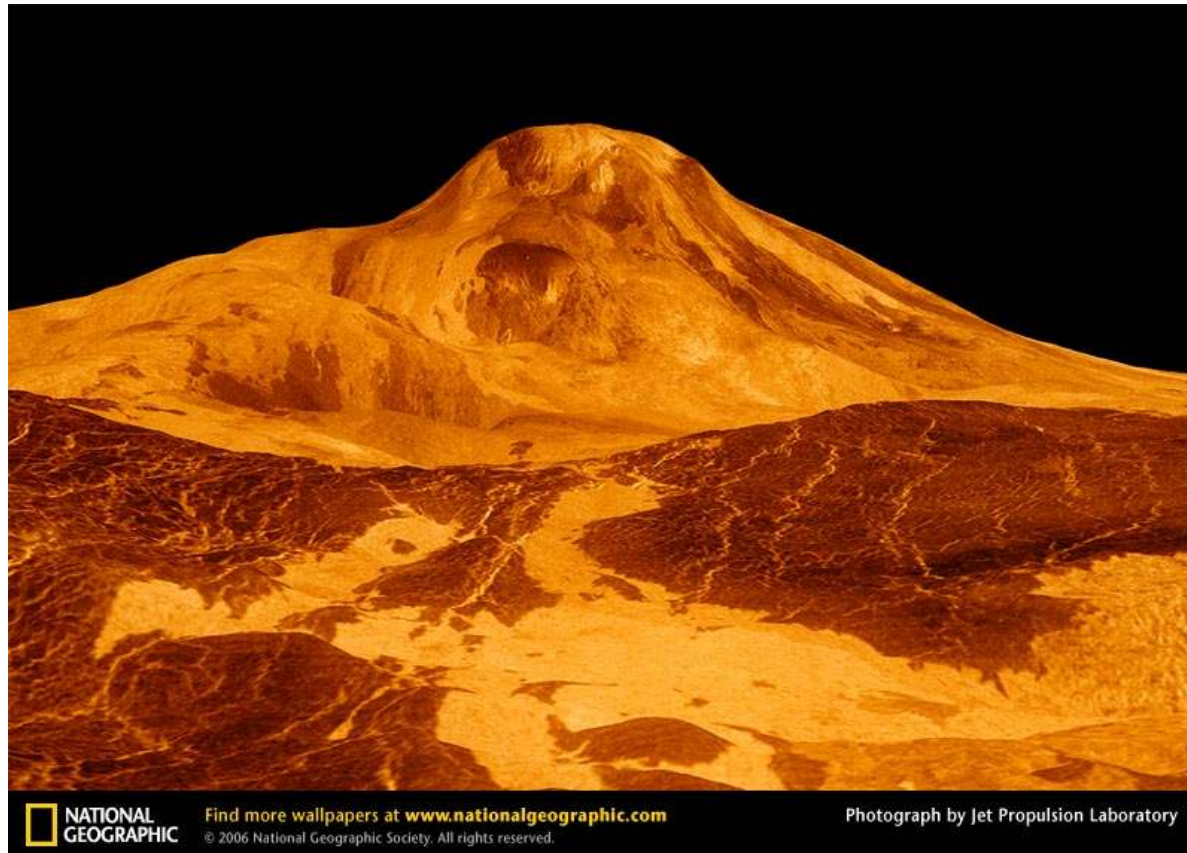


Truth-Telling and Survey Methods
in Advocacy Research:
A Call for the Formation of the
Flat Venus Society in Library Assessment

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NASA/Jet Propulsion Lab Photo in National Geographic



“This image was captured by the Magellan spacecraft... The orange tint approximates the color the human eye would see as a result of sunlight filtering through Venus's cloud cover.”

- *National Geographic Magazine*, Feb. 1993.

This is a call for the formation of the Flat Venus Society. In the face of a media blitz that conveys the impression that Venus is characterized by soaring mountains and deep canyons, a dedicated group is needed to promote the fact that our sister planet is mostly flat, rolling plains... Yet the public thinks [Venus's volcanoes] are precipitous peaks with near-vertical walls rising into a black sky. (A black sky? On Venus?)

*David Morrison, astrobiologist,
in Tufte (1997), p. 24.*

Exemplary Research Critique

by Kaplan (2008)

Reading at Risk, National Endowment for the Arts 2004 report: Reading skills declining among American students

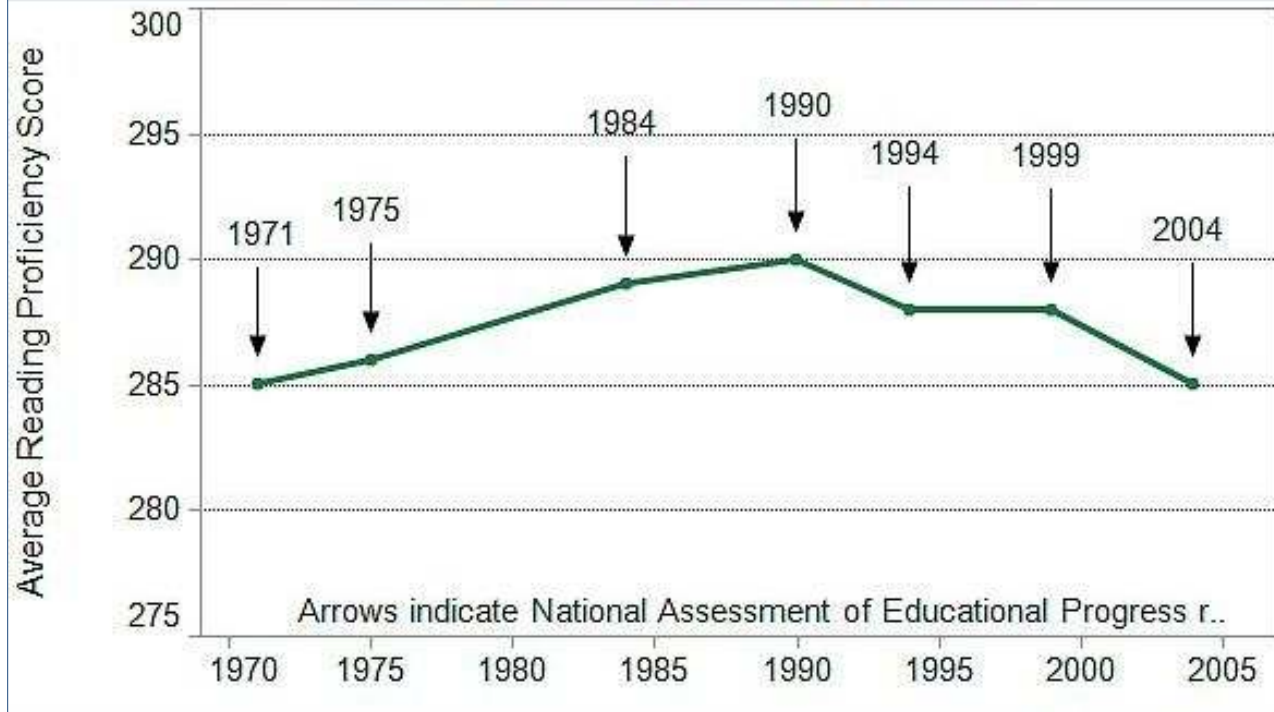
Used national data from 1984 forward, showing only the declining half of a larger trend

