HYPOTHESIS
THE NEWSLETTER OF THE RESEARCH SECTION OF MLA

Contents

HYPOTHESIS:
The Newsletter of the Research Section of MLA
VOLUME 16, Number 2
Summer 2002

~ Research Awards 2002 ~ MLA Papers and Posters Win Commendations

— submitted by Bob Wood, Chair, Awards Committee

At MLA 2002 in Dallas, judges from the Research Section evaluated over 160 presented papers and posters for quality of research and selected six for special commendation.

Before the conference was held, the members of the Awards Committee - Bob Wood, Jon Eldredge, Gary Byrd and Mary Snyder - and volunteers from past research winners – Nunzia Giuse, Sandy De Groote, Kristi Alpi and Jo Dorsch - read the poster and paper abstracts and agreed on the most promising ones, on which they would concentrate their attention. Early at MLA 2002, the group met and divided up the presentations so that each would be covered by at least two judges. To avoid conflicts of interest, the Committee decided that no presenters of research posters would evaluate posters, and no research paper authors would judge papers. After the conference, the overall group made its final determination by email.

A prize of $100 was given for each Research Award; the prize for each Honorable Mention was $50. In addition, authors who were MLA members were sent a letter and a certificate commemorating the award.

Research Award recipients -
"Accessing the Most Recent Information: Part II," by helen-ann brown, Kristine M. Alpi, Daniel Cleary, Mary Jo Dorsey, Kevin Pain, Anny Khoubesserian and Antonio Ramos (paper)

"What's the Score? Evaluating Student's MEDLINE Searches," by Kathryn W. Nesbit, Jan Glover, Michele Shipley and Robert G. Holloway (poster)

(Continued on page 6)

HYPOTHESIS. The Newsletter of the Research Section of MLA
http://gain.mercer.edu/mla/research/hypothesis.html

HYPOTHESIS (ISSN 1093-5665) is the official newsletter of the Research Section of MLA. It is published three times a year by the Section: Spring (March), Summer (July/August), and Fall (November). It is also available at: http://gain.mercer.edu/mla/research/hypothesis .html

Items to be included should be sent to the Editor by the 15th of the preceding month (i.e., February 15th for Spring, June 15th for Summer, October 15th for Fall). Copy is preferred by e-mail, but will be accepted in other formats. *HYPOTHESIS* is selectively indexed in the *Cumulative Index to Nursing and Allied Health Literature* and the *CINAHL* database.

Andrea L. Ball, Editor
Middleton Health Sciences Library
University of Wisconsin-Madison
VOICE: 608-262-4431
E-MAIL: alball@facstaff.wisc.edu

International Research Reviews

— submitted by Anne Brice

A key development in worldwide programmes to deliver high-quality, synthesised knowledge to decision makers in the health care sector has been the improvement in the coverage and number of published systematic reviews. In our own area of practice, we need both to find and use high-quality reviews, and to ensure that we understand and employ the methods used to produce them. The team responsible for the following abstract, based in ScHARR at the University of Sheffield, have developed a unique expertise in both the methodologies of producing systematic reviews, and also in the dissemination of the skills involved through a range of educational interventions. The topic of the review is also one in which we as information professionals need to act as intermediaries and advocates, to ensure that all the user groups we serve have equity of access to the knowledge they need.

A Review of the Health Information Needs of Visually Impaired People

Authors
Beverley, C.A., BSc, MSc, MCLIP, Systematic Reviews Information Officer, Information Resources Section, School of Health and Related Research (ScHARR), University of Sheffield, England.
Email: C.A.Beverley@sheffield.ac.uk

Bath. P.A., BSc, MSc, PhD, Lecturer in Health Information Management, Department of Information Studies, University of Sheffield, England.
Email: P.A.Bath@sheffield.ac.uk

Booth, A., BA, MSc, Dip Lib, MCLIP, Senior Lecturer in Evidence-Based Healthcare Information and Director of Information Resources, Information Resources Section, School of Health and Related Research (ScHARR), University of Sheffield, England.
Email: A.Booth@sheffield.ac.uk

Background
The need to reduce inequalities in health (and social care) is a clear government priority in the United Kingdom. However, information is not always accessible and does not always meet the needs of specific groups; an example of such a group is people who are visually impaired. The term 'visual impairment' encompasses a broad spectrum of people, ranging from completely blind to partially sighted. Worldwide, there are an estimated 44.8 million visually impaired people[1]; the majority of whom are aged over 65 years[2]. Bruce *et al.*[3] revealed that over three-quarters of blind and partially sighted people also have other permanent disabilities; the major ones being, hearing impairment and arthritis. People with visual impairments, therefore, tend to be more regular users of health services than the general population[2], and thus have a wide range of health information needs.

Purpose
The aim of this review was to identify the health information needs of visually impaired people, and to identify any gaps in current service provision.

Methodology
A systematic review of the literature was undertaken following the NHS Centre for Reviews and Dissemination (CRD) framework[4]. A variety of search techniques were used, including sensitive searches of the major information science, medical, health (and related), science, social science, education and 'grey literature' electronic bibliographic databases, as well as a number of other sources; citation searching, reference list checking and contacting major organisations and experts in the field. Studies were assessed against explicit inclusion and exclusion criteria. Research studies were critically appraised using the CRISTAL[5] checklist. Key data were extracted using pre-determined extraction forms.

Results
Of the 1,114 unique references identified, 169 were included at the abstract stage. Only 16 studies met the criteria for inclusion in the formal analysis part of the review, and these contained very little specifically on the health information needs of visually impaired people. Studies utilised three major methods: questionnaires, interviews and focus groups. On the whole the quality of reporting in the literature was poor, and this must be taken into consideration when interpreting the results.

The health information needs of people with visual impairments identified in the review were information relating to:

- healthy living (specifically sexual health, parenting, dental health, breast self-examination, health promotion and general health);
- disease (specifically visual impairment and co-morbidities);
- coping with disease (specifically coping with visual impairment and co-morbidities);
- accessing health services (specifically appointment letters, medication labels, test results and general medical information).

