whether full time or adjunct, regularly or occasionally. Please send "adds and changes," directly to me at ellen@mail.sis.pitt.edu.

Why, you may ask, am I putting this call in the Research Section journal? Because many of the Section's members are actively involved with research in the LIS programs in their home universities, and may know current information about the LIS faculties.   ●

LIS Program	Faculty Member(s) w/ medical course responsibility(ies)
Alabama	Steven MacCall
Albany	
Alberta	
Arizona	Jana Bradley; Zoe Stavri
British Columbia	Christine Marton
Buffalo	Gary Byrd; Diane Schwartz
University of California at Los Angeles	Julie Kwan
Catholic	Shelley Bader; Anne Linton; Ginny DuPont
Clarion	
Dalhousie	Elizabeth Sutherland
Denver	
Dominican	Pru Dalrymple; Logan Ludwig; Carol Jeuell
Drexel	Carol Hansen Montgomery; Nancy Calabretta
Florida State	Cheryl Dee
Hawaii	
Illinois	Linda Smith
Indiana	Katherine Schilling; Julie McGowan
Iowa	Padmini Srinivasan; Connie Delaney
Kent State	Ted Morris; Ruth Fenske; Gretchen Hallerberg
Kentucky	SuJin Kim
Long Island	Mary Westermann-Cicio; Kris Alpi
Louisiana State	Beth Paskoff; Michelynn McKnight
Maryland	Keith Cogdill
McGill	Sharon Grant
Michigan	
Missouri	MaryEllen Sievert; Teresa Hartman
Montreal	
North Carolina - Chapel Hill	Joanne Marshall; Claudia Gollop
North Carolina at Greensboro	Beatrice Kovacs
North Carolina Central	
North Texas	Ana Cleveland
Oklahoma	Clinton M. Thompson, Jr
Pittsburgh	Ellen Detlefsen; Mary Jo Dorsey
Pratt Institute	helen ann brown
Puerto Rico	Elsa Lopez-Mertz
Queens	Karen Brewer; Van Abels
Rhode Island	Frank Kellerman
Rutgers	Laura Barrett
St. John's	Bella Hass Weinberg
Sam Houston State	
San Jose State	Janet Hobbs; Irene Lovas
Simmons	David Ginn
South Carolina	Feili Tu
South Florida	Cheryl Dee; Jim Andrews
So. Connecticut State	Charles Greenberg
Southern Mississippi	
Syracuse	Catherine Arnott Smith; Susan Rohner; Cynthia Sheffield; Wendy Tarby
Tennessee	Martha Earle
Texas at Austin	Glynn Harmon
Texas Women's	Jeff Huber
Valdosta State	
Washington	Sherrilynne Fuller
Wayne State	Lynda Baker
Western Ontario	Pam McKenzie
Wisconsin-Madison	Patricia Brennan
Wisconsin-Milwaukee	Alexandra Dimitroff

THANK YOU!

MLA 2005—
Research Section Programming

Monday, May 16, 2:30pm—4:00pm

Research Methodology 101 (Part I): Yes, You Can Do Research! (Sponsor)
How to find a research topic and take it through to finding an answer you can publish. Part I covers why and how to do research.

Reaching Out Magnificently to All at All Points of Care or Need (Co-Sponsor)
Advances in integrating information in the health care enterprise pose challenges for medical librarians as they reach out in diverse ways to diverse constituencies with diverse information needs. This session will focus on innovative methods of and special or unique experiences in delivering information to diverse constituencies to all points of care or need.

Tuesday, May 17, 2:30 pm—4:00pm

Research Methodology 101 (Part II): Yes, You Can Do Research! (Sponsor)
How to find a research topic and take it through to finding an answer you can publish. Part II covers turning the data into an article and how to get it published.
Panelists:
Joanne G. Marshall, AHIP, FMLA (MLA President)
Finding your niche: opportunities for research and publication for all
Carol Lefebvre (Information Specialist)
Evidence-based librarianship underpinning Cochrane Reviews: a case study of the role of information retrieval research in evidence-based health care
Mary J Moore, PhD (Director of Libraries)
Cynthia A. Olney, PhD (Evaluation Consultant)
Taming evaluation research data: organizing and reporting your results

Practicing Evidence-based Health Care (Sponsor)
Researchers, clinicians, and librarians today practice evidence-based health care. More and more of us are framing searchable questions, preparing clinical trials, and systematic reviews. What are your contributions to the practice of evidence-based health care?

