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DEPARTMENTS / DÉPARTEMENTS

Editor's message

For many of us who either work in academic settings or serve users whose lives are structured by the academic calendar, fall is a time of optimism and excitement. With summer vacations and conference trips behind us, we look ahead to putting what we've learned into practice. Perhaps you'd like to test new ways of delivering or evaluating services you heard about at a conference, or maybe your travels have given you fresh ideas to implement in your daily work.

As I prepared the contents of this issue and planned for the new school year, I kept returning to the idea of "reflective practice," the concept of reflecting on past experience to shape, and hopefully improve, future professional practice. Reflective practice originates from the educational literature, and since this issue highlights the librarian's role as teacher, trainer, knowledge-disseminator, and knowledge-sharer, it seems fitting to give the term some thought. By now, of course, it's a phrase that's infiltrated all sorts of literature, not least of all the discourse of library studies. But as commonplace as the notion of "reflective practice" has become, I think it's still useful in reminding us that teaching and sharing knowledge isn't simply a series of discrete instances. Rather it's a continuous process that invites intelligent innovation.

This issue, I hope, will spur new thinking and new practice by presenting articles that look back to examine the activities we engage in. Paula Robeson's article, "Life as a knowledge broker in public health," examines the knowledge broker as a catalyst for learning and collaboration amongst health decision makers, drawing parallels with the role of the clinical librarian or informationist.

Also appearing in this issue is the first article of Dean Giustini's column on teaching and learning, which offers an overview of learning theories and argues for a more thoughtful approach to instruction.

Last but not least, we present a record of the ideas shared at this year's CHLA Annual Conference in Halifax. Conference authors are invited to submit their papers to JCHLA / JABSC for publication. If you would like to discuss your materials, please send a message to editor@chla-absc.ca.

Teresa Lee

Message de l'éditrice

Pour plusieurs d'entre nous qui travaillons en milieu académique ou qui desservons des usagers dont la vie se structure en fonction d'un calendrier académique, l'automne est un temps d'optimisme et d'emballement. Maintenant que les vacances d'été et les congrès sont choses du passé, il nous reste à voir comment mettre en pratique ce que nous avons appris. Peut-être aimeriez-vous essayer de nouvelles façons d'offrir ou d'évaluer les services dont vous avez entendu parler au congrès ou peut-être vos voyages vous ont-ils fourni de nouvelles idées à mettre en œuvre dans votre milieu quotidien.

Alors que je préparais le contenu de ce numéro tout en planifiant la nouvelle année scolaire, je n'ai pu m'empêcher de ressasser cette idée de l'« exercice réfléchi », ce concept qui consiste à réfléchir à l'expérience passée afin de façonner, et par la même occasion si possible, d'améliorer sa propre pratique professionnelle. L'exercice réfléchi tire ses origines dans la littérature traitant de l'éducation; et puisque ce numéro met en lumière les rôles d'enseignant, de formateur, de diffuseur d'information et de source de connaissances qu'assument les bibliothécaires, il m'a semblé approprié d'y réfléchir plus à fond. Depuis le temps, on s'en doute, cette expression a trouvé sa place dans toutes sortes de documents, sans épargner, il va sans dire, les d'études en bibliothéconomie. Bien que le concept soit devenu notion populaire, l'exercice réfléchi a encore son utilité, ne serait-ce que pour nous rappeler qu'enseigner et diffuser la connaissance ne constituent pas une simple suite d'événements uniformisés. Il s'agit plutôt d'un processus continu qui mise sur l'innovation intelligente.

Ce numéro, du moins je l'espère, suscitera une nouvelle façon de penser, une pratique renouvelée, proposant des articles de rétrospective sur nos activités. L'article de Paula Robeson intitulé « Life as a knowledge broker in public health » (« La vie d'un courtier en connaissances dans le domaine de la santé ») jette un regard sur le courtier en connaissances comme catalyseur de l'apprentissage et de la collaboration des décideurs en santé, en parallèle avec le bibliothécaire en milieu clinique ou l'informationniste.

On trouvera aussi dans ce numéro la première chronique signée Dean Giustini portant sur l'enseignement et l'apprentissage, une vue d'ensemble des théories d'apprentissage, en plus de commentaires prônant une approche à l'instruction mieux pensée.

Et enfin, nous présentons ici un registre des idées échangées au congrès annuel de l'ABSC / CHLA à Halifax. Les auteurs des conférences sont invités à soumettre leurs articles au JABSC / JCHLA aux fins de publication. Pour discuter de vos documents, veuillez faire parvenir un courriel à l'adresse suivante : editor@chla-absc.ca.

Teresa Lee

FEATURE / MANCHETTE

Life as a knowledge broker in public health[1]

Paula Robeson, Maureen Dobbins, and Kara DeCorby

Abstract: Program objective – Knowledge brokers (KBs), like clinical librarians (CLs), are information professionals involved in the promotion of evidence-informed decision-making (EIDM). As with CLs, the impact of literature-evaluating KBs on the health sector is sparse, and there is limited consensus on their role. To provide guidance to information professionals and organizations regarding the KB role, this paper describes a typical "day in the life" of a KB in delivering a program to promote EIDM among Canadian public health professionals. Setting – The KB program was implemented in a randomized controlled trial evaluating knowledge transfer and exchange strategies. Participants – Public health managers at various levels within Canadian public health units or regional health authorities. Program – The KB identified decision makers' (DMs) evidence needs; facilitated access to and use of high-quality evidence; assisted in decision making; and facilitated EIDM skill development. Results – The KB role, activities and related tasks, lessons learned, and challenges are described. Conclusion – Central themes included the importance of relationship development, ongoing support, customized approaches, and individual and organizational capacity development. The novelty of the KB role in public health provided a unique opportunity to assess the need for and reaction to the role and its associated activities.

Introduction

Knowledge brokers (KBs) are information professionals involved in the promotion of evidence-informed decision-making (EIDM), about which little is written to guide those in this role. EIDM is the process through which the best available research evidence, along with evidence from multiple other sources, is systematically and critically considered for incorporation into policy and practice [1]. KBs are often metaphorically referred to as bridges [2–5] that link producers and users of evidence to facilitate two-way interaction and collaboration to identify issues, solve problems [6], and promote EIDM [7–11]. There is little consensus, however, on the KB role and the activities they provid [12]. KB activities target individuals [7,13,14], groups and (or) organizations [15,16], and countries [17]. In each case, KBs are linked to a group of research users, skilled in research interpretation and application, able to communicate effectively with different users and assist in translating research into local contexts [8].

The evolving role of the clinical librarian (CL) is similar to that of the KB. Like KBs, CLs aim to support EIDM and education through the provision of timely, quality appraised, and targeted evidence at the point of need [18]. CL activities involve assisting clinicians with access to clinical practice guidelines and guideline development, intensive literature searching, and professional development related to EIDM [19–21]. However, there is limited evidence of the effectiveness or cost-effectiveness of CLs [22,23].

This paper describes a typical "day in the life" of a KB involved in a randomized controlled trial (RCT) in which the KB was being evaluated in comparison with other, more passive knowledge transfer and exchange (KTE) strategies. The results of this RCT are being published elsewhere [24]. The KB aimed to identify the research evidence needs of decision makers (DMs); facilitate their access to and use of high-quality research evidence; assist them in incorporating evidence into decision making; and facilitate capacity development in the EIDM process.

Role description

The KB role in this study included the following activities: (*i*) developing and maintaining relationships; (*ii*) facilitating capacity for EIDM; and (*iii*) assisting DMs in promoting organizational change to support EIDM. Additional tasks included conducting initial and ongoing assessments of DMs' skills and capacity for EIDM, staying current with emerging evidence, and information management.

Developing and maintaining relationships

One-to-one contact was essential in getting to know DMs and establishing credibility and trust. Tools including a laptop with e-mail, the Internet, Web conferencing ability, and a

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personal digital assistant facilitated monthly communication with DMs as well as the ability to meet their needs in a timely and efficient manner. Additionally, face-to-face contact occurred during regional capacity development workshops and site visits. Another strategy used to develop and maintain relationships was the building of a network for the DMs. This has also been reported in the literature as a key KB activity [5,8,25–30]. A virtual networking forum was created through webinars.

Facilitating knowledge and skill development

Individual and organizational capacity development opportunities occurred during all virtual and face-to-face contacts. Topics covered included identification of the steps in the EIDM process, such as searching for, accessing, appraising, interpreting, and applying the available evidence to the local context. Additionally, capacity development activities involved role modelling, mentoring, promoting reflective practice, and providing guidance throughout the decision-making process.

The KB started with encouraging DMs to be critical consumers of information and moved on to facilitating capacity to critically appraise research evidence. In many cases, DMs brought forward their own information for advice and assistance in judging the quality of the evidence as well as identifying implications for local policies and practice. One participant brought forward an article from the provincial newspaper and asked, "Is this research valid?" The KB assisted the DM to appraise the methodological quality of the study, identify the key findings, and translate these findings into locally relevant action messages.

Promoting organizational change

Organizational factors such as culture, decision making, and capacity for EIDM are associated with research use [31]. Therefore, an important role component for KBs involves facilitating organizational change so as to promote a culture conducive to EIDM. Specific activities used included (*i*) promoting internal knowledge sharing (e.g., through team e-mail distribution, team meetings, management meetings); (*ii*) developing targeted resources (e.g., briefing notes to key stakeholders); (*iii*) encouraging DMs to act as role models (e.g., requiring evidence to support recommendations or ideas brought forward) and including components of EIDM in performance appraisals and staff professional development plans; (*iv*) encouraging collaboration with public health or academic libraries to assist in the development of efficient search strategies; and (*v*) making links to key resources easily accessible.

Initial and ongoing assessment

A core KB activity involves the identification of strengths and needs [5] to tailor KTE strategies to DMs' needs and then assisting them in translating research evidence into local policy and practice [32–35]. During this study, DM assessments were conducted at the beginning of the study and every 3–4 months throughout the 1 year intervention. The information gathered during these assessments related to the individual, organization, broader context, and the evidence itself and was collected primarily through telephone contact, e-mail, and organizational documents. In some instances there was considerable variation between DMs' perceptions of their knowledge and skill in EIDM and those of the KB. For these cases the KB worked collaboratively and in a sensitive manner with DMs to assist them in recognizing their strengths and learning needs in this area.

Scanning the horizon

Electronic connectivity was important for staying current as new evidence and knowledge emerged. Therefore, a portion of time was spent "scanning the horizon" for new evidence and resources in the content areas as well as for KB- and KTE-related information. This activity involved maintaining subscriptions to related list serves, electronic distribution lists, and e-table of contents alerts from relevant journals, or Really Simple Syndication (RSS) applications on journals or Web sites that regularly check for new content.

Information and knowledge management

The volume of information received and shared between the KB and DMs was vast and in some instances overwhelming. Thus, knowledge management was essential for effective and efficient knowledge brokering. A good system for managing the volume of information ensured that the KB could respond quickly to requests from DMs. To facilitate knowledge management, software packages that facilitate management of DM information and references (e.g., RefMan or RefWorks) are most helpful.

Additional outcomes

The outcomes of the randomized controlled trail are being published elsewhere [24]. Regarding the role itself, the KB recognised that (*i*) early face-to-face contact is essential for facilitating greater engagement between the KB and the DM; (*ii*) initial and ongoing needs assessments are helpful in tailoring the KB activities to the specific needs and issues faced by DMs in their local contexts; (*iii*) individual DMs and organizations should complete a self-assessment of their knowledge and skills related to EIDM at baseline; (*iv*) multiple DMs from each organization should be engaged in the knowledge brokering intervention as this would result in a critical mass of DMs working toward EIDM; and (*v*) senior administrators must be active participants in the KB intervention and in promoting organizational change conducive to EIDM. Additionally, specific knowledge and skills are required and challenges met in providing KB services to a widely dispersed, national group of public health organizations.

Required knowledge and skills

A KB should possess expertise in the EIDM process, literature searching, critical appraisal, and the ability to synthesize information and assist in translating evidence into different local contexts. A non-judgemental, respectful manner combined with excellent written and oral communication skills, and strong interpersonal skills are important for building rapport with target audiences and developing strong network ties. An understanding of the context, processes, and key influencers of both the research and target communities is essential to establishing credibility with DMs. As well, proven abilities in critical thinking, reflective practice, stra-

tegic planning, and adult education were key factors in modelling EIDM behaviour to DMs. A commitment to lifelong learning combined with an inquisitive and flexible nature, are key KB attributes, along with a healthy sense of humour to lighten the learning process and cope with challenges as they arise.

These knowledge, skills, and personal attributes have been associated with the clinical librarian, and in some cases, personality traits were considered to be more important to effectiveness than knowledge and skills [19].

Challenges

The title of KB is not regulated, and there is no KB certificate or academic program to prepare KBs for the challenges they face. During this study there was little guidance, either in the literature or through networks, to assist in the development of the role or for evaluating progress. The lack of available resources to support the KB work was particularly challenging and highlighted the importance of regular interaction with the research team to avoid becoming very isolated. From an organizational perspective, the perceived (and real) lack of organizational support in local public health units posed barriers to EIDM. Frequent organizational and staffing changes impacted on relationship development and maintenance as well as knowledge management within the health units.

Providing KB services as part of a study posed specific challenges. The 1-year period was too short to accomplish the KB goals. Geographic regional workshops included participants with a range of skill levels. Upon reflection this diversity resulted in a less than optimal experience for some workshop attendees. Future workshops would likely be more effective if EIDM skill level determined which workshop participants attended rather than geographic location. Furthermore, because adaptation of evidence to local decision making was very challenging for most, the workshops should focus more on interactive strategies promoting dialogue and debate about research evidence and how to adapt the evidence for local implementation.

Conclusion

As the knowledge broker (KB) role developed, the central themes that emerged included the importance of relationship development, ongoing support, customized approaches, and opportunities for individual and organizational capacity development. The novelty of the KB role in public health and the knowledge available regarding the similar clinical librarian (CL) role provide a unique opportunity to assess the need for and reaction to the KB role and its associated activities. Overall, it was a very challenging but rewarding experience that provided many opportunities for the KB to reflect and further develop professionally.

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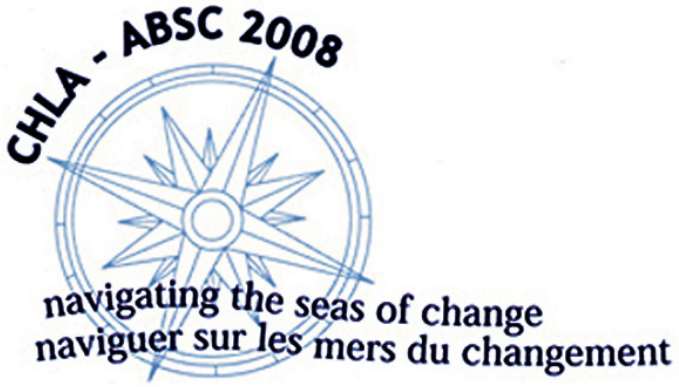

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Abstracts / Résumés

ABSTRACTS / RÉSUMÉS

Mind the gap! Understanding current practice of front line health care workers as information providers to patients: implications for service direction

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Question: The primary goal of this study was to assess the current practice of health care providers in their role as information providers to patients. Results would assist in service planning for the information management of patient education materials. **Design:** This was a descriptive statistical study. A survey of 20 multiple choice and free text questions were delivered in both paper and electronic survey format. **Setting:** The survey took place across three District Health Authorities (DHAs) in western Nova Scotia. **Participants:** One hundred and fourteen front line health care providers (HCPs) across multiple disciplines and practice environments (nursing floors, community health centres) were the target of this survey. **Results:** Seventy-one percent of HCPs lacked the time to find and assemble patient education materials, and 1/3 of nurses reported spending at least 25% of their time looking for, collecting, and providing material to patients. Patient-orientated books are available to 62% of HCPs, but only 5% preferred them. Information types HCPs wanted and could not find included information about local services, self-directed care information, and wellness information. Eighty-four percent of HCPs reported seldom or never using Library Services' search services for patient education information requests. **Conclusion:** The results of this study were instrumental in highlighting services gaps for Library Services in the realm of patient education materials provision, and in the development of best practice standards for the information management of patient education materials in the DHAs. These standards range from the selection and (or) creation of material, usage, availability, access, and education for health care workers.