(Continued on page 4)

(International Research Reviews — Continued from page 3)

Discussion

The limited research that has been conducted to date is based on three alternative assumptions:

- visually impaired people have the same health information needs as totally sighted people; or
- visually impaired people are 'worse off' with regard to health information because of their impairment; or
- visually impaired people simply require the same health information, but in different formats (*e.g.* Braille, large print).

However, there is little research to support an additional hypothesis, that visually impaired people have specific health information needs which need to be explored in their own right.

In addition, several barriers, as well as facilitators, to information access have been identified. These operate at three levels: individual (*e.g.* attitudes, knowledge, *etc.*), community (*e.g.* role models, social support) and society (*e.g.* policies on health and equity, health services, *etc.*)

Conclusions and Recommendations

This review has highlighted a number of implications for practice, including the need for:

- Health and information providers to move away from the paternalistic assumptions of previous information provision.
- Sensitive mechanisms to capture the nature and quality of visually impaired person's interactions with the health services.
- Consumer health information for visually impaired people to follow developments within the wider consumer health arena.

Finally, the poor quantity and quality of literature identified for this review has clearly demonstrated the need for further research in this field, not only in terms of improving existing research, but also in addressing new areas.

Future research areas include:

- Primary research specifically addressing the unique health information needs of visually impaired people.
- A more detailed examination of information provision taking into account all aspects of the information (*e.g.* content), as well as format (*e.g.* large print, Braille, *etc.*)
- Higher quality of involvement of visually impaired people in the planning and conduct of research.

It is hoped that the full findings of this review will be published later this year. The lead author also intends to advance our knowledge in this field further by undertaking a PhD.

References

1 World Health Organisation (2001). *Data on visual impairment.* Available: www.who.int/phd/pbl/data.htm.

2 RNIB (1998). *'Ill informed'*, Campaign Report 7. Royal National Institute for the Blind (RNIB), London.

3 Bruce, I. *et al*. (1991). *Blind and partially sighted adults in Britain: the RNIB survey*. London, Royal National Institute for the Blind (RNIB), London.

4 NHS Centre for Reviews and Dissemination (2000). *Undertaking systematic reviews of research on effectiveness. CRD's guidance for carrying out and commissioning reviews. 2nd edition. CRD Report No. 4*. York: NHS CRD, University of York. (Available: http://www.york.ac.uk/inst/crd/report4.htm).

5 Booth, A. (2000). Research. *Health Libraries Review*, 17: 232-235.

The authors also acknowledge the help and financial support received from the Welsh Assembly Government (formerly the National Assembly for Wales) Public Health Strategy Division.

Announcement
2nd Evidence Based Librarianship Conference
June 5-6, 2003 - Edmonton, Alberta

Immediately following the
Canadian Health Libraries Association Conference

The EBL conference is restricted to 130 participants. Online registration will commence in January 2003 and information about how to register will be posted on the EBL website in early January. http://www.eblib.net If you would like to be added to the EBL 2003 information mailing list, please e-mail: pam.ryan@ualberta.ca

Watch for the EBL 2003 call for papers in September 2002!

Chapter Research Committees Report

— submitted by Martha Earl

"Summary of Issues Surrounding the Administration of a Credit Course for Medical Students: Survey of U.S. Academic Health Science Librarians"

— by Jolene M. Miller, MLS, AHIP

Jolene M. Miller, AHIP, is the 2000 winner of the MLA Research, Development, and Demonstration Project Grant, and a member of the Midwest Chapter of MLA. The following summary describes her work:

Objective

A credit course is one of many methods used by librarians to teach medical students the information management skills needed for clinical practice and research. For librarians who serve as course directors or coordinators, the course is often their first foray into academia from the faculty side. All too often, they learn to administer the course by trial and error. The objective of this study was to identify issues surrounding the administration of a credit course for medical students with the hope of making the process easier for librarians who are new to the process. By being aware of common pitfalls, they can better avoid them.

Methods

A questionnaire was sent to the librarians in charge of instruction for all U. S. medical schools listed in the *2000 AAMC Data Book*. Follow-up surveys were sent to librarians who did not respond to the initial mailing. The questionnaire contained questions in areas such as credit course offerings for medical students, requirements placed on the librarian director by other campus departments, how the librarian learned to administer a credit course, costs associated with the course, course structure, and course evaluation. Items were primarily objective items, with the opportunity for written comments.

Results

Of the 125 libraries surveyed, there were 82 responses (65.6% response rate). Of the respondents, only 11 libraries offered a credit course for medical students. (Of the libraries not currently offering a credit course, 20 were in the process of developing one.) Because of this small set of responses, it was somewhat difficult to identify issues that commonly affected librarian course directors/coordinators. Some of the key findings were in how librarians learned to administer a course and in the relationships between the course director and other departments on campus. When learning to administer a credit course, trial-and-error was the most common way to learn, followed by advice from institutional units. Campus departments that required regular contact included the medical education/curriculum units and the registrar's office (and co-sponsoring departments for those courses that had a co-sponsoring department). The activities required by these departments ran the gamut from attending meetings to processing add/drop forms, updating course descriptions, evaluating the course and its faculty, and filing reports.

Conclusions

Librarians planning on administering a credit course need to be aware of what will be expected of them from other campus departments. It is recommended that librarians undertaking a credit course find institutional mentors (other librarians, other course directors, registrar staff members). Mentors outside of the institution are also recommended, with the caveat that each medical school has its own way of handling credit courses. The most important recommendation for course directors/coordinators is to gather as much information about the process as possible: manuals, formal and informal meetings, and advice from others. By gathering as much information as possible and taking advantage of mentoring relationships, librarians will rely less upon trial-and-error and have a smoother transition into the role of course administrator.

Acknowledgements

This project was supported by a Medical Library Association Research, Development, and Demonstration Project Grant. The full set of findings, including a list of recommendations, will be submitted for publication in JMLA.

MLA 2003 PROGRAM

Shoot the Pipeline with Evidence-Based Librarians: Original Research and Practical Methods

(Research Awards — Continued from page 1)

"**Does Weeding a Monographs Collection Increase Subsequent Usage of Unweeded Titles? A Randomized Controlled Trial,"** by Jon D. Eldredge, Katherine L. Mondragon and Carol L. Fierro (poster)

Research Honorable Mention recipients -
"The Impact of the Web on Reference," by Linda J. Walton, Kurt I. Munson, Stephanie Kerns, Linda C. O'Dwyer, Cheryl Powell and James Shedlock (paper).