Data from 1971 on indicates no decrease in reading proficiency for these student

Average Reading Proficiency Scores for 17-Year-Olds 1971 to 2004

Adapted from Kaplan (2008)

Data source: US National Center for Educational Statistics



Formal Research Subscribes to a Higher Standard of Evidence

Considers the complete range of data
objectively

Data contradicting theories are disclosed
i.e. refutation in scientific research

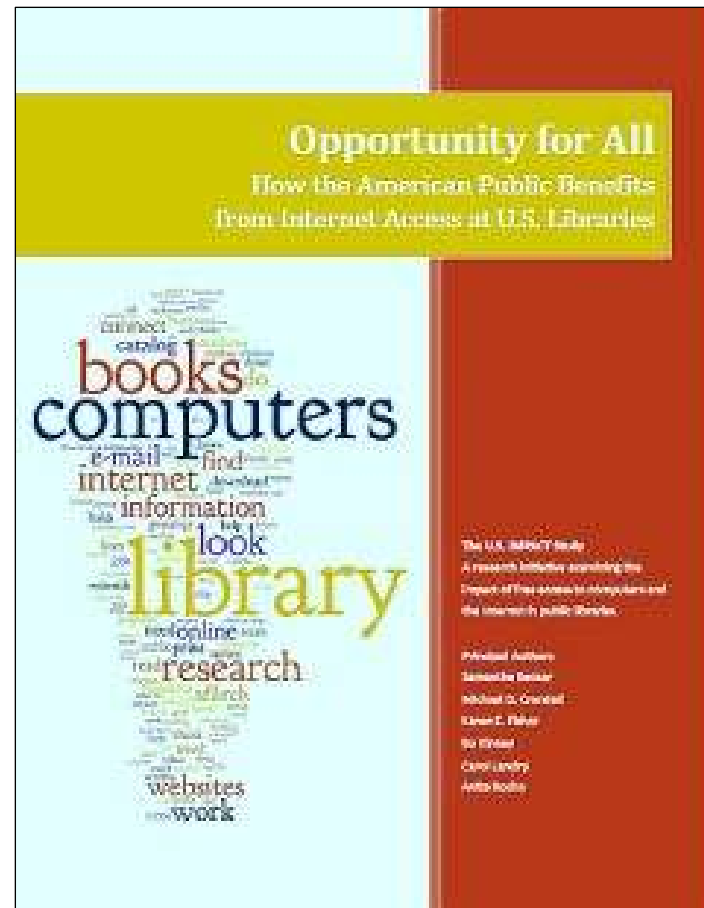
Seeks to make the strongest argument
possible given the investigative data

Formal Research Subscribes to a Higher Standard of Evidence

Discloses limitations to study scope and methods and implications for interpreting study findings

For advocacy research, impartiality and fairness important for a credible message

Examples of Exaggerated Claims in Library Advocacy



Claims from Becker et al. (2010)

“As seen in Figure 2, from 1998 to 2006 the average number of public access computer terminals in public libraries grew by more than 300 percent.” p. 17

