

Research and Statistics on Libraries and Librarianship in 2006

Denise M. Davis

Director, Office for Research and Statistics, ALA

Introduction

We are losing public libraries. Over the last three fiscal years reported (2003 through 2005) the data show we have fewer library systems operating in the U.S. There were 9,211 public library systems in FY2003 and in FY2005 there may be only 9,198 systems – and the FY2005 figure takes into account libraries damaged by hurricane Katrina. Further, libraries are serving 6.1 million more people than in FY2003.

Discussion with the state libraries where these declines were evident proved that some closures were really mergers with other libraries to form larger units of service. Other, fairly marginal libraries that perhaps should never have been counted in the national data also closed – these had inconsistent budgeting, were open very few hours, and often had no full-time paid staff. And, a few libraries closed for fiscal reasons – levies did not pass, or the communities could no longer support them. Sad as it is to lose any library, losing solid library operations because of local funding issues is doubly unfortunate.

Interestingly, given these limited closures we saw growth in a number of states. And, even with operating budgets that are increasing modestly (between 3 and 4 percent each year going largely to staff salaries), services and collection use are rising. Public library visits were up 3 percent (yes, people still go to the library), and circulation of audio and video collections increased more than 14 percent between FY2003 and FY2004 – and early data for FY2005 indicates a similar increase. Staffing costs rose 4 percent for this period, while staffing numbers declined less than 1 percent in FY2004. Detailed data about public libraries is available on the National Center for Education Statistics website, <http://nces.ed.gov/surveys/libraries/index.asp>.

Research Relevant to all Libraries

Digital rights management (DRM) looms large in the discussion on equity of access. A somewhat controversial perspective is presented in an article by Charles W. Bailey Jr., *Strong Copyright + DRM + Weak Net Neutrality = Digital Dystopia?* (ITAL: Information Technology and Libraries. 25(3): 116-139, 2006.

<http://www.ala.org/ala/lita/litapublications/ital/252006/number3september/2503sept.htm>). The debate is presented in the context of an implied web-neutral environment. The reality is quite different. Bailey suggests that rapid content growth, increasing bandwidth requirements, and DRM as a copyright protection utility have developed counter to the inherent, academic intellectual sharing model intended in the development of the Internet. And, he poses an interesting question: "Is Net neutrality a quaint anachronism of the Internet's distant academic/research roots that we would be better off without?" Are we sacrificing innovation? Bailey willingly admits to a one-sided argument, but he presents questions to challenge the information communities, perhaps the greatest of which is to think long-term, not short-term. In addition to the Bob Dylan quote, "information toll road" was a memorable phrase and demands serious consideration.

Recruitment and diversity issues within the profession were in the literature and conference circuit in 2006. Mark Winston and Kimberly Walstad in their article *Recruitment and Diversity: A Research Study of Bilingualism and Library Services* the authors focused on English-Spanish

bilingualism and posed three important research questions: "What recruitment factors were important in the decisions of librarians who are bilingual in English and Spanish to enter the profession?", "What factors were important for bilingual librarians to accept positions with their current employers?" and, "What factors influence bilingual libraries to remain with their current employers." (Library & Information Science Research, 28 (2006): 390-406). The authors discuss the challenges of understanding the impact of staff diversity on the success of the organization, the nuances of Spanish as spoken in various countries as it relates to service provision in libraries (e.g., Mexico versus Dominican Republic), and retention of bilingual employees. The authors provide interesting findings on the demographics of bilingual library staff, the types of libraries in which they are employed, and recruitment factors both to the profession and into the workforce.

Another diversity study, completed for the American Library Association (ALA) by Decision Demographics (<http://www.decision-demographics.com/>), was a demographic analysis of the profession overall. This analysis was used to develop *Diversity Counts*✓, an exploratory report of diversity issues within the library profession. Using 1990 and 2000 Decennial Census PUMS files, the study highlighted changes in distributions within the MLIS and non-MLIS employment classifications. Not surprising, the data held that the profession was unsuccessful in attracting new professionals in the under-35 age range, and had significant retention in the over-65 age range. The race and ethnic diversity of the profession lagged as well. The detailed analysis and the *Diversity Counts*✓ report are at <http://www.ala.org/ala/ors/diversitycounts>.

