Four Article Critique & Synthesis

David Robertson

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Part 1: Comparison Chart	
Article 1	"Emerging Technologies Changing Public Library Service Delivery Models"
Topic, Author, (Author's Background)	Topic: Emerging Web 2.0 technologies Author: Mary Ann Kajewski (Online Public Access to Libraries Trainer). Her career focus is on introducing emerging technologies and trends within the internet and online training sector to the community, State and public library staff through face-to-face training, web pages, web conferences, email distribution lists, podcasts, and her series of online tutorials.
Problem Statement or Research Problem	There is no problem statement or research problem as this is a descriptive article of integrated technologies (i.e., wikis, blogs, podcasts, RSS, etc.).
Approach or Research Method	Qualitative Analysis – The approach is a descriptive overview of examples of integrative technologies in the Australian library system.
Types of Data and Data Sources	There is no data per se in this journal article. The author describes in a narrative format the different types of integrated technologies and provides examples of the use of these instead of providing data and data sources. There are no tables, figures, or pie charts.
Data Collection Strategy and/or Instrument	The author conducted a literature review and extracted examples from the literature she examined. She provides a list of references at the end of the article.
Data Analysis Approach	There is no data. The author provided narrative examples from the references.
Findings/ Results / Outcomes	The author does a good job identifying key emerging technologies in public libraries. She focuses on Web 2.0 tools such as blogs, wikis, RSS aggregators, instant messaging, podcasts, vodcasts, and web conferencing. She cites examples of each currently being used in Australia in a library context and provides ideas on how patrons can adapt the Web 2.0 for personal use. The article is rich with recommended web sites to explore for more information and her reference list provides even more opportunities for information collection on the subject of emerging technologies in libraries.
Implications of the Research /Study / Evaluation	In the author's conclusion, she writes: "These emerging technologies should be used to resolve problems, broaden the library service, ensure the viability of a service whilst increasing effectiveness and saving money. It is important to research the technologies now available and use them creatively to better serve the needs of library users – by proving simple access to what they want, when they want it and how they want it" (Kajewski, 2011, p. 391). The implications of this article addresses the information needs of library administrators and patrons and emphasizes the need to adopt new and inexpensive tools to conventional library services to better connect with the communities they serve.
Citation	Kajewski, M.A. (2011). Emerging technologies service delivery models. *Reference & User Services Quarterly, 50*(4), 380-391.

Article 2	"Taming Technolust: Ten Steps for Planning in a 2.0 World"
Topic, Author, (Author's Background)	Topic: Steps to properly diffuse Web 2.0 innovations in libraries Author: M. Kathleen Kern (Central Reference Librarian at The University of Illinois at Urbana. She is the corresponding author and can be reached at

	kathern@uiuc.edu.) Author: Michael Stephens (Assistant Professor, Graduate School of Library and Information Science, Dominican University, River Forest, Illinois, author of *Tame the Web* blog. In this article, Stephens was the guest columnist for M. Kathleen Kern's column in *Reference & User Services Quarterly*.)
Problem Statement or Research Problem	There is no research problem or statement. It is a narrative (almost editorial) type of journal article of what the author terms as "*technolust*." Included are other new terms like such as "*technostress*," "*technodivorce*," "*technoshame*," and "*technophobia*," which the author explains.
Approach or Research Method	Qualitative Analysis – The approach is a narrative citing suggestions with examples. The author employed the use of surveys to gather data.
Types of Data and Data Sources	None - The author relies on his literature review, own experience and opinion, and references at the end of the paper.
Data Collection Strategy and/or Instrument	The author used a literature review, read narratives, and wrote his own narrative.
Data Analysis Approach	None
Findings/ Results / Outcomes	The reader walks away from this article with an expanded vocabulary with new words regarding technology that are apropos in a 21st century conversation. Further, ten solid steps for planning the diffusion of innovations in a library context using Web 2.0 tools is offered and these insights are a find to emerging technologies librarians who are trying to navigate to and through the new world. Stephens poses further research questions like: "How do we track use? How do we prove the usefulness of the virtual branch and digital librarian to governing bodies, boards, trustees, and those who make the funding decisions?" (Kern & Stephens, 2008, p. 317). For this, Stephens suggests we need new models of tracking statistics and gathering stories. He writes: "In my mind, the return on investment for many of the emerging technologies will be proven with qualitative data such as positive stories from users and an increased amount of participation via commenting and content creation" (Kern & Stephens, 2008, p. 317).
Implications of the Research /Study / Evaluation	While this article is not a quantitative research paper brimming with statistics, the subscribers of *Reference & User Services Quarterly* gain considerable insight on how to survive and thrive in an ever-changing technological library landscape. Stephens writes: "We have a great opportunity to harness emerging technologies and create engaging and useful services, deeply connected to the core mission and values of librarianship. Balancing technolust in this shiny new world and planning mindfully and openly can certainly lead to success" (Kern & Stephens, 2008, p. 317).
Citation	Kern, M.K. & Stephens, M. (2008). Taming technolust: Ten steps for planning in a 2.0 world. *Reference & User Services Quarterly, 47*(4), 314-317.

