HYPOTHESIS

THE NEWSLETTER OF THE LIBRARY RESEARCH SECTION OF MLA

SUMMER 1996

Contents

RESEARCH SECTION CHAIR'S MESSAGE

BY ZOË STAVRI

With great pleasure, and lots of trepidation, I agreed to being nominated for the MLA Research Section chair over a year ago. The trepidation I felt was due to the high visibility research endeavors had received in the profession due in no small part to the activities of the Research Section including the Research Resources Committee, and the Research Policy and Implementation Task Force. I realized that while I have a great deal of enthusiasm for the research process and its artifacts, I haven't the foggiest idea how to chair a section and now the section was going to be in the spotlight big time. I am already indebted to the chairs who preceded me (Jocelyn Rankin put up with my incessant questions and Nancy Woelfl made it all look easy); and the chair of the RPITF, Joanne Marshall, who shares her enthusiasm willingly. Thanks upfront also to Gary Byrd for helping with the wonderful program we presented at MLA and Natalie Schoch who seems tireless in her efforts. These exemplars helped me through it.

RESEARCH BIBLIOGRAPHY

Looking for the Research Bibliography which normally appears here in the newsletter? We are happy to report that in keeping with the Section's "electronic" goals, that document is now available on the Research Section's home page (http://www-hsl.mcmaster.ca:80/lrs/index.html). If you cannot access the bibliography or would like a printed copy, please contact Leslie Behm (20676LXB@MSU.EDU or 517-353-3037).

My first charge was to formulate the section's goals for 1996-97 (see page 5), and apply them to the MLA priorities for the same time period. I wrote these up with the input from the executive committee after the business meeting in Kansas City. In drafting the document for headquarters, two questions arose which begged for members' input. I will put them to you here, in hopes that you will contact our newsletter editor or myself with any ideas you might have.

Message, continued

One of the MLA priorities for 1996-97 is to develop "electronic publishing capabilities by accepting and maintaining electronic manuscripts...". Since more than half of our expenditures for last year were for printing and posting our newsletter, Hypothesis, I would like to suggest that we move toward electronic publication of our newsletter. Electronic newsletter publication raises many questions including: Will our members continue to write the high quality articles we've come to expect? Do most of our members have access to the Web allowing us to utilize Web-based technologies or should we produce a text-only document? Will members read an electronic publication sent to their "mailbox" or published on the home page? If a subscription to the newsletter is one of the benefits of membership, will that benefit be diluted by publishing issues on the home page for the world to read? Any comments or suggestions are welcome.

Another MLA priority is membership development, stated as: "nurture the next generation by encouraging young professionals to join and participate in MLA". Thus the second item for which I'd like input is how we might encourage new researchers. I was delighted to see new faces attached to the papers we selected for our section programming. There ought to be a way to actively solicit aspiring researchers to submit abstracts, papers, and grants. We need to be advocates, cheerleaders, and crusaders: Get others to feel the urge to use scientific systematic measurement to inform decisions. We have a mentoring program in place but are there other things we might be doing to encourage the next generation on an individual level?

Please send your comments and ideas to either our new newsletter editor, Jan LaBeause (labeause.j@gain.mercer.edu), or me (stavri@nlm.nih.gov). The more we hear from you, the more we can do in the coming year.
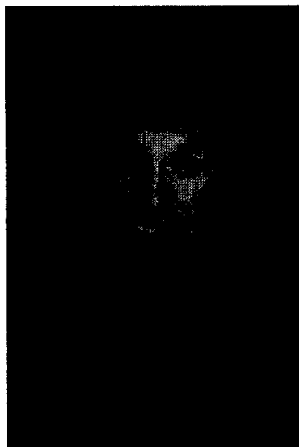
RESEARCH SPOTLIGHT IN MLA NEWS

The Research Section's "Research Spotlight" in the MLA News highlights research projects by MLA members that have been presented or published in places other than MLA meetings or the BMLA. Authors may suggest their own work, or nominate a colleague's project. Included in this issue of HYPOTHESIS is a green, short form for submission. Take a moment to reply today or contact Julie Kelly (J-KELL1@tc.umn.edu or 612-626-5454).