Several books on survey methods and research were released in 2006, or will be published early in 2007. Some more general titles that deserve mentioning are:

The third edition of *How to Conduct Surveys: A Step-by-Step Guide* (Arlene Fink (2006), Sage Publications). As with the earlier editions, Fink's book provides a systematic approach to the elements of survey research and provides useful comparisons of methodology to help the user choose the most appropriate approach.

Peter Nardi has issued the second edition of *Doing Survey Research: A Guide to Quantitative Methods* (Peter M. Nardi (2006), Pearson/Allyn & Bacon). The first edition was published in 2003. The strength of the newer edition is in the results presentation chapter, as well as in its very basic approach to survey methods in the social sciences.

What should prove to be a useful title is *Conducting Online Surveys* (Valerie M. Sue and Lois A. Ritter (2007), Sage Publications). Although Sage doesn't include in its description the value of this book for information science researchers, based on an early review this will be a helpful title for those of us entrenched in online survey development.

Finally, an article that had to be mentioned was *How Much of it is Real? Analysis of Paid Placement in Web Search Engine Results* (Scott Nicholson, Tito Sierra, et al. Journal of the American Society for Information Science and Technology, 57(4): 448-461, 2006). The researchers proposed a hypothesis that users assume context-specific paid advertising on web pages, rather than the "highest bidder" advertising that is the reality, and investigated four broad issues: the mixture of content and advertising and results from different search engines, the variation of advertising based on search topic and query length, and do "patterns of interest" emerge that may result in future research questions? Eight search tools were tested among paid listings providers, general web search tools, and meta search engines – Overture, FindWhat.com, Google,

Yahoo! Search, MSN Search, Dogpile, Mamma, and ixquick. Presented in the article are a table of search terms used in the study, components of the search results pages that were measured (search interface, editorial listings, nonintegrated advertisements (e.g., banner ads), integrated paid listings, and whitespace). A total of 384 searches were conducted in Fall 2003. Interestingly, multi-term phrase searching presented similar results until three terms were used in a search string/phrase. The study found that 60% of search results appear on the first screen because someone pays for them to be there, and 33% of search results appear in the complete listing because they are paid.

Academic Libraries

The number of MLIS staff employed in academic libraries increased a little more than 1 percent between 2002 and 2004, the most recent fiscal years for which the National Center for Education Statistics (NCES) collected data (<http://nces.ed.gov/surveys/libraries/academic.asp>). During this same period, the number of other paid staff (not including student assistants) declined 1.48 percent or slightly more than 1,000 full time equivalents (FTE) and expenditures for staff increased by more than 20 percent. Circulation increased over 6 percent and library visits by more than 14 percent. Although expenditures for collections decreased by nearly 9 percent, library collections grew by 4.7 percent with the greatest increase in E-book and serial subscriptions in all formats.

Quite a bit of research was published in 2006 in the area of communication models and learning/knowledge networks, and readers interested in this are encouraged to investigate the subject further. Two articles highlighted focused on the concept of "invisible college," and the impact of the Internet on scholarly communication and barriers to entrants in science research.

The concept of "invisible college" was investigated by Alesia Zuccala (*Modeling the Invisible College*. Journal of the American Society for Information Science and Technology, 57 (2): 152-168, 2006). Zuccala's conducted literature analyses to determine consensus in describing this concept especially as it relates to communication models in the sciences. Inherent conflicts were found in the literature regarding communication as a social process and institutional structure (referencing L.A. Liervrouw 1990 research). Zuccala also presents cocitation analysis as a method to plot research in a discipline to understand the extent of external collaboration, not unlike the bibliometric mapping done by Eugene Garfield (who's body of work she does not cite). This is an important article for those interested in the "invisible college" communication concept.