Article 3	"Information Commons, University of Calgary: Providing Service Through Collaboration and Integration"
Topic, Author, (Author's Background)	Topic: Case study of the rollout of an information commons project Author: Susan Beatty (Head, Learning Commons, Reference Librarian, Software Instructor at the University of Calgary, Alberta, Canada. Ms. Beatty may be reached at sdbeatty@ucalgary.ca.)
Problem Statement or Research	In this article there is no research problem or statement. The article is a historical narrative of the launch of an information commons in the University of Calgary

Problem	library. The author describes strategy, services, and staffing offered in the commons. The author describes the technical support element in detail.
Approach or Research Method	Mixed Research Approach - The data collection included both quantitative and qualitative findings. It is a narrative, descriptive overview that is historical in nature. The approach involves a compilation of service statistics from the information commons; a chart of summary of statistics is provided. The author describes planning, the decision making process, and partnerships during and after the launch phase. The evaluation portion of this article almost lends itself to an research article within itself.
Types of Data and Data Sources	A compilation of the latest service statistics from tracking software capturing reference, directional, IM, virtual service, and technical service data over a one-year, four-month period. Additionally, interviews of staff and survey results are included.
Data Collection Strategy and/or Instrument	Service data plus evaluation of the results. Appendix A includes the "Information Commons Student Navigator" job description and qualifications rubric.
Data Analysis Approach	Uses historical data to describe the information commons launch and subsequent operation for a period of years.
Findings/ Results / Outcomes	A new model has emerged at the University of Calgary in diffusing an information commons in an academic library setting. Whether or not other libraries in the global community will follow suit is yet to be determined. Yet the article provides evidence electronically and in print that it can be done successfully within budget and in a timely fashion. Beatty writes in her conclusion: "The Information Commons at the University of Calgary has met the information and technology needs of a generation of students. From its inception, the focus has been on integrating information resources and technology to enable the student to move forward in his or her studies and achieve academic success" (Beatty, 2010, p. 159).
Implications of the Research /Study / Evaluation	Beatty writes about the post-launch surveys from the library web site: http://library.ucalgary.ca/information-commons-customer-survey (still a live link) which provided a feedback instrument to gather data from the user community. The author says the form has been invaluable, especially during the first year after the launch. Beatty reports: "As part of the ongoing evaluation of services, the library has participated in LibQual+ online survey in 2002, 2004, and 2007. We plan on participating again in 2010. While the survey does measure the perceptions of all library services and does not single out the Information Commons, comments and ratings have been useful in planning new initiatives and improving our services" (Beatty, 2010, p. 155).
Citation	Beatty, S. (2010). Information commons, University of Calgary: Providing service through collaboration and integration, *Journal of Library Administration*, *50*(2), 145-159.

Article 4	"Checking Out Facebook.com: The Impact of a Digital Trend on Academic Libraries"
Topic, Author, (Author's Background)	Topic: Social networking and its academic implications for library patrons Author: Laurie Charnigo (Educational Librarian at the Houston Cole Library, Jacksonville State University, Alabama) Author: Paula Barnett-Ellis (Health, Science, and Nursing Librarian, at HCL at JSU)
Problem Statement or Research Problem	What impact has Facebook had on academic libraries and librarians? The authors state that they wanted to gain an understanding on the perspectives of librarians of Facebook use by patrons.