Establishing Best Practice (Co-Sponsor)
Clinical medicine has modeled the use of scientific evidence to support professional decision making. But how do you locate, organize, and analyze the existing data in nonclinical medicine fields like librarianship, oral health, and public health?

Wednesday, May 18, 2:30pm—4:00 pm

Trends in Oral Research (Co-Sponsor)
Describes the current trends in oral research, the effect of evidence-based medicine, and the role of the librarian in the research process.

Development of a Core Titles List of Health Sciences Books in a Post Brandon/Hill List World

—Submitted by Jill Crawley-Low

The inaugural Brandon/Hill selected list of books and journals for the small medical library was published in the *Bulletin of the Medical Library Association* in July 1965. Thirty-eight years later, the 20th revised version was published on the Internet bringing to an end a successful and long-standing collection development project. The three Brandon/Hill selected lists - medical, nursing, and allied health - still reside on the Mount Sinai School of Medicine website (www.mssm.edu/library/brandon_hill/small_medical/index.shtml), although they are no longer updated.

Alfred N. Brandon began the selected book and journal list in 1965 as a collection development tool for hospital librarians. Later, after Dorothy Hill became a co-author, the list became known as the Brandon/Hill List (*Bulletin of the Medical Library Association* 87(2), April 1999, p.147). After Alfred Brandon's death in 1996, Dorothy Hill continued revising the lists with the help of colleagues until 2004.

Health sciences collection development librarians wondered what would fill the void left by the cessation of the Brandon/Hill lists. T. Scott Plutchak, editor of the *Journal of the Medical Library Association* (*JMLA*), facilitated discussion among librarians with the suggestion that members from MLA sections might create a standardized methodology for developing recommended lists of books and journals that would incorporate evidence-based medicine (EBM) principles. Interested librarians met informally at the MLA annual conference in Washington D.C. in May 2004 to continue the dialogue. Members from the Collection Development Section organized and chaired the meeting. There was general agreement at the meeting that the creation and maintenance of selected lists of books and journals is a time-consuming task and not one that Sections were willing to embrace, although Sections would continue to develop lists for specific purposes. Recently, the Collection Development Section posted a list on MLANet (colldev.mlanet.org/subject.html), of subject-based resources aimed at health sciences librarians with collection development responsibilities.

An announcement made at the May 2004 meeting by Doody's Enterprises, Inc. to create a web-based annual publication called the *Doody's Core Titles in the Health Sciences* (DCT) was discussed. Although the DCT would focus on books and software, and exclude journals, the consensus was that it would be a suitable alternative to the Brandon/Hill lists. Support for the proposed product was based, in part, on the reputation of Doody's Enterprises, Inc. for providing objective, timely, and authoritative reviews of newly-published books from many English-language medical publishers. At the meeting, and later by e-mail, librarians were urged to contribute to the development of the inaugural *Doody's Core Titles in the Health Sciences* by acting as reviewers in their areas of subject expertise.

The DCT was first published in December 2004, and covered 119 specialties in clinical medicine, basic sciences, nursing, allied health, and other associated health-related disciplines. The selection and review process for the inaugural issue involved 92 content specialists and 82 collection development librarians. The content specialists in each of 119 specialties made the initial selection of core titles for their areas. A panel of up to 3 librarians for each area reviewed the selections made by the content specialists, and had the opportunity to add titles to the list. Finally, the librarians scored each title on the final list according to 5 different key collection development criteria. The criteria were authoritativeness of author and publisher, scope and coverage of the subject matter, quality of content (including timeliness), usefulness and purpose, and value for money.

A Doody's editor welcomed librarians to the project by mail, and later communicated instructions by e-mail. All reviewing tasks were completed using web-based forms on the Doody's website. Although the deadlines were firm, there were opportunities to edit responses before the final version of the work was submitted. Selection tools for librarians and content specialists included titles that appeared on the final versions of the Brandon/Hill lists, access to Doody's database of book reviews and ratings, tables of contents from Majors, bibliographic data on books and software from Matthews, and access to the websites of three major medical book dealers. Reviewers were encouraged to consult with fellow panelists. Librarian reviewers were recognized with a certificate of achievement for their participation in the DCT project. A follow-up survey asked for feedback from librarians regarding the selection and scoring process, and how to improve it. I served as a reviewer for the veterinary medicine and toxicology sections, and found the experience to be intellectually challenging and rewarding.