A comparative analysis of librarians and health professionals as "health info(r)mediators"

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Objectives: The public is being bombarded with health information from sources with different and sometimes conflicting interests. The new concept of "health info(r)mediation" denotes the processes through which health information is provided to users. This paper explains how librarians and information specialists are central to the effectiveness of the info(r)mediation work of health professionals. **Methods:** A comparative analysis of the codes of practice and training materials of librarianship, medicine, social work, nursing, dietetics and nutrition, and pharmacy, focusing on involvement in patient/client education. **Results:** These health professions are all involved in health

info(r)mediation, with some more concerned about patient compliance and others about patient self determination. Their info(r)mediation practices are affected by the emergence of Internet-based health information. Librarians are central to the production and management of health information systems, building collections, writing finding aids, and helping people who approach the reference desk. Health librarians also construct systems used by health professionals to access current information about illness and treatment. Ultimately, the future effectiveness of the info(r)mediation work of these five health professions will depend on foundations built by librarians and information technology specialists who produce and manage health information systems and help others to use them. **Discussion:** Our findings about health info(r)mediation will be discussed in the broader context of emerging socio-technical configurations in the production, consumption, and regulation of health information.

Bridging the divide between consumer health and evidence-based information

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Objective: To develop a value-added resource that combines consumer health media reports with evidence-based medical information for physicians. **Setting:** Through a number of media sources, today's consumers have unprecedented access to health information of varying reliability and authority. Empowered by this information, patients are becoming more involved in their health decisions and are more willing to question the advice received from physicians. This is challenging for physicians, who must now find time to read mass media health reports in addition to medical research. To help physicians with this task, the University of Manitoba Health Sciences Libraries created What Your Patient Reads. **Audience:** Physicians and medical residents working in Winnipeg's hospitals. **Program:** The What Your Patient Reads service involves scanning local and national print and electronic media sources, and creating a briefing connecting the reports with medical evidence. Each one-page synopsis contains a summary of the news report, reference to the cited research, key points from both the news report and cited research, and related medical evidence. These reports will prepare physicians for questions from their patients by making them aware of the media reports and pointing them to literature that can either support or refute the claims. **Conclusion:** The Health Sciences Libraries has identified a shift in consumer health literacy habits and in response has developed a value-added project to help physicians become aware of health reports in the media. This will allow them to anticipate and answer patient questions with authority and confidence.

Collaborating with the teaching doctor: an evolving informatics approach

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Program objective: The position of Health Informatics Librarian was created to help professors in the Faculty of Health Sciences use innovative information resources to improve teaching. By providing access to electronic multimedia resources, the library contributes to an increase in the relevance, integration, and interactivity within the health sciences curricula, resulting in a reduction in the amount of didactic teaching. **Setting:** Bracken Health Sciences Library at Queen's University in Kingston, Ontario, Canada. **Participants:** The library serves users in the schools of Medicine, Nursing, and Rehabilitation Therapy, as well as the Life Sciences and Biochemistry programs. In total, the library supports over 700 faculty members. **Program:** By providing a range of informatics services and resources, Bracken Health

Sciences Library and the Health Informatics Librarian play a central role in helping faculty improve their teaching. For example, a new partnership between the library, Office of Health Sciences Education, and Medical Education Technology Unit provides faculty with a single source for requesting and receiving help with any teaching question, be it resource-based, technological, or pedagogical. Also, by identifying and (or) purchasing resources such as image collections, 3D anatomical models, and videos, the library provides access to many valuable teaching tools and helps faculty move beyond books and journals as sources of information. In focusing on collaboration with faculty, the Health Informatics Librarian is able to provide timely, responsive, and innovative solutions to common teaching concerns. **Results:** After 2 years in the position of Health Informatics Librarian, the author has seen a marked increase in the numbers of requests and collaborations around technological resources for teaching. **Conclusion:** Librarians who support faculty in any teaching setting (classroom, clinic, bedside) will learn useful tips for creating a health informatics strategy at their institutions.

Health sciences librarians in Europe

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The aim of this presentation is to provide an overview of the European Association for Health Information and Libraries (EAHIL), including the mission and objectives of the association, its organization, its members, as well as the main projects under way. The most recent evolution after the integration of former communist countries in the European Union will be also briefly described, with a focus on health sciences librarianship in Romania and the projects being developed in this country.

Consumer health information in public libraries: a five-country comparison

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Objective: To assess the relative size and coverage of consumer health collections in public libraries in different countries. Citizens are expected increasingly to take responsibility for their own health. An important aspect of this responsibility involves staying informed about health-related matters, especially "healthy living", and being able to participate in an informed manner in decision-making related to medical treatment. Although the Internet plays a significant role in the health information seeking practices of many lay citizens, in some countries the public library is an important site of health information resources. A recent study in the UK revealed, for instance, that library patrons rated public libraries among their most trusted sources of health information, second only to doctors. In this presentation, we explore how support for users' consumer health information needs is expressed in the collections available to patrons of public libraries in six countries. **Methods:** The holdings within several Dewey classifications that reflect mainstream and alternative health resources were tabulated for public library systems drawn from a random sample of mid-sized cities in six countries: the United Kingdom, Italy, Australia, Canada, and the United States. **Results:** We will present findings comparing the relative size of the collections and the emphases on different types of health information material (reflected in the distribution of items across Dewey classification numbers) available in public library collections in several countries. **Discussion:** We will discuss our results in terms of the health information roles played by public libraries in different countries.

Repository redux: UPEI virtual research environment

Mark Leggott
University of Prince Edward Island, Charlottetown, PE, Canada

Objective: The Robertson Library at the University of Prince Edward Island (UPEI) embarked on the development of a comprehensive program for the stewardship of information resources in the three primary academic "landscapes": administration, learning, and research. The VRE or virtual research environment is a collaborative research environment supporting all stages of the research life cycle. **Methods:** The VRE is being developed using the open source Drupal and Fedora systems as the two primary components and is compared with more traditional models for institutional repositories, which have not always met with the anticipated success. The session will also touch on aspects of capacity building and staff development at a small academic institution that are enabled by the use of open source applications. **Results:** There are a number of VREs currently in production at UPEI, with a particular focus on the biosciences including generic collaborative tools as well as vertical applications that provide repository functions of interest to specific research areas. This session will present some of the elements of the VRE that would be of particular interest to health-related research. **Discussion:** Issues and challenges encountered in developing the VRE model will be discussed, including how the VRE project was used to build capacity in a young team and issues when an academic library engages the research community in new ways.

New roles for health sciences librarians in disaster response

Robin Featherstone
National Library of Medicine, Bethesda, MD, USA

Question: What are the roles for medical librarians in disaster planning, response, and recovery? **Setting:** National Library of Medicine in Bethesda, Maryland, USA. **Participants:** Librarians from across North America who responded to a wide range of disaster situations, such as hurricanes, epidemic outbreaks, and terrorist attacks. **Methods:** Interviews were conducted over the phone and via e-mail to determine the roles that had been played. Transcripts were subsequently analyzed and individual activities were categorized. **Results:** Librarian skills naturally lent themselves to disaster scenarios in which accurate information was needed in a short time frame. Health information was of particular importance, and medical librarians made significant contributions by disseminating materials to first responders and health providers working in evacuation shelters. **Conclusions:** Based on the findings of the investigation, a strong case can be made for librarian involvement in federal, provincial/state, and local disaster response activities.

Refocusing the HSL: shifting to a services paradigm

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Program objective: Primary – To refocus the library's role within the organization toward professional services instead of technical services and collections, and thereby solidify the library as an integral contributor to patient care, teaching, and research. Secondary – To introduce a liaison-librarian model of professional services with subject-specific portfolios. **Setting:** Teaching hospital library in London, Ontario, Canada. **Participants:** Staff of the London Health Sciences Centre. **Program:** The library shifted its philosophy and respective labour mix to include six librarians. Existing services were re-evaluated while new services were considered. A liaison-librarian model was adopted to target specific hospital departments and build client relationships. Through regional and organizational partnerships, the focus and extent of library collections changed, minimizing technical services. Intentional and systematic promotion of the new library focus and model was conducted. **Results:** Use of existing services has significantly increased, and new services have been added to the suite of librarian services. The information literacy program has been enhanced. The liaison model has been widely accepted within the organization. The successes and challenges of adopting the new focus and model for the library will be discussed. **Conclusion:** In the digital age, the library can continue to be relevant to users by moving from a traditional collections-focused model to one centered on excellent professional services. Within the health sciences context, library services are crucial in supporting evidence-based practice through enhanced access to, and effective use of information by health care professionals. The liaison model is an effective way of engendering trust and confidence between the librarian and health care practitioner.

On the cutting edge: experiences of a clinical surgical librarian

Marina Englesakis[1] and Amy Faulkner[2]
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Program objective: The Clinical Surgical Librarian (CSL) service is designed to go "beyond the library walls" to address the research needs of General Surgery staff. **Setting:** The Surgical Quality of Care Rounds that are held every Thursday afternoon at the University Health Network, Toronto, Canada. These rounds can include discussions of professional practice, assessment of morbidity/mortality for surgical patients, and presentations on surgical topics. **Participants:** Regular attendees at rounds are General Surgery staff, residents, and medical students. Members of other departments are invited for discussions of non-surgical aspects of morbidity/mortality. **Program:** The CSL role is a supplemental function of the Information Specialist position. In this role, the CSL attends the weekly Surgical Quality of Care Rounds and upon request, provides research support to surgical staff, residents, and (or) medical students. As topics arising from discussions in one week's session may be presented at the next week's rounds, searches of or for the requested material must be timely. **Results:** The impact of the CSL has been a demonstrable increase in an awareness of library services, and use of the Information Specialist both within and outside of rounds. Other positive effects include invitations to provide database search training to surgeons attending the Annual Update in General Surgery conference. **Conclusion:** The function of CSL will continue to be a part of the Information Specialist position. In the future rounds, the CSL will conduct "teaching vignettes" incorporating evidence-based medicine searching principles and database search training. In addition, it has been a learning experience for the librarian.

Implementing an integrated information prescription model in family medicine

Francesca Frati
Herzl Family Practice Centre, SMBD Jewish General Hospital, Montréal, QC, Canada

Program objective: To meet the health information needs of patients, families, and health professionals at point of care within one academic family medicine teaching unit, supported by the adjacent hospital library, with a librarian on site as a new member of the health care team. **Setting:** The Herzl Family Practice Centre (HFPC), a McGill University family medicine teaching unit in Montreal. **Participants:** Patients and families, health professionals, and support staff at the HFPC. **Program:** This Information Rx model sees the librarian acting as a member of the health care team, providing support at point of care. Health professionals (HPs) are encouraged to write "information Rx" that patients can then fill during consultation with the librarian. The service is located next to the centre's waiting area. Patients and family members can drop in or make appointments with the librarian independently of their HP. Consultations with patients are documented in the charts. The library's Patient and Family Resource Centre acts as a support and provides access to resources, including a print collection. **Results:** This session explores the process that resulted in the creation of this innovative new service, describes the service, and shares some lessons learned several months after implementation. **Conclusion:** This example shows how collaborating with health care professionals outside of the library setting can enable a librarian to be integrated into the health care team, facilitate a health information service being tailored to the needs of a specific community, and encourage use of the service by acting as a reminder to patients, families and HPs.

Metropolis revisited: the evolution of an interdisciplinary approach to teaching informatics at the Massachusetts College of Pharmacy and Health Sciences

Samuel King
Health Sciences Library, Manchester Campus, MCPHS, Manchester, NH, USA

Objective: The study of informatics is multidisciplinary in nature. The objective of this paper is to identify opportunities for librarians to engage in interdisciplinary collaboration through the teaching of informatics. **Methods:** The evolution of librarian-taught informatics curriculum at the Massachusetts College of Pharmacy and Health Sciences (MCPHS) will be reviewed. This will include for credit courses taught by librarian led teams as well as librarian participation in informatics courses within the School of Nursing. Issues and challenges working within a class only, class/online hybrid, and totally online environment will be discussed. The benefits of interdisciplinary teaching will be highlighted. **Results:** Librarians can learn and benefit from collaboration with instructional designers, statisticians, nurses, pharmacists, and other professions in teaching a multidisciplinary subject like informatics. We can increase the profile of our profession, broaden our expertise, and open doors to further participation within the institutional team. **Discussion:** Librarian involvement in teaching informatics at MCPHS began with a National Library of Medicine (NLM) fellowship in informatics at Wood's Hole resulting in the library's first for credit course, offered totally in class and including the participation of faculty from other disciplines. The successful collaboration with the College instructional designer was essential in moving this librarian-led course to a totally virtual environment. In addition, teaming with other faculty resulted in two nursing-led hybrid courses in Boston and Manchester. Librarians have opportunities to learn from other disciplines and much to offer through collaborative teaching. Informatics is an ideal area where these varied disciplines can join to achieve common goals.

Promoting effective task-related Internet information seeking for healthcare professionals: oncology nurses as example

Ina Fourie
Department of Information Science, University of Pretoria, Pretoria, South Africa

Background: A growing interest in using the Internet in healthcare contexts and the numerous factors affecting information seeking by healthcare professionals have been widely noted (e.g., lack of time, computer and search skills, opportunity to use the Internet while at work, and not realizing the importance of information for task completion and personal development). **Objectives:** The paper will address how, in a dynamic healthcare environment facing increasing patient interest in using the Internet and being involved in decision making, healthcare professionals should be prepared to use the Internet for effective task-related information seeking. **Discussion:** Healthcare professionals are working adults with experiences, backgrounds, skills, and beliefs that need to be recognized when promoting information literacy skills. Building on their task environment and allowing them to help in identifying examples of use in their jobs will thus be addressed. Issues that may be covered in training sessions can include (*i*) analyzing daily tasks, the information intensity of tasks and plotting these against the value of Internet information resources; (*ii*) exploring the value of recommended Internet information resources for daily tasks on different levels (e.g., deciding on treatment for nausea and (or) vomiting, explaining chemotherapy to patients); (*iii*) exploring the scope and limitations of Web search tools (e.g., inadequacy of coverage, lack of overlap between search engines); (*iv*) exploring mechanisms to identify appropriate search terms; (*v*) exploring the reasons for poor retrieval when using search engines and how to counter act these by using advanced search features; and (*vi*) exploring the opportunities for professional development and self-fulfilment.

