

# E-books in Academia: Expectations and Challenges

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## Abstract

This paper reports on the results of a pilot study conducted as part of a larger project aimed at understanding the evolving role of e-books in academia. The study used a survey, a scenario-based usability test, and interviews to collect data on e-book reading habits, specific user expectations, and issues related to the usability of an academic library interface for e-book access. Future work will investigate factors affecting user preferences and patterns of use in context, including routine use of academic e-books.

*Keywords:* e-book, e-reader, reading habits, technology adoption, academic libraries

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## Introduction

Every day academic libraries make significant investments in e-book packages or individual e-book titles with little or no information on how students and faculty use e-books and e-readers in the course of their work. This paper describes the initial phase of an ongoing research project conducted in partnership with several academic libraries on the adoption of e-books and e-readers in academia. The study described here was conducted in collaboration with a major academic library. Factors investigated included users' familiarity with and expectations toward academic e-books, and the impact different interfaces and devices have on users' research and reading habits. The project aims to provide insight and recommendations that would inform library decisions in the areas of collection development, instructional programming, and library catalog interface design. We ultimately hope to gain a better understanding of the evolving role of digital media in education and research within the changing landscape of scholarly reading practices.

## Relevant Literature

Though issues concerning e-books in academic libraries have been discussed since before 2000, there has been a marked increase in research conducted on the subject in the past decade as the medium and related technologies have evolved. The bulk of the work has fallen into a few main categories, including adoption, usability, vendor relations and offerings, and collection development.

A large number of studies have focused on issues related to the acceptance and use of e-books. Most of the studies found that while awareness of e-books has increased, usage has yet to catch up, and preference for print continues to be strong among students as well as faculty and staff (Woody et al., 2010; Croft & Davis 2010; Li et al., 2011). This trend appears to be changing with the introduction of more sophisticated e-readers, but while students with e-readers show an increasing fondness for e-books, they

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Acknowledgements We would like to thank Aimee Slater for assisting with data collection and analysis.

Lopatovska, I., Pattueli, M.C., Lange, L. & Ludas Orlofsky, V. (2013). E-books in academia: Expectations and challenges.

*iConference 2013 Proceedings* (pp. 486-490). doi:10.9776/13261

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remain a relatively small population (McCarthy 2011; Pearson 2011 and 2012). Many studies have shown that the most heavily used e-books in academia are in the areas of computer science, engineering, business, economics, management, and social sciences (Nicholas et al. 2008; Abdullah & Gibb, 2008; Simon, 2011). Though e-book use in the arts and humanities has lagged, for the most part this appears to be more related to the availability of e-books in those fields rather than the preference of arts and humanities scholars. While print is still preferred in cases of extended reading, academics in the arts and humanities are both aware of and open to the medium overall (Fischer et al. 2012).

Another set of topics frequently discussed in the literature relate to the evaluation and comparison of vendor products and services. No vendor interface has proven to be particularly popular with patrons (Kimball et al., 2010; Lippincott et al., 2012). Many of the negatives cited include problems with the interface functionality and navigation of e-book reading programs and the discomfort of reading long passages on a screen.

This examination of the literature indicates that while e-books are gaining popularity among academic users, there are a number of issues that still hinder their wide acceptance. In an effort to better understand the use of e-books in academic environments, the initial phase of our study focused on investigation of the user expectations and the challenges pertaining to the use of e-books for scholarly pursuits.

## Methods

The data were collected in the spring of 2012. A pool of four faculty and eleven students from the partner institution representing diverse demographic characteristics (e.g., age, sex, race) participated in the study. Participants were selected from a pool of volunteers who responded to the recruitment flyers posted around the campus. The study used a purposive sample of faculty and students who had experience using academic e-books. The study site was a usability lab located on the Pratt Institute's Manhattan campus. Each session involved three stages: first, participants were asked to fill out a short survey that collected demographic data and data on their e-book and e-reader use habits; next, participants were asked to complete several search tasks that required them to access e-books through the website of the partner library and also through other website(s) of their choice (e.g. Amazon). The tasks were designed to investigate specific features of the library interface for accessing e-books and solicit participants' suggestions for improving the site's usability. Finally, participants were interviewed about their search experience in a post-task debriefing interview. Interviews lasted an average of 20 minutes. The interview data were audio-recorded and captured in the researchers' notes.

## Data Analysis and Discussion of Results

Survey responses of the fifteen participants were summarized using descriptive statistics. Ten out of the fifteen participants reported owning an e-reader. The most popular reason for owning the e-reader was *convenience*. Other frequently cited reasons were *cost*, *text searchability*, and *interactive features*. The most popular channel for obtaining academic e-books was identified as the *academic library*. Participants cited *personal purchases* and *public/non-academic libraries* as other channels they favored. Twelve participants reported using the partner institution's e-books for research, while three participants reported never having used e-books from the partner institution in the past. Figure 1 summarizes survey findings related to the frequency of e-book and e-reader use as well as the reported experience with using the institution's e-books and e-books acquired from other sources. We collected data on the use of e-readers in general, without differentiating between their academic and non-academic uses.