More on scientific communication, Franz Barjak investigated informal communication models in an Internet environment (*The Role of the Internet in Informal Scholarly Communication*. Journal of the American Society for Information Science and Technology, 57 (10): 1350-1367, 2006). The impact of networks on scholarly communication, research and development (R&D) and publishing are outlined by Barjak, and he discusses the impact of online communication in different research communities and describes and tests a number of hypotheses and "hybrid indicators" through a questionnaire administered to academic institutions, non-profit R&D institutions, and government-funded research institutes in the US and Europe. Five academic disciplines were selected – astronomy and astrophysics, chemistry, computer science, economics, and psychology. The findings are not surprising, but the limitations of time in fully participating in the range of communication channels were significant. It is clear from this study that younger researchers with fewer support resources are disadvantaged in their ability to fully participate and access to the technological infrastructure is an insignificant barrier.

Public Libraries

As mentioned earlier, there has been a decline in the total number of public libraries. In some states there have been annual increases in libraries, but in the last two years we have seen closures in some states and others remaining static (which is more the norm). Based on the most current national data (NCES) (<http://nces.ed.gov/surveys/libraries/public.asp>) public libraries are doing well, overall. Use of public libraries continued to increase (nearly 3 percent, or 38.2 million visits). Circulation increased 2.33 percent (45.7 million) and collections grew by 10.4 percent (7.7 million). The greatest increase in collections was in audio and video formats, increasing 14.25 percent. Not surprisingly, staffing declined slightly between fiscal years 2003 and 2004 (- .87 percent). Expenditures increased slightly more than 4 percent (approximately \$227 million) between these fiscal years, with the largest increases in "other" expenditures and staffing. Collections budgets decreased just over 1 percent (approximately \$12.5 million).

Research of interest to public libraries came not only from the publications focusing on public libraries and generally about management, but also from **Library Trends** (<http://puboff.lis.uiuc.edu/>). Two issues focused on topics important to public libraries. The Fall 2005 issue (54(2)), edited by Allison Druin and titled *Children's Access and Use of Digital Resources*, covered topics as information seeking behavior of youth, the role of digital resources in formal education, digital resource development appropriate for children, and metadata development to increase access to resources appropriate for children. The second issue, *Dual-Use Libraries* (54(4) Spring 2006), was edited by Sarah McNicol and includes topics as best practices and "guidelines for success", partnership development, personnel concerns, and content-specific alliances (e.g., health information). Both journal issues are highly recommended.

Another article to read is from Denise E. Agosto and Sandra Hughes-Hassell, *Toward a Model of the Everyday Life Information Needs of Urban Teenagers* (parts 1 and 2) (Journal of the American Society for Information Science and Technology, 57: 1394-1403 and 1418-1426, 2006). Funded by a grant from the Institute for Museum and Library Services (IMLS), Agosto and Hughes-Hassell present a model of the "everyday life information seeking" (ELIS) of urban teens. Two groups of Philadelphia teens were selected to participate in a qualitative study. The first article details the methodology of the study, and the second article details the themes identified by the research. These themes included 28 informational topics identified by the teens, from current events to personal finance to sexual safety and identity, and became the ELIS topics of the study. Seven dependent variables were identified – social self, emotional self, reflective self, physical self, creative self, cognitive self, and sexual self. The 28 ELIS empirical values were then aligned with the dependent variables. This study confirmed research of previous studies in this area, and discovered that the information needs of urban teens closely aligned with those found in more "advantaged" and "nonminority" communities. The researches also suggest replicating this model in rural or suburban communities.

Finally, consider an article by Reijo Savolainen and Jarkko Kari titled *Placing the Internet in Information Source Horizons: A Study of Information Seeking by Internet Users in the Context of Self-Development* (Library & Information Science Research (26 (2004): 415-433), that investigates the information seeking behaviors and source preferences of individuals aged 10-70 in Finland. The article presents summary findings of general information value and situation-specific information needs as it relates to hobbies, or self-development. This analysis included developing criteria for determining the relevance of Web-based sources as perceived by the user and the reality of information sources available, and presents these findings (preferences) in zones of

preference. Overall, the researchers present an interesting conceptual model for considering information seeking behavior.

