COLUMN / CHRONIQUE

Current research

Compiled by Teresa Lee

Kamel Boulos MN, Wheeler S. The emerging Web 2.0 social software: an enabling suite of sociable technologies in health and health care education *Health Info Libr J.* 2007;2(1):2–23. doi:10.1111/j.1471-1842.2007.00701.x.

Web 2.0 sociable technologies and social software are presented as enablers in health and health care for organizations, clinicians, patients, and laypersons. They include social networking services, collaborative filtering, social bookmarking, folksonomies, social search engines, file sharing and tagging, mashups, instant messaging, and online multiplayer games. The more popular Web 2.0 applications in education, namely, wikis, blogs, and podcasts, are but the tip of the social software iceberg. Web 2.0 technologies represent a quite revolutionary way of managing and repurposing/remixing online information and knowledge repositories, including clinical and research information, in comparison with the traditional Web 1.0 model. The paper also offers a glimpse of future software, touching on Web 3.0 (the Semantic Web) and how it could be combined with Web 2.0 to produce the ultimate architecture of participation. Although the tools presented in this review look very promising and potentially fit for purpose in many health care applications and scenarios, careful thinking, testing and evaluation research are still needed in order to establish "best practice models" for leveraging these emerging technologies to boost our teaching and learning productivity, foster stronger "communities of practice", and support continuing medical education/professional development (CME/CPD) and patient education.

Rigby M. Applying emergent ubiquitous technologies in health: the need to respond to new challenges of opportunity, expectation, and responsibility. *Int J Med Inform.* 2007 Apr 12; [Epub ahead of print]. PMID: 17434338.

In spite of their name, "ubiquitous" technologies are not yet ubiquitous in the true sense of the word, but rather are "novel", being at the research, pilot, and selective use stages. In future, the proliferation in types of application, the major increase in cases and data volumes, and above all the dependence on ubiquitous technologies to monitor persons at risk, will raise practical, ethical, and liability issues. Equally significantly, it will require health service redesign, including new response services. Health informaticians need to be active in stimulating consideration of all these issues, as part of both social and professional responsibility.

Meats E, Brassey J, Heneghan C, Glasziou P. Using the Turning Research Into Practice (TRIP) database: how do clinicians really search? *J Med Libr Assoc.* 2007 Apr;95(2):156–63. Available at http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=17443248. PMID: 17443248.

Objectives: Clinicians and patients are increasingly accessing information through Internet searches. This study aimed to examine clinicians' current search behavior when using the Turning Research Into Practice (TRIP) database to examine search engine use and the ways it might be improved. **Methods:** A Web log analysis was undertaken of the TRIP database — a meta-search engine covering 150 health resources including MEDLINE, The Cochrane Library, and a variety of guidelines. The connectors for terms used in searches were studied, and observations were made of 9 users' search behavior when working with the TRIP database. **Results:** Of 620 735 searches, most used a single term, and 12% (n = 75 947) used a Boolean operator: 11% (n = 69 006) used "AND" and 0.8% (n = 4941) used "OR". Of the elements of a well-structured clinical question (population, intervention, comparator, and outcome), the population was most commonly used, while fewer searches included the intervention. Comparator and outcome were rarely used. Participants in the observational study were interested in learning how to formulate better searches. **Conclusions:** Web log analysis showed most searches used a single term and no Boolean operators. Observational study revealed users were interested in conducting efficient searches but did not always know how. Therefore, either better training or better search interfaces are required to assist users and enable more effective searching.

Lacroix EM, Collins ME. Interlibrary loan in US and Canadian health sciences libraries 2005: update on journal article use. *J Med Libr Assoc.* 2007 Apr;95(2):189–94. Available at http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=17443252. PMID: 17443252.

Purpose: The authors analyzed 2.48 million interlibrary loan (ILL) requests entered in the National Library of Medicine's (NLM's) DOCLINE system from 3234 US and Canadian medical libraries during fiscal year (FY) 2005 to study their distribution and nature and the journals in which requested articles were published. **Methods:** Data from DOCLINE and NLM's indexing system and online catalog were used to analyze all DOCLINE ILL transactions acted on from October 2004 to September 2005. The authors compared results from this analysis with previous data collected in FY 1992. **Results:** Overall ILL volume in the US and Canada is at about the same level as FY 1992 despite

marked growth in online searching, knowledge discovery tools, and journals available online. Over 21 000 unique journal titles and 1.4 million unique articles were used to fill 2.2 million ILL requests in FY 2005. Over 1 million of the articles were requested only once by any network library. Fifty-two percent (11 022) of journals had five or fewer requests for articles from all the years of a journal by all libraries in the network. Fifty-two percent of the articles requested were published within the most recent 5 years. **Conclusion:** The overall ILL profile in the libraries studied has changed little since FY 1992, notable given other changes in publishing. Small changes, however, may reveal developing trends. Total ILL traffic has been declining in recent years following a peak in 2002, and fewer of the articles requested were published in the most recent 5 years compared with requests from 1992.

Eisinga A, Siegfried N, Clarke M. The sensitivity and precision of search terms in Phases I, II and III of the Cochrane Highly Sensitive Search Strategy for identifying reports of randomized trials in MEDLINE in a specific area of health care — HIV/AIDS prevention and treatment interventions. *Health Info Libr J.* 2007;24(2):103–9. doi:10.1111/j.1471-1842.2007.00698.x.

Objectives: To detect term(s) in the Cochrane Highly Sensitive Search Strategy (HSSS) that retain high sensitivity but improve precision in retrieving reports of trials in the PubMed version of MEDLINE. **Methods:** Individual terms from the PubMed version of the HSSS were added, term by term, to an African HIV/AIDS strategy to identify reports of trials in MEDLINE using PubMed. The titles and abstracts of the records retrieved were read by two handsearchers and checked by a clinical epidemiologist. The sensitivity and precision of each term in the three phases of the HSSS were calculated. **Results:** Of 7719 records retrieved, 285 were identified as reports of trials [204 randomized (RCTs); 81 possibly randomized or quasi-randomized (CCTs)]. Phase III had the highest sensitivity (92%). Overall, precision was very low (3.7%). One term, "random*[tw]", retrieved all RCTs found by our search and improved precision to 29%. The least sensitive terms, yielding no records, were "(doubl* AND mask*)[tw]" and terms containing "trebl*" or "tripl*", except for "(tripl* AND blind*)[tw]". The highest precision per term was for "Double-blind Method [MeSH]" (76%). **Conclusions:** To retrieve all RCTs and CCTs found by our search, seven terms are needed but precision remains low (4.3%). Developments in the methods of search strategy design may help to improve precision while retaining high levels of sensitivity by identifying term(s) that occur frequently in relevant records and are the most efficient at discriminating between different study designs.

Seago BL, Gyore R, Williams S. Assessment of the integration of AAMC Medical Informatics Objectives into the medical school curriculum. *Med Ref Serv Q.* 2007 summer;26(2):1–14. PMID: 17522004.

The School of Medicine at the Medical College of Virginia Campus of Virginia Commonwealth University (VCU) examined the 2005–2006 medical school curriculum to ensure that students were prepared to meet the informatics objectives put forward by the AAMC Medical School Objectives Project published in 1998. The AAMC Medical Informatics Objectives Survey, issued in 2005, led the VCU School of Medicine to investigate the points of integration between informatics objectives and course syllabi for the first 3 years of the medical school curriculum. This analysis raised awareness of the informatics objectives with SOM faculty and staff and showed that more than 74% of the informatics objectives have been integrated into the curriculum.