“Internet provision [by libraries] has skyrocketed...”
p. 18

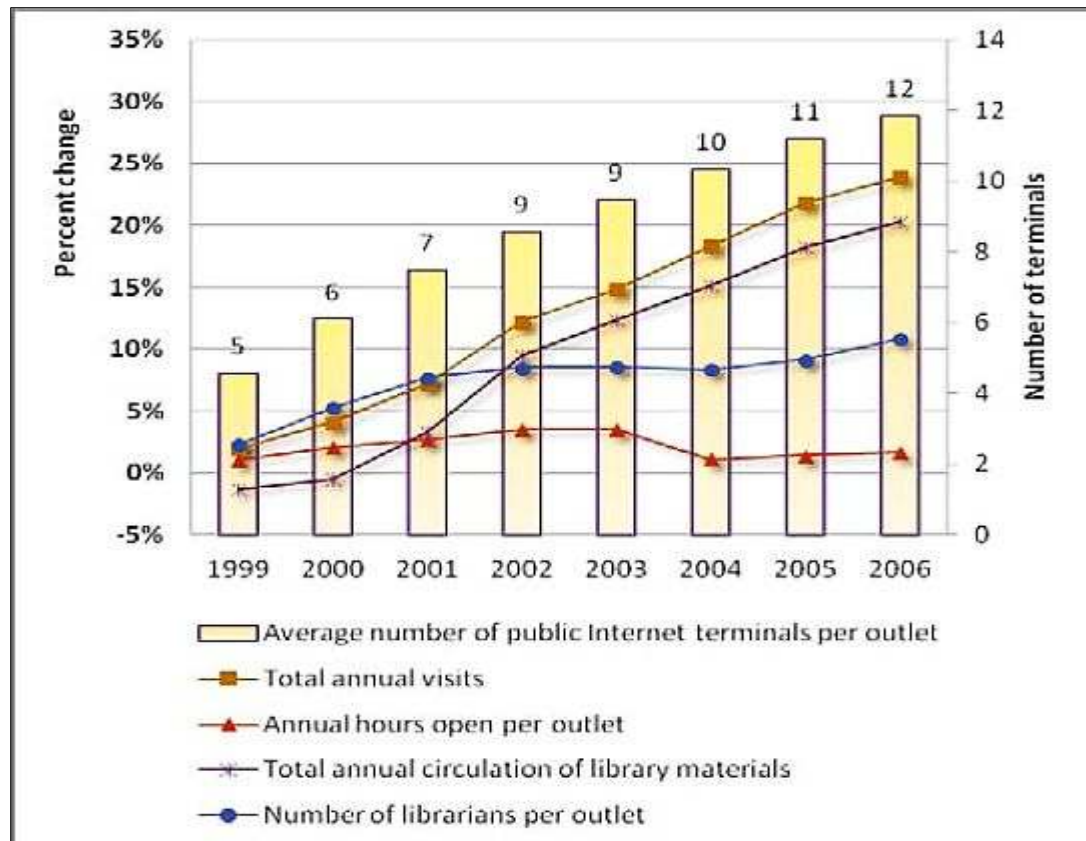
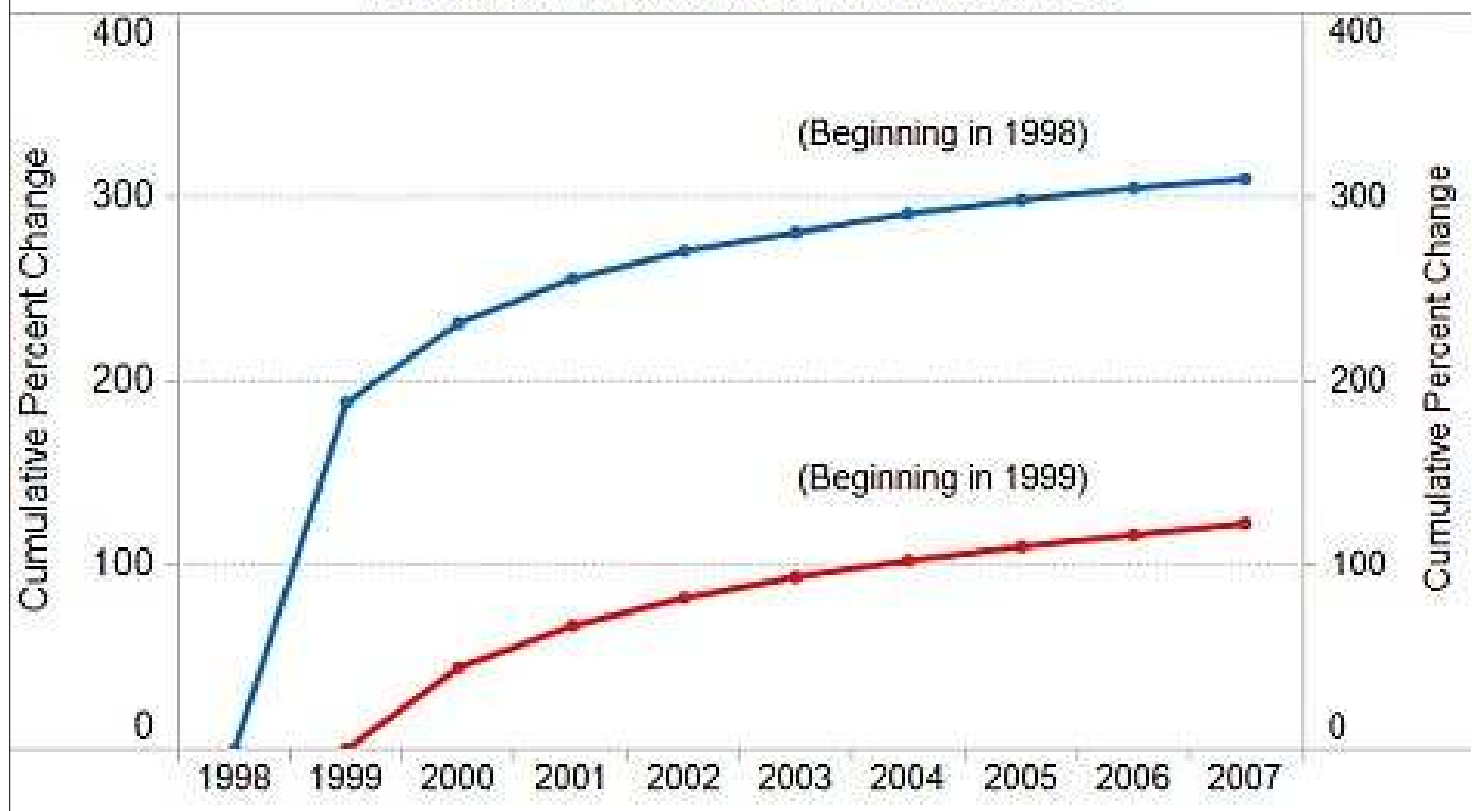


Figure 2 from Becker et al., *Opportunity for All*, p. 18.