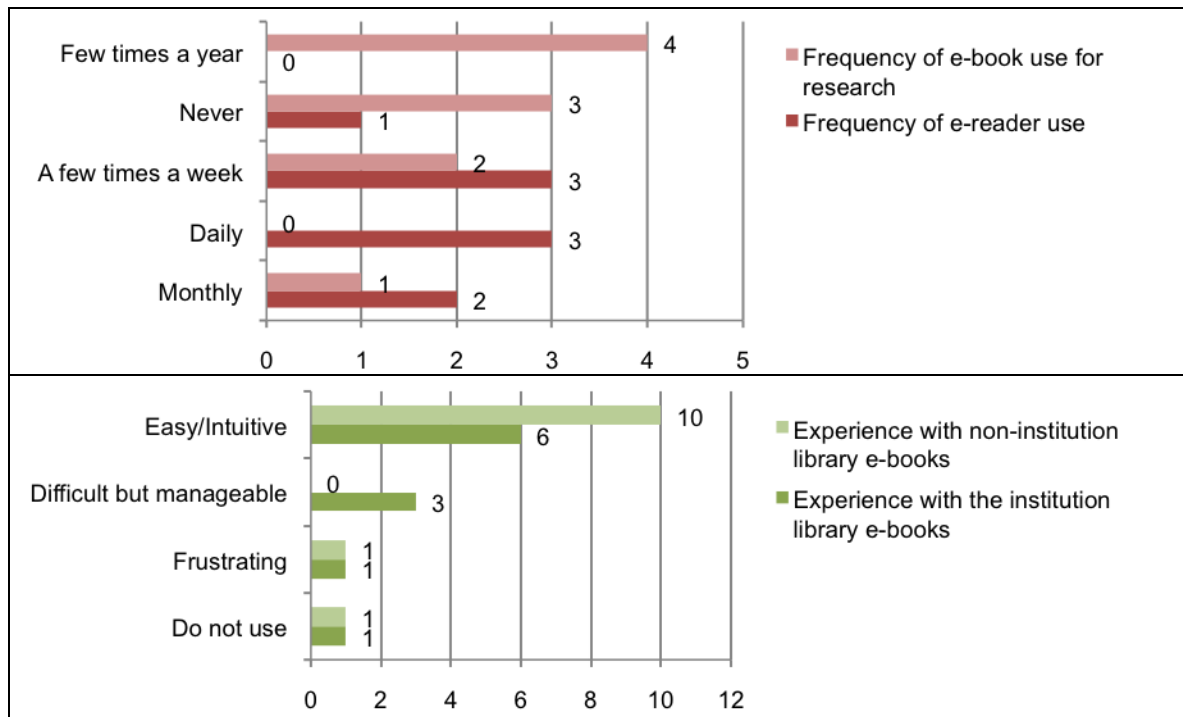


Figure 1. Frequency of use of e-books and e-readers and experience with e-books from the partner library and from other e-book sources.

Results revealed several trends in participants' habits of using e-books as well as in their use of e-readers:

1. While 6 participants reported using e-readers daily or few times a week, only 2 of these frequent uses were associated with academic e-books. Three participants have never used e-books for academic purposes, while one participant reported using academic e-books on average once a month and 4 participants reported using e-books for academic purposes several times a year. No one used academic e-books on a daily basis.
2. The strongest motivation for using e-books was the instant access to content that made it unnecessary to visit the library in person, followed by the unavailability of a printed version of the same book.
3. Most participants reported having an easy and intuitive experience while using e-books; fewer participants reported having positive experiences associated with the use of e-books from the partner institution's library compared to the books accessed through other channels.

While results from the search task portion of the study were specifically focused on technical usability issues related to the partner institution's library interface and would be less relevant to report in the context of this paper, data from post-task debriefing interviews offered insight into user expectations and issues related to academic e-book usability. Questions focused on the motivations behind the search strategies participants adopted to find specific academic e-books as well as on their level of satisfaction with interface design issues (e.g., wording of labels). More general questions solicited participants' accounts of their experience using e-books in the context of their academic institution and, when applicable, using their personal e-reader. Interview data were coded and grouped in categories, and six major themes emerged from the content analysis. Responses related to more than one category per question were copied under each relevant category. Figure 2 offers a visualization of these themes and their relationships arranged across a continuum of issues of familiarity and issues of access.