Effectiveness of a faculty workshop on finding evidence for teaching and learning in medicine

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Purpose: This study assesses the effectiveness of an educational intervention on improving literature search skills and confidence of medical school faculty. **Methods:** Participants were invited to attend two interactive faculty development workshops on Searching the Literature for Evidence Based Teaching and Learning. Workshop goals included searching databases for literature on medical education, especially trials and systematic reviews; searching databases of peer-reviewed literature efficiently; and determining whether a document is available online or in the library. Prior to the session, an electronic questionnaire, which served as both a needs assessment and pre-test, was distributed to all registrants. During the workshop, participants completed a pre-post instrument to measure their confidence in online literature searching. After the workshop, feedback was solicited via paper questionnaire. To measure participants' retention of search skills and perception of such abilities, a second electronic questionnaire was distributed 5 months after the workshop. **Results:** Sixty-five medical school faculty members attended both workshops, which were highly rated. Preliminary data from the pre-test indicated participants had only some basic knowledge required to search effectively. The pre-post instrument demonstrated that although many participants were confident that they could complete several tasks required for a search, they learned more as a result of the workshop. Data from the follow-up questionnaire are being analyzed. **Conclusions:** The revitalization of faculty members' literature search skills is an important component of continuing professional development. This study demonstrates to what extent an educational intervention is effective in meeting this goal.

Handheld information technologies and medical students: have undergraduates outgrown PDAs?

Trish Chatterley and Dagmara Chojecki
John W. Scott Health Sciences Library, University of Alberta, Edmonton, AB, Canada

Background: Five years ago PDAs were all the rage, especially in health science circles. Are they still being used, or have they been replaced by smartphones and other newer technologies? The John W. Scott Health Sciences Library at the University of Alberta still provides access to some PDA resources but wanted to assess whether or not the collection policy needed to be revised to take into account more recent handheld technology patterns. **Objective:** Two librarians conducted a research project to determine use of handheld devices (PDAs, etc.) by undergraduate medical students and assess their need for handheld resources. Results from the needs assessment will be used to inform library collection development and customer instruction policies and practices. **Methods:** Subsequent to ethics approval, an electronic questionnaire was e-mailed to all undergraduate medical students at the University of Alberta. Following analysis of survey results, focus groups were held with students in both preclinical and clinical years of their program to gather more in-depth information about handheld usage. **Results:** This study is currently underway, results are forthcoming. **Discussion:** As librarians, we want to provide access to resources in the formats most preferred by our customers, thereby facilitating knowledge use and adding value to the student experience. Results from this study will enable our library to adapt current practices to best meet the needs of our students.

Hunting for health statistics? We can help!

Liz Dennett
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Background: Many organizations worldwide generate health data and statistics, but there was no one database that facilitated access to this information. As a result, searching for these statistics was often a time-consuming and frustrating task. **Objective:** Our goal was to create a searchable portal that offered a single access point to the plethora of Web-based health statistics available from national and global agencies. **Methods:** We developed a list of potential producers of health statistics and reviewed their Web sites. This was supplemented by a review of various library guides to health statistics as well as general Internet searches. When statistical products were identified, information about each was entered into an Access database we created. Tags were assigned in such fields as disease category and geography. A simple Web interface was then produced, and the database content was uploaded, making the portal freely available for use. The interface offers both browsing and search functions. **Results:** Though work on the database is still in progress, our product—a simple, freely available portal to health statistics—will be of use to information specialists, researchers, and health professionals. **Discussion:** At present, the database has a largely Canadian focus and is limited to English language resources. As we continue to populate the database, additional categories and regions will be represented. We plan to solicit feedback about the portal and incorporate suggestions into both the user interface and content.

PubMed Central Canada: A partnership that will increase research access and application

Geoff Hynes[1] and Donna Meighan[2]
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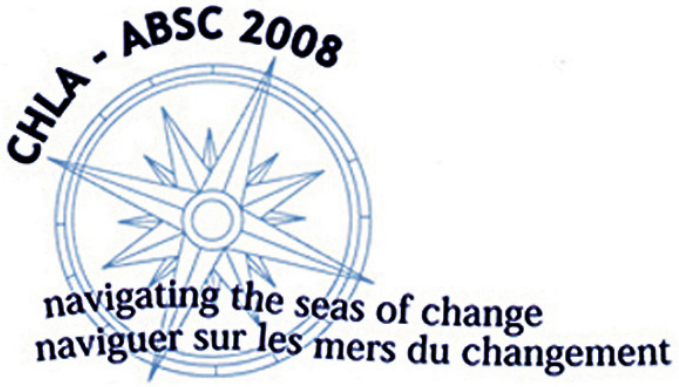
Since the 17th century, the scholarly journal has been a central means of disseminating new findings and knowledge. Today, thanks to the Internet, open access is transforming the way in which research findings are disseminated. Open access publishing enables research results to be accessible more quickly by researchers and research users worldwide. Open access recognizes that advancements in science are made possible through widespread and barrier-free access to research. With the announcement of its Policy on Access to Research Outputs in September 2007, the Canadian Institutes of Health Research (CIHR) became the open access leader amongst funding agencies in Canada. This new policy requires CIHR researchers to make every effort to ensure that their peer-reviewed publications are freely accessible online within 6 months of publication. As part of the implementation plan for this policy, CIHR and the Canada Institute for Scientific and Technical Information (CISTI) are partnering to create a national, Web-based repository of health sciences literature that will be part of the PubMed Central Canada (PMC) network. PMC Canada will be a tool for knowledge diffusion and a platform for knowledge creation. By working together, CIHR and CISTI are sharing expertise to develop a valuable resource that supports both organizations' unique mandates as well as contributes to the advancement of human health and disease knowledge and health policies that will ultimately benefit all Canadians. In this presentation, the systematic development of CIHR's policy will be highlighted, along with the joint work that has begun on building PMC Canada. You will also hear about the future plans for PMC Canada and the lessons learned in this ongoing partnership.

NurseONE: the Knowledge Beacon...

Micheline Jaworski
Canadian Nurses Association, Ottawa, ON, Canada

NurseONE is an interactive Web-based portal that is home to a comprehensive list of reliable and respected sources of health information. The portal technology provides members with secure access to scholarly health information at the point of need; utilization of best practices for health care; evidence-based health information for nurses in all domains of practice; access to information for all stages of a nurse's career; and assists in ensuring nurses are able to remain at the forefront of their practice regardless of their geographical location. NurseONE is the one-stop shop for reliable, credible information resources on a 24/7/365 basis for nurses across Canada as they strive to make the organizational shifts and changes needed to optimize patient outcomes in our ever changing health care system. The portal context has been designed to provide a wide range of services utilizing the latest information communication technologies available to promote professional development; lifelong learning; high quality, safe, ethical patient care; and enhanced patient outcomes. This presentation will provide a contextual overview and demonstration of the NurseONE portal from creation to implementation, with a focus on the Helen K Mussallem e-library.



Canadian Health Libraries Association 2008 Conference

26–30 May 2008
Halifax, Nova Scotia, Canada

Association des bibliothèques de la santé du Canada Congrès 2008

26 au 30 mai 2008
Halifax (Nouvelle-Écosse), Canada

Poster abstracts / Résumés d'affiches

2008 CHLA Conference / 2008 Congrès de la ABSC

ABSTRACTS / RÉSUMÉS

Collaborating across the Atlantic: the experiences of Canadian and British librarians working together

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Objective: To report on the successful working partnerships between Canadian and British staff that have been established in the BMJ Knowledge Information Team. **Methods:** A process evaluation of our experiences working with colleagues from Canada based on a questionnaire and personal testimony covering all members of our Information Specialist Team. We will look at what can be learned and identify the elements that have allowed this to proceed successfully. **Results:** The evaluation is currently ongoing, but we already know that employing three different Canadian librarians over recent years has produced a successful outcome in each case. Common characteristics do run across each appointment, but each post and situation was distinct, so we wish to understand more about the factors that contributed to this success, both at the organisational (the BMJ and Canadian employers) and the individual level. We hope to analyse more fully the value of this form of cross-border sharing of staff expertise and highlight what circumstances allow it to work effectively in the way that we have experienced. **Conclusions:** Working abroad in a professional library/information post can be a rewarding exercise but is often a "hit and miss" process. We hope, by analysing our experiences, we can provide an insight into the factors that are required for success, both for the individual and the employers involved, which will help others to replicate the good outcomes we have achieved.

The Info Long Term Care Blog: a current awareness service for geriatric practitioners

Laurie Blanchard
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Objective: To investigate whether a blog is an effective way to provide a current awareness service for long-term care practitioners. **Method:** Many social networking technologies are ideally suited to alerting users to new research and journal literature. While blogs, in particular, provide potential for busy clinicians to stay current with new research and an option for health librarians in delivery of information services, little research exists to determine whether they do so effectively. Using a simple interface and integrating information technologies such as RSS feeds and bookmarking tools, I created a hybrid weblog (http://infoltc.blogspot.com/) to communicate with health care practitioners in long-term care. This poster will illustrate how a blog can be used to provide a current awareness service in long-term care and will also report on tools (survey and blog statistics) to evaluate use and satisfaction with the blog. **Results:** Blog statistics will report on frequency of use and page views. Survey results will include profession of visitor, comparison to other current awareness services, useful areas of the blog, and overall satisfaction. **Discussion:** A current awareness service using blogging and other social networking software is easily created and maintained, and is potentially an effective way of alerting health care professionals to new Web sites, resources, and journal literature.

Which are the most productive sources of information for global health?

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Life Sciences and Osler Libraries, McGill University Library, McGill University, Montreal, QC, Canada

Background: Global health is an interdisciplinary endeavor. In 2007, a group of McGill librarians from across the Library system began to collaborate in support of global health research and teaching, including organizing training workshops and maintaining a wiki as a guide to information resources. In preparing workshops, example subject searches were shared. It quickly became evident that the databases and Internet resources of no single discipline covered the topic comprehensively; valuable answers would be missed if topics in this interdisciplinary area were not searched across various resources. **Objective:** To quantify the value of various bibliographic sources and Internet resources for identifying publications on global health. **Methods:** Ten questions representing the various areas of global health will be searched in the health, social science, legal, and statistical databases, and on Internet resources such as those provided by international organizations. **Results:** The results will be classified by resource and by discipline to point out the strengths of each resource and the best resources to use for each discipline. **Discussion:** This study will identify the best resources for finding global health information, analyzing results by number and quality. Results will suggest the most efficient strategies for finding information and will bring out the necessity of searching a range of resources for information on interdisciplinary topics.

Promoting academic library resources within a course management system: partnering with faculty

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Outline: Undergraduate students often find it difficult to select the most relevant research materials for their courses from the various resources offered through the Library Web site. Many universities use a course management system or CMS. One of the benefits of using a CMS, such as Moodle, is that course materials can be accessed from one Web location whenever and wherever students want. So why not use the course management system to push library resources relevant for specific courses? **Objective:** To promote the use of library resources in first-year courses by integrating a library presence into the campus CMS, Moodle. **Methods:** Nine first-year courses, including Nursing 101 and Psychology 101, were selected as part of a funded pilot for the 2007 fall term. A standard block of four library resources appears by default. In addition, course-specific resources are selected by the liaison librarian in consultation with the course instructor. Course-specific resources include electronic course reserves, databases such as CINAHL or PsycINFO, research guides, and tutorials. These additional resources are integrated into the courses and dynamically updated using an in-library developed "database of databases". **Results:** It quickly became evident that the standard set of resources could be useful to all courses through to the 4th year level and was immediately provided in all Moodle course communities. Based on positive feedback from participating faculty and students, the service is expanding to other courses. **Discussion:** Placing direct links to library resources in Moodle provides students with one-click access to a visible set of Library resources. Other resources could include a link to RefWorks, online reference tools, and Web sites. This project expands the use of a database originally designed to manage the Library's databases on our Web site to include managing library resources in the CMS. Liaison librarians can use this service to partner with faculty in promoting the use of library resources as well as participating in course forums and chats. Bring the Library to the student by using the CMS as a gateway to library resources.

Fostering a healthy environment for health literacy in Canadian consumers

Kimberley Meighan[1] and Mary Anne Howse[2]
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Objective: This poster presentation will highlight more recent consumer health initiatives in fostering health literacy and the consumer health librarian's role in ensuring patient and families understand the most recent evidenced-based health information. Health literacy is defined by Healthy People 2010 as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions". Health literacy is not just knowing how to read. It requires a complex set of skills involving listening, problem solving, and a set of decision making skills that can be over whelming for many individuals. Research has show that low health literacy is often linked to higher rates of hospitalizations and higher costs associated with increased emergency visits and overall health care costs. Statistics from 2007 show 60% of adult Canadians (ages 16 and older) lack the capacity to obtain, understand, and act upon health information and services and to make appropriate health decisions on their own. Ensuring culturally appropriate resources are available can sometimes be a significant challenge; however, with the growing immigrant population in Canada, it is ever more important for consumer health librarians to be diligent in advocating for such resources. Consumer health librarians are often faced with the challenges of ensuring patients, families, and the public have a good understanding of their health care needs and options. Utilizing their expert knowledge, librarians have the ability to help individuals make informed health decisions. This poster presentation will feature examples of existing programs, tips to ensure patients and families get what they need, and opportunities for librarians to advocate for healthy public policy and more health research.

Preliminary experience using a portable training lab in rural Saskatchewan

Christine Neilson
Saskatchewan Health Information Resources Partnership, Health Sciences Library, Saskatoon, SK, Canada

Objective: The Saskatchewan Health Information Resources Partnership (SHIRP) provides library instruction to health care practitioners across Saskatchewan as part of its mission to provide the province's health community with access to critical evidence-based health information. This poster will describe the use of a portable lab for instruction. **SHIRP training:** SHIRP provides library instruction to health care practitioners across the province as part of its mission to provide Saskatchewan's health community with access to critical evidence-based health information. **The need for hands-on training:** Training has previously included a mix of presentation style demonstrations and computer lab training where lab facilities exist. Participant feedback reflected a preference for hands-on training; however, most rural health facilities do not have computer labs, and it can be difficult for practitioners to travel to another facility in their region. **The lab:** To address the need for hands-on training in more facilities, SHIRP created a portable lab composed of five laptops, each equipped with antivirus software, Windows Firewall, a spare 9-cell battery, and a cordless optical mouse; a wireless broadband router; an LCD projector; a portable printer; and a custom travel case. There has been the odd bump along the way, but overall the introduction of the portable lab has been smooth. **The participants' response:** Since August 2007 the lab has functioned well in a variety of spaces, and the response to the new equipment has been very positive. Participant comments received both informally and through the session evaluations indicate that they want—and need—hands-on sessions to strengthen their skill using the SHIRP library resources.