EARLY CALL FOR PAPERS AND POSTERS MLA ANNUAL MEETING, SEATTLE, 1997

Even though we've just returned from MLA '96 in Kansas City, it's never too early to begin thinking ahead. MLA '97 in Seattle promises to have many opportunities to present your research findings. The Research Section is planning to co-sponsor three contributed paper sessions with the Research Policy and Implementation Task Force, the Medical Informatics Section and the History of the Health Sciences Section respectively. In addition, we will sponsor a poster session for the third year. Submissions will be reviewed based on the structured abstract. Be ready to respond to the official Call for Papers which will be announced in a coming issue of the MLA News. In the meantime, for more information contact our Section's Program Chair, Julie McGowan (Julie.McGowan@VTMEDNET.ORG or 802-656-4362).

CERTIFICATE OF APPRECIATION PRESENTED TO ERIKA LOVE

Erika Love, who recently retired as Director of the Health Sciences Library at the University of New Mexico in Albuquerque, was honored in absentia at the Section's Business Meeting in Kansas City. The certificate awarded to her at that time by Jocelyn Rankin, Chair, reads: "In appreciation for your leadership, vision, and formative role in promoting the value of research within our profession, this certificate is presented by the Library Research Section to Erika Love, this 3rd day of June, 1996."

Erika Love

MEDICAL LIBRARY ASSOCIATION

In appreciation for your
leadership, vision, and formative role in promoting
the value of research within our profession

THIS CERTIFICATE IS PRESENTED BY THE
LIBRARY RESEARCH SECTION
TO

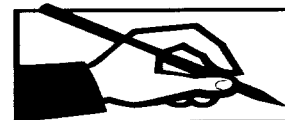**Erika Love**

This 3rd day of June 1996

Kansas City Missouri   *Jocelyn A. Rankin Chair*

RESEARCH SECTION OFFICERS, 1996-1997

Chair	Zoë Stavri, Ph.D.
Chair-Elect	Julie McGowan, Ph.D.
Past Chair	Jocelyn Rankin, Ph.D.
Secretary/Treasurer	Ann McKibbon
Section Council Representative	Gary Byrd, Ph.D.
Section Council Alternate	Julie Kelly
Section Candidate for Nominating Committee	Pam Bradigan
Awards Jury Chair	Jocelyn Rankin, Ph.D.
Bylaws Committee Chair	Leah Anderson
Continuing Education Liaison	Natalie Schoch, Ph.D.
Governmental Relations Liaison	Jon Eldredge, Ph.D.
History Task Force Chair	Robert Braude, Ph.D.
Membership Committee Chair	Nancy Woelfl, Ph.D.
Nominating Committee Chair	Julie Kelly
Research Resources Committee Co-Chairs	Natalie Schoch, Ph.D. & David Owen, Ph.D.
Newsletter Editor	Jan LaBeause
Layout Editor	Miriam Hudgins

For contact information, see MLA Directory or Research Section Home Page (http://www-hsl.mcmaster.ca:80/lrs/index.html)

MINUTES OF THE 1996 RESEARCH SECTION BUSINESS MEETING

NATALIE SCHOCH, PH.D.

The annual meeting of the MLA Research Section (RS) (formerly the Library Research Section) was held on Monday June 3, 1996 from 4:00-5:30 p.m. in Kansas City, MO. There were approximately 20 members in attendance. Chair Jocelyn Rankin presided over the business meeting.

The minutes of the 1995 annual meeting of the Library Research Section (LRS) were approved as written.

Reports and Discussions:

1) Research Policy Implementation Task Force Report. Joanne Marshall provided an overview of the Research Policy Statement of MLA which was distributed in 1995 and discussed the activities of the Research Policy Implementation Task Force (RPITF) during the last year. The RPITF hoped that the RS will take a leadership role in implementing the policy statement and encouraged RS members to communicate ideas to Joanne or other members of the Task Force. The following suggestions for RS activities were made during the discussion:

a) RS should develop a slate of continuing education courses for research to be offered at annual meetings and at chapters. It was suggested that the RS sponsored session on research methods at the Kansas City meeting (Survey Research-A. Dimitroff; Focus Groups-B. Glitz; Meta-analysis-S. Fuller) would be useful topics to develop into courses. It was also suggested that the RS could take an active role in the development of distance education opportunities.

Minutes, continued

b) Find ways to assist MLA members in obtaining Research Support (e.g., support additional or larger MLA research grants; assist members in finding funding opportunities; etc.)

c) Promote recognition for research, including increasing the points awarded for research in AHIP (It was noted that the RS has already taken positive steps in this regard with the Best Research Paper Awards given this year and the Research Spotlight.)

d) Promote dissemination of research results (e.g., enhance the Bulletin of the MLA to include more research or indicators of which articles are research articles; Use MLANet for questionnaires or datasets)

e) Document the growth of knowledge in health sciences librarianship and perform studies which show the value of the medical librarian.