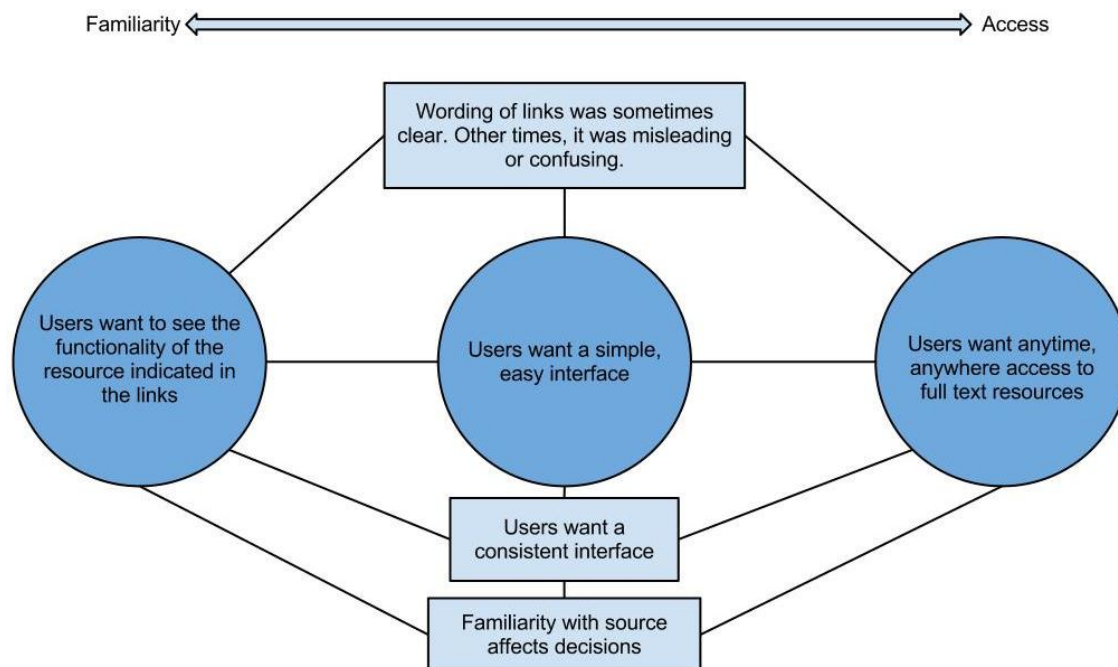


Figure 2. Model of themes and their relationships as identified in post-task interview data.

The theme at the center of the analysis was users' desire for a *simple, easy interface*. Of the fifteen participants, 11 proposed adding more detail to the labels of the links to make it easier to navigate across them. Some offered specific suggestions for a more user-friendly interface such as adding "S" and "D" symbols to indicate whether the linked text was searchable or could be downloaded. Regarding issues of access, *users want access to full-text resources anytime and anywhere*. When asked what they like most about e-books at their institution, 10 participants mentioned the high amount of titles available. Yet, when asked what they like least, problems with access were commonly cited. The most frequently reported issue was functionality. Users expressed the desire to *see the functionality of e-resources indicated in links*. This suggestion is related to the idea that *users want a consistent interface*, since many participants preferred a particular interface because of their familiarity with it. Familiarity with publishers was another instance of the general preference for familiar sources (*familiarity with the source affects user decisions*), since users tend to choose links based on their knowledge of whether that source offers the functionality or access they require. Finally, it became clear that *wording of links has a high impact on user experience*. Some labels were perceived as clear to most participants; for example, 10 participants said that "Electronic version via" was clear to them. However, many participants reported that the wording of other labels was either misleading or confusing. As an example of a misleading label, participants who clicked on "Ebrary Academic Complete" explained that they believed "complete" meant they had access to the full text, which was not always the case. Participants expressed confusion when faced with two links with exactly the same wording.

Overall, the findings revealed a relatively high acceptance of e-books not only for leisure but also specifically for academic purposes, and helped to identify specific usability issues with the partner institution's interface for accessing e-books. However, the results did not provide insight into why some academic library users make use of e-books only occasionally or never and whether user expectations for e-books are influenced by their experiences with printed media, the nature and demands of academic tasks, or other factors. These research questions, scarcely addressed in the literature, will be investigated in the next phase of the study.

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## Conclusion and Future Work

This pilot reveals that a large percentage of students and faculty who participated in the study use e-books not only for leisure but also for academic purposes, and that they access them through their academic library. While most of the participants were generally pleased with their interactions with e-books, they reported having less satisfying experiences with the use of academic e-books accessed through the partner institution's library compared to those acquired either through other libraries or personal purchases. As this study progresses, we will investigate the research routines of academic e-book users to identify factors affecting their preferences and patterns of use in context (e.g., project deadlines, academic year milestones, etc.).

While these results cannot be generalized due to the small size and the homogeneous nature of the sample, this pilot offers preliminary insights into the use of e-books in an academic environment and the expectations of its users. It also lays the foundation for future studies to broaden and deepen our understanding of the changing practices of accessing and using e-books.

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