Cumulative Percent Change in the Number of Public Access Computers in U.S. Public Libraries

Data source: Institute of Museum and Library Services



Examples of Exaggerated Claims in Library Advocacy

The screenshot shows the homepage of geekthelibrary.org. The page has a dark background with red accents. At the top left is the URL 'geekthelibrary.org'. At the top right are links for 'Share This' and 'See The Latest'. Below the header are four main navigation buttons: 'Get Your Geek On' (Share what you geek, download free stuff, buy gear and spread the word), 'Geek The Library' (Understand the value of public libraries and why they need your help), 'Show Your Support' (Find out who you can talk to, what you can say and what you can do), and 'Take Our Quick Survey' (Help us understand the level of public library support in your community). The main content area features a large portrait of a smiling woman on the left. To her right is the headline 'Igeekvampires' in a large, stylized font. Below the headline is a paragraph: 'Whatever you geek, the public library supports you. Join Geek the Library in spreading awareness about the value of libraries and the critical funding issues they face.' Underneath this text is a video player showing a woman speaking, with a play button in the center and a progress bar at the bottom. To the right of the video player is a 'Get Involved' section with a list of links: 'Tell us what you geek', 'Join our social networks', 'Learn about library funding', and 'Share this in your community'. Below that is a 'Get Geek the Library' section with a link: 'Find out how libraries can run the campaign locally'. At the bottom of the page, there is a 'geek VERB' logo on the left, a 'Recent News' section in the center, and a 'Geeking It' logo on the right.

Source: www.geekthelibrary.org

Support the Library

Speak up and lend us your voice

- Question 1
- Question 2
- Question 3
- Question 4

In the current economic climate, what is the most common use for your local library's computer center over the past year?

- Checking e-mail
- Researching and writing term papers
- Preparing resumes and searching for jobs



Source: www.geekthelibrary.org

Geekthelibrary.org's "correct" answer.

(Arrow is my annotation.)

Support the Library

Speak up and lend us your voice

• Question 1 In the current economic climate, what is the most common use for your local library's computer center over the past year?

Question 2
Question 3
Question 4

Answer:

Libraries across the country report a significant increase in people coming in to use computers specifically to find and apply for jobs.

Over 60 percent of U.S. libraries say that helping job seekers is now one of the most critical roles they play.

Supporting argument for the claim that job-seeking is the most frequent computer use.
(*Ellipse is my annotation.*)

The data:

Anecdotal reports of library attendance.

In 2009 66% of librarians *believed* job-seeking computer use is important. In 2010, this figure increased to 74% (Davis et al., 2009, 2010)

Neither of these are measures of actual use of computers in US public libraries

Geekthelibrary.org's claim is *pure conjecture*

Examples of Exaggerated Claims in Library Advocacy



Career assistance when we need it most

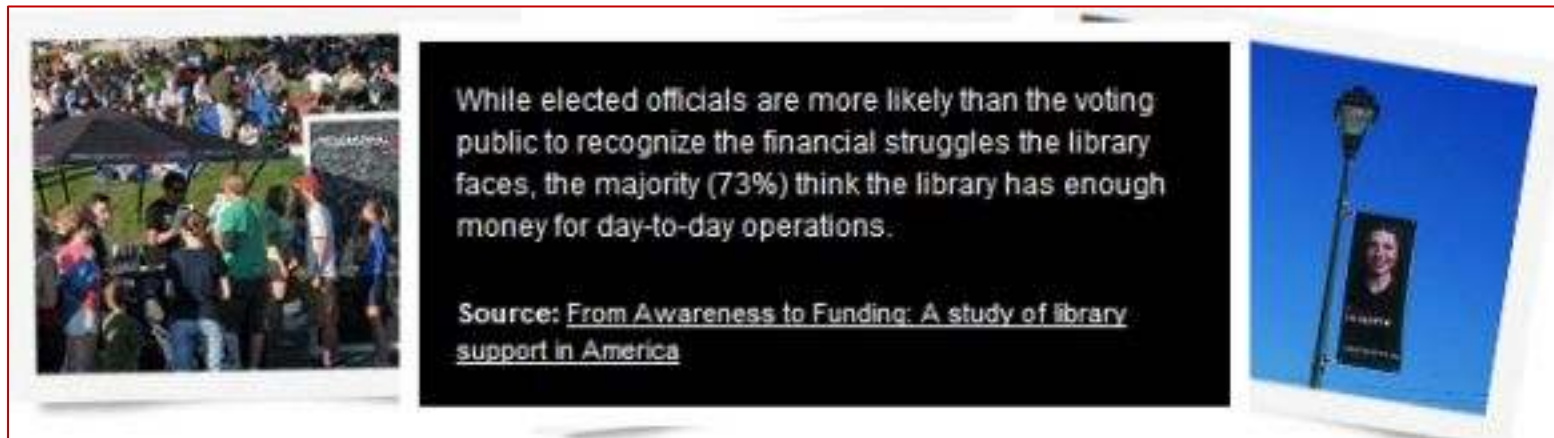


Source: *How Libraries Stack Up: 2010*, Online Computer Library Center.

Problems with OCLC's 'Help Wanted' comparison:

Number of services outlets are poor indicators of the numbers of services delivered

Comparison ignores types and mix of services



Source: www.geekthelibrary.org

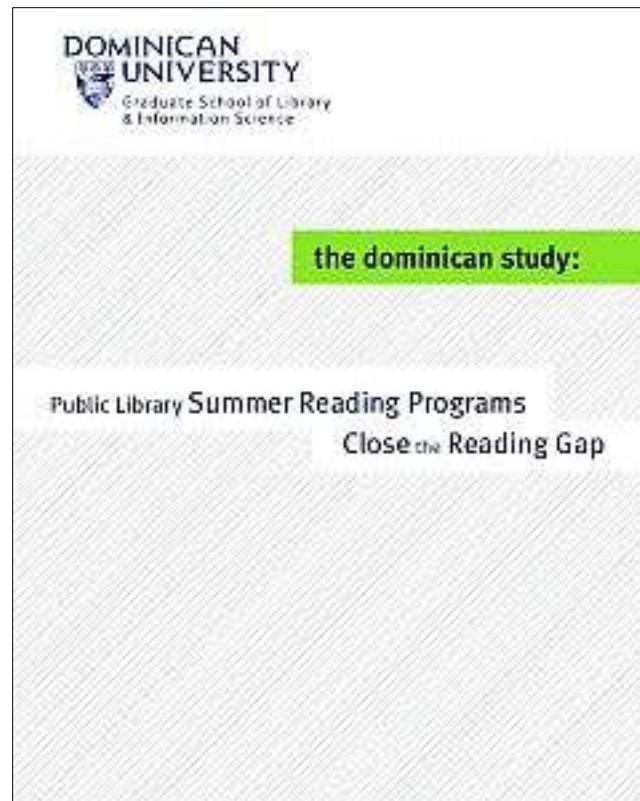
Survey sample: 84 self-selected respondents

De Rosa & Johnson (2008) admitted sample was “a convenience sample that is quantitative but not statistically representative of all local elected officials in the United States.” p. 23.