2) Mentoring Service Report (by Gary Byrd) Although it has not been heavily used, he had informal contact with a few members at MLA who might be interested in this service. It was suggested that advertizing in the MLA News, Hypothesis and the RS home page could be useful.

3) Treasurer's Report (provided by J. Rankin for Ann McKibbon) Ann's report showing a balance of $3,510.73 was distributed. Expenditures exceeded revenues for the year but the dues increase should balance this next year. The dues increase from $7 to $12 was approved.

4) By-Laws Report (provided by J. Rankin for Leah Anderson) Ruth Fenske raised issues about the duties of the immediate past Chair which were not identified and the question of who should appoint the Nominating Committee. The motion to accept the by-laws revision (including the name change to Research Section) was approved under the condition the these two issues be addressed. The Executive Committee will address these issues in the coming year.

5) Governmental Liaison Report (by Jon Eldredge) Members of the Governmental Liaison Committee encouraged RS members to conduct research or compile a list of studies which show the value of health sciences librarians.

6) Hypothesis Report (by Emily Fang). The Section Newsletter was published three times in 1995/96 and back issues will be made available on the home page. E. Fang was thanked for her service as newsletter editor. Jan LaBeause will be the new Hypothesis editor.

7) Membership Report (by Julie McGowan) The Membership Committee is seeking to attract new members to the section and will work this year on contacting BMLA authors with information about the Section. It was also suggested that Award recipients for this year could be given a one year free membership to the Section to encourage membership.

8) Nominating Committee (by Julie Kelly) Julie McGowan is the year's Chair-Elect and Pam Bradigan is the Candidate for the MLA Nominating Committee.

9) Program Committee (by Zoë Stavri) The RS sponsored one session of invited papers (organized by G. Byrd), two contributed papers sessions (selected by J. Backus, L. Anderson and Z. Stavri) and one poster session. The research awards were made by a separate panel of J. Backus, N. Schoch and N. Woelfl, Chair.

Julie McGowan asked the Section if we would be interested in co-sponsoring a session on historical research which was supported. It was further discussed that we should try to increase the number of research posters and that contributed paper sessions are preferred over invited sessions. Gary Byrd noted that there will likely be a reduction in the number of programs offered next year at MLA so we should plan carefully.

10) Research Resources Committee (by Natalie Schoch) New members have been identified to fulfill the roles of the Committee. The Research Bibliography will continue to be produced. Activity on the Research Spotlight is continuing. A new function of the RRC will be finding links to funding resources on the WWW which will appear as links to the RS Home Page. David Owen and Natalie Schoch will co-chair this committee in 1996/97. RRC products (the bibliography, research spotlights, and funding links) should be available through the RS Home Page shortly.

11) Section Council Report (by Gary Byrd) Section Council discussed the possibility that smaller sections might have current officers double as Section Council Representatives. It was agreed that the RS is large enough to continue our current practice of selecting separate Section Council Representative and Alternate.

For the Centennial program, Robert Braude has replaced E. Love as Section historian.

Natalie Schoch is the RS liaison for continuing education and she encourages members with ideas for research courses to contact her.

Section Council would like to see MLA take on a more active role in promoting research between librarians and vendors.

Old Business—None

New Business

The RS discussed the need to recognize Erika Love and the University of New Mexico for their efforts in developing and maintaining the RS Database. Erika's long and devoted work to the RS was recognized through the presentation of a framed certificate that was read by J. Rankin and will be sent to Erika who was unable to attend the meeting. (See page 3 for photo.)

G. Byrd discussed the possibility of having a Colloquium on Research Milestones for the Centennial meeting in Philadelphia in 1998. This may be co-sponsored by the Research Policy Implementation Task Force.

The new Chair, Zoë Stavri, was introduced. J. Rankin was thanked for her service to the RS. The meeting was adjourned at 5:30.
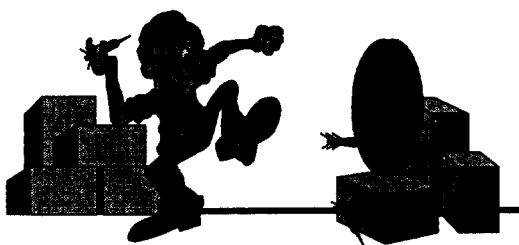
RESEARCH SECTION GOALS AND OBJECTIVES FOR 1996-1997

Editor's Note: As noted in the Chair's Message (see page 1), the Section Officers (Zoë Stavri, Chair; Julie McGowan, Chair-Elect; Jocelyn Rankin, Past Chair; and Ann McKibbon, Secretary/Treasurer) met following the Business Meeting in Kansas City to help draft the Section's Goals and Objectives for 1996-1997. Zoë's report to MLA covers the Section's objectives from June 1996 through May 1997 with reference to the general goals in the MLA Strategic Plan priorities for this year.