Approach or Research Method	Quantitative Analysis - A survey of 126 librarians across 850 higher education institutions in the United States. The surveys were delivered by the U.S. Postal Service with return-postage paid.
Types of Data and Data Sources	The results of the surveys are presented in pie charts and tables of data.
Data Collection Strategy and/or Instrument	A mailed, paper survey. An example of the paper survey is included in the Appendix.
Data Analysis Approach	The authors offer a narrative describing the results of the survey along with pie charts showing percentages of respondents and tables with data.
Findings/ Results / Outcomes	One of the major goals of the survey of 126 academic librarians was to obtain a statistical snapshot of their perspectives on Facebook use in libraries by patrons. Twenty-one respondents saw no connection between libraries and Facebook. Sixty-seven librarians agreed that library computers should be reserved for academic purposes. However, fifty-one respondents indicated that librarians are obligated to keep up with current trends in technology. The authors write: "Few librarians indicated that Facebook should be addressed or regulated in library policy. Most individuals viewed the site as just another communication tool similar to instant messaging or cell phones" (Charnigo & Barnett-Ellis, 2007, p. 29).
Implications of the Research /Study / Evaluation	In their conclusion, the authors report that the survey found librarians to be "overwhelmingly aware and moderately knowledgeable" (Charnigo & Barnett-Ellis, 2007, p. 31) about Facebook. The quote that captures the implications of this research study can be found in a closing comment: "What role the library will serve in these environments might largely depend on whether librarians are proactive and experimental with this type of technology or whether they simply dismiss it as pure recreation" (Charnigo & Barnett-Ellis, 2007, p. 31).
Citation	Charnigo, L., & Barnett-Ellis, P. (2007). Checking out Facebook.com: The impact of a digital trend on academic libraries. *Information Technology & Libraries, 26*(1), 23-34.

Article Collection Critique & Synthesis

Introduction

Technology is dramatically impacting the way libraries serve patrons in the 21st century. With the advent of free Web 2.0 tools, social networking phenomena like Facebook, and innovative facility upgrades like the addition of a 24-hour information commons, each provide an unprecedented menu of new opportunities and challenges for both librarian and patron. This paper will explore those opportunities and challenges from the perspective of library administrators.

This critique and synthesis will compare and contrast four articles on the basis of their respective similarities, differences, strengths, and weaknesses. Next, the paper will provide a section called "Take Aways" to summarize big ideas and lessons learned from the collection and segue to a conclusion to synthesize the information gained.

The four articles featured in this paper serve as good examples of crude researching skills at work. Checking boxes in library database search engines like "peer reviewed," and "full text," adding a date range, and entering a few keywords like "emerging technologies" and "libraries" are a starting point but may not yield the ultimate results an experienced researcher is looking for. Beginning with a research problem or statement can be very helpful and this collection was secured without the benefit of such a key element in quality research. None of the four refereed journal articles in the collection dealing with

the general research topic of emerging technologies in libraries are research-based papers. Nevertheless, the collection provides some exposure to quantitative, qualitative, and mixed research.

Part 2A - Similarities

The collection shared several commonalities. For example, each article was written from the context of a library environment. Library terminology meant that "clients" were "patrons" and "leaders" were "librarians." Next, each author wrote passionately about leveraging technology to improve user services. Technology, and especially emerging technology, was a cornerstone of the collection. All authors preferred a team approach to problem solving and decision making. Concern about access was universal in both public and academic settings. Authors unanimously conveyed, to one degree or another, of striving to keep pace with changing end user needs.

Kajewski (2011) and Beatty (2010) each share international authorship and venue - Australia and Canada respectively. Beatty (2010) and Charnigo and Barnett-Ellis (2007) feature quantitative analysis as their chosen research methodology with each implementing surveys to gather and report data. The resulting tables and pie charts helped to provide the reader with tools to interpret the data.

Part 2B - Differences

Naturally there are differences in every author, article, and library setting. One obvious difference in the collection is that Kajewski (2011) writes from a public library perspective while Kern and Stephens (2008), Beatty (2010), and Charnigo and Barnett-Ellis (2007) keep their research findings on campus. The geographical delineations were split down the middle with half of U.S. origin and the other half originating from outside the United States. Beatty (2010) and Charnigo and Barnett-Ellis (2007) employed more traditional research methods while Kajewski (2011) and Kern and Stephens (2008) preferred a descriptive narrative to communicate their messages. Michael Stephens (2008) took a radical departure from the other three by inventing new words. In "Taming Technolust: Ten Steps for Planning in a 2.0 World," Stephens expands readers' vocabulary by introducing (and defining) new terminology such as "*technolstress*," "*technoshame*," "*technodivorce*," and "*technophobia*" (pp. 314-315).