Sample unrepresentative and inaccurate

Unusable for drawing conclusions about U.S. elected officials as a whole

Examples of Exaggerated Claims in Library Advocacy



Study's main question:

Do public library summer reading programs impact student achievement?

Researchers' answer:

“Yes, we can state that in this study they do in positive ways.” (Roman et al. (2010), p. 51)

Soundness of study findings:

Poor. Research design insufficient for drawing conclusions about causality (impact).

Misleading statements in the Dominican Study:

“Students who participated in the public library summer reading program scored higher on reading achievement tests at the beginning of the next school year than those students who did not participate.

While [non-participating] students also [had] improved reading scores, they did not reach the reading level of the students who did participate. [in summer reading].” p. 1

Participating students superior readers before and after summer programs (i.e., non-equivalent control group)

Inadequate baseline for comparing effects of summer reading programs

Performance improvements not attributable to summer programs due to inadequate research design

Examples of Mistaken Understanding of Statistical Methods



OCLC Study of Perceptions of Catalog Users (Calhoun, [2009])

Well-planned, comprehensive study

Uses data to inform decisions!

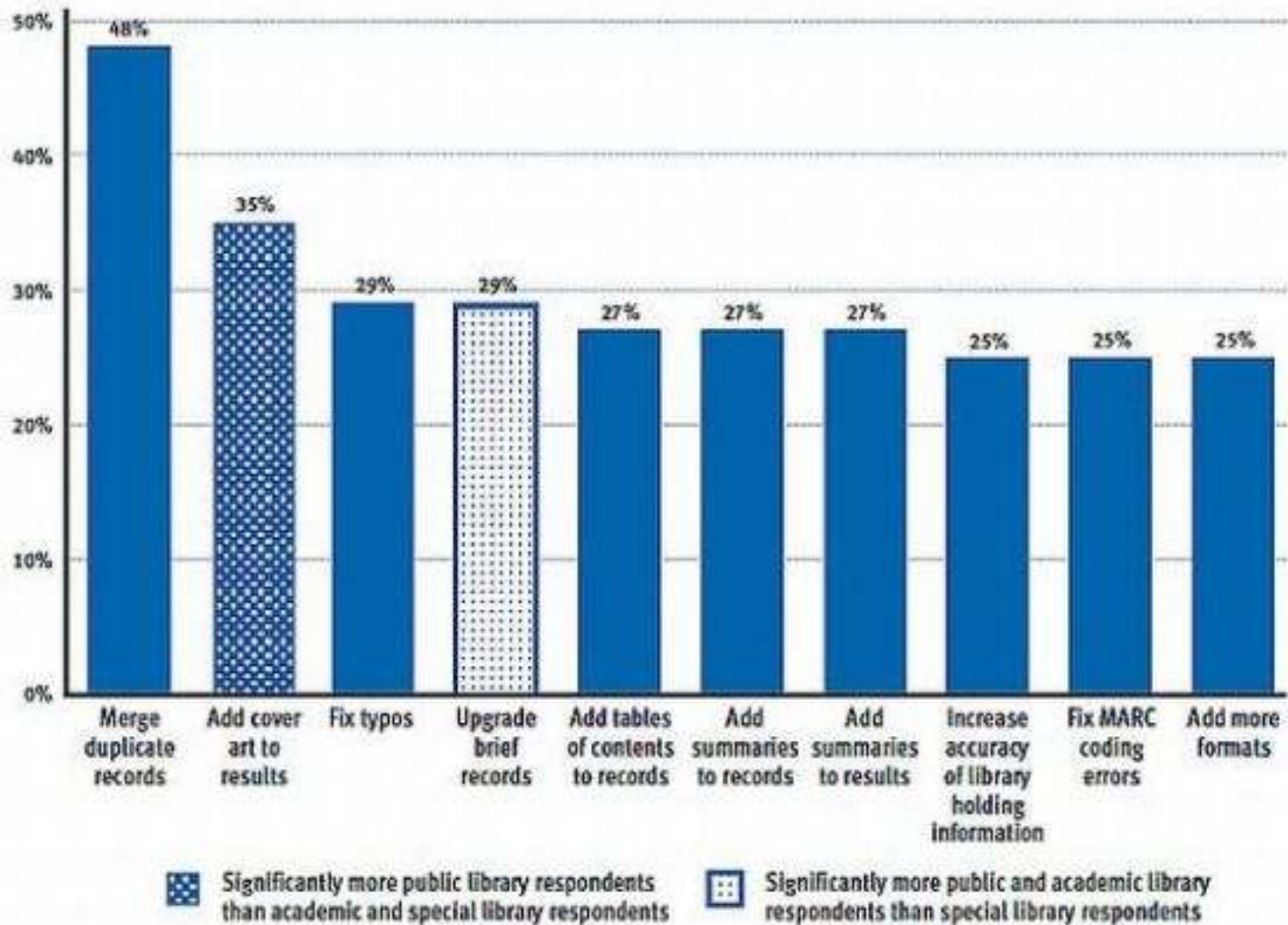
Random sampling used for one subset of
respondents