1. **Professional Development: Goal 1. Education and Distance Learning.**

   Objective A. Encourage Chapters to conduct research and offer Section resources and expertise to assist in the endeavor.

   Objective B. Continue mentoring program and increase its visibility by familiarizing each Chapter of its mechanics, advertising in MLA News, Hypothesis, and the section home page.

   Objective C. Investigate feasibility of offering research education at a distance by planning a pilot which might include videotaping future sessions such as the methodology session offered by the section in the 1996 program.

   Objective D. Identify researcher/faculty in health science librarianship, beginning with schools of library and information science, to approach as advocates for research and/or instructors for continuing education courses.

   Objective E. Document the growth of knowledge in health sciences librarianship.

   Objective F. Investigate how our Research Resources products are used in order to better develop them for our members.

2. **Advocacy: Goal 2. Membership development.**

   Objective A. Utilize a marketing approach to section membership.

   Objective B. Support a section poster session displaying products and projects and an opportunity for section members to update their records in the record database.

Objective C. Promote recognition for research and continue with section recognition of best research paper.

Objective D. Promote dissemination of research results including flagging research articles in the BMLA.

3. **Professional Development and Research: Goals 1 & 4. Access to electronic information.**

   Objective A. Enhance section home page with links to funding sites.

   Objective B. Mount research bibliography on section home page.

   Objective C. Find ways to assist MLA members in obtaining research support beginning with adding links to funding resources to the section home page.

4. **Professional Development, Organization & Research: Electronic Publishing. Goals 1, 3, & 4.**

   Objective A. Promote the idea of librarians as developers and evaluators of electronic publishing.

   Objective B. Draft proposal to publish MLA proceedings or abstracts in electronic form.

   Objective C. Work toward electronic section newsletter.

5. **Advocacy and National Information Policy: Advocacy for the profession. Goals 2&5.**

   Objective A. Work with Government Liaison to highlight seminal, reproducible, research studies. Will also be included in education and Centennial work.

   Objective B. Commission a review of the literature to support the practice and value of health science librarianship.

   Objective C. Explore participation with other professional agencies to develop joint symposia to promote research.

   Objective D. Advocate and support the performance of research which shows the value of the health sciences librarian.

1996 MLA LIBRARY RESEARCH SECTION

PAPERS AND POSTER SESSIONS

ABSTRACTS

EVIDENCE-BASED PRACTICE FOR LIBRARIANS: PRACTICAL EXAMPLES OF USABLE RESEARCH

(LIBRARY RESEARCH SECTION, WITH RESEARCH IMPLEMENTATION TASK FORCE)

Tuesday, June 4, 11:00 AM - 12:30 PM

DEVELOPING INTEGRATED SUPPORT FOR MOLECULAR BIOLOGY RESEARCH INFORMATION NEEDS

Nunzia B. Giuse, M.D., M.L.S., Director;

Jeffrey T. Huber, Ph.D., Research Information Scientist;

and Aubrey Wright, VMS II, Active Digital Library,

Vanderbilt University Medical Center, Nashville, TN.

The VUMC IAIMS grant includes a component, spearheaded by the Active Digital Library, aimed at creating integrated support for molecular biology research. We conducted an information needs assessment among Molecular Biology faculty and researchers. We collected information about 1) current and anticipated computer tools use; 2) research and analysis activities, organisms studied, and sequencing techniques supported; and 3) use of electronic databases. Based on the assessment results, we recommended better local support for the GCG sequence analysis package; creation of a VUMC Entrez tutorial; and better Web-based tools. We then reorganized the institution's molecular biology Web information, presenting to the outside world a homogeneous view while allowing departments to organize information as appropriate. We also acquired the databases and tools identified by the survey, making them available to researchers directly and on computers within the library. Finally, we developed a training program which uses local expertise, on-line training material, and intensive on-site course offered by experts from other institutions. (Contact Jeffrey Huber at <jeffrey.huber@mcmail.vanderbilt.edu> or 615-936-1606.)