Doody's Core Titles in the Health Sciences will be published annually with a fresh selection and scoring process. The database will be updated weekly with new pricing information, software upgrades and enhancement, and information about new editions. Selectors wishing to participate in the creation of the 2005 edition of the *Doody's Core Titles in the Health Sciences* may send an e-mail directly to dcteditor@doody.com.   ●

(Assessing the Efficacy of EBM Teaching—Continued from page 1)

One hundred twenty-six unique users have participated in the courses so far (140 in total) belonging to the following categories: MDs, postgraduating doctors, nurses, midwives, PhDs (chemistry, biology, etc), and other technical staff. The average learners/facilitators rate was 3.9 (min 2.7 max 5.3).

Three areas of assessment were carried out:

1. Information Skills Durability Assessment
This was carried out by means of a multiple choice questionnaire, administered after the course and then again in May 2004 (11 to 38 months after). The main goal was the assessment of the Delta (Δ) between the two results.

2. EBM Skills Durability Assessment
The first part of the Fresno Test (validated in 2002; see Ramos KD, BMJ 2003; 326:319-21) was administered to test EBM skills in 4 areas:

Item	Weight (% of total points)
Clinical question	10
Selection of bibliographic sources	21
Selection of study design	41
MEDLINE search strategy	28
Total	100

3. EBM practice assessment
A qualitative questionnaire was administered for which the main outcome measures were: ideal and real percentage of clinical activity devoted to EBM; relative frequency of use of different bibliographic sources; experience of barriers and facilitators for EBM practice.

Users were contacted initially by letter, and then after 1 week by e-mail, explaining the study purpose and methods. Up to 5 phone calls during 3 weeks were made in order to make an appointment for questionnaire completion. Questionnaires were administered individually in the library, without the use of computers and users were allowed 45 minutes for completion. The software used for statistical analysis was StatSoft Statistica 6.1 for MS Windows.

Results

Seventy out of 126 users completed the questionnaire, with 55.6% response rate (N = 70). Based on reported opinions the questionnaire was considered "difficult". A higher response rate might have been reached by accepting "remotely completed questionnaires", but the data reliability would have been lower.

Demographics data showed the following: gender: F 71%, M 29%; age: mean = 41.03, StdDv = 8.70, Max = 62, Min = 27; role: 72% doctors, 28% other roles. Delta between 1st and 2nd completion of multiple choice learning evaluation questionnaire was as follows: delta%: N = 70; Mean = -19.43; StdDv = 19.02; Max = 16.67; Min = -73.91.

The main barriers affecting the results of the 2nd completion of the multiple-choice questionnaire were reported as finding contradictory results in the literature; poor knowledge of English; and insufficient number of PCs. The main barriers affecting the Delta between 1st and 2nd completion of the multiple-choice questionnaire was insufficient access to PCs.

Results: Fresno test

	Valid N	Mean (%)	Std. Dev.
Total Score	46	54.99	24.24

The main barriers affecting the Fresno test total score are: lack of institutional support, lack of statistics skills, insufficient search strategy building abilities, poor knowledge of English language.

EBM practice ideal and real

	Valid N	Mean	Std. Dev.
EBM practice ideal	66	23.06	20.10
EBM practice real	66	6.29	7.56

The real and ideal practice of EBM are correlated. Users who consider EBM practice more important tend to have a higher percentage of real EBM practice. Time is an important barrier to the practice of EBM skills. There is a significant correlation between the two variables.

Research Section Annual Business Meeting
Monday, May 16, 7:00am —9:00am
San Antonio, TX

Third International EBL Conference

MLA Research Section members will want to participate in the upcoming 3rd International Evidence-Based Librarianship (EBL) Conference during October 16-19, 2005 in Brisbane, Australia. The MLA Research Section is a co-sponsor for this conference.

The 3rd International EBL Conference will focus heavily upon the pragmatic aspects of EBL. Reports from applied research studies will permeate all aspects of the Conference.

The Conference will be a haven for the librarian or informationist with an interest in applied research. This is a wonderful opportunity to learn about practical research relevant to one's work, hone research skills, meet new friends and like-minded colleagues, and to identify potential mentors or collaborators for future research projects. It would be hard to imagine someone leaving the 3rd International EBL Conference without inspiration to conduct his or her own exciting research.