"MEDLINE Selective Dissemination of Information (SDI) Services: How Do They Compare?" by Mary Shultz and Sandra De Groote (poster)

"Determinants of Effective Library Faculty-Pharmacy Faculty Communication, A Randomized Controlled Trial," by Jonathan D. Eldredge and Charity T. Karcher (poster)

The Awards Committee asked all the first authors to write a summary of their research for *Hypothesis*. These summaries follow.

Accessing the Most Recent Information Part II

Authors
helen-ann brown, Kristine Alpi, Daniel Cleary, Mary Jo Dorsey, Information Services, Weill Cornell Medical Library, New York, New York

Purpose
Continue investigation of which online resource offers access to the citation data of the most recent journal issue. The original study compared seven journals in four online resources. This study compares 131 journals in eight online resources.

Setting/subjects
This study compares eight online resources for accessing the content of recent journal issues: electronic journals direct from the publisher, PubMed, Ovid PREMEDLINE, Journals@ Ovid, Ovid EMBASE, CURRENT CONTENTS® connect™, MD Consult, and Ingenta. The first study sample compared seven journals of four varying frequencies. This study sample compares 131 journals of six varying frequencies. The 131 journals were selected from a common database of 215 journals available in all eight online resources. A random number generator program was used to select the monthly and bi-monthly journals.

Methodology
Longitudinal cohort study. 34 samples will be taken on Friday-Tuesday between September 2001 and May 2002.

Results
Access to information will be measured in two ways: 1) percentage of times the system had the most recent issue's citations and 2) number of issues behind the most recent issue. In the original study, electronic journals direct from the publisher offered access to the most recent information in both measures, being recent 95.5% of the time and almost never (0.03 of an issue) behind. Analysis by journal frequency showed fluctuation in the results for weekly journals in the original study. More weekly journals are sampled in this study to resolve this issue. Very preliminary data of the current study look similar to the results from the prior study.

Discussion/conclusion
The need for up-to-the minute literature for research and patient care remains. Libraries need to find less costly ways to deliver timely information. Access to citations and abstracts from electronic journals may often be free. Electronic journal subscriptions vary in price, but provide the timeliest information. With the need for timely information and limited funds these findings may help librarians allocate scarce resources.

What's the Score? Evaluating Student's MEDLINE Searches

Authors
Kathryn W. Nesbit, AHIP, coordinator, Education Services, Edward G. Miner Library, University of Rochester Medical Center, Rochester, NY; **Jan Glover**, AHIP, education coordinator, Cushing/Whitney Medical Library, Yale School of Medicine, New Haven, CT; **Michele Shipley**, coordinator, Electronic Resources, Edward G. Miner Library; and **Robert G. Holloway**, M.D., associate professor, Neurology and Community and Preventive Medicine, School of Medicine and Dentistry; University of Rochester, NY

Purpose
The project will define effective MEDLINE search tactics and develop a mechanism to evaluate a student's ability to search MEDLINE.

Methodology
Based on previous search assignments and a literature review, twelve tactics were identified for effective MEDLINE strategies. To validate these tactics' merit, a survey was mailed to U.S. medical schools' education librarians. To rank student searches, each tactic was assigned a point value based on importance toward constructing an appropriate search. For consistency, coding instructions and instrument were written, two librarians coded each strategy; disagreements were resolved by consensus. After varied teaching interventions, three medical student groups searched the same question on Ovid MEDLINE. After attending several MEDLINE classes and complet-

(Continued on page 7)

(Research Awards — Continued from page 6)

ing a homework assignment, 100 first-year students searched the question during a mid-term. After additional training and homework, ninety-seven second-year students completed it during a comprehensive exam. Without recent reinforcement, forty-six third-year students searched it during their medicine clerkship.

Results

U.S. education librarians agreed with the tactics' importance with minor exceptions. The students' ability to complete tactics by the first-year, second-year, and third-year students were respectively: tried searching all concepts (83%, 77%, 41%), used all appropriate Medical Subject Headings (MeSH) (95%, 84%, 76%), used specific subheadings (62%, 51%, 48%), exploded appropriately (70%, 44%, 4.3%), limited by age (91%, 87%, 39%), and used Boolean operators correctly (96%, 97%, 91%). To verify the inter-rater reliability of the evaluators, four librarians were given the coding instructions. Then each graded the same 25 strategies. Of 300 items, the librarians averaged 23 (7.58%) disagreements with the master answer. The weighted Kappa scores among the librarians ranged from 0.726 to 1.0 except for two tactics, which had scores of 0.555 and 0.144 respectively.

Discussion/Conclusion

The coding instrument and scoring mechanism allowed librarians to evaluate students' searching skills. Based on inter-rater reliability, coding instructions were clarified and one tactic was dropped from the next generation of the instrument. The coding/scoring instrument was modified for different search questions. Librarians used the overall scoring results to focus their training and feedback tips. This instrument is useful for attempts to quantify student searching abilities for grading purposes.

Does Weeding a Monographs Collection Increase Subsequent Usage of Unweeded Titles? A Randomized Controlled Trial

Authors

Jonathan Eldredge, **Katherine Mondragon**, **Carol Hierro**. The University of New Mexico, Health Sciences Library & Informatics Center, Albuquerque, NM.87131. Contact jeldredge@salud.unm.edu.

Objectives

To gauge the effect, if any, of weeding in a monographs collection on subsequent usage; to adapt an experimental research design (randomized controlled trial) to examine an enduring collection development concept.

Setting/Participants/Resources

A monographs collection at an academic health sciences library, which also serves a teaching hospital. Conventional wisdom suggests that weeding a monographs collection will increase usage by, theoretically, removing books that are dated or of marginal interest to users. Weeding thereby enhances the "Serendipity Effect" of users becoming more likely to find items of interest through casual browsing of books on adjacent shelves. The hypothesis in this study agreed with this conventional wisdom.