AN ANALYSIS OF SEARCH REQUEST TOPICS: GaIN STUDY ON HEALTH PROFESSIONALS' USE OF INFORMATION
PHASE I - PHYSICIANS' CLINICAL INFORMATION MEDLINE REQUESTS CORRELATED WITH CONTINUING EDUCATION NEEDS

Jan LaBeause, Nancy Van De Water, and Priscilla Carey, Mercer University School of Medicine, Macon, GA;

Mary Fielder, Candler Hospital, Savannah, GA;

Brenda Sorrow, Houston Medical Center, Warner Robins, GA;

and Cathy Woolbright, Medical Center, Columbus, GA

A literature review reveals that it is time to re-examine why certain search topics are requested, and whether recurring questions indicate continuing education needs. A study was designed to collect data from the institutional members of GaIN (Georgia Interactive Network for Medical Information). For Phase I the scope was limited to MEDLINE requests from physicians for clinical topics. Data were collected during a six-month period by participants via a standard search request form created for the study. Copies of all completed requests were collected and ICD-9 codes assigned to the search topics which were then entered into a spreadsheet program. Institutional and county-wide reports were generated for each participating librarian to share with their CME coordinators. A report was also compiled for the group as a whole, and a state-wide Top Ten List created. The continuing education personnel were surveyed to evaluate the usefulness of the reports and make suggestions for future data sharing. The presentation 1) reviews previous studies, 2) describes the current study design, 3) discusses the reports created and their use, and 4) suggests future applications. (Contact Jan LaBeause at <labeause.j@gain.mercer.edu> or 912-752-2516.)

POSTER SESSIONS: FORGING AHEAD THROUGH RESEARCH RESULTS
(SPONSORED BY THE LIBRARY RESEARCH SECTION)
Tuesday, June 4, 11:00 AM-12:30 PM

4. THE COST OF MONOGRAPHIC CATALOGING: TWO METHODS OF CALCULATION

Bill Maina, Information Resources Development Librarian;

Mitchel Walters, Research Manager,

University of Texas Southwestern Medical Center at Dallas Library

As part of a project to test the cost-effectiveness of outsourcing the library's cataloging, we wanted to determine the cost of in-house monographic cataloging. In one method, individual titles were tracked through the cataloging process, with staff entering the time spent at each stage of the process. Then the time spent was totaled and multiplied by the hourly salaries of the staff performing the work. Cost factors for fringe benefits, equipment and environmental overhead were also included in the total. In the second method, the total yearly cataloging output of the unit was divided by the total yearly salaries, benefits, equipment and overhead costs of the cataloging unit. The two methods produced very different results. In in-house cataloging cost per item for each method is also compared with the prices quoted by a commercial cataloging service. The poster demonstrated the two methods of calculation using simple formulas and examples. Proportions of staff time spent at various tasks and the breakdown of salary, benefits and overhead costs were displayed using pie charts. (Contact Mitchel Walters at <walters@medcat.library.swmed.edu> or 214-648-2483.)

5. A COMPARISON OF THE DURABILITY OF TWO METHODS OF JOURNAL BINDING

Mitchel Walters, Research Manager;

Eric Zeidler, Research Assistant,

University of Texas Southwestern Medical Center at Dallas Library

In regular double-fan adhesive binding, the adhesive is applied to smoothly trimmed leaf edges. In the notched-edge method, small notches are cut into the leaf edges before the adhesive is applied, thus providing more "edge" for the adhesive and supposedly strengthening the attachment. To determine which method was actually stronger, we noted the method of leaf attachment for 90 volumes whose bindings had failed during a recent six-month period. These figures were then compared using Chi-square analysis with a random sample of 90 volumes from the latest five years of the library's journal collection. Additional factors which might affect the results, such as whether the titles were low use or high use, were also noted in both the samples and were factored into the analysis of the results. The study was presented in printed poster format with illustrations of the two binding methods and a chart showing the use distribution of the library's collection. (Contact Mitchel Walters at <walters@medcat.library.swmed.edu> or 214-648-2483.)

AWARDS FOR BEST RESEARCH PAPER AND POSTER
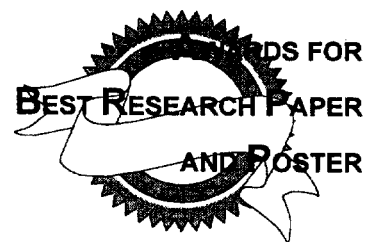
Congratulations to the winners of the first Research Section Awards for Best Paper and Best Poster. In addition to the honor, recipients received $100 each.