School Libraries

Data are collected about school library media centers by NCES every three-to-four years (<http://nces.ed.gov/surveys/libraries/school.asp>). The data released in the 2003-2004 report were limited as compared with previous studies due, in part, to a publication change made by NCES. This has resulted in limitations in analyzing change since 1999-2000, the date of the previous comprehensive study of school libraries. There was an increase of 7.5 percent in the number of schools with libraries (approximately 5,700), and an increase of 2.3 percent in staffing (approximately 1,975), yet a decline in the number of MLS staff by approximately -14.4 percent. Other staff categories (non-MLS certified) grew by over 51 percent for this same period. School libraries saw a 5 percent increase in the number of students and teachers served (approximately 2.28 million individuals) during the 1990-2000 and 2003-2004 period.

The American Association of School Librarians (AASL), a division of ALA, will conduct its first NCES-comparable sample survey of school libraries. Prompted by the infrequency of the federal survey, AASL will ask fewer but more directed questions of school library staff about staffing, collections, and services provided to students, teachers and school administrators. The questionnaire will be fielded in early 2007 and results available before the end of the year.

Even students in the UK prefer electronic resources. James E. Herring found in his study *A Critical Investigation of Students' and Teachers' Views of the Use of Information Literacy Skills in School Assignments* (School Library Media Research, 9 (2006), <http://www.ala.org/ala/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume9/informationliteracy.htm>) that student's views of information access, and their literacy skills, were improved by an interactive but structured learning approach. Using a quantitative and qualitative research model, Herring investigated the value of the PLUS information literacy model (concept mapping, etc.). The study identified that students benefited from brainstorming and concept mapping prior to beginning a research project, and that preference for online resources has caused a shift away from information literacy to digital literacy. Not surprisingly, the study found that more than 65 percent of information used by students was from the Web and about 35 percent from print resources, and that students preferred using Web-based resources over print nearly 2-to-1. The questionnaire and comprehensive bibliography are included in the article.

Sally Brewer and Peggy Milam reported similar findings regarding use of electronic resources in *SLJ's Technology Survey 2006* (School Library Journal (SLJ). June 1, 2006. <http://www.schoollibraryjournal.com/article/CA6338687.html>). In addition to basic questions about technology access, the survey inquired about student development of websites, use of WIKIs, podcasts, RSS feeds and other emerging technologies to understand the penetration of these technologies in the daily activities of students. This study is one of the few that isolates school library expenditures, and therefore is very useful.

Other research benefiting the profession

Information needs of the elderly, or the "oldest old", was presented by Terryl Asla, Kirsty Williamson, and John Mills in *The Role of Information in Successful Aging: The Case for a Research Focus on the Oldest Old* (Library & Information Science Research, 28(2006): 49-63).

The authors present a comprehensive review of key research in the area of “global aging” and the need for more deliberate research especially as it relates to the impacts on libraries serving this growing population.

Marcia J. Bates’ work in the area of information seeking continues. In her article *Fundament Forms of Information* (Journal of the American Society for Information Science and Technology, 57(8): 1033-1045, 2006), Bates presents a definition for “information” and walks readers through an analytical assessment of its implied meaning.

In 2006 the American Library Association launched a new title in its annual salary survey series – non-MLS salaries. The series title changed, as well, to the *ALA-APA Salary Survey: Librarians – Public and Academic, and Non-MLS – Public and Academic*. A subscription database also was released in 2006, supporting cross-position searching and salary comparison. A summary article of the 2006 study is at http://www.ala.org/ala/ors/reports/2006_Salary_Survey_Final_Report.pdf and information about the new salary survey series at <http://www.ala-apa.org>.

The Web, Blogging, Podcasting, and WIKIs

Just when we thought we couldn’t take more email or chat, the profession has launched headlong into blogging, WIKIs, and pushing presentation content out through podcasting. The active utility of these technologies to disseminate and create virtual dialogues around MLIS education, research, and professional development by practitioners is impressive. Keeping up with the threads proves challenging. Add to this the continued utilization of chat reference and other platforms to provide services to library users, the literature is only beginning to evaluate these communication and dissemination devices to understand the value and impact of alternate forms of information delivery.

In the Fall 2006 issue of *Library Administration & Management*, Deborah Lee’s article *iPod, You-pod, We-pod: Podcasting and Marketing Library Services* (20(4): 206-8, Fall 2006) provides a useful overview of the value of the technology format and how-to information that will be helpful to those new to this method of information delivery.