Methods

Randomized Controlled Trial. The first author sought to find pairs suitable for matching within the clinical NLM subject classification ranges in the main "bookstacks" monographs collection. He sought to find pairs which could be matched according to the following three criteria: (1) overall size of the clinical subject classification range in the monographs collection; (2) actual growth in the subject classification range during the1990-1999 period; and, (3) total usage for each classification range for the 1997-2000 period. The second author produced reports from the online catalog that helped identify these three pairs of six classification ranges to be matched. The three individual subject classification ranges from three matched pairs were selected for weeding through randomization by the toss of a coin.

Intervention

The first author identified for weeding, in accordance with strict criteria, one classification range selected through randomization from each of the following three matched pairs: WJ and WT; WP and WQ; WH and WR. The successive weeding criteria consisted of the following process: all WT, WP, and WR (intervention ranges) books were considered initially for weeding if published prior to 1991; second, all pre-1991 books with no checkouts were further considered for weeding; third, all books fitting the first two criteria were weeded if there were no recorded internal or copier uses. The third author removed the titles from the collection and provided feedback on any titles possibly mistakenly identified for weeding.

Results

The second author produced a usage report from the online catalog for each of the six classification ranges under study 15 months later without knowledge of which of the three from the matched pairs had actually been weeded. Pairs of classification ranges had been matched as closely as possible. To avoid further bias, the first author examined the predicted use difference between the intervention and control groups. The control group of three ranges would be predicted to experience 10.4% greater use than the intervention group of three ranges based upon usage during the three years preceding the intervention. Yet, the actual difference between control and intervention groups was 25.2%. When only the use of unique items was compared, to avoid possible confounding, the control group still experienced 27.7% greater use than the intervention group. When those popular titles having experienced 5 or more average uses

(Continued on page 8)

(Research Awards — Continued from page 7)

per year since publication were removed, the control group had only an 8.8% greater usage. Potential confounders included: the relatively brief 15 month study period; the ongoing maintenance of the collection prior to the study, resulting in the weeding of books on a case-by-case basis since at least 1986; a 1994 weeding project that removed 2,100 volumes about which little else was ever known; and, the slight overlap of the study across the curricular cycle.

Conclusion

The randomized controlled trial, used for the first time in this type of setting, does appear to be adaptable to weeding and possibly other collection resources applications. The results suggest rejection of the hypothesis that weeding increases usage. Adjusted data involving removal of popular titles does not confirm the hypothesis either.

The Impact of the Web on Reference

Authors

Linda Walton, Associate Director; **Stephanie Kerns**, Head, Learning Resources Center; **Kurt Munson**, Head, User Services; **Linda O'Dwyer**, Reference/Education Librarian; **Cheryl Powell**, Learning Resources Center Manager; and **James Shedlock**, Director. Galter Health Sciences Library, Northwestern University.

Introduction

The Galter Health Sciences Library located at Northwestern University established an Assessment Committee in 1999 to evaluate various services and programs within the library. A recent focus of the Committee has been reference desk activity. During the past ten years, it has become clear that there are fewer questions at the reference desk for most academic institutions due to the Web and end-user searching. For example, we answered 19,110 questions five years ago and 12,816 questions last year, which means there were 33% fewer questions being asked.

Of those questions still coming to the desk, we wanted to know what tools are being used to answer them and who is asking the questions. The hypotheses when beginning this project were: 1) that Reference Team members were relying on Web based resources; and 2) those asking questions at the desk were primarily medical center staff as opposed to faculty (who send staff to the library on their behalf) and students (who receive orientation on library resources and services).

To begin studying reference desk activity, we looked at various sources such as our own in-house count of reference questions. Interestingly, the number of "information" questions; that is questions that require consulting a database, catalog, or other traditional reference resource such as a directory, was 69% of the questions asked at the desk as opposed to the expected technology-oriented questions which totaled 13%. The next step was to do an analysis of these information questions to determine if there were any patterns in who was coming to the reference desk, what questions were being asked, and what resources were being used to answer the questions.

Methodology

To begin the analysis, a Microsoft Access database was created to record each reference question received at the desk. The entries were auto numbered with a date and time stamp. Using pull down menus, staff entered their name, the user's affiliation, how the question was received, how long it took to answer the question, and what databases staff used to answer the question.

Three text fields were included providing staff with a place to note the question asked, any additional sources beyond the databases listed in the pull down menus used, and a place to make comments about the question. Check boxes allowed staff to note if a question was citation verification, a do you own question, if the question would be suitable for training purposes, and if the question was answered. The data was collected every other month for one year; therefore six months worth of data was collected as a sample of reference desk activity.

Results

During the six months we collected data, 2,631 records were created. The data results for who is coming to the reference desk show that users are evenly split between staff, students, and faculty. This data is not consistent with our hypothesis that the majority of users asking reference questions are staff. Faculty are still coming into the library to do their own research, while students are using a PBL curriculum and asking questions at the reference desk.

The staff were surprised to see that over 50% of the questions are "do you own" questions. Clearly, the users themselves can answer these questions by looking in the online catalog, a resource easily accessible both in-house and remotely.

As anticipated, the majority of questions are answered using online resources. The most heavily used resource is the online catalog followed by MEDLINE and other electronic resources such as web sites and databases. We noted that 10% of questions were answered using "other resources" in a combination of print and electronic formats.

A further breakdown of this category shows that the majority of questions are answered using online resources. One quarter of the resources are only available in print format, while 10% of the resources are available in both a print and online format. We noted that staff was frequently using the print version. We looked closely at this

(Continued on page 9)

(Research Awards — Continued from page 8)

category to determine why staff was using print when the electronic version was available to answer the questions. Some of these resources include the List of Serials Indexed for Online Users, medical dictionaries, the PDR and other drug-related sources, the Encyclopedia of Associations, ABMS, and telephone directories for the university as well as the hospital.

Anecdotally, staff use the directories and handbooks that are kept at the reference desk. They believe it is faster and more efficient to look up a quick answer in a book at their fingertips rather than seeking the Web site that also has the information. In other cases, such as the ABMS, the information on the Web site is not as complete as the information found in the print resource.

Conclusion
The study identified that the majority of reference questions being asked at Galter can be answered using online resources, yet varied users are still coming to the reference desk for assistance. To improve access to online resources for our users the Reference Team will be focusing on two objectives for the next year, those being improved training for users and staff, and additional marketing.