January 15, 2005   Call for abstracts
April 1, 2005   Deadline for abstracts
July 1, 2005   Registration begins
October 16-19, 2005   3rd International EBL Conference, Brisbane, Australia

Questions? Contact MLA Research Section member, Jon Eldredge, who serves on the Program Committee. (jeldredge@salud.unm.edu).

I find that a great part of the information I have
was acquired by looking up something and finding something else on the way.
Franklin P. Adams (1881 - 1960)

Main barriers to EB practice
Average points on 1-5 Likert scale: "totally disagree" to "totally agree"

	Valid N	**Mean**	**Std. Dev.**
Time	63	3.4	1.2
Isolation	63	3.2	1.1
Institutional support	64	3.2	1.3

Main facilitators for EB practice
Average points on 1-5 Likert scale: "totally disagree" to "totally agree"

	Valid N	**Mean**	**Std. Dev.**
Time	62	4.0	0.8
Critical Appraisal Skills	65	4.0	0.9

Users who had good 1st questionnaire results had a greater probability to also have good 2nd questionnaire results. Users who had good 2nd questionnaire results had a greater probability to also have good Fresno test total score results This shows a good internal coherence of the assessment methods of the study.

Conclusions
Our conclusion is that EBM skills tend to be lost after some time. Our users tend to consider the ideal of EBM practice very important, but the real practice of EBM is significantly lower than the ideal one. The main barriers to EBM practice, related to the results of our tests are: time, access to PCs, isolation and lack of institutional support.

Further research
We need larger, multicenter studies to reach more reliable and relevant results. It would also be useful to test whether, for the practicing professional, regular recalls of EBM concepts are effective. We need to study more extensively the influence of barriers vs EBM practice and to take consequent action.   ●

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Literature Review

—submitted by Ruth Fenske, Ph.D.

Steiner, John F. et al. Assessing the Role of Influential Mentors in the Research Development of Primary Care Fellows. Academic Medicine. 79(9):865-875, September 2004.

Henry, Deborah B. and Tina M. Neville. Research, Publication, and Service Patterns of Florida Academic Librarians. Journal of Academic Librarianship. 30(6):435-451, November 2004.

Two articles on factors influencing research productivity have appeared.

In 1998, Steiner et al surveyed 215 individuals who had received the National Research Service Award primary care research fellowship from 1988 to 1997. They achieved a 65% (139) response rate. Respondents did not differ from non-respondents in age, race, and ethnicity, but response rate for females was higher than for males.

In a 2002 report of the analysis of these data, the authors found that one factor associated with early research productivity is having an influential mentor. This article is a more in-depth analysis of the mentorship data from the earlier study.

Subjects were asked questions about the distribution of time for research, course work, and other activities during the fellowship. They were asked to identify mentors, to say how much time they spent with mentors, and to describe particularly influential mentors. They were also asked about their current research and mentoring activities.

Almost all respondents had mentors and two-thirds were now mentoring others, particularly in the area of research. Three-quarters had a particularly influential mentor. Respondents most frequently attributed influence to the nature of the relationship between fellow and mentor. Influential mentors listened and provided feedback and advice. Personal traits of the mentor were much less important. Those with influential mentors were publishing more and were more likely to have obtained a grant.

Much was made of a distinction between those who had an influential mentor and had sustained the relationship over time and those who had an influential mentor during training but were not currently receiving guidance from the mentor. This distinction, carried over into the data analysis, seems to have muddied the waters more than helped. The authors tell us that the amount of time since the end of the fellowship varied from 1.5 to 6.3 years and show that those who had not sustained the relationship had been out earlier. They acknowledge in their discus-

sion that this is "easily explained by the evolution of fellows toward independence in research or by a diminution in the intensity of mentorship over time." Considering all of this, it is surprising they emphasized the difference between the two influential mentoring groups in their tables and results and discussion sections.

This is a useful article in that it shows a relationship between having done a research fellowship and later research activity among the respondents. Even considering that former fellows no longer active in research probably did not answer the questionnaire, these data show that 50 or 60 of the former fellows are definitely getting grants, conducting research, and mentoring others in research. Having an influential mentor is also shown to be important in research development. Although ostensibly having sustained the relationship with a mentor is important, the evidence presented here is not convincing on that point.