Misunderstood statistical significance
testing

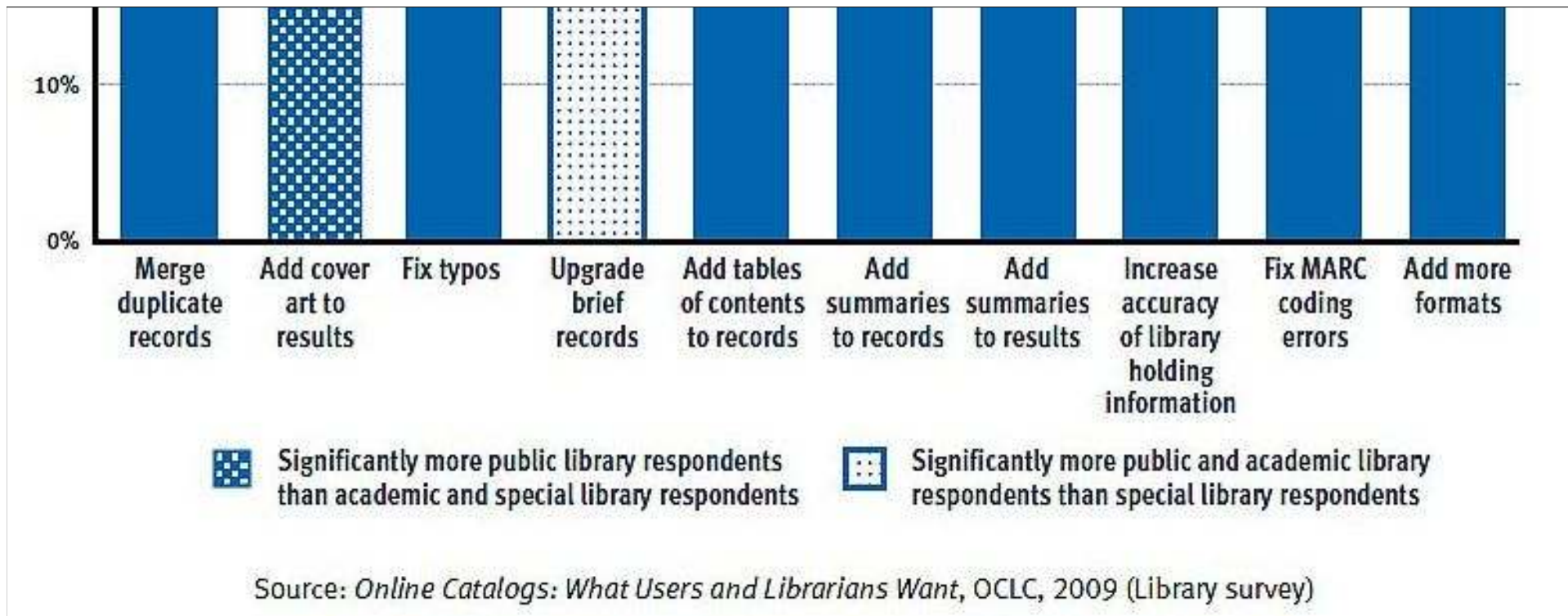
Top Ten Data Quality Enhancements

Which of the following enhancements would you recommend?

Base: Public library respondents



Source: *Online Catalogs: What Users and Librarians Want*, OCLC, 2009 (Library survey)