Best Paper: Cheryl Dee, et al. "SC/MLA Journal Usage Study : Hospital Library Analysis"

Best Poster: Kathryn Connell, et al. "Solving Problems through Research: A Document Delivery Case Study"

Honorable Mentions were received by: Pascal Calarco, et al. "Workflow and Cost Impacts of WWW-Based Electronic Forms in Document Delivery", and Carol Jenkins, et al. "Information Needs in Community-Based Practice and Educational Settings: Preliminary Results."

The Criteria used for the awards was the same as that for choosing papers and posters for the program. Content counted for 60% of the overall score, while Originality (15%), Clarity of Expression (15%) and Relevance to the Theme (10%) made up the remainder. The Awards Jury (Joyce Backus, Natalie Schoch and Nancy Woelfl, Chair) had a difficult time selecting the winners, and want to thank everyone for participating in our section's programming.

— submitted by Zoë Stavri

Meeting Announcements

Past ...

PHILADELPHIA REGIONAL CHAPTER SPONSORS CE PROGRAM/COLLOQUIUM ON RESEARCH

On March 14 and 15, 1996 the Philadelphia Regional Chapter/MLA sponsored a continuing education course and colloquium, "Research & You" for chapter members to explore the role of research in the health sciences library environment. The two-day endeavor was held at the College of Physicians of Philadelphia. Joanne Gard Marshall, Ph.D., member of the MLA Board of Directors, chair of MLA's Research Policy Implementation Task Force, and Associate Professor of Information Studies at the University of Toronto was the course instructor for "Research Methods for the Health Sciences Librarian" on the first day.

A Research Colloquium was held on the second day with Dr. Marshall leading a panel of researchers who presented some of their individual research projects and explored research trends and opportunities. Dr. Marshall was joined on the panel by Michael Hamlin, Ph.D., Director, Education Services, Academic Information Services and Research, Thomas Jefferson University; Carol Hansen Montgomery, Ph.D., Associate Provost for Academic Informatics, Allegheny University of the Health Sciences; and Barbara Smith Shearer, MSLS, Director, Public Services and External Relations, Scott Memorial Library, Thomas Jefferson University.

To continue the chapter's efforts to support research opportunities for its members and their institutions, the establishment of a Research Task Force is being considered. This committee would explore and sponsor further research-oriented endeavors including workshops, a mentoring program, a "research club," and a chapter grant to be awarded annually. For more information, contact Marjorie Smink, Past Chapter Chair, Philadelphia Regional Chapter/MLA at <SMINK@SHRSYS.HSLC.ORG>or 215-561-6050, ext. 265.
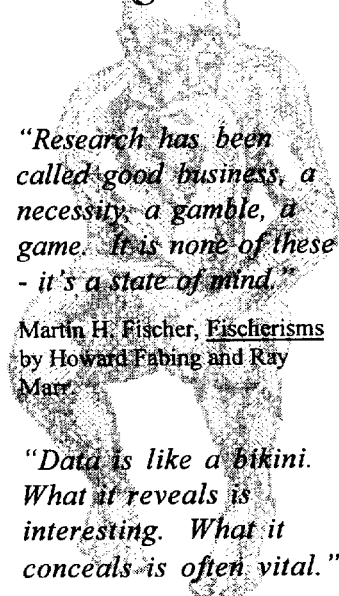
And future ...

ELECTRONIC PUBLISHING OF DATA SETS ON THE WORLD WIDE WEB

This workshop, organized by the Association of Research Libraries, is one in a series of ARL initiatives to provide essential skills to information professionals in dealing with numeric data sets and data analysis. This three-day workshop for librarians, information professionals, and educators will be held October 28-30, 1996 at the University of Virginia, Charlottesville, VA, and will provide hands-on experience in developing interfaces for publishing and analyzing data sets on the WWW.

Numerical databases and quantitative analysis require knowledge of statistical programming, but the WWW allows users to manipulate data more easily. This workshop will provide step by step instructions on publishing social, economic, and other data on the Internet. Participants will learn how to create HTML home pages, Perl scripts, evoke SAS, SPSS, STATA, and other code and will also provide transparent data analysis capabilities to their users. Familiarity with either HTML, Perl, SAS, SPSS, or STATA would be helpful but not essential.