MEDLINE SDI Services: How Do They Compare?

Authors
Mary Shultz, Assistant Health Sciences Librarian, Library of the Health Sciences-Urbana, University of Illinois at Chicago and **Sandra L. De Groote**, Assistant Information Services Librarian, Library of the Health Sciences University of Illinois at Chicago

Selective Dissemination of Information (SDI) services regularly alert users to new information on their chosen topics. This type of service can increase a user's ability to keep current and may positively impact efficiency and productivity. Currently, there are many venues available which allow users to establish, store, and automatically run search strategies for MEDLINE.

Purpose
To describe, evaluate, and compare selected SDI services for MEDLINE.

Hypothesis
SDI MEDLINE services do not all function in the same way nor do they provide the same output.

Resources
The following SDI services were selected for this study

- PubMed Cubby - http://www.pubmed.gov
- Biomail - http://biomail.sourceforge.net/biomail/
- JADE - http://www.biodigital.org/jade/
- PubCrawler - http://www.pubcrawler.ie/
- OVID - http://gateway.ovid.com
- ScienceDirect - http://www.sciencedirect.com

OVID and ScienceDirect search MEDLINE through their own licensed copy of the database while the other services utilize PubMed to search MEDLINE.

Methodology
Identical searches were established in each of the selected SDI services and were run on a weekly basis over a period of two months. Eight search strategies were used in each system to test the performance under various search conditions. Searches included: both simple and complex nested searches; MeSH terms; subheadings; keywords; a search which regularly yielded large retrieval sets; and a search which regularly yielded few or no results. The PubMed Cubby system was used as the control against which the other systems were compared. The results of the searches were analyzed to establish the efficiency and accuracy of each SDI provider.

Other aspects evaluated in this study included: ease of use; frequency of results; ability to use MeSH; ability to access and edit existing search strategies; ability to download to a bibliographic management program; file size of results; and fields displayed in results.

Note
Two of the six systems in this study (ScienceDirect and JADE) yielded no results during the test period due to technical difficulties. They were therefore dropped from the data portion of the study.

Results
The data collection portion of the study showed that the SDI services do not retrieve an equal number of results. These differences varied widely depending on the search strategy used. OVID generally received more weekly citations than either BioMail or PubCrawler, but both BioMail and PubCrawler had greater overall overlap with the citations found in Cubby. There appeared to be a lag time with the OVID MEDLINE system which would explain the small amount of overlap with Cubby results. This is likely due to the fact that OVID uses a licensed copy of MEDLINE rather than running off the PubMed system directly.

The SDI services evaluated in this study also offered varying choices and features to users. Some systems allowed users to select the frequency and timing of results. For example, PubCrawler allowed users to select weekly runs and choose the day of the week on which the searches were conducted. In BioMail, users could choose weekly runs but the searches were always executed on Fridays. In OVID, the only choice was weekly and the day of the week on which the searches were executed was determined by OVID.

(Continued on page 10)

(Research Awards — Continued from page 9)

Some systems limited the number of search strategies which could be saved. For example, Cubby allows 100 searches to be saved under one user ID, Biomail allows 20, and ScienceDirect allows 10. Both OVID and PubCrawler did not appear to have limits on the number of saved searches permitted per user.

Five of the six systems evaluated automatically provided emails to users which contained either the search results or a notification that new results could be accessed online. Cubby is the only system which has no email notification feature. The other features and functions evaluated during this study also varied by service.

Conclusions

This study confirms the hypothesis that MEDLINE SDI services do not all function in the same way and do not provide identical retrieval sets. Even as the control, it was observed that PubMed Cubby consistently returned the largest retrieval sets and was the most current.

SDI services are an important feature of online systems. Librarians can offer value-added services by teaching and promoting their use. With the number of choices for MEDLINE SDI services currently available and many freely, librarians should be aware of these differences and guide users to the service most suitable to their needs.

Determinants of Effective Library Faculty – Pharmacy Faculty Communication. A Randomized Controlled Trial.

Authors

Jonathan D. Eldredge, **Charity T. Karcher**. The University of New Mexico, Health Sciences Library & Informatics Center, Albuquerque, NM. Contact: jeldredge@salud.unm.edu.

Question

Does face-to-face interaction of a library liaison with faculty members change these faculty members' perceptions of or use of a library?

Objectives

To measure the effect of direct contact (in-person interviews last 30-60 minutes) between a library faculty member and members of the UNM College of Pharmacy faculty; to adapt the randomized controlled trial study design to test a common idea about the efficacy of direct, in-person communication.

Settings/Participants/Resources

The study population consisted of College of Pharmacy faculty served by a large academic health sciences library. Included: all faculty members below the level of associate dean who had worked at the institution for at least one year. Excluded: any faculty members who did not return the preliminary survey mailed to 24 faculty members within 5 weeks of distribution via email, following several follow-up emails or phone reminders. The catalyst for this study was the arrival at UNM of the first-ever Pharmacy Librarian.

Methods

Randomized controlled trial. All 18 eligible faculty members who returned surveys were stratified by: (1) Basic Science or Pharmacy Practice division membership; (2) assistant, associate or full professor status. Within their stratifications, faculty members' names on pieces of paper were picked from a hat as the randomization technique to determine who would receive the intervention.

Intervention

18 College of Pharmacy faculty members returned the initial survey. Following stratification (see above) the Pharmacy Librarian paid 30-60 minute individual face-to-face visit by new pharmacy librarian (CTK) to the 9 faculty members in the intervention group in their offices. Controls continued to receive any routine generic electronic (phone or email) communications from pharmacy librarian.

Results

Neither the intervention nor the control groups changed their perceptions or their self-reported behavior following the intervention, based upon the 14 follow-up surveys we received. This finding surprised us since it contrasted with conventional wisdom. We speculate that perhaps until direct, in-person communications reach a certain threshold of maybe three (3) visits any changes in perception or self-reported behavior might not be detectable? This would parallel other clinical trials in which patients do not respond to an intervention until given repeated dosages of a drug. When we then further analyzed the results according to Basic Science or Pharmacy Practice divisions within the College of Pharmacy, no detected no appreciable differences in perceptions or self-reported behavior. Finally, when we analyzed the results according to length of service (1-4 years versus more than 4 years of service to UNM), we did detect modest differences of perceptions and self-reported use. Possible confounders include the limited number of participants in the second survey (n = 14), the September 11th terrorist attacks in the midst of the study, and a concurrent major journals cancellation project.