Henry and Neville did an extensive web survey of Florida academic librarians, asking them about their research, publishing, and service activities and their perception of the institution's desire that librarians do each in order to achieve tenure and/or promotion. Although they achieved only a 24% (196) response rate, responses are proportional in terms of the Carnegie Classification of colleges and universities.

Results clearly show that "in overall productivity, tenure requirements strongly motivate librarians at " baccalaureate, master's doctoral institutions. Publication of books and articles and evaluations by external peers are perceived as being most important for gaining tenure and promotion. They also present evidence that some librarians slack off on research activity after achieving tenure. Table 7 in the article is a valuable list of activities perceived to be important by academic librarians for gaining tenure and promotion.

It is logical to believe that health sciences librarians in academic health sciences libraries are being induced to publish and present, because of tenure requirements. It would be interesting to determine if academic health sciences librarians do achieve tenure and if tenured academic health sciences librarians continue to publish and present. Researchers could also determine how many AHIP members present research activities in support of membership and look at what influenced that group of health sciences librarians to conduct research.

Over the years, health sciences librarianship has provided opportunities for post-master's fellowships, mid-career leadership development, and mentoring of new directors of health sciences libraries. There is a tacit assumption that these opportunities are more for academic health sciences librarians than for hospital librarians. In some of these programs, research is an important component. In others, management and leadership are more emphasized.

How can we structure our opportunities to develop both research and leadership and management talent among our members? Is assuming leadership and management responsibility the death knell for research productivity? Is it possible to structure hospital librarianship to allow for both excellence in research and excellence in librarianship?

Auster, Ethel and Donna C. Chan. Reference Librarians and Keeping Up-to-Date. <u>Reference & User Services Quarterly</u>. 44(1):157-166, Fall 2004.

Cardina, Christen and Donald Wicks. The Changing Roles of Academic Reference Librarians Over a Ten-Year Period. <u>Reference & User Services Quarterly</u>. 44(2):133-142, Winter 2004.

Two articles have appeared that document the changing roles of reference librarians.

Cardina and Wicks did a random survey of librarians from all over the United States, who had at least ten years of academic reference experience, about changes in their job activities between 1991 and 2001, changes in tools used, and job satisfaction.

The authors surveyed the literature in order to develop a list of traditional and newly developed duties. In general, the literature showed more use of technology, specifically there was increased use of the Internet, more instruction because of technology, more service to remote users, and more introduction of new electronic products and services.

Eighty-seven questionnaires were distributed; all but five were returned. However, only 68 (78% of the total distributed) were useable. Nevertheless, this is a good return rate.

The traditional functions of face-to-face reference, print collection development, bibliographic instruction, and attending meetings still are the most frequently performed tasks. Reference librarians are performing an increased number of tasks. As would be expected, new tasks have to do with electronic delivery, electronic resources, and information literacy instruction. Less, but still considerable, time is spent attending meetings. Reference librarians also are increasingly supervising others. Time spent on professional development was low in 1991 and even lower in 2001. It is unclear if professional development done on one's own time was included. As was expected, print tools were used less and electronic, more. Eighty-two percent were more satisfied or experienced no change in job satisfaction compared to 1991. They cite this as evidence that reference librarians are tolerating and embracing change.

Just as a point of information, half of the respondents were 50 or older. Interestingly, 44% were 39 and under, leaving only a small group in their 40s.

Auster and Chan also surveyed the literature. In this case, they were building a list of competencies for today's reference work environment. The traditional service commitment and other personal traits, reference interviewing skills, knowledge of reference resources, subject knowledge, communication and interpersonal skills, and analytical and creative thinking are still necessary as are newer skills in technology, management, and instruction. They then developed a questionnaire designed to explore the extent to which librarians are choosing formal and informal professional development activities that develop the requisite new competencies. Barriers to participation were also assessed.

Questionnaires were sent to 733 librarians working in eighteen large, urban, public library systems in Ontario. The response rate was 75.4% (553). More than 65% of the respondents were 45 years of age of older.

The authors define formal professional development as "organized, structured programs that explicitly aim to foster understanding, knowledge, and skills." Formal activities are for the most part in-house workshops, association workshops, and formal course work. Informal activities are everything else, including attending conferences, discussion with colleagues, and doing self-directed projects. These librarians had spent an average of 26.4 hours on formal activities in the past year. The majority of this time was in-house workshops. On the other hand, 247.7 hours were spent on informal activities. This included 74 hours of discussion with colleagues, 53 hours of professional reading, 51 hours of self-directed projects, and 35 hours of on the job training. Although the authors do not say it, the combined figure of 274.1 hours spent in a year on professional development was more than one hour for every workday.