WISE: Web-based Interactive Support and Education

Kelly Nystedt, Lorraine Leitz, Carlene Meilleur, Lee Salter, and Rachel McDonald
BC Cancer Agency, Vancouver Island, Victoria, BC, Canada

Outline: Currently there is no interactive component on the British Columbia Cancer Agency (BCCA) Web site (www.bccancer.bc.ca). The Web site provides a vast amount of information to patients, the public, and health care workers, regarding types of cancer, treatment options, prevention, screening, statistics, research, regional services, and much more. However, the information available on the Web site is almost entirely in the presentation format, except for an option that users have to submit questions to the webmaster. An interprofessional group consisting of a librarian, a nurse, a radiation therapist, and a radiation therapy educator, conducted a survey of patients and their family and friends to determine whether there is interest in an interactive component (Internet forum, online support group, public bulletin board, chat room, etc.) on the BCCA Web site. **Question:** Do Vancouver Island Centre (VIC) patients and their caregivers (family and friends) want, and would they use, an interactive module on the BCCA Internet Web site (www.bccancer.bc.ca)? **Setting:** The study was conducted in the Radiation Therapy, Chemotherapy,and Patient Clinic areas of the BCCA VIC in Victoria, British Columbia. **Participants:** Data was collected by surveying a convenience sample of patients and their family and friends (n = 284). **Methods:** The research team members distributed the surveys to patients and their caregivers who attended the VIC over 2 days. The 28-question survey included demographic information, as well as questions about participants' interest in various interactive Internet forums, including online support groups, online conversations with health care professionals, Web-based public bulletin boards, mailing lists/list servers, and chat rooms. Information about past experience with the Internet, the BCCA Web site, and various interactive forums was also collected. **Results:** A total of 295 surveys were collected over 2 days, almost 30% more than our goal. Overall, 64% of people were aware of the BCCA Web site, but that awareness decreased with age: 100% of people age 18–30 years old were aware of the BCCA Web site, 82.6% of those 31–45 years old, 77.5% of people 46–60 years old, 53.6% of those 61–75 years old, and only 28.6% of people older than 75. However, less than half, only 47.8% of respondents, had actually utilized the BCCA Web site. Even fewer were aware of (30.3%) or had accessed (21.3%) the regional VIC pages. Only 46% of respondents were aware of and fewer (14.8%) has used the Internet access available to patients in the centre's waiting rooms and library. Interest levels reported for interactive Internet services were considerably higher than past experience or participation; however, the highest level of interest in any interactive service was only 51.9% for an online conversation with a physician. Interest in online conversations with other health professionals ranged from 23.1% for a conversation with a librarian to 50% for a conversation with a nutritionist. Only 28.8% of respondents were interested or very interested in an online support group, 24.5% were interested in a bulletin/message board, 24.5% were interested in a mailing list, and 19.8% were interested in a live chat room. **Discussion:** The results of this study did not indicate a strong need for an interactive component on the BCCA Web site at this time. Although there was interest, it was not of a sufficient level to justify the resources required. The most desired interactive service as indicated by the responses were online conversations, especially with a physician. However this would likely be the most difficult to implement due to the human and technical resources required along with issues of privacy and confidentiality associated with patient data. As expected, demographically, the 18–30 year age group was most interested, and those over 75 years old were the least interested and experienced with interactive Internet services. With fewer than 10% of respondents under the age of 45, it is likely that within the next 5–10 years these services will be increasingly in demand. With so much emphasis being placed on providing information, educational materials, and patient support online, we need to be cognizant of the needs and abilities of our oncology patient population in the realm of the Internet and ensure that we provide them with the information they need in a more accessible face-to-face format.

Evidence for change: Regina Qu'Appelle Health Region Health Sciences Library Usage Survey

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Objectives: The Regina Qu'Appelle Health Region (RQHR) Health Sciences Library provides library services for physicians, staff, and medical residents and needed to better understand who the users are, what their information needs are, and how the library can best meet those needs. The main purposes of the study were to determine, among RQHR staff and physicians, (*i*) the level of awareness of library services, (*ii*) the use of library services, (*iii*) the frequency of library patrons requiring information, and (*iv*) the reasons why library patrons require information. Additional purposes of the study were to determine the use of the electronic resources among library patrons and the impact of being able to access information for physicians, staff, and medical residents. **Design and methods:** A survey was sent to all RQHR physicians and medical residents (n = 564), and a random sample of RQHR health practitioners identified as information users (n = 1200). **Results and conclusions:** The response rate among physicians and staff was 47%. Staff and physicians are continuing to use print departmental collections, and lack of computer access is impeding complete adoption of electronic resources. However, easy off-site access is a critical issue that needs to be resolved. The library needs to implement easier off-site access. Despite significant promotional activities some staff remain unaware of the library and library services. Additional work needs to be done to identify the pockets and enhance library promotion. Departmental print collections continue to be important for responding to immediate information needs.

Skills enhancement for public health: online course on information searching and retrieval

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Background: The Ontario Public Health Libraries Association (OPHLA) is a community of information professionals who work in partnership from within public health units across Ontario. In winter of 2007, OPHLA became aware that an e-learning module on information searching and retrieval was being developed for the Public Health Agency of Canada's Skills Enhancement for Public Health Program and offered to enhance the module's content with public health-focused information. **Objectives:** Building on the already developed content, OPHLA integrated into the module their own custom-designed information tools and products. The additional topics included in the updated version of the module, and their scope, were chosen to provide public health practitioners with rudimentary skills in information literacy, basic literature searching, information management, and awareness of intellectual property issues. **Methods:** Contributors employed their collective public health information expertise to design the module. After several consultations, the group developed a strong project model and focused work plan. They incorporated into the content of the module tutorials based on instructional materials used to train public health unit staff to address the requirements of an online learning environment. Feedback from a pilot session was utilized to include additional information identified by users as useful. **Results:** The course has been evaluated by a test group, with excellent reviews, and approved for inclusion in the Skills Enhancement program across Canada. The module's customized information literacy instruction and provision of appropriate research tools will empower public health practitioners to become more efficient information users. This project also allowed OPHLA to promote the role of information professionals in public health research.

Value of demonstration authoring software in a hospital library

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Objectives: To measure the value of using demonstration videos and online tutorials in place of one-on-one training for basic training in a hospital setting. **Methods:** Created a demonstration video that will be posted on the hospital intranet to teach library users how to access journals through the library Web site. Monitored frequency of use of demonstration video and invited all users to participate in an online survey/test to measure the impact. **Hypothesis:** The number of one-on-one instructional sessions that were requested by users of the virtual collection will be reduced with the availability of demonstration videos. With the availability of demonstration videos, training resources will be available 24 hours a day, 7 days a week. A cost-benefit analysis will prove this to be a beneficial tool for hospital libraries. **Discussion:** The preference for demonstration videos and online tutorials is a personal choice. While we understand that some users will never use demonstration videos, the availability of an alternate source of information will meet some users needs. This will reduce staff time spent training users and increase accessibility to training for users. This poster will have two components, a poster and an electronic demonstration of the video.

Navigating the sea of change: A small hospital library becomes a worldwide seller of specialized health resources

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Canadian hospital libraries have traditionally not considered income-producing activities a function of their organizations. Times have changed. As health care costs increase—and ongoing cuts to programs a reality—revenue building opportunities can serve as an alternative funding source for hospital libraries. Faced with such a scenario, the librarian at the Family Resource Library at BC Children's Hospital capitalized on a new Web-based catalogue project by creating the C&W Bookstore. By sharing infrastructure, staff, and operational costs, the bookstore and library have been able to support not only patients and families seeking to purchase or borrow consumer health materials, but also the hospital staff needing avenues to disseminate the resources they have created. Working closely with the hospital's IT and finance departments, the C&W Bookstore was able to expand its online capabilities by enabling buyers to select and securely pay for their purchases using credit cards. Buyers from around the world were now able to purchase materials previously available in-house and negotiate license/copyright agreements with the librarian. Heading into its 5th year of operation, the C&W Bookstore has become financially self-sufficient and shares profits with the many hospital authors. Its success in providing a unique service unavailable at any other Canadian hospital has raised the profile of the Family Resource Library within the hospital community and has ensured the library's continuity in the face of cut-backs.

EBM tool-picking made easy: simplifying the tiers of evidence helps students choose the best information tools for their clinical question

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Program objective: Develop a simple, re-usable method to help students quickly identify and select the best tools for answering clinical questions. Librarians delivered a 3-hour workshop on evidence tiers and synthesized information resources to 75 students, as part of a transitional program for physicians educated abroad. None of the participants had prior exposure to synthesized information products. Using feedback from a similar clerkship program, where students reported difficulty understanding and applying the well-known evidence pyramid, librarians developed a "tierless" evidence pyramid within which 13 search tools were placed in a loosely arranged vertical order from most distilled (e.g., BMJ Clinical Evidence) to least distilled (e.g., Google). To further help students, three smaller subset pyramids were developed, containing information tools to best answer questions about diagnosis, treatment options or drug information. Students were taught to match the clinical question to the best subset pyramid and then select and search from resources in that pyramid. **Results:** The simplified tierless pyramids enabled students to select the best tools for specific types of questions without requiring a deep understanding of each tool's content or features. **Conclusion:** Initial results indicate that this method can save valuable instruction time and could be used to introduce undergraduate medical students to evidence-based information tools earlier in their medical education. The method will be used in September 2008 to introduce synthesized resources at lower levels of the undergraduate medical curriculum, thereby enabling subsequent clerkship sessions to focus more on comparative appraisal of information tools.

Sailing together in the seas of change

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Objective: The Western Ontario Health Knowledge Network (WOHKN) is a newly created not-for-profit, voluntary cooperative between The University of Western (UWO), Grey Bruce Health Services, London Health Sciences Centre, Shared Library Services, and St. Joseph's Health Care, London. The basis for the WOHKN partnership is the mutual care, teaching, and research goals of the partners and is founded in the view that collaboration between the libraries is mutually beneficial and will allow for excellence in service for hospital and professional staff, faculty, and students. Additionally, WOHKN partners believe that equal access to quality knowledge-based information is required for enhanced patient care and patient safety, and for the provision of best practice. **Setting:** WOHKN hospitals currently represent 29 sites, with 16 707 clinical and other staff mostly with the Southwest Local Health Integration Network (LHIN 2). **Method:** In the fall of 2005, library leadership from the respective organizations developed a project plan that included data collection in the current local context, an overview of existing provincial and regional models, and a significant amount of consultation. In March 2006, a preliminary report was delivered to the steering committee and to library staff, and an implementation plan and structure was then established for the development of the regional library

network. **Results and discussion:** WOHKN partners officially sanctioned the relationship between its parties via a letter of intent. A robust collection strategy was developed, and a common suite of electronic journals, e-books, databases, and evidence-based resources was established. A portal was designed and launched (www.wohkn.ca). WOHKN's strategic and operational aspects are now managed by its planning and operations committee, which receives recommendations from five sub-committees in the areas of collection development, communications, services, information technology, and purchasing/contracts. **Next steps:** The evolution of WOHKN and expansion to partners within our LHIN will occur by working progressively through a balanced use of evidence-based practice, continuous re-evaluation, together with the flexibility for innovation and responsiveness to community, regional, and provincial concerns.

Nursing and medicine: their professional cultures and implications for training in evidence-based practice

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Objective: We planned to determine what behaviours were expected from nurses and physicians to function as competent clinicians and use these findings to suggest what liaison librarians can do to assist both groups to develop the skills necessary to survive and to thrive in clinical settings. **Methods:** Building on our shared experiences as liaison librarians, we explored the professional cultures of both groups by conducting a review of the literature on the professional cultures of nursing and medicine. We aimed to link our findings on each group's skills and valued behaviours with suggested content, methods, and objectives for the delivery of evidence-based practice training. **Results:** The evidence was less abundant and more difficult to find than we anticipated. It became necessary to rely on less systematic and more serendipitous methods of searching, including using Google and Amazon to search book content. Much of the literature on this topic was American and from the 1980s and 1990s, which made it difficult to transfer to today's electronic environment and to the Canadian health care context. Evidence was also more general, and some interpretation was required to apply it to evidence-based practice. **Conclusions:** *Implications for practice* – The way in which we approach evidence-based practice in medicine is different from the way we need to address it in nursing. This reflects the different professional philosophies and subcultures of these two professions. In medicine, the overarching issue is certainty versus uncertainty, and evidence-based information and resources give students, practitioners, and faculty a way to deal with this uncertainty. For nursing students, the resources they need are more theoretical and qualitative in nature, while after graduation the information is sought to inform their own practice and thus is tied more specifically to nursing interventions. *Implications for research* – Our study identified a lack of evidence around how different health professions' subcultures affect the information that they require and how best to educate them in evidence-based practice. To validate the implications for practice above, we hope to conduct a qualitative research study with students, faculty, and (or) practitioners to assess their information needs and to develop some generalizable learning objectives and strategies for delivery of our evidence-based practice skills training.

Access to archives: the OHLA archives online

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Objective: The objective of this project was to increase accessibility of the archives of the Ontario Health Libraries Association (OHLA). This would impact not only the individual members who may want to review past activities and projects, the executive and other committees of the OHLA that require quick reference to past history and data, but also other organizations and associations with whom we have affiliations and share activities. **Methods:** The methodology of the project involved three steps: (1) identifying materials that would be included in the archive from an existing collection of documents, (2) digitizing the archival materials, and (3) posting the digitized documents to the existing Web site. **Results:** Documents from the inaugural meetings in December 1985 through to the present were assessed for inclusion. Approximately 185 separate documents were chosen based on the inclusion criteria developed by the executive. These were forwarded to Emmett Digital Solutions Inc., where they were digitized into PDF files and named according to the document type and year of origin. OHLA's webmaster organized the documents into natural groupings and posted these to the Web site using HTML coding. The archives were made available on the Web site in April 2008. **Discussion:** It is expected that the impact of this new accessible archive for the association will be that similar library associations may model this method of making materials accessible. Making the organizational memory available helps current projects flow more smoothly and contributes to the field of health librarianship by broadening the shared knowledge base.

COLUMN / CHRONIQUE

Leadership 101
Column 2: Leadership versus management — Either, or, both?

Laurie Scott

This series of columns addressing the topic of leadership is based on the Canadian Health Libraries Association / Association des bibliothèques de la santé du Canada (CHLA / ABSC) accredited course "Discover the Leader in You: Developing and Realizing your Leadership Potential", developed and delivered by D. Phelan, L. Scott, and W. Glover. Interested readers are encouraged to join the CHLA / ABSC Leadership Interest Group (http://www.chla-absc.ca/?q=en/node/217).

For many people, leadership is frequently associated with management or administration. Indeed, as noted in a previous column, Library Literature indexes articles dealing with leadership using subject headings for administration. It is possible to be a competent manager without being a strong leader, and vice versa. Some individuals are able to combine leadership abilities with strong administrative skills. We are fortunate indeed when we are able to work with individuals who have these qualities. More frequently, however, individuals will have strengths in one or the other camp.

Effective managers and administrators have strong organizational, time management, interpersonal, and financial skills. They may or may not supervise staff. They are adept at overseeing often complex and detailed tasks. One of the pioneers of the study of leadership, Warren Bennis, summarized his view of the difference between leaders and managers/administrators through a list of contrasting qualities and functions:

- The manager administers; the leader innovates.
- The manager is a copy; the leader is an original.
- The manager maintains; the leader develops.
- The manager focuses on systems and structure; the leader focuses on people.
- The manager relies on control; the leader inspires trust.
- The manager has a short-range view; the leader has a long-range perspective.
- The manager asks how and when; the leader asks what and why.
- The manager has his eye on the bottom line; the leader has his eye on the horizon.
- The manager imitates; the leader originates.
- The manager accepts the status quo; the leader challenges it.
- The manager is the classic good soldier; the leader is his own person.
- The manager does things right; the leader does the right thing.[1]

Bennis is, perhaps, a bit hard on managers. Not all managers have leadership potential, nor do all management positions require incumbents to lead. A good administrator is worthy of respect, and there is a strong role for such individuals in every organization.