Conclusions

One 30-60 minute length direct, in-person communication does not appear to affect pharmacy faculty members' perception or self-reported use of the library and informatics center. Perhaps additional in-person communications would produce a change in behavior or perceptions?

Minutes of 2002 Business Meeting

Medical Library Association
Research Section Business Meeting, May 19, 2002
Adams Mark Hotel
Dallas, Texas

1) Call to Order – Leslie Behm called the meeting to order at 7:30 a.m.

2) Announcements: Behm announced that Alexandra Dimitroff has resigned as Chair-Elect due to personal reasons. Jon Eldredge will serve as Chair in 2002-2003. Eldredge will hold Virtual Business Meetings throughout the year employing the Research Section list serve.

3) Reports of Officers

   a. Treasurer's Report – Jo Dorsch reported that the Section balance was $4,806.14, after paying the invoice for the Spring 2001 *Hypothesis*, but before the business meeting breakfast payment.

   b. Chair-elect, Program chair – Leslie Behm reported for Alexandra Dimitroff that the Research Section sponsored "Reflective Practice: Qualitative Research – Tales from Recovering Positivists" at the 2002 Annual Meeting. Alice Hadley reported that the theme of the 2003 MLA Annual Meeting is "Catch the Wave." There will be three types of programs: 16 papers, 125 posters, and "Hot Topics" informal sharing sessions held poolside. Abstracts are due November 1. Several sections are interested in co-sponsoring with the Research Section.

   c. Section Council Representative – Dixie Alford Jones reported that Section Council reached consensus on several motions: 1) Establishment of the Corporate Information Services Section; 2) a new set of standards for the Hospital Libraries Section; and, 3) the ad hoc Section Program Planners become a standing committee. Section Council is seeking logos from each section. Elizabeth Connor volunteered to help with the design. Jones also announced the Lindberg Research Fellowship, an annual $25,000 research award.

   d. Newsletter Editor – Behm reported for Andrea Ball that three issues were published in the previous year at a cost of $1322.02. Future plans call for web access, possibly by July 2002. Ball is working with Bowker and Wilson to have *Hypothesis* indexed in their publications. The officers expressed a high level of satisfaction with the content and the direction that Editor Ball has taken *Hypothesis*.

4) Reports from Committees

   a. Nominating – Behm and Eldredge announced that there are five vacancies on committees due to resignations and end of terms. They are: Awards, Bylaws, Membership, Nominating, and Research Resources. Interested section members should contact Eldredge.

(Continued on page 12)

b. Research Resources – Jana Allcock reported the Research Bibliography has been revised and is available on the Research Section web site. She recommended that bibliographies be archived and that the updates be publicized via MLA Focus. Eldredge thanked Jana Allcock for her many years of service to this committee.

c. Continuing Education – Kris Alpi reported on an Evidence Based Public Health electronic journal club and discussed possible adoption of the format by the Research Section. She solicited suggestions for research-focused continuing education classes to propose to the Continuing Education Committee.

d. Awards – Bob Wood reported that his committee and volunteer judges met to divide papers to be judged and will meet again at the conclusion of the meeting to discuss evaluations. Awards will be given for Best Paper, Best Poster, and Honorable Mentions. Eldredge thanked Bob Wood for his good work on behalf of the Executive Committee and credited Wood with the revitalization of the MLA Research Award.

5) Reports from Task Forces

a. Evidence Based Librarianship Implementation Task Force – Jon Eldredge reported that he attended the First International Evidence Based Librarianship conference in Sheffield, UK, last September. A second conference will be held as a pre-conference activity at the Canadian Health Libraries Association on June 7-9, 2003, in Edmonton, Alberta. MLA/ Research Section has been asked to co-sponsor with the British Library, University of Sheffield, and the University of Alberta.

Motion by Eldredge: The Research Section will pursue MLA co-sponsorship of the 2nd International Evidence Based Librarianship Conference by obligating $1,000 in financial support as "seed" money to cover security deposits and to offer logistical support from the new International Collaboration Committee. The motion is to be forwarded to Section Council, the Continuing Education Committee, the MLA Board of Directors, and Carla Funk.

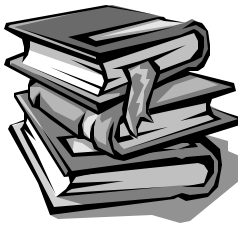
The motion was seconded by Gary Bird. There was consensus among the membership present to support the motion.

b. Research Mentors – Byrd reported that the Mentoring Service is activated, but only one referral was made in the past year. He suggested the need to promote the service.

c. Research Content – Eldredge reported that the *Journal of the Medical Library Association* is interested in publishing methods papers on study designs used by librarians. Since last year JMLA Editor Scott Plutchak has received and accepted a methods article on cohort study designs and welcomes other methods articles on topics such as randomized controlled trials, meta-analyses, or systematic reviews. *The Journal of Hospital Librarianship* is also soliciting methods papers and contributions to its Research column.

6) Adjournment – Behm adjourned the meeting at 8:50 a.m. until the Research Section business meeting to be held at the 2003 annual meeting in San Diego, CA.

Submitted by Jo Dorsch, Secretary/Treasurer



Literature Review

—submitted by Ruth Fenske, Ph.D.

Hersh, William R. et al. Factors Associated with Success in Searching MEDLINE and Applying Evidence to Answer Clinical Questions. Journal of the American Medical Informatics Association. 9(3):283-293, May/June, 2002.

This study was based on the premise that it is more valuable to know if the users of bibliographic information systems are able to apply the information retrieved rather than if they retrieved relevant documents. Of course, presumably the retrieved documents need to be relevant in order to have correct information for application. A paid convenience sample of forty-five senior medical students and twenty-one nurse practitioner students were given a half-hour orientation to MEDLINE searching and the techniques of evidence-based medicine. Two to four weeks later subjects were asked to do one practice search and five real searches. No more than one hour was allowed for each search, article retrieval, reading, and applying the material to the question. At some point before searching subjects were asked to answer the search questions and to rate their confidence in each answer.