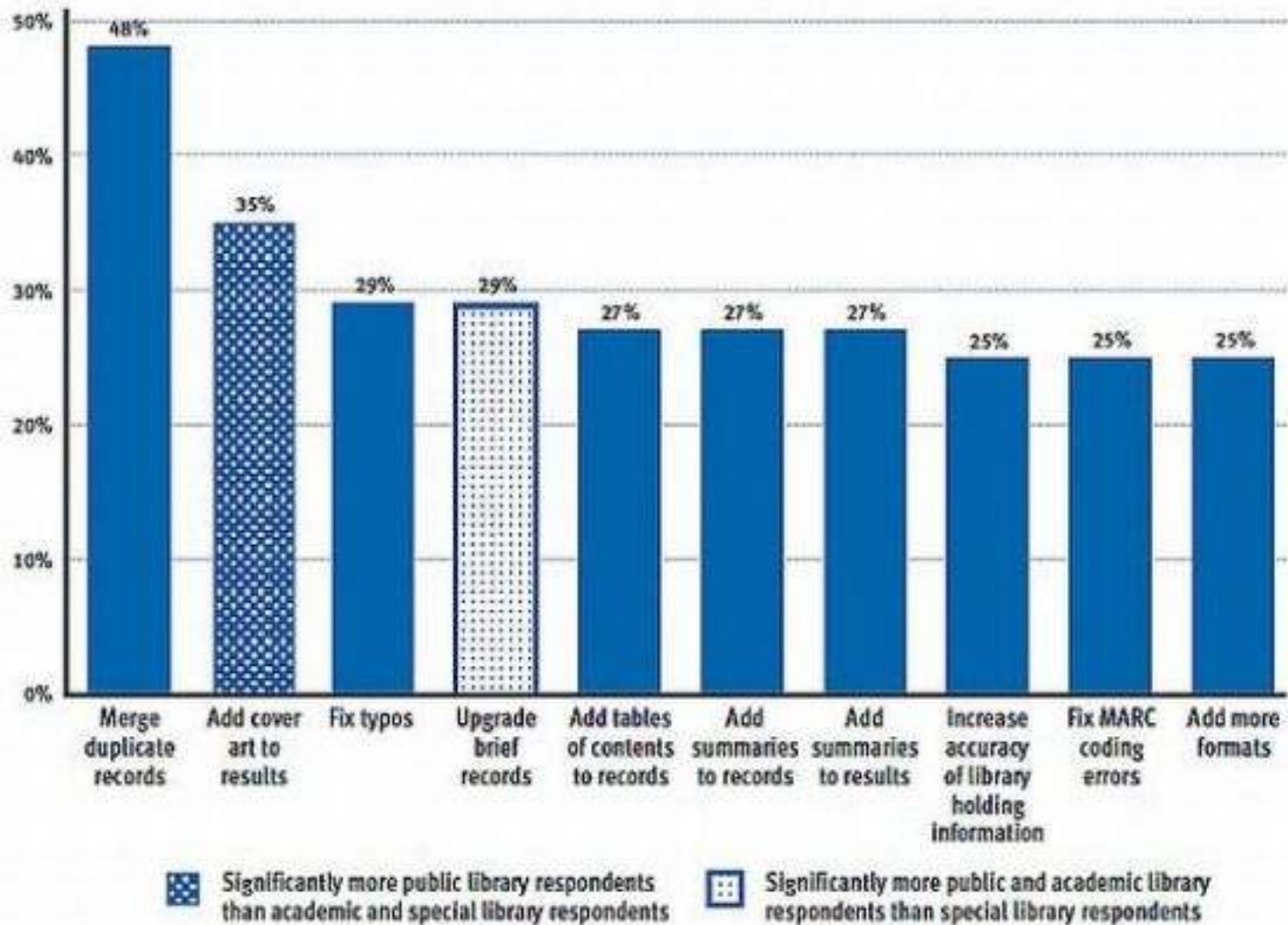


Close-up of portion of chart from previous slide (Calhoun, (2009), p. 28)

Top Ten Data Quality Enhancements

Which of the following enhancements would you recommend?

Base: Public library respondents



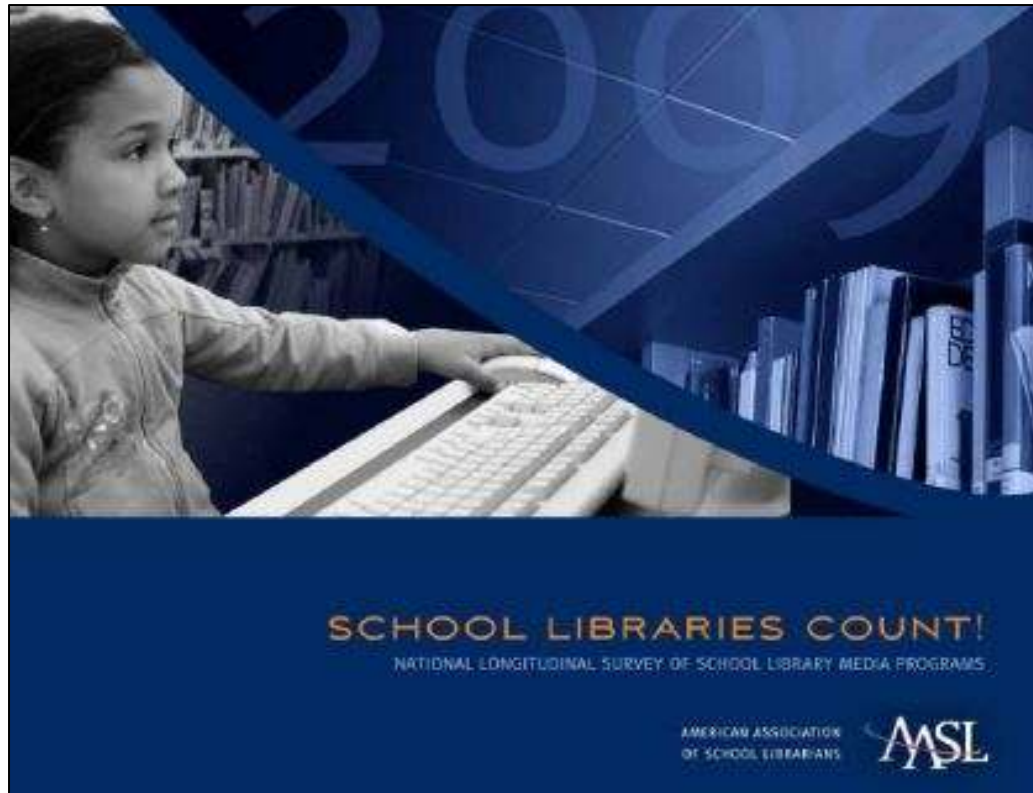
Source: *Online Catalogs: What Users and Librarians Want*, OCLC, 2009 (Library survey)

Statistical significance determines *whether* observed difference is likely to be authentic rather than due to random error (chance)

Statistical significance sheds no light on meaning of magnitude of difference

Meaning (non-statistical “significance”) of difference magnitude comes from subject knowledge and professional judgment

Examples of Mistaken Understanding of Statistical Methods



American Association of School Libraries Studies (2007 – 2009)

Nonprobability sampling used annually
(self-selected respondents)

2009 study reports margins of error,
estimates of survey precision

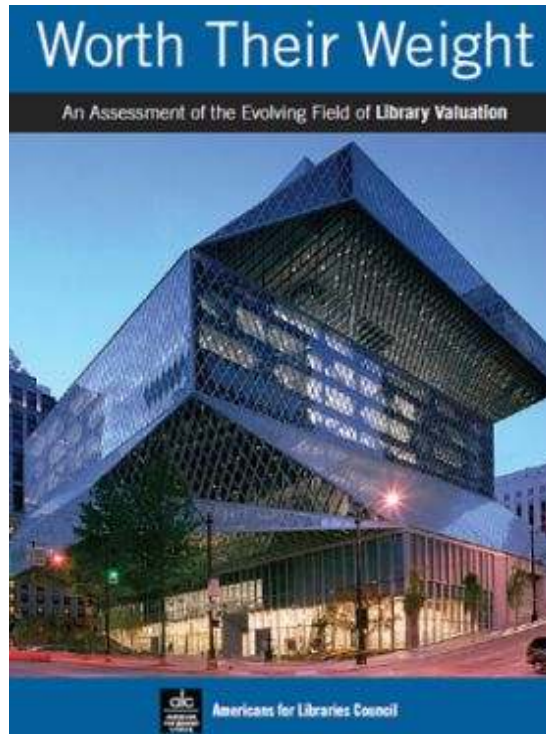
Margins of error calculations valid only
with probability sampling

Cost/Benefit Analysis & Return-on-Investment

Misunderstanding of the theory behind these techniques:

Cost/benefit results not necessarily comparable across libraries or institutions (Elliott et al., 2007)

Subjects libraries to purely economic comparisons with other public services



Due to positive cost/benefit findings, in one community “...library staff was asked to share management practices with local school systems and fire districts and to impart the secrets of its efficiency in managing money.” Imholz and Arns (2007), p. 20.