So what, then, of leadership? Just as managers are not necessarily leaders, so too, leaders may not be effective managers. Consider the concept of a charismatic leader who can inspire people yet can't get to a meeting on time or balance the books! Leaders are focused on the big picture and may get bogged down when faced with details.

It is important to note that leaders are not necessarily in positions of authority. It is possible to lead "from the ranks"—to inspire people and influence policy without it being part of one's job description. Librarians in junior positions are often the people who come up with the most innovative ideas. Those junior librarians who have leadership qualities can make their case and carry their ideas to fruition, to the benefit of the whole organization. Stoyko et al. call this concept of leading without authority being an "idea leader":

> Building creative organizations requires leadership. Leadership can be exercised at any level within an organization. An *idea leader* is someone who knows how to spot a good idea and adapt it to suit the organization's needs…An idea leader is also someone who is conscious of how personal actions can inadvertently affect fledgling ideas. Creativity is often destroyed by the actions of managers who are focusing on other things.[2]

One leadership quality that often comes to the fore in any discussion of how leaders differ from managers (or any non-leader) is charisma. One might suggest that an administrator is unlikely to be charismatic, while it would be absolutely

[1] W. Bennis. Managing the dream: Leadership in the 21st century. *The Antioch Review*. 1991 Winter;49(1):22.

[2] P. Stoyko, G.K. Henning, D. McCaughey. *Creativity at work: a leadership guide*. CSPS Action-Research Roundtable on Creativity. Ottawa: Canada School of Public Service; 2006 [retrieved 2008 Jun 23]. Available from: http://dsp-psd.pwgsc.gc.ca/collection_2008/csps-efpc/SC103-23-2006E.pdf.

essential for a leader to have that quality. There can be little doubt of the fact that charisma will carry an individual a long way, regardless of whether there is substance below the surface. The late leadership guru Peter Drucker, in one of his final interviews, addressed the issue of charismatic leadership:

> You know, I was the first one to talk about leadership 50 years ago, but there is too much talk, too much emphasis on it today and not enough on effectiveness. The only thing you can say about a leader is that a leader is somebody who has followers. The most charismatic leaders of the last century were called Hitler, Stalin, Mao, and Mussolini. They were mis-leaders! Charismatic leadership by itself certainly is greatly overstated. Look, one of the most effective American presidents of the last 100 years was Harry Truman. He didn't have an ounce of charisma. Truman was as bland as a dead mackerel. Everybody who worked for him worshiped him because he was absolutely trustworthy. If Truman said no, it was no, and if he said yes, it was yes. And he didn't say no to one person and yes to the next one on the same issue.[3]

So, charisma is not a "must have" when it comes to being a leader, although it can be an asset to a good leader. Drucker makes an excellent point in highlighting the destructive potential of charisma in a person who would "lead" others in evil or, in less dramatic contexts, ill-conceived causes. Perhaps a new term, "mis-leadership" should be created to apply to these individuals.

In the course, "Discover the Leader in You", case studies are used to examine the differences between management and leadership. Consider the following example:

> You are the head of a hospital library. The library advisory committee is meeting and discussing the allocation of budget resources on e-journals versus print journals. Two of the six committee members disagree strongly. One member feels the library should abandon print entirely, citing the desire of most users to access materials from outside the library and the need to free up space for other purposes. The other member is equally adamant that he needs paper copies of all the important journals both current subscriptions and back runs for both clinical and research purposes. The meeting is getting bogged down in an endless debate between these two strongly opinionated people. You are not the chair of the advisory committee, and the chair seems unable to bring the discussion under control.

What action would you take to show leadership in resolving the dispute described? Do you think a manager would approach it differently? If so, in what ways? Something to ponder until the next issue!

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[3] R. Rich. Peter Drucker on Leadership. *Forbes.com*. 2004 November 19 [retrieved 2008 Jun 23]. Available from: http://www.forbes.com/2004/11/19/cz_rk_1119drucker.html.

COLUMN / CHRONIQUE

Utilizing learning theories in the digital age: an introduction for health librarians

Dean Giustini

Key messages

(*i*) Many health librarians are successful, intuitive teachers but increasingly recognize the need to employ new teaching approaches
(*ii*) Most health librarian-led teaching takes place in classrooms, at reference desks, and online (using chat, tutorials, and Web 2.0 tools)
(*iii*) In the digital age, *how* we teach may be as important as what we teach
(*iv*) Behaviourism, constructivism, and situated-learning are three learning theories presented to tailor teaching sessions to users' needs
(*v*) Insight into *how learning occurs* has implications for the successful design, delivery, and assessment of library programs circa 2008

Introduction

This paper is an introduction to learning theories for health librarians. In this column (part I of a teaching and learning series for the JCHLA / JABSC) I lay the foundation for the study of learning theories and examine three influential theories specifically: behaviourism, constructivism, and situated learning [1]. In subsequent columns, I will explore learning theories as a set of tools and strategies for the improvement of information literacy and teaching programs.

Throughout this series, I want to emphasize the importance of a "blended approach" to designing and evaluating our teaching, one that comprises experience, learning theory, and evidence from the literature. Learning theory is simply that: a tool in our teaching toolbox. Perhaps some of you are already using a blended approach to design instructional programs or some other hybrid methodology.

For those interested in deeper exploration of learning theories, I make suggestions for further reading whenever possible. The current research, for example, is worth a close review due to newer pedagogical theories such as *connectivism* and the idea of recontextualizing existing learning theory for Web 2.0 users [2]. However, I will begin by distilling the very basics of learning theory and by orienting readers to a few major theorists in the area.

These basic learning theories are difficult to grasp at times, but perseverance will bring rich rewards to those who put in the time and effort to understand them. Remember that learning theories are simply ideas—not to be followed slavishly but to consider for the insights they provide in (re)designing our work in the classroom. Health librarians looking to evaluate *how* they teach may find that they offer a good place to start.

Background

Much of the work of health librarianship depends on comprehensive knowledge of health information sources and services. In the context of reference services, health librarians spend a lot of time leading end-users to the evidence and do so at various physical and virtual library service points [3–5]. In a strategic sense, clinical librarians also lead users to the evidence in various contexts: face-to-face (F2F) during ward rounds and on clinical teams [6].

As health librarians, we play a key role in getting the evidence to where clinicians and patients need it most: *at-point-of-care* [7]. But health librarians cannot facilitate this knowledge transfer alone and ultimately end-users must learn how to find the evidence for themselves. The ability to cumulate the evidence efficiently requires a growing list of digital skills and vigilance in keeping them current, so health librarians are never short of new things to teach.

Technology drives much of our teaching. But rather than performing searches for end-users (the way we used to), health librarians teach end-users information skills with varying levels of user retention and success. What are the reasons for a lack of retention and success related to our teaching? Does learning theory—and changes in the way end-users stay informed in the digital age—provide insight into this problem?

A recurring question in this discussion is what information literacy skills are most useful and worth teaching? Biomedical information skills run the gamut from navigating the newest interfaces to MEDLINE to searching for grey literature and managing citations in RefWorks. But not every clinician will have the time to learn these skills.

In the long view, how we teach will determine how successful we are in moving knowledge-translation forward. If

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we want to be as competent at teaching as possible, we can increase our chances of success by understanding how knowledge is created in the digital age in the first place. It seems self-evident that our work will be increasingly ineffectual unless we can use a set of proven methodologies to optimize our time with end-users.

Interestingly, research into how librarians perceive their teaching roles suggests more than half (>50%) feel some reluctance and discomfort about them [8]. One reason may be that most library and information science (LIS) programs have only recently begun to offer courses on teaching roles and few offer courses on pedagogical theory. It is not surprising some librarians feel ill-equipped to assume instructor roles and express a lack of proper theoretical training.

How we teach is critical

If our goal is to be better at teaching, *how* we teach in the digital age is just as important as what we teach. But this requires some sense of how learning takes place and how it shifts based on context. For two decades or more, health librarians have assumed teaching roles in their institutions [9]. Many have evaluated their programs and design classes based on what they feel works and what content they surmise is important.

But librarians need as many techniques in their teaching toolbox as possible, including a set of workable theories [10]. We face a host of challenges in getting our users' attention given the pressures of the age, lack of time, and the ubiquity and simplicity of Web searching.

Most importantly, we need to consider meeting our end-users where they practice, learn, and work, including embedding ourselves online. Health librarians will eventually want to consider a hybrid of face-to-face and digital methods to deliver programs in the Web 2.0 era.

Five teaching skills for health librarians

At least two health librarians have synthesized the evidence about instructional program delivery [11–12]. Other academic librarians, such as Peacock, McNamara, and Core, stress the importance of "sound pedagogical knowledge" in assuming teaching roles [13–14].

Many of the teaching skills (capabilities or knowledge sets) mentioned regularly fall into five categories:

(1) Basic knowledge of learning theories – Do you apply knowledge of learning theories into your teaching or use the same method each time (e.g., demonstration, "hands-on")
(2) Awareness of innovative teaching trends and pedagogical research – Do you integrate new ideas from the research into your teaching? Can you evaluate your teaching and undertake critical appraisal methods (evidence-based)?
(3) Competency using information technologies and social software – Do you follow trends in open access, scholarly publishing, and Web 2.0? Can you apply technologies or tools to specific problem-solving (e.g., blogs for reflective practice, digital outreach, wikis for collaboration)?
(4) Ability to design individual classes as part of overall information literacy programs – Do you gather information about users' skill levels before your classes? Are you familiar with the information literacy frameworks of the American Library Association (ALA) or the Association of American Medical Colleges (AAMC) [15–16]?
(5) Ability to evaluate instruction and publish research – Do you get regular feedback about your teaching (i.e., from participants and peers)? Have you thought of using a study methodology to evaluate your teaching (e.g., randomization, pre-test/post-test evaluation, case study)?

Selecting a teaching approach

> There is nothing so practical as a good theory.
>
> Kurt Lewin

Effective librarian–teachers consider several factors in selecting a teaching approach. Selecting a method based on the goals of a session and (or) type of classroom environment the instructor wants to create is important. So what teaching and learning techniques create a desirable environment in the classroom? Accordingly, the literature identifies a number of different pedagogical methods that can be used to promote various kinds of learning, and they are worth looking at in some detail.

One popular method—by modifying and directing desirable behaviours—is based on the idea that "knowledge" is an asset given to a learner by an expert in the area. The correct skills and behaviours are then reinforced by repeating main concepts and testing comprehension. This is where our examination of learning theory begins.

What is behaviourism?

> Behaviourism is seeing observable changes in behaviours…patterns are repeated in learners until they become automatic [17].

Behaviourists believe that learning takes place when prompted by a stimulus and shaped by repetition/reinforcement [18]. By rewarding learners for a correct response, desirable behaviours are reinforced. In the stimulus–reinforcement–consequences model, students know that mastering content presented by an expert will bring rewards. Many current educational systems are built on the beliefs of behaviourism.

But when students learn to please their teachers and stay on their "best behaviour", the motivation is to respond to cues and patterns in learning activities. Is it a good pedagogical approach to teach library users to seek specific cues in their searching or by offering incentives to master certain skills? It may well be; some educators say that they have their place. Others however have repeatedly suggested that this may be a limited approach if used exclusively [19].

A recurring theme in the literature is that competition between learners increases when a premium is put on achievement; some medical schools are so concerned about the implications of competition that they are looking at pass/fail assessment models as alternatives [19].

In post-secondary education, behaviourist models are linked to didactic lectures. Think of the way most professors teach, usually by lecturing as a "sage on the stage" [20].

Some lecturers are very entertaining and expert at public speaking but may not be as expert at teaching.

Sage-on-the-stage lecturing is a very efficient way to convey content for learners, particularly at conferences. But is lecturing the only way to convey content to a large group of people enrolled in a course? Lectures certainly have their place in learning, but some students suggest that if professors want to talk so much that they put their lectures on YouTube for later (re)viewing [21].

Prominent educational figures such as John Dewey, Jean Piaget, and others proposed alternate paradigms to behaviourism while acknowledging its place in our educational systems. Some of these formal and informal models are discussed throughout the teaching and learning series, such as Freire's *Pedagogy of the oppressed* [22], Vygotsky's *Mind in society* [23], and Lave and Wenger's *Situated learning: legitimate peripheral participation* [24], to name a few.

For now, let's turn our attention to some prominent names in behaviourism.

Influential behaviourists

Russian psychologist Ivan Pavlov (1849–1936), known for his work in classical conditioning, carried out behavioural experiments involving a dog, some food, and a bell [25]. During his experiments, he rang a bell a few times before his dog was given food and repeated it several times. After, Pavlov noticed that the dog salivated at the ringing of the bell alone.

Pavlov's experiment is the basis of all "classical" conditioning [26]. His model is seen as the first scientific study of measuring learned behaviour—think of it as an important reference point for understanding all subsequent theory. Interestingly, even though Pavlovian conditioning is considered by many to be an important behavioural concept, "Pavlov's dog" is used pejoratively by some to describe a person who reacts to situations rather than uses critical judgment.

American psychologist John B. Watson (1878–1958) established a variant of Pavlov's work called operant conditioning. Operant conditioning *operates* on conditions within a subject's environment [27]. To be more precise, Watson observed the behaviour of an infant boy, Albert, as a rabbit was introduced into his crib area or his play environment. Watson hit the crib several times while releasing the rabbit, which made the boy apprehensive (he cried). Thereafter, Albert developed a conditioned "emotional response" (fear) brought on by seeing the rabbit alone.

Published in 1920, Watson's "Little Albert Study" is seen as one of the most important studies in the 20th century of the central role that emotions play in learning [28]. His findings were later challenged on the grounds that conditioned fears (also known as avoidance learning) are not as permanent as Watson believed and could actually be reversed [29].

American psychologist B.F. Skinner (1904–1990) observed that rewards and punishments influence animal behaviour [30]. He noticed that a rat can learn how to push a lever in his cage to get a reward of food. However, if a second lever was pushed administering a mild electrical charge, the rat learned to avoid it. The idea of Skinner's "zap" led to other forms of negative reinforcement and aversion therapy for the treatment of homosexuality [31].

Skinner's research illustrates that rewards and punishment have a profound psychic impact on learning behaviour. Further, changes in behavior are the result of an individual's response to events (stimuli) that occur in the environment [30]. His research includes motivation and presenting information to learners in small bits to reinforce micro-behaviours and responses.

Behaviourism and computer-assisted learning

Many basic behavioural concepts can be applied to computer-assisted learning (CAL). Skinner, in fact, refers to machine-based learning in his own research [32]. One benefit of CAL is that complex material and vast amounts of information can be covered several times by learners. The idea of repetition is used by many librarian-instructors and within library tutorials to emphasize critical content, for example [33].

E-learning also helps students learn new skills on their own time. Some e-learners enjoy doing modules at their own pace and prefer the regular assistance provided by online instructors without having to attend actual classes.