Medical and nurse practitioner students each answered about a third of the questions correctly before searching. Medical students improved to 52% correct after searching and nurse practitioner students only to 35% correct. Both were more certain of their answers after the search. Recall and precision for the searches (both low) did not appear to affect the ability to answer the questions correctly. In the discussion, the authors say, "this task was challenging for students at this level of experience." They conclude, based on their results, that "the ability to answer clinical questions with the aid of MEDLINE is low." I would agree that this is correct, based on the results of their study. They suggest that perhaps more training as part of the study or in the curriculum may help. They also suggest that a database containing concise, synthesized references might be more useful than MEDLINE in this task.

It seems to be unreasonable to expect students to do a literature search, retrieve and read articles, and apply results in one hour. I also agree that the students needed more background in searching MEDLINE than they had. Although the authors made a correct conclusion based on their results, I do not think the results of the study are valid, because the task they set for the students was too advanced for students, particularly those with very little training in the use of databases. Their idea about using a database containing concise, synthesized references is interesting. Perhaps students should be introduced to the use of evidence-based practice by applying evidence to relatively simple situations. In this case, the database could be standard texts. They then could move up to more advanced cases and use a more advanced database which consists of the concise, synthesized references the authors suggest. Only after taking these baby steps and being thoroughly trained in using MEDLINE would students then be asked to apply MEDLINE data to non-routine cases.

Powell, Ronald R., Lynda M. Baker, and Joseph J. Mika. Library & Information Science Research. 24 (1):49-72, 2002.

The authors surveyed a sample of 1,444 members of ALA, ASIS&T, MLA, and SLA about their involvement in research. I will highlight the results for MLA members. The overall response rate was 42.6%, with MLA having a response rate of 56.5%. Two-thirds of MLA members indicated that reading research literature was part of their job expectation, and they indicated they were given time to read the literature. Possibly health sciences librarians answered in reference to the expectation that they have time to read health sciences research literature on the job, as they answer reference questions. MLA members read an average of 2.75 library and information science research journals regularly. MLA was highest (67.7%) on the number of respondents who read research-based articles in the journals. Almost 40% of MLA members conduct job-related research frequently or occasionally. In general, the authors found that MLA and ASIS&T members have a higher level of research activity than do members of ALA and SLA. The reader is referred to the article for more extensive and detailed results.

Kim, Kyung-Sun. Information Seeking on the Web: Effects of User and Task Variables. Library & Information Science Research. 23(3):233-255, 2001.

Kim, Kyung-Sun and Bryce Allen. Cognitive and Task Influence on Web Searching Behavior. Journal of the American Society for Information Science and Technology. 53(2):109-119, January 15, 2001.

Two articles about how individual differences and task type are related to Web searching behavior and outcomes have appeared.

In the first article, presumably Sun-Kyung Kim's dissertation, the relationship of cognitive style (field independence vs. field dependence), online database search experience, and task type to search behavior are studied. Forty-eight undergraduate students at the University of Texas were asked to do a known-item (requirements for admission to graduate school at UT) search and a more general subject search (information useful to prepare for the students' future career) on the university's Web site. She

(Continued on page 14)

(Literature Review — Continued from page 13)

chose to have them search only the university's Web site to control the search environment. She thought searching on the open Web might result in long delays, drastic changes in sites, and discomfort with searching unknown sites. It does not appear she asked each subject about his/her previous experience with searching the university Web site.

Search behavior was measured by time spent in retrieving information, the number of nodes visited, and navigation style, as measured by the use of five navigational tools. Students were asked to bookmark useful sources found.

Data were analyzed using analysis of variance. Online database search experience did have a strong impact on search behavior. She concludes that "training for the effective use of online databases can help users search the Web well." However, nowadays students almost always search the Web long before they search online databases. Also, these results should not be generalized to the Web as a whole because only one Web site, one with which student subjects may have had experience, was searched.

In general, field dependents had more trouble searching than do field independents. Field dependents tended to use linear navigation and they experienced more disorientation than did field independents. However field independents who had substantial online search experience performed equally as well as field dependents. This finding caused me to think about search training for library school students. Do librarians tend to be field independent or field dependent? If the latter, should online database searching be a required course in library schools? Another question is how prior extensive independent searching of the Web affects learning to search online databases, particularly those best searched with a controlled vocabulary. Assuming MEDLINE search training tends to emphasize the use of MeSH, how does previous Web searching and online database experience affect ability to learn MEDLINE among medical students?

In the second article, Kim teams with fellow faculty member, Bryce Allen, to conduct two experiments considering the same general variables. Some variables were operationalized in different ways from what was used in the previous study. Eighty students were used in each experiment. Experiment 1 was similar to Kim's previous study in that the same search tasks were used. Problem-solving style (emotion-focused or problem-focused) was used instead of online search experience as an independent variable. Subjects were asked about previous computer experience, Web experience, and Web searching experience. In this case, subjects searched the whole Web, rather than just the university's site. In Experiment 2, the independent variables were search engines used, cognitive ability, and search task. Each subject used one of four search engines. Cognitive abilities were perceptual speed, spatial scanning, and logical reasoning. In this experiment, the tasks were to find a few good sites needed to write a ten page term paper and as many sites as possible needed to write an article for the student newspaper. In both studies, dependent variables were recall and precision as a measure of search outcome and average time, bookmarks made, and search/navigational tools used, as measures of search activity.

In both of these studies, subjects were able to use the Web to meet academic information needs. Some searchers were less efficient than others. Nature of the task affected both search outcome and activities. In Experiment 1, task interacted with problem-solving style. Ineffective problem-solving style was a greater barrier when subjects did the vague and less structured subject search task. In Experiment 2, those with higher levels of cognitive ability had higher Levels of search activity when doing the newspaper article task than when doing the term paper task. The authors speculate that those with higher cognitive ability simply ignored the instruction to find only a few good sites to use for the term paper task. The general conclusion is as follows: The flexibility of the Web allowed all users to achieve results consistent with the tasks they were carrying out. However, the manner in which users completed their searches depended on the fit between personal and task variables. This study has implications for our teaching of web searching. Our approach to any particular task might not be the most suitable for the person with whom we are working.

