Evidence Based Library and Information Practice

Evidence Summary

Usage Data of Images from a Digital Library Informs Four Areas of Digital Library Management: Metadata Creation, System Design, Marketing and Promotion, and Content Selection

A Review of:
Reilly, M., & Thompson, S. (2014). Understanding ultimate use data and its implication for digital library management: A case study. *Journal of Web Librarianship, 8*(2), 196-213. http://dx.doi.org/10.1080/19322909.2014.901211

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Received: 9 Mar. 2015 **Accepted:** 7 May 2015

Abstract

Objective – To investigate the implications of intended and actual usage data retrieved from a digital library on digital library management and design.

Design – Case study.

Setting – A digital library of predominantly high resolution images based at a large research university in the United States of America.

Subjects – Responses from 917 users of an open access digital library.

Methods – Researchers used a literature review to identify previous research on this topic and to inform the methodology for their research. Two distinct studies informed the methodology: research by Beaudoin (2009) that identified categories of both users and questions around usage was incorporated, and the ultimate use categories suggested by Chung and Yoon (2011) to compare against those used in this research. Researchers used data extracted via recorded system logs that are part of the statistics feature of the digital library. This feature is an in-house developed system, the Digital Cart Service (DCS). The logs tracked usage of 917 images recorded over

a three year period, from 2011-2013. After eliminating personal information, researchers examined three fields: university affiliation, intended use, and description. After exporting the data from these three fields to a Microsoft Access database for text analysis, researchers normalized the data using a series of codes assigned to the responses. It is unclear how many description fields were used to yield more information.

Main Results – Researchers identified five user-types among users of the digital library. The biggest user group was visitors, followed by university staff, while university faculty had the lowest usage. Visitors were found to use images for personal use, such as inspirational and artistic purposes. The products developed from images in the digital library were-wide ranging, and included image albums, research, artwork, and video productions. These findings have implications for four areas of practical management of digital libraries: metadata creation, system design, marketing and promotion, and content selection. Among the eight categories of intended uses recorded, the highest uses were found to be for personal use, followed by 'other' use. Researchers examined the 'other' use category and further divided it into 12 sub-categories. Of these sub-categories, the highest use was for publication and research, while the lowest use was for 'gift' and 'industry.'

Conclusion – Incorporating user-generated metadata and distributing it to digital library managers is found to produce enhanced metadata and to aid the promotion and awareness of collections. Usage data may inform marketing efforts, as it provides a more comprehensive picture of who uses digital libraries and why they use images retrieved from those libraries. Equally, usage data may reveal the least frequent users of digital libraries, which informs targeted user marketing campaigns. Finally, the authors find that usage data combined with user-generated metadata should form part of content selection criteria for digital library managers.

Commentary

This research adds to a small but growing body of evidence about the use of digital images from digital libraries and how usage may inform digital library management. At least one study has found that the needs of users of digital images are not yet met (Kandiuk & Lupton, 2012). The findings point to the analysis of usage data as a way of identifying user needs.

Overall, this case study adheres to a good level of validity when checked against Glynn's (2006) critical appraisal checklist. The authors note the limitations of the study, including the possibility of the sample not being representative of the overall user population of the digital library, or of all the uses of the data. The literature review successfully builds on previous research methodologies, including coding schemes for image use (Chung & Yoon, 2011), and the replication of three research questions previously asked by Beaudoin (2014). Despite the integration of relevant methodologies, the authors do not appear to have integrated recommendations of previous research into their own digital library management practice. For example, two recommendations found by the current study come from McCay-Peet & Toms' (2009), who advised that information professionals develop more categories of access points to aid image retrieval and to describe objects using both conceptual and non-conceptual attributes. These recommendations are highlighted in the literature review, and it may have been useful to revisit their relevance in the discussion area of the article.

The DCS appears to be an innovative feature of the digital library and may prove useful for other digital library managers. Since the DCS is customized software, the inclusion of a screenshot of the DCS may have enhanced the readers' understanding of the practical use of image retrieval from the digital library. A good description of the data extraction and analysis is provided, and the categories used could be replicated by other digital library managers. Results are clearly presented in six tables, and the authors incorporate quotations from users about images used in practice.

The authors have made some important findings in this case study that will be of interest to digital library managers and of special interest to those responsible for digital images. Specifically, the integration of user-generated metadata compliments indexing by library professionals. Where this feature is possible, the metadata should be sent to digital repository managers. User data informs system design and involves users in marketing and promotion of digital image collections. Low usage statistics among categories of users, as indicated by usage data, could directly inform targeted marketing initiatives. The authors argue that ultimate use should be used as a selection criterion for content inclusion. This may become more important over time, with more usage data collected over longer periods of time. The authors continue to investigate how usage of images can aid effective retrieval of images using improved metadata. They have identified further topics relevant to digital library management for future research.

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