Evidence Based Library and Information Practice

STEM and Non-STEM Library Users Have Increased Their Use of E-Books

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Evidence Summary

STEM and Non-STEM Library Users Have Increased Their Use of E-Books

A Review of:
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Abstract

Objective – To compile a set of usability and collection development suggestions and to examine a possible statistical correlation between visiting the physical library, online resource use, and e-book use.

Design – Online questionnaire survey.

Setting – Major public research university in Maryland, United States of America.

Subjects – 47,209 faculty, students, and staff.

Methods – This survey is a follow-up to a similar 2012 study at the same institution. Survey respondents completed 14 multiple-choice and up to 8 open-ended questions about academic e-book discovery, perception, and usage patterns for both STEM and non-STEM respondents using the Qualtrics online research platform. Seven of eight open-ended questions were conditional (i.e., dependent on answers to multiple-choice questions), thus the number of questions answered by respondents could vary. The survey was available from October 1 to November 22, 2014, and promoted across a variety of communication channels (email, library website, social media, print flyers and handouts). Incentives for completing the survey included one iPad Mini and eight U.S. $25 Amazon gift cards.

Main Results – 1,911 (820 STEM and 1,091 non-STEM) self-selected students, faculty, and staff from a total campus population of 47,209 faculty, students, and staff (4.2% response rate) participated in the survey, excluding 277 additional responses representing library

personnel (70) and individuals not affiliated with the institution (207).

64% of respondents indicated more e-book use than three years before, with only 21.9% of respondents noting they never use e-books for academic purposes compared to 31% in 2012. 32.5% of respondents noted daily or weekly use of e-books for scholarly pursuits, with undergraduates reporting the most frequent use: 38.6% daily/weekly use versus 37.2% for graduate students, 16.2% for faculty, and 14.2% for staff. 38% of respondents reporting daily/weekly use were from STEM disciplines; 31.3% were from non-STEM fields.

Computers, not e-readers, were the primary devices used for accessing e-books: 72.5% of respondents reported using laptops or desktops to this end versus tablets, 37.9%; mobile phones, 36.7%; Kindles, 25.6%; Nooks, 5.9%; and other e-readers, 3.3%. Top "mixed device access" responses were tablet/mobile phone/computer (98 responses); mobile phone/computer (93 responses); and tablet/computer (81 responses).

The top three discovery tools respondents reported using for finding e-books were commercial sites (35.9%), free websites (26.8%), and the library website (26.2%). A weak-positive Spearman's rho rank correlation of 0.25 provides some evidence that respondents who visit the library often are likely to use online resources and e-books. 35% of respondents reported they use e-books online "most of the time," and 67% of respondents indicated they print out e-book content for use. Responses to the question "What, if anything, would make you more likely to use e-books for academic purposes?" included easier access via the library website (48% of respondents), better functionality for highlighting/annotating (44%), reduced cost (43.2%), easier downloading (38.5%), more e-books in area of research interest (37.3%), more textbooks (37.2%), and ownership of a dedicated e-reader (35.6%).

In 2012, 52% of respondents reported never having downloaded an e-book for offline use. This percentage dropped notably in this study, with only 11.5% of respondents indicating they had never downloaded for later use.

Conclusion – While this study indicates both STEM and non-STEM respondents at this institution are increasingly using e-books, preferences for electronic versus print format varied according to content type and type of user (e.g., STEM or non-STEM, undergraduate or graduate, student/faculty/staff). Key recommendations for usability and collection development include: improving discovery and awareness mechanisms, purchasing some content (e.g., references works, style guides) in e-format while ensuring multiple simultaneous use, taking advantage of print plus electronic options to serve users with different format preferences, and encouraging vendors to allow digital rights management free downloading and printing.

Commentary

This study adds to the corpus of institutional surveys about academic e-book use. Frame (2014) provided a review of such studies, including implications for collection development, while Rayner and Coyle (2016) highlighted more recent discussions in this area. Cross-institutional, global surveys in this field of investigation, such as McKiel (2011), are still rare.

The local nature of this study and the low overall response rate (4.2%) limit generalization of findings, but it is still possible to compare themes identified here to those identified in other local surveys. Because of this, the study shows "face validity" (Bryman, 2012, p. 171). For example, Raynor and Coyle (2016) found – as in this study – significant online use as well as appreciation of easy downloading. McKiel (2011) identified discovery difficulties, also an important barrier to use in this study, with 47% of respondents in his study stating "I do not know how to find e-books" (p. 149). Additional thematic comparisons across the e-book survey corpus should be addressed in future studies.
The 2012 predecessor survey could, in some ways, be considered to be a "pilot" questionnaire (Boynton & Greenhaigh, 2004, p.

1372) because investigators modified the 2014 instrument's wording and scope to include STEM respondents, focus on academic (not recreational) use, and solicit more feedback about format preferences. Despite these minor modifications, the 2014 survey re-tested 2012 concepts, indicating reliability – at least for this particular institutional setting – by illustrating stability over time (Bryman, 2012). In future surveys, wording of questions about discovery and specific e-book vendors might be further simplified in order to avoid local jargon and provide more generalizable results (Bryman, 2012). McKiel (2011) provided examples of clear, simple wording for discovery-related terms.

While this study follows the Boynton and Greenhaigh (2004) questionnaire research precepts, key underlying details about the Spearman's rho correlation, including rank data, are not provided. A data table and/or scatterplot for rank data would enrich future studies (Boynton & Greenhaigh, 2004).

While investigators presented data tables highlighting demographic aspects of the study, tables showcasing unique aspects of the study, notably preferences for different content types, are not present. Future studies might include format preference tables to facilitate easier comparison of responses across formats.

One of the most original contributions of this article is Table 3, *Implications for collection development decision-making*. Here, investigators link interpretations of survey results to specific collection development actions. Seeing how investigators interpreted survey findings to inform their actions might inspire other institutions to conduct their own local surveys using a same or similar instrument in order to confirm or dispute interpretations made by others. More critical analysis across institutions might, in turn, lead to better investigative cooperation across institutional and geographical boundaries and increase confidence in findings, as noted in *Suggestions for Future Research* (p. 151).

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