



In transition: academic e-book reading in an institution without e-books

E-book reading
in an institution
without e-books

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Abstract

Purpose – This paper aims to report the results of a study that examined the ways in which graduate-level library and information science students make use of e-books and e-readers at an institution that does not offer e-books through its library. The paper can be used as a case study in the adoption of emerging technology.

Design/methodology/approach – The study used three research methods – a survey, focus groups and interviews – to investigate library and information science students' reading habits and preferences.

Findings – The findings suggest that despite the barriers of access and usability, the students have generally incorporated e-books into their academic routines. The results also suggest the factors that contribute to reader preferences for e-book technology.

Research limitations/implications – The study sample was limited to one academic institution without e-book collection.

Originality/value – The article presents one of the very few studies that examine e-book reading of an academic population that does not currently have access to e-books through their academic library. Understanding the ways in which such a population accesses, uses and values e-books would help many academic libraries make decisions with regard to the selection, integration and marketing of e-books. Additionally, such a study could serve as the basis of a case study that seeks to understand the ways in which people who do not have ready access to technology through their institutions find ways to work around that obstacle.

Keywords User studies, USA, Technology, Academic libraries, Case studies, Books

Paper type Case study

Introduction

The electronic book is one of the many emerging technologies that changes the way we learn and conduct research. Many academic libraries have already incorporated e-books

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into their collections, while others are planning to do so to meet the evolving demands of their academic users. While e-books and e-readers are gaining popularity, a large body of literature suggests that this technology has not yet reached critical mass. As e-book reading habits are still forming and the reliance on traditional print media for academic uses remains high, this study focused on an environment that offers a representative example of the changing reading culture in academia. This study was conducted to examine the reading habits of library and information science (LIS) graduate students who do not currently have access to e-books through their academic library but who are actively using digital resources for academic purposes.

The following sections include a review of the current literature on e-book adoption in academic libraries, a description of the three data collection methods used in this study (survey, focus groups and interviews), a presentation the study results, a discussion of the significance of findings and an outline of several directions for future work.

Literature review

As the technology of e-books and e-readers matures and gains popularity, the number of publications about the use of this technology in academic libraries increases as well (Lopatovska *et al.*, 2013). The research has largely focused on issues of usage, relationships between mobile devices and reading preferences and vendor comparisons. A smaller number of publications focus on the drawbacks of e-book technology that affect its wider adoption by academic libraries.

Usage

A large number of the reviewed studies examined e-book usage by various academic communities, undergraduate and graduate students, faculty and staff, on the international, national and institutional levels.

Jamali *et al.* (2009) report the results of a survey of 16,000 students and faculty from 123 UK universities. The article provides detailed reports on e-book use among various demographic groups (males/females, engineering/medical students) and discusses those e-book features that users find valuable (e.g. convenience and searchability). Springer (2008) conducted a large-scale study surveying the users of several academic libraries in the USA and abroad. The report indicated that academic readers tended to read e-books differently than print counterparts (skimming vs in-depth reading) and used primarily reference and textbook titles for their research and study.

Between 2008 and 2009, Abdullah and Gibb (2008, 2009) published a three-part report on an e-book study conducted in two Scottish universities. The report focused on the e-book features that academic users found useful or distracting and provided recommendations for integrating e-books into academic libraries' collections. Briddon *et al.* (2009) used online survey, interview and observation methods to understand how e-books were used in a large university library in the UK. The authors found that e-book use among students was influenced by faculty (assigned/recommended readings), and also by such e-book features as accessibility and ease of use.

Several studies focused on specific groups of academic users, including students and faculty in business, law, literature, geoscience, nursing and medical sciences. The use of e-books by distance learners was also explored (Croft and Davis, 2010; Grudzien and Casey, 2008).