Workshop Leaders: Patrick Yott, Coordinator of Social Science Data Services, University of Virginia Libraries, and Paul Bergen, Coordinator of Instructional Computing Faculty of Arts and Sciences Computing Services, Harvard University. Registration is $300 for ARL members and $350 for non-members. Registration inquiries should be directed to Allyn Fitzgerald (allyn@cni.org), and program inquiries to Martha Kyrillidou (martha@cni.org).

Research Spotlight

Alexandra Dimitroff

THE USE OF PROBLEM-BASED LEARNING IN A HEALTH SCIENCES LIBRARIANSHIP COURSE

ALEXANDRA DIMITROFF, PHD

Introduction and Background

In the Medical Library Association's Platform for Change (MLA, 1992), the challenge of library professionals working in health sciences environments is succinctly described as "pivotal in the handling of biomedical information, combining the ability to use the knowledge bases of medicine and the technical expertise of librarianship with clearheaded problem solving, analytical competence, and well-honed interpersonal and organizational skills." In addition, the document emphasizes the need for health sciences librarians to develop the skills to insure lifelong learning and to assume greater responsibility for increasing professional performance, often through several learning strategies. The project described here will address these two issues through the design and evaluation of a health sciences librarianship course which will utilize a technique not previously used in educating health sciences librarians, namely problem-based learning.

Problem-based learning (PBL) is not a new concept, having roots as far back as Plato and the Socratic method. More recently, several professional disciplines have been exploring the use of PBL, including law, dentistry, pharmacy, and optometry. As health sciences librarians are well aware, medical education provides the most complete model for implementing PBL in professional education. McMaster University was the first North American medical school to adopt a PBL curriculum (Neufeld, 1974). Today over 100 medical schools have incorporated PBL methods into some part of their curricula (Schilling et al, 1995). An examination of the medical education literature found that when compared to traditional methods, PBL was more nurturing and

enjoyable, and that graduates performed as well or better than graduates of traditional programs (Albanese & Mitchell, 1993). A meta-analysis of the evaluative research (also in medical education) found that PBL was significantly superior to traditional teaching techniques in such areas as student evaluations and student performance, and that PBL and traditional teaching techniques did not differ on tests of factual and clinical knowledge. In addition, the authors found that the value of PBL is supported by data on outcomes that are less frequently studied such as faculty attitudes, student mood, class attendance, academic process variables, etc. (Vernon & Blake, 1993). A report of the use of PBL in a large group environment also found that PBL students performed better and held more positive views regarding the teaching method than students in a traditionally taught course (Winslade, 1995).

Alfred North Whitehead observed that "education means, literally, the process of leading out," (Whitehead, 1948) something PBL proponents consider key to development of independent critical learners. Current methods of PBL have more structure than Whitehead's statement suggests, but they definitely provide more options for individual student exploration than do more instructor-oriented methods. It has been argued that PBL is "the most effective means...of securing an integration of academic and operational approaches to higher education and to instilling a high level of motivation and a capacity for active learning" (Birch, 1986). PBL incorporates an instructional format characterized by small-group discussion and self-study (Schilling et al, 1995). The instructor serves as a facilitator rather than the sole provider of information. In the medical model, patient cases are presented, the problem is analyzed, and the knowledge needed to understand it is identified and investigated (Schilling et al, 1995). Through this problem solving, students are required to develop critical reasoning strategies so that they can gather facts and develop hypotheses in the investigation of the solution.

Olander (1995) describes the use of PBL in several components of a general LIS curriculum at Lund University, Sweden. Problems used (the example described was the preparation of a strategic plan) were all related to public libraries. Olander reiterates that the use of PBL "highlights the problem-solving process" including "information-seeking, analysis, critical assessment, structuring, and creativity." While fostering confidence in the students, team work encouraged the development of social and communicative skills. Additional details of the use of PBL in the Lund LIS program are eagerly awaited, but the experience described in this brief report appears to be very positive.

In the project described here in which PBL will be used in a health sciences librarianship course, the students will develop their ability to acquire the needed knowledge, synthesize it and apply it to the problem. As advanced students, they will have the basic knowledge

and skills of general reference and online searching. They will utilize these skills in applying them to a specific and unique information environment, that is, the health sciences. Course content will cover both information problems (i.e., advanced search techniques) as well as management issues (i.e., working with other institutional staff in developing an IAIMS-like network). With appropriate preparation and problem development, PBL becomes not simply a way to learn problem solving but a way to learn content and skills as well (Stepien & Gallagher, 1993).