Part 2C – Strengths of the Collection

The collection offers a good value to readers who choose to invest the time required to absorb these materials. Kajewski (2011) identifies free Web 2.0 tools that both librarians and patrons can benefit from citing examples of each. This list includes blogs, wikis, podcasts, vodcasts, RSS aggregators, web conferencing, and instant messaging. The author goes on to explain how these utilitarian tools can enhance one's appreciation for and participation in the library community.

Kern and Stephens (2008) offer librarians ten tips for planning how to successfully diffuse innovations in the library context. The list is strong enough to have relevance in other social sciences as well.

Beatty (2010) describes in detail the round-the-clock information commons that the library provides for the students at the University of Calgary in Alberta, Canada. The author's descriptive narrative provides an outstanding model for blending hardware/software support and reference librarians into a one-stop service center. This pattern is a virtual roadmap to "how to masterfully roll out a $2.2 million project in one year."

Finally, Charnigo and Barnett-Ellis (2007) weigh in on Facebook's (undeniably) emerging role in libraries across the nation. The strength of this article is the sound research obtained and reported from paper

surveys collected from 126 academic librarians and represented in four useful pie charts and two tables of data findings.

Part 2D – Weak Areas of the Collection

The collection has some inherent deficiencies from a research standpoint. Even though Beatty's (2010) and Charnigo and Barnett-Ellis' (2007) articles provide better-than-average research, the collection as a unit is weak in solid research methodology. All of the articles refrain from applying a research study approach that one might find in scholarly journal articles which typically include clearly labeled sections like an introduction, stated research question or problem, review of literature, research method, data analysis and discussion, conclusions and policy implications. Because of this, it was difficult to locate a research problem or research question in nearly every article. The collection as a whole was characterized by descriptive narratives of "how we did things right" more so than scholarly research.

Part 2E – Take Aways

First, it is helpful for a researcher, fledgling or veteran, to settle on a research topic, focus, problem, and/or question *before* the article selection process begins. Secondly, it is apparent that there is a considerable amount of good research being conducted outside the United States. The moral of that story is to "think world." Third, it is clear why researchers work better together. The collection effectively demonstrates that teams and workgroups succeed more rapidly when brainpower and synergy combine. For example, Canadian librarian, Susan Beatty's (2010) strategy for the rollout of 42,000 square feet of information commons in roughly twelve months at the University of Calgary is a superb pattern to emulate. Next, research is important and has value. Students at any level can benefit from research but even more so for those pursuing advanced degrees. Graduate students should make it a priority to become adept at using academic search engines like EBSCO, JSTOR, ERIC, and ProQuest to locate peer-reviewed journal articles rather than the public Internet. The skill of being able to refine a search to bring up the precise resource to match the research objective is a valuable skill indeed. Finally, the process is important. As much as students might want to move disconnectedly from step A to step G, it rarely works that way. Typically, good research exists as a line upon line, precept upon precept learning process; building one idea and concept upon another and carefully tracking down references and cross-references.

Conclusion

This collection highlights the ever-increasing role of emerging technology in public and academic libraries around the world. While Web 2.0 tools like blogs, wikis, RSS aggregators, and the like have provided both librarian and patron with unprecedented abilities to share their messages, other technologies like Facebook have posed challenges to library settings with limited workstations. Expanding library access to 24-hours-a-day in a fully-staffed information commons has alleviated some of the burden patrons experience by more demanding computing needs. The diffusion of innovations requires skill and wisdom in order to save time, energy, and diminishing funding. This paper has attempted to compare and contrast the similarities, differences, strengths, and weak areas of the collection. Not surprisingly, the evidence suggests that emerging technologies creates both opportunities and challenges in a 21st century library context.

References

Beatty, S. (2010). Information commons, University of Calgary: Providing service through collaboration

and integration, *Journal of Library Administration, 50*(2), 145-159.

Charnigo, L., & Barnett-Ellis, P. (2007). Checking out Facebook.com: The impact of a digital trend on

academic libraries. *Information Technology & Libraries, 26*(1), 23-34.

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