Spink, Amanda, ed. Special Topic Issue on Web Research. Journal of the American Society for Information Science and Technology. 53(2):65-196, January 15, 2002.

In addition to the Kim and Allen article profiled above, this special issue of JASIS and T contains nine other research articles, most of high potential interest to health sciences librarians. The issue is highly recommended, as is an article on bibliographic access to special issues of journals in the sciences, engineering, and medicine, which appeared in the September, 2001, issue of Journal of Academic Librarianship.

Research Section News

Who Does the Good Work of Our Section?

— by Jon Eldredge, PhD

Hello again. I am honored to serve as your Section Chair again, after already serving as Chair during 2000-2001. I am hopeful that this repeat service will involve a smaller learning curve than one normally experiences during a first term in office.

This column will focus upon the Research Section committees since they perform so much of the work of the Section. Readers interested in serving are invited to apply to the listed committee chairs for appointment to their respective committees as described below.

Awards Committee
This committee administers all aspects of judging for the MLA Research Award. The criteria for judging the award for rigor in research follow the following aspects, in descending order of importance: validity, research design, reliability, and presentation. This committee issues award certificates to all authors and recommends financial amounts to be paid for both MLA Research Awards and Honorable Mentions. For the 2002-03 year this committee will continue to administer judging the MLA Research Award and develop guidelines for managing and judging the new Evidence-Based Librarianship in Hospital Libraries Award. The 2002-2004 Chair will be Carole Gilbert cgilbert@providence-hospital.org.

Bylaws Committee
Recommends any changes in the Research Section bylaws in accordance with existing bylaws of the Section. The Chair for 2002-2003 will be Peggy Mullaly-Quijas at mullaly-quijasm@umkc.edu

Evidence-Based Librarianship Implementation Committee; EBLIC
This Committee fosters EBL and seeks ways to integrate EBL principles into the practice of health sciences librarianship. The 2002-2004 Chair will be Jon Eldredge. jeldredge@salud.unm.edu

Executive Committee
Consists of all elected officers and committee chairs of the MLA Research Section. The Section Chair calls and presides at its meetings. During the year the Executive Committee convenes approximately twice for virtual business meetings. Normally the Executive Committee meets during the MLA Annual Meeting on Sunday mornings.

Hypothesis Editorial Board
The Editorial Board serves in an advisory capacity, solicits manuscripts from contributors, and writes articles or news items for *Hypothesis*. This year the Editor and Editorial Board will be continuing the transition of *Hypothesis* to a peer reviewed journal and will seek to increase database indexing coverage of its contents. The Editor for 2002-2004 will be Andrea Ball alball@facstaff.wisc.edu.

International Research Collaboration Committee
Ensures MLA Research Section representation in international research initiatives or other collaborations. Responsible for identifying research reports for the International Research Reviews columns in *Hypothesis*, in conjunction with the column editor. For 2002-2003 this Committee will be focusing primarily upon MLA Research Section co-sponsorship of the 2nd International Evidence-Based Librarianship Conference in Edmonton, Alberta during June 7-9, 2003. The Chair for 2002-2004 has yet to be selected.

Membership
Identifies potential members among the authors of original research appearing in peer reviewed journal articles in the health sciences library literature, winners of MLA Research Awards or Honorable Mention recipients, attendees in research or Evidence-Based Librarianship (EBL) continuing education courses sponsored by MLA or its chapters, and students at graduate schools of library science/informatics programs. The Chair for 2002-2004 will be Elizabeth Connor econnor@rossmed.edu.dm.

Nominating
Identifies candidates worthy of running for Research Section offices. The Chair for 2002-2003 has yet to be selected.

Practice Guidelines Advisory Committee
Assists MLA sections in designing evidence-based practice guidelines based upon relevant research in health sciences librarianship. The Chair for 2002-2004 will be Molly Harris mharris@verdict.uthscsa.edu.

Program Committee
This Committee manages all aspects of the Section's sponsored or co-sponsored programs at the MLA Annual Meeting. The 2003 Research Section theme will be on Evidence-Based Librarianship (EBL). The Research Section also will co-sponsor two other section programs on EBL. The Committee Chair (also the Chair-elect of the Section by convention) will be Alice Hadley Ahadley@gam.10med.navy.mil.

Research Resources Committee
This committee will be revising and updating the Research Resources Bibliography this year. The Chair for 2002-2004 will be the Immediate Past Chair of the Section, Leslie Behm behm@mail.lib.msu.edu.

(Continued on page 16)

(Section News — cont'd from page 15)

Research Results Dissemination Committee

Recommends methods for improving the timely dissem i-
nation of research results to MLA members and for MLA
to take a leadership role in this area. Recommends ince n-
tives to support and encourage health sciences librarians
to utilize and conduct research. During the past year this
committee, thenatask force, recommended thewide
adoption of structured abstracts for reporting research
projects in articles, posters or presented papers. These
recommendations included samples of structured b-
stracts. The Chair for 2002 - 2004 will be Liz Bayley
bayleyl@mcmaster.ca.

Website Editorial Board

Posts documents and other info rmation relevant to the
MLA Research Section. Advises the Executive Commi t-
tee on formatting and other issues. The Website Editor
for 2002 - 2004 will be Allan Barclay abarclay@library.
wisc.edu

The proced ure for applying for committee membership
will be simple. Interested readers can contact the Co m-
mittee Chair directly. The Committee Chair will then fo r-
ward committee recommendations to the Section Chair,
which normally are approved. Readers interested in ser v-
ing on those committees for which no chair has been
named are welcome to contact the author (Section Chair)
directly.

Jon Eldredge, MLS, PhD, Chair
MLA Research Section
jeldredge@salud.unm.edu

HYPOTHESIS
THE NEWSLETTER OF THE RESEARCH SECTION OF MLA

Andrea L. Ball, MLS, Editor
Middleton Health Sciences Library
University of Wisconsin-Madison
1305 Linden Drive
Madison, WI 53706 – 1593