Phillip M. Davis and Jason S. Price have completed a systematic analysis of six publishers Project COUNTER-compliant eJournal data for 2004 (*eJournal Interface can Influence Usage Statistics: Implications for Libraries, Publishers and Project COUNTER*. Journal of the American Society for Information Science and Technology, 57(9): 1243-1248, 2006). The purpose of the study was to determine if a preferred format for content delivery existed by title or subject for PDF and HTML formats. The study found that interface did have an impact on user navigation to retrieve a full-text article. Further, the study further revealed that although a publisher is COUNTER-complaint, realistic data comparison is not possible because of publisher interfaces variations.

Further analysis of web usage and the impact on citation reuse using nearly 14 years of data was conducted by Tim Brody, Stevan Harnad and Leslie Carr (*Earlier Web Usage Statistics as Predictors of Later Citation Impact*. Journal of the American Society for Information Science and Technology, 57(8): 1060-1072, 2006). Focusing on peer-reviewed journals, the authors used Citebase to harvest and analyze citation metadata for “inlinks” and “outlinks,” and compiled download latency tables for a range of titles. The article presents a model for describing the impact of downloads in supporting information access.

Information Retrieval

What an interesting year for publishing information retrieval research! Sherry Koshman's *Visualization-based information Retrieval on the Web* (Library & Information Science Research, 28(2006): 192-207) provides a clear summary of the application of visualization tools to analyze information seeking behaviors of searchers. Koshman replicated search strategies (proximity, closure, and connectivity) in a variety of metasearch tools utilizing visualization applications, including Anacubis, Grokker, Kartoo, MapStan, the Missing Pieces, Star Tree, PC-VIBE, and TouchGraph.

Jeffrey Pomerantz, Lili Luo, and Charles R. McClure's *Peer Review of Chat Reference Transcripts: Approaches and Strategies* (Library & Information Science Research, 28(2006): 24-48) evaluated NCKnows, the chat reference service used statewide in North Carolina. The study team worked with the State Library of North Carolina to administer a peer (librarian) review process for evaluating colleague chat transcripts in both public and academic libraries participating in the statewide program. The study found that 52 percent of transcripts studied completely and correctly answered the query, and nearly 27 percent of responses were correct but incomplete – yielding nearly 79 percent accuracy rate for chat-based reference. Librarians participating in Ncknows also were interviewed as part of the program evaluation, and summary anecdotal findings from these are provided in the article. The evaluation strategy presented by the research team could be replicated easily for evaluation of other chat-based reference programs.

Marie L. Radford's *Encountering Virtual Users: A Qualitative Investigation of International Communication in Chat Reference* (Journal of the American Society for Information Science and Technology, 57(8): 1046-1059, 2006) evaluated randomly selected transcripts from Maryland's AskUsNow! virtual reference service and a fixed number of transcripts nominated for the LSSI Samuel Swet Green Award in a context of communication theory. Radford found that relational facilitators and relational barriers existed in both data sets, and provides detailed interpretation of those themes and subthemes. These include interpersonal aspects of chat, greetings, rapport building, deference behaviors, compensation for lack of nonverbal cues in a virtual environment, and chat closing messages. Not surprising, interpersonal cues are challenging to create in a virtual environment, and Radford's study provides useful analysis. A literature review of computer-mediated communication also appears with the article.

Finally, a special topic section of the Journal of the American Society for Information Science and Technology (57(4), 2006) addressed soft computing, an area of research within artificial intelligence. This special section is highly recommended for anyone interested in learning more about research and analysis of search techniques in various search engine environments, meta-tagging and metadata, personalized Web, and applications of fuzzy logic models to evaluate question-answer databases.

Awards and Grants that Honor and Support Excellent Research

The professional library associations offer many awards and grants to recognize and encourage research. The 2006 awards and grants here are listed under the name of the sponsoring association, and in the case of ALA by the awarding division, in alphabetical order. More-detailed information about the prizes and prizewinners can be found at the association Web sites.