Computer-assisted instruction (CAI) is an efficient teaching method for visual and kinesthetic learners—those who like to be involved "hands-on" in their learning [34]. One of the strengths of CAI is that individual differences can be acknowledged in module and course design; however, it must be said that not all learning styles can or will be accommodated.

Some gender research reveals a digital divide between boys who prefer computer learning and girls who prefer social learning. In using computers, boys are able to work through tutorials when they want and are not limited by the traditional classroom—a major benefit to them [35].

Positive reinforcement is used throughout the computer gaming world. As gamers learn advanced guild skills in World of Warcraft (WoW), they gain advantage over opponents. This is a reason why gaming is popular with some learners as it provides a strong motivation to learn new skills.

Critique of behaviourist models

When teachers lecture to students—and literally "download" information to them—they provide no time to discuss or challenge ideas. Some critics say that this is not learning for retention as much as listening to an expert speak. Many millennial and Internet generation students now expect opportunities to debate ideas because they have grown up digital and are part of an ongoing global discussion using social media, such as Twitter and Facebook [36].

Many teachers in the 21st century put learners first, which is referred to as *student-centred learning* [37]. Although some pedagogues continue to lecture in this model, students are encouraged to learn through peer-to-peer interactions—a form of active learning as well as acculturation. The emphasis on rote memorization has been supplanted by social forms of learning. Educators recognize it is more difficult for one person to teach 30 students simultaneously than it is to empower students to share their learning.

In health programs around the world, clinical instructors teach some subject content by lecturing (also known as didactic teaching) but also get students to meet together to dis-

cuss hypothetical patient cases [38]. Some rote-learning will always be required in higher education, but memorization is increasingly secondary to learning how to think critically and work with others.

Interestingly, learners in behavioural models confront problems of various kinds when the stimuli-response patterns that they have learned do not occur in the same sequence each time, resulting in a "cognitive disconnect". Some workers trained to respond to certain cues on the job, for example, cannot exercise judgment if something unforeseen happens. It could be argued that teachers handicap their students when they teach exclusively based on "cueing".

Another criticism of behaviourism pertains to intrinsic motivation. Being self-motivated is critical to lifelong learning, but if someone is trained to accomplish tasks and get rewards, they become externally motivated. Worse, they do not think for themselves [39].

What is constructivism?

> Constructivism claims that learners construct their own learning by building on previous knowledge, systems, or mental schema [40].

Constructivists believe that learners construct their own meaning and knowledge when given the chance to do so. When confronting new information, especially online, learners adjust their schema or previous knowledge to suit the new situation. Knowledge is not something transmitted but created by the learners themselves. The teacher's role in this model is to guide and facilitate, not to control learning [40].

There are three main types of constructivism: (*i*) the cognitivist model, where a change in knowledge is constructed by learners and stored in the brain as information processes (as in a computer); (*ii*) the radical model, which focuses on what is or has been experienced by the learning activity; and (*iii*) the social model, a combination of the first two, where the "social nature of knowledge" is emphasized [41].

All three types of constructivist learning emphasize the importance of a learner's individual experiences in making sense of the learning activity. However, it must be pointed out that each type of constructivism takes a slightly different view of the process [42].

Influential constructivists

One of the major figures in education is the American John Dewey (1859–1952). He believed that teachers should not focus on teaching students facts or passing information along but helping them to "think for themselves" [43]. His educational reforms included an emphasis on experiential learning ("learning by doing") and reflecting on experiences for deep learning. Later constructivists such as Donald Schon referred to this powerful adjunct to learning as *reflective practice* [40].

Swiss psychologist Jean Piaget (1896–1980) proposed a constructivist theory of two parts: (*i*) an "ages and stages" aspect where learners pass through cognitive stages according to age; and (*ii*) most learners develop cognitively in stages by introduction to the learning activity, getting assistance, testing the skills learned, and finally reaching a place of accomplishment [44].

Russian psychologist Lev Vygotsky (1896–1934) stressed the importance of a learner's cultural and social background in learning [45]. Different cultures stress different kinds of social interactions and learners are products of their environment. His belief that sociocultural influences are critical to learning challenges Piaget's theory that learning takes place in stages.

The gap between a student's existing ability and what she/he can learn with the guidance of an adult or a more capable peer is what Vygotsky called the "zone of proximal development (ZPD)" [46].

Health librarians can guide users through searching, model certain skills, and help learners through the zone of proximal development. Move your learners into "the zone" by getting them to frame their own understanding of concepts and by modeling best practices.

Critique of constructivism

Constructivist ideas have not always been accepted by educators. Undirected learning can be aimless and a waste of time [46]. Further, how can you construct knowledge of database searching if you are a novice? Where would you start? Doesn't this material have to be presented first as a basis of understanding? This is the biggest challenge of most constructivist teaching: how do you get all of your end-users on the same page in terms of basic content for your classes?

Piaget and other constructivists theorized that a lot of human learning takes place by trial and error—think of the idea of child's play and how creative it is [47]. How can health librarians incorporate the idea of trial and error in search workshops? Simply by offering some free time to do so.

Today, the idea of play is influential in education and in the workplace. Google permits its employees to learn things on their own and "try out new things" for up to 20% of their day [48]. However, this can cause time-management problems and lead to a lack of cooperation in team-based projects as it tends to emphasize individualism over collective needs.

It is critical to remember that constructivists believe students are less likely to retain information if they receive it passively. When listening to a lecture for example, students do not learn how to think critically about the ideas presented, and consequently they are not engaged intellectually; they may even grow bored. The challenge of constructivist models is that learners must be eager to learn, and, as most health librarians know, not all learners are motivated to learn. Often, we need to find a way to encourage motivation.

My own experience with constructivist teaching is that it requires some "letting go" of control in the classroom and that it yields some exciting results. As teachers, it can be difficult to trust that students can build their understanding without us. But in order for constructivist approaches to succeed, learners must be committed, have a high level of maturity and time-management skills, especially for group work.

With a health librarian there as a guide, a group of advanced MEDLINE searchers might benefit most from a constructivist approach, for example, because they can teach each other the skills and shortcuts they deem most useful.

What is situated learning?

> Situated learning is learning in contexts that reflect the way knowledge and skills will be used in real life [49].

Situated learning (or situated cognition) focuses on learning by doing in context and grounded in everyday life; it owes a lot to constructivist principles [49]. Two examples of situated (literally "in situ") learning are apprenticeships and practicum experiences in various health professions. In gaining their practical work experience, some student health librarians are able to practice their PubMed search skills when they are mentored by an experienced health librarian. But by working with a pharmacist or nurse (or any clinician for that matter) on a specific search problem (or case), their learning is more meaningful and put into context. In my experience, learning in authentic contexts can often be a trigger for much faster learning.

In situated learning, what is learned is transferable but requires "participation, engagement, negotiation, and contribution to the practice of a community" [50]. In a teaching hospital, for example, clinicians, medical students, librarians, and other health professionals contribute to a community of practice (CoP), which is an aspect of informal learning discerned in this theory.

Influential situated learning theorists

Jean Lave and Etienne Wenger, two of the leaders in the situated cognition movement, see learning as "an act of creation" and co-creation (with others). Many rich, social interactions that occur between like-minded individuals are what they call a community of practice (CoP). A CoP is defined as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" [51].

CoPs are defined along three dimensions: (1) what is the community about – its joint enterprise as understood and continually renegotiated by its members; (2) how does it function – mutual engagement that bind members together into a social entity; and (3) what capability has it produced – the shared repertoire of communal resources (routines, sensibilities, artifacts, vocabulary, styles, etc.) that members develop over time [52].

Similarly, Brownet al. see CoPs as groups of people who are "learning knowledge and skills in contexts that reflect the way they will be used in real life" [53].

Critique of situated learning

Situated learning sounds novel, but as an approach to learning, it is not new. Of course, it places learning in a context that many professions expect, including librarianship, where learning occurs wherever librarians are working. It is also worth emphasizing that being submerged in the culture of a profession enhances learners' competencies and facilitates self-efficacy beliefs [53].

Situated learning is not a panacea, however. Acculturation, the "experience of participating and engaging in daily life" [54], can take time to develop organically; it doesn't happen overnight. Moreover, some kinds of skills are better learned alone before integration into professional practice because individual "lone rangers" can hold team progress back. Take musical groups such as choirs or symphony orchestras. Considerable time is spent learning how to sing or play alone before coming together and learning how to work with others—success does not come otherwise.

Wenger reminds us though that "not everything called a community is a community of practice. A neighborhood is considered a community but it is not a community of practice" [55]. Other critics of situated learning say that not all learning requires a meaningful context or a community. New skills can be learned out of context by reading a book or teaching oneself.

Conclusion

The next time you plan to teach a PubMed session at your hospital or university computer lab, the three learning theories discussed here may trigger a number of questions: will I try a behavioural or a constructivist approach in my session? Perhaps you will plan to demonstrate and talk about the basics of PubMed searching and move on to getting your users to work on specific searches in small learning groups.

Between your teaching sessions, how will you encourage your users to keep learning? Can you suggest ways to move your learners towards more of a community of practice? Will you embed yourself on a regular basis in the CoP? At the very least, knowing the basic principles of these theories should help you to explore alternatives and attach pedagogical terms to your approach.

I have found that many health librarians have an intuitive sense of how to teach, and many excel at it. Others like to use the evidence to inform their teaching and use the literature to design classes. But by using learning theory—rather than experience and evidence alone—we can move towards a more integrated teaching model. At the very least, using a blended approach of theory, experience, and intuition is more holistic than using any individual method alone.

Consider your long-term planning in terms of your teaching. What goals are you trying to achieve in your instructional programs? Are you looking to teach discrete information skills or something more durable? In the current digital landscape, a critical issue may be how we can actively foster learning cultures in our organizations given the speed of change in our libraries and the pressures introduced by newer information technologies.

These and other practical questions will be the focus in the second column of this series where I will explore how to apply learning theories to the actual design of library workshops and teaching sessions.

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COLUMN / CHRONIQUE

Consumer health information

Compiled by Susan Murray

Consumer Health Information Service (CHIS) wiki

Please visit the recently launched CHIS wiki at www.chis.wikidot.com to check out resources such as the following:

(*i*) Building a consumer health collection – Updated collection development guides (the "long" list and short, annotated core list); updated list of consumer health articles and books
(*ii*) Health navigators – Resource guides of recommended articles, books, periodicals, and organizations on a variety of health topics
(*iii*) Locating reliable health info – Evaluation guidelines/checklist; selected Canadian, US, and international multi-topic health-related Web sites
(*iv*) Toll free health numbers – Focuses on Canadian sources but includes many US and international sources
(*v*) Information about material in the CHIS collection – Information file subjects, journals and magazines

A few sections are still "under construction," such as most of the Frequently Asked Health Questions, but are coming soon. Live links appear in red.

The wiki partially replaces information on the CHIS Web site (http://www.tpl.toronto.on.ca/uni_chi_index.jsp). For example, the collection guides on the new wiki are updated, while those on the CHIS Web site are not.

Tell us what you like, what you think can be improved, and what you'd like to see included on the wiki. And if anyone has lessons learned in developing your own wikis that you can share (such as gathering statistics, getting input from users), please contact me at smurray@torontopubliclibrary.ca.

Notable new publications and Web sites

Johnson B, Abraham M, Conway J, Simmons L, Edgman-Levitan S, Sodomka P, Schlucter J, Ford D. *Partnering with patients and families to design a patient and family-centered health care system. Recommendations and promising practices.* Bethesda, Md.: Institute for Family-Centered Care, 2008 Apr.

This report highlights examples of best practices from hospitals, ambulatory programs, medical and nursing schools, health care funders, patient- and family-led organizations, and other health care organizations. The publication is available at http://www.familycenteredcare.org/pdf/PartneringwithPatientsandFamilies.pdf.

Wilhelm, MR. Pfannenstiel B, editor. The Library Consult: delivering consumer health information using the electronic medical record system. *MLA News*. 2008 Mar;11.

The Library Consult system enables point-of-care referrals from clinic providers to library staff for patients who are seeking a better understanding of their health condition or diagnosis.

Agency for Healthcare Research and Quality

http://www.ahrq.gov/path/beactive.htm

The Agency for Healthcare Research and Quality (US) has an extensive section titled "Be an Active Health Care Consumer." It includes tips on navigating the system (not all are US focused), finding information and support after a diagnosis, preventive steps to maintain good help, what you need to know when having surgery, recognizing health care quality, checking your medications, and how to be an active health care consumer.

Friends of Alternative and Complementary Therapies (FACT)

www.thefacts.org

The Friends of Alternative and Complementary Therapies (FACT), "a community of discerning consumers and qualified professionals with a vision: the creation of a repository of health information that is factual, accessible, credible and ethical," launched their new Web site in June. While creating this knowledge base of quality complementary and alternative medicine (CAM) will take some time to develop, there are some useful items on the site:

(*i*) Related links with annotated descriptions to CAM resources
(*ii*) News and events to FACT and other CAM events
(*iii*) A blog to engage those interested in CAM: the first post is a discussion of the film screened by FACT, *How to save the world: one man, one cow, one planet*, and its theme of biodynamic farming.

HealthInsite

http://www.healthinsite.gov.au/

This is not so much a new than a recently discovered site brought to my attention by CHIS librarian Donna MacLeod. HealthInsite, an Australian government initiative, provides up-to-date quality assessed information on a range of health topics. You can search by A–Z topics, health conditions,

health and well-being, life stages and events, as well as news and health services. On the sidebar are useful features such as Questions to Ask Your Health Professional, How to Assess Health Information Online, and Reviews of Evidence for Treatments.

Health databases

Patient Education Reference Center (PERC) is a new EBSCO database that features a comprehensive collection of current, evidence-based patient education information for clinicians to print and distribute right at the point-of-care. There are 12 000 individual patient handouts written at a 3rd – 7th grade reading level, covering 4000 diseases and conditions, over 750 procedures and lab tests, more than 2800 lifestyle and wellness topics, over 1500 unique drugs (more than 8000 brand and generic names), and discharge and home care information for more than 300 related topics. For more information or to arrange a free trial, see http://www.ebscohost.com/thisTopic.php?marketID=2&topicID=1034.

Another EBSCO feature that I wasn't aware of is the promotional material that can be customized for your institution. For example, for medical libraries, go to http://support.ebsco.com/customer_success/promo.php. The PERC database is so new that material is not yet available for this product.

Foreign language resources

In May, MedlinePlus released a multilingual feature, providing access to high quality health information in more than 40 languages. The collection, containing over 2500 links to information covering nearly 250 health topics, can be searched by language or topic (see http://www.nlm.nih.gov/medlineplus/languages/languages.html).

Health literacy

At the 2008 Medical Library Association (MLA) Conference, there was a presentation on "The Role of the Librarian in Health Literacy." One of the presenters was Sabrina Kurtz-Rossi who is the Project Coordinator of MLA's Health Information Literacy Research Project (http://www.mlanet.org/resources/healthlit/hil_project.html). She reported that in a survey of hospital administrators with libraries, 90% thought that consumer health information was critical to their hospital's success. However, many administrators feel that providing online health information is adequate, overlooking the very real problem of health literacy. Some excellent resources for health literacy are mentioned below.

The Ask Me 3 Campaign, established by the National Patient Safety Foundation, helps consumers improve their health literacy by doing three things: (*i*) asking their health care providers three simple questions, (*ii*) bringing a family member to a doctor's appointment, and (*iii*) providing their physician with a list of their medications.