Cost/Benefit Analysis & Return-on-Investment

Measures of “economic efficiency” only!

By no means do these approaches measure effectiveness, operating efficiency, quality, or managerial aptitude

“Library Value Calculators”

Biased and misleading

Library-wide calculators produce exaggerated results since they ignore relevant costs

Individual patron calculators are deceptive since they ignore students and households subsidizing patron benefits

“Library Value Calculators”

Calculators withhold information from constituents; libraries should not participate in this deception

Evaluation and assessment concerned with communities of users, not how individuals fare

Value calculators are marketing gimmicks, not measurement instruments

Need for a Flat Venus Society in Library Assessment

Inaccurate and exaggerated advocacy claims impede profession's search for reliable, useful advocacy information

Professional reputation suffers when constituents discover misleading, disingenuous information

Next Steps for The Society

Set higher expectations for accuracy of advocacy information

Consider existing standards in evaluation and survey research

Next Steps for The Society

Do not permit marketers* to define advocacy campaign content

Work to improve understanding of quantitative and survey research methods by library professionals

* “Marketers” are marketing and advertising professionals who have insufficient regard for the soundness and accuracy of the information they present.

Relevant Standards: *Joint Committee for Standards in Educational Evaluation (2010)*

“Evaluation conclusions and [study design] decisions should be explicitly justified in the cultures and contexts where they have consequences.

Evaluation procedures should yield sufficiently dependable and consistent information for the intended uses.

Evaluations should employ technically adequate designs and analyses that are appropriate for the evaluation purposes.”

Relevant Standards: *Joint Committee for Standards in Educational Evaluation (2010)*

“Evaluation reasoning leading from information and analyses to findings, interpretations, conclusions, and judgments should be clearly and completely documented.

Evaluation communications should have adequate scope and guard against misconceptions, biases, distortions, and errors.”

Relevant Standards: *Principles of Disclosure,*
National Council on Public Polls

Sampling method employed

Population sampled

Size of the sample

Margin of sampling error (if a probability
sample)

Relevant Standards: *Principles of Disclosure, National Council on Public Polls*

Survey mode (e.g. telephone/interviewer,
telephone/automated, mail, internet, etc.)

Complete wording and ordering of questions
mentioned upon which the results are based

Percentage of responses for all questions
reported

References*

American Association of School Libraries. *School Libraries Count! National Longitudinal Survey of School Library Media Programs* (Chicago: American Library Association, 2009), accessed September 16, 2010, <http://www.ala.org/ala/mgrps/divs/aasl/researchandstatistics/slcsurvey/2009/slc2009.pdf>

Becker, Samantha, Michael D. Crandall, Karen E. Fisher, Bo Kinney, Carol Landry, and Anita Rocha. *Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries* (Washington, DC: Institute of Museum and Library Services, 2010).

Calhoun, Karen, Diane Cellentani, et al., *Online Catalogs: What Users and Librarians Want* (Dublin, OH: OCLC, Inc., 2009). Accessed September 16, 2010, <http://www.oclc.org/reports/onlinecatalogs/fullreport.pdf>

Davis, Denise, John Carlo Bertot, and Charles McClure, *Libraries Connect Communities 3: Public Library Funding & Technology Access Study 2008-2009* (Chicago: American Library Association, 2009).

Davis, Denise, John Carlo Bertot, and Charles McClure, *Libraries Connect Communities: Public Library Funding & Technology Access Study 2009-2010* (Chicago: American Library Association, 2010).

De Rosa, Cathy and Jenny Johnson, *From Awareness To Funding: A Study of Library Support in America* (Dublin, OH: OCLC, Inc., 2008). Accessed September 16, 2010,
<http://www.oclc.org/us/en/reports/funding/default.htm>.

Elliott, Donald S., Glen E. Holt, Sterling W. Hayden, and Leslie Edmonds Holt, *Measuring Your Library's Value: How to Do a Cost-Benefit Analysis for Your Public Library* (Chicago: American Library Association, 2007).

Imholz, Susan M. and Jennifer Weil Arns, *Worth Their Weight: An Assessment of the Evolving Field of Valuation* (New York: American for Libraries Council, 2007). Accessed September 16, 2010, <http://www.ala.org/ala/research/librarystats/worththeirweight.pdf>.

Joint Committee on Standards for Educational Evaluation, "Program Evaluation Standards." Accessed September 16, 2010, <http://www.jcsee.org/program-evaluation-standards>

Kaplan, Nancy, "To Read, Responsibly," *Public Library Quarterly*, 27, no. 3 (2008): 193-201.

National Council on Public Polls, "Principles of Disclosure." Accessed September 16, 2010, <http://www.ncpp.org/?q=node/19>

Online Computer Library Center, *How Libraries Stack Up: 2010* (Dublin, OH: Online Computer Library Center, Inc., 2010). Accessed September 16, 2010, http://www.oclc.org/reports/pdfs/214109usf_how_libraries_stack_up.pdf.

Roman, Susan, Deborah T. Carren, and Carole D. Fiore, *The Dominican Study: Public Library Summer Reading Programs Close the Reading Gap* (River Forest, IL: Dominican University, 2010). Accessed September 16, 2010,
http://www.dom.edu/academics/gslis/downloads/DOM_IMLS_book_2010_FINAL_web.pdf.

Tufte, Edward, R. *Visual Explanations: Images and Quantities, Evidence and Narrative* (Cheshire, CT: Graphics Press, 1997).

* *For slide presentation only; complete reference appear in the paper.*