A new award to honor the contributions of Mary Jo Lynch was established by Beta Phi Mu, named the Mary Jo Lynch Distinguished Research Award [lecture]. This year the award was presented to the Beta Tau Chapter at Wayne State University for their Third Distinguished Beta Phi Mu Lecture. The Lecturer was Past President Robert Martin. More information about this award is available at http://ci.fsu.edu/go/virtual_host/beta_phi_mu_org/new_events/distinguished_lectures/

American Library Association

<http://www.ala.org>

Carroll Preston Baber Research Grant

Winner: No Awardee for 2006

Jesse H. Shera Award for Excellence in Published Research

Winners: Helen Georgas and John Cullars, for "A Citation Study of the Characteristics of the Linguistics Literature."

American Association of School Librarians (AASL)

<http://www.ala.org/aasl>

AASL/Highsmith Research Grant

Winner: Judith Dzikowski for "Partners in Achievement: Libraries and Students (PALS) Improving Student Achievement through Data Use for Library Media Specialists"

Association of College and Research Libraries (ACRL)

<http://www.ala.org/acrl>

Doctoral Dissertation Fellowship

Winner: Jean E. Dryden for "Copyright in the Real World: Copyright and Archival Material on the Internet."

Samuel Lazerow Fellowship for Research in Collections and Technical Services in Academic and Research Libraries

Winner: Kyung-Sun Kim for "Factors Affecting the Selection of Information Sources."

Coutts Nijhoff International West European Specialist Study Grant

Winner: Dale Askey for "Documenting a Vanishing Culture: German-language Literature from Czechoslovakia, 1945–1990."

Ilene F. Rockman Instruction Publication of the Year Award (formerly the IS Publication Award)

Winner: Michelle Holschuh Simmons for "Librarians as Disciplinary Discourse Mediators: Using Genre Theory to Move Toward Critical Information Literacy."

Library and Information Technology Association/OCLC

<http://www.ala.org/lita>

Frederick G. Kilgour Award for Research in Library and Information Technology

Winner: Ching-chih Chen

American Society for Information Science and Technology

<http://www.asis.org/>

ASIS&T Research Award

Winner: Brenda Dervin

ProQuest Doctoral Dissertation Award

Winner: Vivien Petras

Thomson ISI Doctoral Dissertation Proposal Scholarship (formerly ASIS&T/ISI Doctoral Dissertation Proposal Scholarship)

Winner: Heather O'Brien

Thomson ISI Citation Analysis Research Grant (formerly ISI/ASIS&T Citation Analysis Research Grant)

Winners: Steven Ackerman and Jean Phillips

John Wiley Best JASIST Paper Award

Winner: Lisl Zach

ASIS&T Best Information Science Book Award

Winner: Geoffrey C. Bowker

Association for Library and Information Science Education

<http://www.alise.org>

Eugene Garfield/ALISE Doctoral Dissertation Award

Winner: Diane Kelly for "Understanding implicit feedback and documents preference: A naturalistic user study," University of North Carolina-Chapel Hill

Research Grant Award

Winner: Marcia A. Mardis for "From one-to-one to one-to-many: A study of the relationship between the practicum and the transition from teacher to school library media specialist," Wayne State University

Medical Library Association (MLA)

<http://www.mlanet.org>

Donald A. B. Lindberg Research Fellowship

Winner: Indra Neil Sarkar, Division of Invertebrate Zoology and Library Services, American Museum of Natural History, New York, NY

President's Award

Winners: Renee Bougard, Houston Academy of Medicine-Texas Medical Center Library, National Network of Libraries of Medicine, South Central Region, Houston, TX, and Janice Kelly, Health Sciences and Human Services Library, University of Maryland, National Network of Libraries of Medicine, Southeastern/Atlantic Region, Baltimore, MD

Ida and George Eliot Prize

Winners: Jean P. Shipman, AHIP, Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University-Richmond, and Sarah B. Watstein, Charles E. Young Research Library, University of California-Los Angeles, for "Emerging Roles of Health Sciences Librarians"

Janet Doe Lectureship (for 2006)

Winner: Henry L. Lemkau Jr., FMLA, Louis Calder Memorial Library, University of Miami, Miami, FL