The three simple questions to better understand their medical situation are the following:

(1) What is my main problem?
(2) What do I need to do?
(3) Why is it important for me to do this?

There are sections on the site for health care providers, consumers, large-scale implementers, and the media (http://www.npsf.org/askme3/).

The Speak Up initiatives, established by the Joint Commission (US), is an award-winning patient safety program that emphasizes clear, direct language. A number of their brochures are available at http://www.jointcommission.org/PatientSafety/SpeakUp/.

A 20 May 2008 column by Dr. Carolyn Clancy, which is on the Agency for Healthcare Research and Quality (AHRQ) Web site, has links to additional resources such as an AHRQ podcast and building a question list (http://www.ahrq.gov/consumer/cc/cc052008.htm).

Health care survey

A 2008 Survey of Health Care Consumers in the US, produced by the Deloitte Center for Health Solution, looked at five major areas: (*i*) traditional health services, (*ii*) alternative and non-conventional health services, (*iii*) self-directed care, (*iv*) information seeking, and (*v*) financing.

Six segments were observed: the content & compliant, the sick & savvy, the online & onboard, the shop & save, the out & about, and the casual & content (http://www.deloitte.com/dtt/article/0,1002,cid%253D192717,00.html).

Health records

Does access to health records help consumers improve their health outcomes?

Kaiser Permanente, the biggest health maintenance organization in the US, has a pilot program to link patient records to Microsoft's consumer health platform. The test will initially be limited to Kaiser employees who volunteer to have their records transferred, but access could be widened to the HMO's 8.7 million members later this year. More than 2 million members have signed up to use Kaiser's own online health records service, My Health Manager, and the agreement with Microsoft will dramatically expand availability of online health information, services, and tools.

Google unveiled Google Health, a US health information service that combines the leading Web company's classic search services with a user's personal health records online. Kaiser and Microsoft, as well as Google, said their sites adhere to federal standards for data exchange and include advanced safeguards to protect members' personal information.

COLUMN / CHRONIQUE

Current research

Compiled by Sophie Regalado

Farrell A. An evaluation of the five most used evidence based bedside information tools in Canadian health libraries. *Evidence Based Library and Information Practice*. 2008;3(2):4–17. Available from: http://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/1515/1240.

Objective: This project sought to identify the five most used evidence-based bedside information tools used in Canadian health libraries, to examine librarians' attitudes towards these tools, and to test the comprehensiveness of the tools. **Methods:** The author developed a definition of evidence-based bedside information tools and a list of resources that fit this definition. Participants were respondents to a survey distributed via the CANMEDLIB electronic mail list. The survey sought to identify information from library staff regarding the most frequently used evidence-based bedside information tools. Clinical questions were used to measure the comprehensiveness of each resource and the levels of evidence they provided to each question. **Results:** Survey respondents reported that the five most used evidence-based bedside information tools in their libraries were UpToDate, BMJ Clinical Evidence, First Consult, Bandolier, and ACP Pier. Librarians were generally satisfied with the ease of use, efficiency, and informative nature of these resources. The resource assessment determined that not all of these tools are comprehensive in terms of their ability to answer clinical questions or with regard to the inclusion of levels of evidence. UpToDate was able to provide information for the greatest number of clinical questions, but it provided a level of evidence only 7% of the time. ACP Pier was able to provide information on only 50% of the clinical questions, but it provided levels of evidence for all of these. **Conclusion:** UpToDate and BMJ Clinical Evidence were both rated as easy to use and informative. However, neither product generally includes levels of evidence, so it would be prudent for the practitioner to critically appraise information from these sources before using it in a patient care setting. ACP Pier eliminates the critical appraisal stage, thus reducing the time it takes to go from forming a clinical question to implementing the answer, but survey respondents did not rate it as high in terms of usability. There remains a need for user-friendly, comprehensive resources that provide evidence summaries relying on levels of evidence to support their conclusions.

Kipnis DG, Kaplan GE. Analysis and lessons learned instituting an instant messaging reference service at an academic health sciences library: the first year. *Med Ref Serv Q*. 2008 Spring;27(1):33–51.

In February 2006, Thomas Jefferson University went live with a new instant messaging (IM) service. This paper reviews the first 102 transcripts to examine question types and usage patterns. In addition, the paper highlights lessons learned in instituting the service. IM reference represents a small proportion of reference questions, but based on user feedback and technological improvements, the library has decided to continue the service.

Whitmore SC, Grefsheim SF, Rankin JA. Informationist programme in support of biomedical research: a programme description and preliminary findings of an evaluation. *Health Info Libr J*. 2008 Jun;25(2):135–41. PMID 18494648.

Background: The informationist programme at the Library of the National Institutes of Health (NIH) in Bethesda, Maryland, USA, has grown to 14 informationists working with 40 clinical and basic science research teams. **Purpose:** This case report, intended to contribute to the literature on informationist programmes, describes the NIH informationist programme, including implementation experiences, the informationists' training programme, their job responsibilities and programme outcomes. **Brief description:** The NIH informationist programme was designed to enhance the library's service capacity. Over time, the steps for introducing the service to new groups were formalized to ensure support by leadership, the team being served, and the library. Job responsibilities also evolved from traditional library roles to a wide range of knowledge management activities. The commitment by the informationist, the team, and the library to continuous learning is critical to the programme's success. **Results/outcomes:** NIH scientists reported that informationists saved them time and contributed to teamwork with expert searching and point-of-need instruction. Process evaluation helped refine the programme. **Evaluation method:** High-level, preliminary outcomes were identified from a survey of scientists receiving informationist services, along with key informant interviews. Process evaluation examined service implementation, informationists' training, and service components. Anecdotal evidence has also indicated a favourable response to the programme.

Andretta S. Promoting reflective information literacy practice through Facilitating Information Literacy Education (FILE). *Health Info Libr J*. 2008 Jun;25(2):150–3. PMID 18494650.

This article discusses the individual learning possibilities and professional knowledge education that can be acquired through reflective information literacy. Reflective information literacy is promoted through Facilitating Information Literacy Education (FILE), which is an educational course commissioned by London Health Libraries in London, England, to train National Health Service librarians in information literacy education as part of an educational program called the Learner Support Program.

Booth A. Implementing EBLIP: if it works in Edmonton will it work in Newcastle? *Health Info Libr J*. 2008 Jun;25(2):154–7. PMID 18494651.

This article discusses the implementation of evidence-based library and information practice. Factors are discussed including intervention complexity, facilitation strategies, and participant responsiveness, which may be responsible for variations in the effectiveness of the same program in different areas. Also discussed are the differences that evidence-based library and information practices can have in areas as close as Edmonton and Newcastle, England, and as far away as Edmonton, Canada, to New Castle, Australia.

Bracke PJ, Howse DK, Keim SM. Evidence-based Medicine Search: a customizable federated search engine. *J Med Libr Assoc*. 2008 Apr;96(2):108–13. PMID 18379665. Available from: http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2268222&blobtype=pdf.

Purpose: This paper reports on the development of a tool by the Arizona Health Sciences Library (AHSL) for searching clinical evidence that can be customized for different user groups. **Brief description:** The AHSL provides services to the University of Arizona's (UA's) health sciences programs and to the University Medical Center. Librarians at AHSL collaborated with UA College of Medicine faculty to create an innovative search engine, Evidence-based Medicine (EBM) Search, that provides users with a simple search interface to EBM resources and presents results organized according to an evidence pyramid. EBM Search was developed with a Web-based configuration component that allows the tool to be customized for different specialties. **Outcomes/conclusion:** Informal and anecdotal feedback from physicians indicates that EBM Search is a useful tool with potential in teaching evidence-based decision making. While formal evaluation is still being planned, a tool such as EBM Search, which can be configured for specific user populations, may help lower barriers to information resources in an academic health sciences center.

Guo R, Bain BA, Willer J. Results of an assessment of information needs among speech-language pathologists and audiologists in Idaho. *J Med Libr Assoc*. 2008 Apr;96(2):138–44. PMID 18379669. Available from: http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=2268224&blobtype=pdf.

Objectives: The research assesses the information needs of speech-language pathologists (SLPs) and audiologists in Idaho and identifies specific needs for training in evidence-based practice (EBP) principles and searching EBP resources. **Methods:** A survey was developed to assess knowledge and skills in accessing information. Questionnaires were distributed to 217 members of the Idaho Speech-Language-Hearing Association, who were given multiple options to return the assessment survey (Web, e-mail, or mail). Data were analyzed descriptively and statistically. **Results:** The total response rate was 38.7% (84/217). Of the respondents, 87.0% (73/84) indicated insufficient knowledge and skills to search PubMed. Further, 47.6% (40/84) indicated limited knowledge of EBP. Of professionals responding, 52.4% (44/84) reported interest in learning more about EBP, and 47.6% (40/84) reported interest in learning to search PubMed. SLPs and audiologists who graduated within the last 10 years were more likely to respond online, while those graduating prior to that time preferred to respond via hard copy. **Discussions/conclusion:** More effort should be made to ensure that SLPs and audiologists develop skills in locating information to support their practice. Results from this information needs assessment were used to design a training and outreach program on EBP and EBP database searching for SLPs and audiologists in Idaho.

BOOK REVIEW / CRITIQUE DE LIVRE

The Extreme Searcher's Internet Handbook: A Guide for the Serious Searcher. 2nd ed. By Randolph E. Hock. Medford, N.J.: CyberAge Books, 2007. 326 pages (soft cover). ISBN 978-0-910965-76-7. CAN$31.95.

As a former reference librarian and now Internet instructor, author Randolph Hock is obviously passionate about searching the Internet. *The Extreme Searcher's Internet Handbook: A Guide for the Serious Searcher* is written with enthusiasm and humour; the author has fun with a topic that could easily become overwhelming. Hock introduces the book assuming the reader knows the basics of computers (how to log on, what an Internet browser is, etc.). As the Introduction explains, it is meant to be a book written for researchers, writers, librarians, teachers, and others, covering what a serious user needs to know to take full advantage of Internet tools and resources.

One of the problems inherent with any book on the Internet is that it's quickly outdated, sometimes before it even reaches bookstore shelves, which is one reason I'm always hesitant to buy a book like this. The author overcomes this problem by maintaining The Extreme Searcher's Web Page at www.extremesearcher.com. The Extreme Searcher's Web Page is updated regularly to account for changing URLs and disappearing Web sites.

The book is laid out clearly and logically. Chapter 1 starts with "Basics for the Serious Searcher," covering a wide variety of important information and begins with a very brief history of the Internet. While interesting, this section could be skipped to get on with the real gems that are included later in the chapter. Although the section on developing search strategies should probably have been given its own chapter, its brief advice on breaking down your question into its basic concepts and tips for narrowing a search is well written. Next, the section on assessing the quality and authority of Web sites covers the topic well. Hock explains how to look at the Web site source, content, and authority to determine if the information is trustworthy. Finding older information using the Internet Archive (www.archive.org) is quickly discussed before Hock heads into a discussion of the Invisible Web. Some general points on American copyright are touched upon before launching into a section on citing Internet resources. The chapter ends with a discussion on keeping up-to-date with Internet resources and tools. Although each one of these sections could have been given their own chapter, the author lists informative URLs to other sites so that the reader can find more information on the topic at their leisure. There's enough information packed into this one chapter for an entire book. For those Internet users who are new to Web searching, this section should be required reading. Even experienced searchers will pick up useful tips on ways to make searching more productive. This chapter could easily be used to teach a course on Internet searching.

The next four chapters look at specific tools that can be used for searching. Chapters 2 and 3 review Web directories and portals, while chapters 4 and 5 are the parts that are going to be of most interest to those who have never tried using different search engines. Chapter 4 reviews how search engines work, discussing typical search options common to all search engines, such as searching by date or language. If you've ever wondered why Boolean searching doesn't work as you'd expect it to in your favourite search engine, you'll find the answer here. No need to memorize the different Boolean capabilities of each engine because a table of Boolean syntax for major search engines is included.

In chapter 5, Hock goes in-depth, profiling each of the most popular search engines: Google.com, Yahoo.com, Live.com, and Ask.com (formerly Ask Jeeves). A lot of space is taken up here listing the different capabilities of each search engine. There's nothing here that couldn't be found by reading a search engine's FAQ. Save yourself some time by heading to the end of the chapter where the author has created a chart listing each of the four engines' main features (Boolean searching, stemming, etc.).

Concluding the first section of the book, chapter 6 packs a huge amount of information into one chapter. Groups, newsgroups, forums, and their relatives are all discussed.

The place where this book excels as an indispensable reference text is in chapter 7, "An Internet Reference Shelf," with short descriptions of Web sites of all types (weather, maps, stock quotes, company information, etc.). This is not a chapter to be read beginning to end, but to be kept as a reference when needed.

The book ends with several chapters that discuss specialized searches. Chapter 8 describes ways to find multimedia, chapter 9 covers news resources, and chapter 10 covers finding products online—everything from online auctions to finding catalogues. Hock concludes with chapter 11, "Becoming Part of the Internet: Publishing." This includes brief information on blogging and looks quickly at "social networking" sites such as MySpace.

There is a wealth of valuable information crammed into this small book. One problem is that Hock has tried to make sure he covers everything about the Internet for everyone. The title is misleading; calling it "A Guide for the Serious Researcher" makes it a book that a beginner Web searcher is unlikely to pick up, although that's really the market it's aimed at. That being said, there's going to be something here for everyone. Experienced searchers will pick up a few tips and tricks to help make their searching more efficient, and the Internet Reference Shelf is sure to list Web sites that you weren't aware existed.

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BOOK REVIEW / CRITIQUE DE LIVRE

Using Benchmarking, Needs Assessment, Quality Improvement, Outcome Measurement, and Library Standards: A How-To-Do-It Manual with CD-ROM. By Rosalind Farnam Dudden. New York: Neal-Schuman Publishers, 2007. 461 pages (soft cover) plus CD-ROM. ISBN13: 978-1-55570-604-3, ISBN10: 1-55570-604-5. US$85.00.

Using Benchmarking, Needs Assessment, Quality Improvement, Outcome Measurement, and Library Standards: A How-To-Do-It Manual with CD-ROM provides an overview of some of the methods used to evaluate library services in the context of a culture of assessment. These methods are based on the author's experience as a health librarian, her involvement with Medical Library Association (MLA) groups looking at hospital library standards and benchmarking, and a wealth of library and business management literature. Although Dudden's book is written mainly with the small health library in mind, she also includes examples from public and academic libraries, which makes this book of potential interest to these audiences as well.

Dudden begins by giving the reader background information on how evaluation of library services has changed over time, shifting from being library centric towards a focus on customer satisfaction and how well a library fits within its parent institution. The book then moves on to discuss needs assessment, quality improvement, benchmarking, library performance standards, and outcome measurement in turn. A very brief account of other methods for evaluation and quality improvement follow, as well as a broad discussion of data collection and analysis, various forms of communication, and a short description of tools of potential use in evaluation and presenting data.