Project Objectives

The specific objectives of this project are:

1. To collect and modify cases and problems that provide appropriate learning scenarios for health sciences librarianship students.

2. To re-design the "Sources and Services in the Health Sciences" course into a problem-based learning format.

3. To evaluate the success of the PBL teaching method in the "Sources and Services in the Health Sciences" course through the use of student self-assessments.

Methodology

This project will be conducted as a modified evaluative case study because 1) it is research in which the presumed cause is an intervention (PBL technique) that can be manipulated and 2) it is research whose aim is to discover the extent to which the intervention had a specified impact (Mohr, 1985).

The major activity of this project is the complete re-design and subsequent evaluation of the "Introduction to Sources and Services in the Health Sciences" course in the University of Wisconsin-Milwaukee School of Library and Information Science. Three distinct phases are planned: 1) preparation for and actual re-design of the course, 2) teaching the re-designed course, and 3) assessing the value of the PBL technique via student outcome measures.

The preparation for the re-design of the course will consist of the development of cases or problems. These cases will be solicited from librarians in a variety of health science environments: hospital, academic, corporate. A request to librarians to contribute cases will be made via the MEDLIB-L listserv. This invitation will result in a list of potential "case contributors" to whom I will subsequently write describing the type of cases needed and the level of detail required for a PBL unit. Soliciting cases from practicing librarians will, I hope, insure that a necessary "reality check" is built in. Cases will cover sources as well as services and issues related to health sciences librarianship. That is, cases or problems related to

sources will require extensive patron interviewing, identification and in-depth use of sources, re-packaging of information, and evaluation of information retrieved, among other things. Cases related to information services may involve policy formation for selection and acquisition of CD-ROM sources or preparation for a JCAHO accreditation site visit, as examples. It is anticipated that many of the cases will need to be enhanced or modified to facilitate student learning. Cases will be reviewed by experienced health sciences librarians for authenticity, but in general all cases (or problems) will result in the students being directed through the following steps (Birch, 1986):

1. Recognition of a problem with significant academic and/or operational implications.

2. Initial formulation of the problem.

3. Description of the problem situation.

4. Identification of solutions for analysis and testing.

5. Evaluation of solutions to the problem.

While the cases are being solicited, pre-tested and modified, the course calendar will be developed. An introduction to the PBL method will be necessary at the beginning of the course. Following the introductory unit, students will be assigned to groups. The work on the problem will provide them with the opportunity to examine in detail one problem or issue related to information services that will be examined within the context of a specific type of health sciences environment. Students will change groups so that they can witness a variety of problem-solving styles with each problem. The instructor will act as facilitator for all groups.

In addition to problem exploration and solution activities, groups will be required to report to the class. These will be brief, informal reports describing processes and outcomes. Discussions will be based on the reports of the student groups.

Project Timeline

The project should be completed in nine months, beginning in late August 1996. Planning will take four months, followed by the teaching of the course. A complete project calendar follows:

September - December 1996
    Solicit problems from health sciences librarians
    Develop supplemental problems and cases
    Have librarians evaluate problems
    Plan course (course calendar, introductory units, evaluation criteria, examinations, etc.)

January - May 1997
    Teach course

May - June 1997
    Evaluate outcome of course
    Prepare MLA report/paper

Project Evaluation

Monitoring of the progress of the project activities will be set by the teaching calendar at the University of Wisconsin-Milwaukee. All planning for the course needs to be completed by January 1, 1997. Conduct of the course is, of course, pre-determined by the university's calendar and will take place from January through May 1997.

In terms of evaluation of the efficacy of the PBL technique itself, it is hypothesized that its use will result in the acquisition of more sophisticated problem-solving skills by the students. The "modus operandi approach" (Mohr, 1985) will be used to identify these skills. In other words, the PBL course will be designed to reveal to the greatest possible extent the characteristic causal processes at work, in this case, enhanced reference problem-solving skills. In addition, students opinions will be sought to assess their relative satisfaction with the PBL format.

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RESEARCH SPOTLIGHT

The Research Resources Committee of the Research Section is sponsoring the Research Spotlight, a column in the *MLA News* featuring research projects by MLA members. The focus is on work that has been published or presented in places other than the *Bulletin of the Medical Library Association* or the MLA annual meeting.

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Project title/topic:

Brief description, including statement of purpose, methodology, and results:

Have you received funding? From what source?

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Name of project leader:

Title of project leader:

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