The most popular activities all had to do with technology. Internet applications and electronic resources were at the top of the list. Brushing up on public service skills was also chosen by more than half. Fewer chose management and instruction topics. Very few chose the tradition topics of reader's advisory, children's services, programming, and subject specific reference. Developing creative and analytical skills was conspicuously missing.

The results section on barriers to participation is not totally clear. The discussion section on barriers is better. In addition to personal factors such as family and health circumstances, one measure they used was "Updating Climate," which refers to contextual features in libraries that affect participation in professional development. Four dimensions were important: support for updating, availability of time, innovative climate, and information sharing.

They quote studies that show that well-educated workers in both Canada and the United States spend over 60 hours per year on formal professional development. The 26.4 hours found here is considerably below those norms. Possibly the quoted studies include attending conferences under formal, rather than under informal, as was done here. Time spent on informal activities is comparable to the Canadian norm. Comments showed the press of covering the reference desk often precluded having time for professional activities during the workday. However, the authors also tell us that the numeric results did not show lack of time to be a predictor of lack of participation. The authors suggest "lack of time" may really mean they do not value professional development.

Lists of new roles developed in the two articles are about the same. Cardina and Wicks document what 21st century reference librarians are doing and Auster and Chan document that one group of librarians is undertaking professional development relevant to their current roles. Cardina and Wicks found that only 15% of reference librarians were doing research in 1991 and no more were doing research in 2001. Auster and Chan point out that librarians are not building on the research methods and statistics courses they had in library school.

Gilbert, Carole M. and Ellen O'Donnell. The Hospital Library's Role in Recruitment and Retention of Medical Staff. <u>Journal of Hospital Librarianship</u>. 4 (4):9-30, 2004.

Yitzhaki, Moshe and Gloria Hammerschlag. Accessibility and Use of Information Sources Among Computer Scientists and Software Engineers in Israel: Academy Versus Industry. <u>Journal of the American Society for Information Science and Technology</u>. 55 (9):832-842, 2004.

Yitzhaki and Hammerschlag compared the accessibility and use of information sources among Israeli computer scientists and software engineers working in industry and in academe. Questionnaires were sent to 700 individuals in late 1999. The response rate was approximately 33% (233) for both groups. Just over half of the respondents work in academe and just under half, in industry. Academic respondents were older and more likely to have a Ph.D. As would be expected, most industrial respondents were doing applied research. Respondents in academe are more evenly divided between basic and applied research.

The authors present several tables which show use of various information sources used before starting a project and when solving a problem in the middle of a project. The respondents also indicated the accessibility of each type of information source. For most categories of information source, a distinction is made between the Internet and print form of the resource or between oral contact

and Internet contact. These data were gathered in 2000 and published in 2004. During that period, for any one category, mode of access for each type of information source may have changed. Unfortunately responses about use of librarians and information specialists as a source of information are divided into Internet and print, rather than Internet and oral. It is hard to tell what respondents might have been thinking about when they made a distinction between print and Internet librarians and information specialists.

In the initial stages, two thirds of both groups ranked discussion with colleagues in the organization highly. Academics were also high users of printed professional journals and printed textbooks. They were greater users of conference papers than those in industry. About half used bibliographic databases on the Internet at this stage. All other resources were used by less than a third of the academics. In the initial stage, 39% of those in industry indicated librarians and information specialists (Internet) as a resource and 24% of the academics did so. This difference is statistically significant.

For mid-project problems, three-quarters of both groups ranked discussions with in house colleagues highly and a large proportion of both groups consulted printed textbooks. Academics continued to use professional journals and conference papers and those in industry used handbooks and discussions with supervisors. Again those in industry used librarians and information specialists more. Again, the difference is statistically significant.

Turning to the accessibility of each type of resource, both groups had high access to discussion with in house colleagues and printed textbooks. Seventy-one percent of academics had access to print journals but only 57% of those in industry did. Academics also had much better access to conference papers. In the accessibility comparison table, contact with librarians is portrayed as being "oral," rather than print or Internet. Possibly three categories of contact with librarians and information specialists were presented throughout the questionnaire. At any rate, both academics and industry reported low accessibility to librarians and information specialists (oral).