Dudden stresses the ongoing nature of assessment, using different approaches at different times, as a means of ensuring that the library adapts and survives. She asserts that no two assessment projects are truly the same because of varying circumstances for each library, so the librarian must think about what is right for their library at the time and adjust their approach accordingly. Working with departments within your organization that have the expertise required for undertaking research and looking to the literature for assessments of similar libraries is encouraged. The author also emphasizes going beyond report generation to communicating the findings to administration and using the knowledge gained from the project to shape decision making and improve library services.

The primary strength of *Using Benchmarking* is its structure. Useful sidebars are included throughout the book that feature definitions, recommended readings, references to the material contained on the CD-ROM, and various tidbits of advice. The references for each chapter are located at the end of the chapter itself, which is easier to deal with than an all encompassing reference list at the end of the book.

Another major strength of this book is the use of examples and references to other resources that would be useful for undertaking an evaluation project. The needs assessment and benchmarking chapters are particularly illustrative, with steps in the process clearly laid out, followed by an example project from a real library parsed into the steps required to undertake the project. The examples used in the book point to various projects and initiatives that take place in the public, academic, and health library settings. The accompanying CD-ROM contains electronic versions of the worksheets included in the book, as well as the *2004 MLA Hospital Library Standards*, MLA Vital Pathways Documents, and links to program development and evaluation resources from the University of Wisconsin's Extension Division. The CHLA / ABSC toolkit for benchmarking using ratios and the *Standards for Library and Information Services in Canadian Healthcare Facilities* are granted a brief mention within the text.

Despite the strengths listed above, Dudden's stated intention of creating an evaluation "cookbook" for library professionals misses the mark. There are too many topics included for the author to go into great depth for each of them, and it may have been wiser for her to focus on the few topics she was willing to cover adequately. The chapters "Other Systems for Quality Improvement and Evaluation", and "Tools for Improvement and Evaluation" are particularly disappointing. A number of systems and tools are mentioned, but the author does not provide the reader with any substantial instruction in their use. The cursory look at many of the topics included in this book is somewhat at odds with the topics the author chose to discuss in detail. Dudden assumes very little previous knowledge on the part of the reader, which is normally a good thing, but it is taken to the extreme by explaining what a percentage is in the chapter on data collection and analysis. The chapter on communication is also somewhat mystifying; portions of this chapter pertaining to interviews could, and perhaps should, have been included in the discussion of interviews located in the chapter dealing with data collection and analysis. Meanwhile, topics such as e-mail etiquette and assertiveness may be important in the grand scheme of things, but a book on benchmarking, needs assessment, quality improvement, outcome measurement, and library standards hardly seems like an appropriate venue to discuss them.

Using Benchmarking, Needs Assessment, Quality Improvement, Outcome Measurement, and Library Standards: A How-To-Do-It Manual with CD-ROM is useful for someone who is looking for a starting point that provides a general background on evaluating library services, and points the reader to other useful resources. However, anyone who would like a self-contained, how-to guide should consider purchasing another title.

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NEWS AND NOTES / NOUVELLES ET NOTES

Compiled by Sophie Regalado

NEWS AND NOTES / NOUVELLES ET NOTES

Copyright cock-up

Tossell I. *The Globe and Mail*. 2008 Jun 19
http://www.theglobeandmail.com/servlet/story/RTGAM.20080619.wgtwebseven0620/BNStory/Technology/home

What a happy fuzz we've been in all these years. While Americans have been wrangling over gigantic recording-industry lawsuits, Canadians have been enjoying a pleasantly nebulous relationship with digital copyright. Nobody seems to know exactly what the letter of the law says (even lawyers say it's debatable in parts), so we laypeople have assumed that if our intentions are fair, everything will be all right. Enough of this reverie. The Tories' new copyright bill, unveiled last week, is a glass of cold water to the face. It spells out in meticulous detail what you can and cannot do with digital media. And unless it's exactly what the copyright holder says you can do, odds are you can't do it.

Canadian Library Association disappointed, concerned with new copyright legislation

Canadian Library Association. 2008 Jun 18. Ottawa
http://www.cla.ca/AM/Template.cfm?Section=News1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=5374

The Canadian Library Association / Association canadienne des bibliothèques (CLA) is continuing to express disappointment and concern with the government's newly announced copyright legislation, Bill C-61.

MLA 2008: NLM Theater presentation recordings available

***NLM Technical Bulletin*. 2008 May–Jun;(362)**
http://www.nlm.nih.gov/pubs/techbull/mj08/mj08_theater_presentations.html

The NLM Distance Education Program Resources page now includes recordings of the NLM Theater presentations from the 2008 Annual Meeting of the Medical Library Association (MLA).

New NLM Fact Sheet: Authorship in MEDLINE

***NLM Technical Bulletin*. 2008 May–Jun;(362)**
http://www.nlm.nih.gov/pubs/techbull/mj08/mj08_authorship_factsheet.html

NLM has produced a new Fact Sheet, Authorship in MEDLINE, that describes current policies and practices on how authorship is reflected in MEDLINE and searchable in PubMed. A complete list of NLM Fact Sheets is available at http://www.nlm.nih.gov/pubs/factsheets/factsheets.html. To be alerted to the publication of new Fact Sheets, subscribe to NLM-Announces, the NLM electronic mailing list of changes to the NLM Web site.

NCBI beta version of Advanced Search available

***NLM Technical Bulletin*. 2008 May–Jun;(362)**
http://www.nlm.nih.gov/pubs/techbull/mj08/mj08_advanced_search.html

The National Center for Biotechnology Information (NCBI) is developing an Advanced Search option for PubMed. A beta version (which may undergo changes) has been released for users to try. Look for the link next to the search box buttons. Comments can be sent to NCBI via the "Write to the Help Desk" link at the bottom of the screen and will be helpful in developing the design and format of this feature.

OCLC and Google to exchange data, link digitized books to WorldCat

OCLC. 2008 May 19
http://www.oclc.org/news/releases/200811.htm

OCLC and Google Inc. have signed an agreement to exchange data that will facilitate the discovery of library collections through Google search services. Under terms of the agreement, OCLC member libraries participating in the Google Book Search program, which makes the full text of more than one million books searchable, may share their WorldCat-derived MARC records with Google to better facilitate discovery of library collections through Google.

Cancer genome consortium enhances Toronto's image as life sciences centre

***Research Money*. 2008 May 20; 22(8)**

The selection of Toronto as the global and data headquarters for an ambitious $1-billion global genome consortium to combat cancer promises to dramatically increase the city's life sciences activity and profile, says the researcher who led the effort to attract the initiative to the region.

Chair in E-Librarianship created

York University. 2008 May 15
http://www.yorku.ca/yfile/archive/index.asp?Article=10507

A $1-million gift to York University through the York University Foundation from the family of William Pearson Scott is helping York create a new kind of library for the digital age. The gift from Michael Scott, his wife Janet, and their family, matched by the University, will create the W.P. Scott Chair in E-Librarianship, tasked with researching the innovations and implications of new developments in computing and information technologies. This extends to exploring areas such as e-learning, digital collections, collaborative Web spaces, social software, and interactive and integrative online services and information.

A national license to The Cochrane Library for Canada

Canadian Health Libraries Association / Association des bibliothèques de la santé du Canada (CHLA / ABSC)
http://nlccl.epetitions.net/#stay

The Cochrane Library is universally recognized as one of the best sources of high-quality, research-based clinical information that exists. However, at present, there is inequitable access to this resource in our country. CHLA / ABSC endorses a petition circulated by the Canadian Cochrane Network and Centre to garner support for government-funded national licensing of this essential resource.

Canadian Library Association meets with MPs on Library Book Rate

Canadian Library Association. 2008 Apr 8
http://www.cla.ca/AM/Template.cfm?Section=News1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=4903

The Canadian Library Association (CLA) today met with Conservative Members of Parliament to educate them on Canada Post's Library Book Rate and to ask for their support to make the rate more sustainable. The Library Book Rate is one of CLA's major advocacy files, and the Association lobbies diligently for its continuation and expansion.

Web site restores “abortion” search term

CBS News – Associated Press. 2008 Apr 5
http://www.cbsnews.com/stories/2008/04/05/health/main3995656.shtml

The Johns Hopkins Bloomberg School of Public Health has restored the word “abortion” as an acceptable search term on a reproductive health Web site funded by the government. The move followed criticism from some health advocates and librarians that the restriction on searches about abortion amounted to censorship.

McGill Library Global Health Resource Guide

http://wikisites.mcgill.ca/GlobalHealthGuide/index.php/Main_Page

The McGill Library has created a Global Health Resource Guide to promote collaboration and to share and organize knowledge about resources within the McGill community and beyond. This Global Health Resource Guide was created as a wiki using MediaWiki software.

MEDLINE Milestone – 15 Millionth journal citation

***NLM Technical Bulletin*. 2008 Mar-Apr;(361)**
http://www.nlm.nih.gov/pubs/techbull/ma08/ma08_medline_milestone.html

On 4 February 2008 MEDLINE attained a major milestone when the 15 millionth journal citation, counting from 1966 data forward, was added to the database.

PubMed Central: New journals participating and new content added

***NLM Technical Bulletin*. 2008 Mar–Apr; (361)**
http://www.nlm.nih.gov/pubs/techbull/ma08/ma08_pmc.html

Meetings, conferences, and workshops

LITA National Forum

Library & Information Technology Association. 16–19 October 2008, Cincinnati, Ohio, USA. For details, check the conference Web site at http://www.lita.org/ala/lita/litaevents/litaforum2008/litaforum2008.cfm.

Access 2008

McMaster University, Mohawk College, and Hamilton Public Library. 1–4 October 2008, Hamilton, Ont., Canada. For details, check the conference Web site at http://access2008.blog.lib.mcmaster.ca/.

Internet Librarian International

Information Today. 16–17 October 2008, London, UK. For details, check the conference Web site at http://www.internet-librarian.com/index.php.

UNYOC 2008

Upstate New York and Ontario Chapter of the Medical Library Association (UNYOC/MLA). Ithaca, N.Y., 22–24 October 2008. For details, check the conference Web site at http://unyoc.mlanet.org/.

Professional development

Education Institute: Copyright issues in distance education (audio conference)

Friday, 12 September 2008
1:00 p.m. ET (1 hour)
Instructor: Arlene Bielefield
Member: $54.00; Non-Member: $74.00

The authors strive to explain the complexity of copyright law in relation to distance education in part III. Those trying to understand the difference between section 107 (fair use) and the TEACH Act, legislated 2 November 2002, will find this new chapter worth reading. The approach of presenting sections of the law followed by the authors' interpretation leads to a better understanding of the uncertainty of using copyrighted materials in distance education. "Twelve common misconceptions about copyright" conclude this section and serve to explain the difference between copyright and plagiarism in relation to commonly occurring misconceptions.

Education Institute: Knowledge sharing in the era of the socially networked organization (audio conference)

Thursday, 18 September 2008
3:00 pm ET (1 hour)
Instructor: Mary Cavanagh
Member: $54.00; Non-Member: $74.00

Libraries have always been in the business of resource sharing, but that was when resources were collections, not people. Where we used to leverage information with technology, now we leverage our human networks via social software. The new definition of "organization" is really "network", where knowledge and information are created and shared between and among our colleagues in our various technologically supported social, informational networks, where the boundaries for strategic planning and decision making are being re-drawn, and where you find that your most valuable co-workers usually work for another organization completely. The networked organization of the 1990s was created by Internet technologies; the socially networked organization of 2007 works through people-to-people knowledge and information relationships and Web 2.0 technologies. What strategies do you as information managers and information specialists need to know to build and leverage your own knowledge networks? What's the most effective way to structure your "knowledge work" in the socially networked information organization? How do our clients and customers participate in our information practices and networks? Join our public library practitioner and researcher as she addresses these interesting issues and challenges.

Education Institute: Using evaluation results to communicate your value, part 3. Outcomes measurement (Web conference)

Wednesday, 17 September 2008
2:00 pm ET (1 hour)
Instructor: Rosalind F. Dudden
Member: $75.00; Non-Member: $95.00

What does management ask you about your library and how do you respond? How do you explain what a library is in the Internet age? Learn how traditional and innovative measures can be gathered and integrated to explain your library to its customers and to those that fund it. Learn the steps in conducting a needs assessment and why understanding your customer is so important today. Review the Logic Model and its use for outcomes measurement. Learn how to use outcomes studies from the literature to discuss your library. Wrap all this theory up in the new theory of a culture of assessment and see how it can be applied even in a small library setting. The four courses taken together will assist library managers in seeing their system of assessment as a whole and communicating their value to their user community and upper management. Each session should stand alone as a learning experience.

Part Three: Outcomes Measurement: This session will discuss the present work with outcomes measures, using the Logic Model to decide what your outcomes will be for a specific project or program. Using outcomes studies from the literature will also be discussed.

Education Institute: Using evaluation results to communicate your value, part 4. Culture of assessment and communicating your value (Web conference)

Wednesday, 24 September 2008
2:00 pm ET (1 hour)
Instructor: Rosalind F. Dudden
Member: $75.00; Non-Member: $95.00

This session will discuss the theory of a culture of assessment and how to tie all your assessment activities together. Reports from participants from the first two sessions will be used as examples of implementation of this culture. Communicating what you found out about the value of libraries and your library in particular will be discussed.

FIS Professional Learning Centre: Designing information products and services

25–26 September 2008
2 days (12 hours); 9:00 a.m. – 4:00 p.m.
Instructor: Stephen Abram
Fee: $425.00 (US$425.00)

The conceptualization, design, and development of products and services has become a critical skill for today's information managers. Its importance is evidenced by the virtualization of library and information operations, the emergence of portals and intranets, as well as the design of ancillary services such as research operations and training programs. The successful managers will be those who can define, develop, introduce, and improve their services and products. On completion of this course participants will have a clearer grasp of the complexities of product and service design, with particular emphasis on electronic products and services; an understanding of the product and service design process with illustrations from case studies; the right questions to ask as their projects proceed; and the confidence needed to adapt to these new challenges.

FIS Professional Learning Centre: Influencing decision making strategies for getting results you want

29–30 September 2008, Ottawa
2 days (12 hours); 9:00 a.m. – 4:00 p.m.
Instructors: Susan Geary and Lorraine Clemes
Fee: $525.00 (US$525.00)

This course will introduce you to a framework for planning, creating, and delivering your message when you are attempting to influence others around a management goal—be they bosses, colleagues, staff, or other stakeholders. You'll learn how to analyze and understand your own communication style preferences and those of your stakeholders. You will then be able to use this understanding to plan and deliver compelling, fact-based, conclusion-focused presentations.

FIS Professional Learning Centre: Advocating for libraries and library issues: A plan for success (Web)

6 October – 23 November 2008
7 weeks
Instructors: Kathleen DeLong and Pam Ryan
Fee: $395.00 (US$395.00)

This Web-based, instructor-led course is for participants seeking ways to effectively position their library for success with decision-makers and constituents. Advocacy is about raising awareness and gaining commitment that leads to action. Successful libraries understand the advocacy process and exercise professional leadership in the gaining of the attention and commitment of decision-makers to address the library's issues. Advocacy may relate to policy, funds, support, or partnership, and may be directed to external or internal decision-makers. The course includes how advocacy relates to promotion and marketing, how to understand your decision-makers' environments and their perceptions of libraries, and how to identify and engage key stakeholders. Participants will develop an advocacy plan for a particular issue of concern (objectives, target groups, obstacles, communication tools, and evaluation) tailored to their own individual situation or environment.