Accessibility of information sources was not correlated with use for the industry group. For the academic group, there was a modest positive correlation between accessibility of a particular type of source and its use. Although there is no significance difference in Internet access to librarians and information specialists, those in industry made significantly more use of librarians and information specialists (Internet), both at the initial and mid stages of a project.

Results in this study are hard to interpret because of the distinction among print, electronic, and oral access to resources. It would have been useful for the authors to explain more about this aspect of the questionnaire. Possi-

bly looking at their questionnaire or the questionnaire on which this questionnaire was based would clarify the situation. Although the authors tell us they based their questionnaire on the NASA/DoD questionnaire, they do not give a citation to that questionnaire.

This study looked at the use and accessibility of formal and interpersonal information sources by computer scientists and software engineers in academe and industry. How might these results compare to the use of information sources in the health care area where patient care, clinical teaching, and clinical research are added to the mix. Yitzhaki and Hammerschlag probably can safely assume that information sources are used by their audience of computer scientists and engineers in industry and academe. Can we as health sciences librarians make the same assumption about practicing physicians, particularly once they finish their residency?

Gilbert and O'Donnell do make this assumption in that they start out with the assertion that "everyone knows hospital libraries are good recruitment and retention tools." After all, if no one used hospital libraries, why would they say this? Their research was designed to document the truth of the assertion.

Their survey population was physicians in Michigan (21,000). The survey was confined to the 14,000 who belong to the Michigan State Medical Society or the Michigan Osteopathic Association. After consulting with a statistician, they decided to send 2500 surveys in order to assure a return of at least 300 surveys. The random

selection of those to be surveyed is described. The survey was pilot-tested in a rural and an urban area. A copy of the questionnaire is included in the article. The response rate was 17% (426). Forty percent were in primary care and 59% were specialists.

Respondents identified 395 hospitals that had libraries having space, staff, scheduled hours, a budget, and access to resources in other libraries. Thirty-eight percent of respondents said they were not at all influenced by the presence of a library when deciding where to practice. Forty-two percent were at least somewhat influenced by the presence of a library. Thirty-four percent indicated that the availability and quality of library services had no effect on their decision to stay and 46% were at least somewhat influenced by library services in their decision to stay.

Specialists were more likely than primary care physicians to be influenced by having a library. Orthopedics, surgery, and anesthesia were most influenced and allergy, psychiatry, and emergency medicine were least influenced. One hundred eight-one (45%) of respondents had received an introduction to the library during recruitment. Fifty-one percent of the respondents who have recruiting responsibilities now use the library as a recruitment tool. Eighty-one percent (333) of the respondents were active library users. Undoubtedly respondents are more interested in libraries than non-respondents. Hence, we cannot tell what proportion of physicians in Michigan use hospital libraries.

The authors tell us all 426 respondents listed library services they were looking for. However, Figure 5, Desired Library Services, is based on only 248 respondents' answers. Sixty-six percent wanted journals, 63% wanted MEDLINE performed by a librarian (MEDLINE not performed by a librarian was not a choice!), 61% wanted knowledgeable staff, 57% wanted reference service, and 49%, a pleasant environment.

The authors conclude that the availability of a library does have a positive impact on recruitment and retention. The biggest problem here is not having any basis on which to compare respondents and non-respondents. Although the study group was chosen randomly, respondents were probably more interested in libraries than non-respondents, leaving a biased sample.

Gilbert and O'Donnell's study concentrates on library services in hospitals, whereas Yitzhaki and Hammerschlag looked at information sources in general, not just those coming from the library. They compared academe and industry and found differences. This brings us back to some questions we are all asking about our health sciences setting. Do clinicians feel they need information? If so, how should it be delivered? Does information have to be easy to access for clinicians to use it? How should librarians and information professionals contribute to increased use of information by clinicians? ●

From Kris Alpi, CE Chair

The evidence-based librarianship electronic journal club did not start in October 2004 as planned due to schedule conflicts. In the interest of giving it one more try, please contact Kris Alpi by May 1 if you are interested in participating in a club from June – November 2005.

For the next issue of *Hypothesis*, I'd like to hear from anyone who has participated in the new Medical Library Association's Independent Reading Program (IRP) who would like to share their experiences. For more information on the IRP, see http://www.mlanet.org/education/irp/index.html.

HYPOTHESIS

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