In 2007, [Hernon et al. \(2007\)](#) explored e-book use by economics, nursing and literature students of Simmons College. The authors analyzed the logfiles of e-book usage, as well as data collected through think-aloud protocols and interviews conducted as part of an experimental procedure. The study's major findings include classification of academic e-book types and reasons behind students' preferences for e-books.

E-book adoption by business faculty and undergraduate and graduate students was examined by [Simon \(2011\)](#). The findings indicate that the quick rate of e-book adoption could be linked to business research demands for quick identification and extraction of specific data. The findings of the [Simon \(2011\)](#) study partially confirm the results of a previous study of the business faculty ([Camacho and Spackman, 2010](#)). While a large portion of participants reported using e-books and prizing e-books' portability and annotation features, about 40 per cent of participants preferred print sources. A study of geoscience faculty and graduate students ([Foote and Rupp-Serrano, 2010](#)) connected participants' preference for print to the difficulties associated with e-book access in remote locations (lack of connectivity). [Folb et al. \(2011\)](#) examined e-book usage by the health science students and professionals and concluded that all groups of users had flexible attitudes toward print and electronic media and valued whatever sources provided them with needed information. The study also listed several e-book features that users found valuable (searching, saving and printing) and identified specific research tasks where e-books were preferred over print.

Comparison of academic reading cultures and a steady preference for print among academic users is one of the common themes in most of the reviewed studies (and especially in [Woody et al., 2010](#); [Bole, 2011](#)).

Several studies that focused on e-book usage discovered that despite increased awareness of the existence of e-books as technology in general, many academic library patrons remained unaware of e-books' presence in their particular academic library, which contributed to lower-than-desired usage rates as well as a strong preference for print among students, faculty and staff ([Woody et al., 2010](#); [Croft and Davis, 2010](#); [Li et al., 2011](#)).

E-readers and tablets

Another issue frequently discussed in the literature is the role played by e-readers and tablets in user reading habits and e-book adoption. Looking at e-readers in academia, [Ahlroos and Hahto \(2012\)](#) viewed academic reading as activity that involves "a lot of browsing, glancing, seeking and re-reading" (p. 252). As e-readers tend to support more linear reading, the authors hypothesized that they are more suitable for leisure reading. Other issues that hinder wide adoption of e-books for academic purposes include habitual use of and preference for print. [Thayer et al. \(2011\)](#) suggested that students who have established routines for reading academic texts in print do not readily or easily change these habits when reading academic e-books on e-readers. In terms of tablets, very recent studies show that the improved technology of tablets has led to greater usage of and preference for e-books, but tablet owners still remain a relatively small proportion of academic users ([McCarthy, 2011](#); [Pearson Foundation, 2011, 2012](#)).

Comparing products and services of academic e-book vendors

Vendor platforms for reading e-books are still evolving, and users tend to tolerate most interfaces rather than enjoy using them ([Kimball et al., 2010](#); [Lippincott et al., 2012](#)). Common criticisms concerning the interface include the lack of functionality users expect from print

books such as indexes and page numbers, inability to search for books from different vendors, having to learn how to navigate multiple interfaces for e-books from different vendors and difficulty highlighting and bookmarking (Tedd, 2005; Muir *et al.*, 2009; Kimball *et al.*, 2010; Simon, 2011; Lippincott *et al.*, 2012; Lopatovska *et al.*, 2013).

Obstacles to e-book adoption

In a large pool of publications that report on the studies conducted in the libraries that integrated e-books in their respective collections, there is a limited number of publications that discuss academic libraries that have no e-book collections. While the number of libraries that do not offer e-books might be low[1], analyzing the reasons for libraries' refusal to offer e-books can help understand broader issues related to e-book adoption. In a recent study conducted by *Library Journal* and *School Library Journal* (survey of ebook usage in U.S. academic libraries, 2012), survey respondents from the sample of journal subscribers cited the following reasons for not integrating e-books into their library collections:

- insufficient budget;
- resistance to buying a platform until a single universal format is agreed upon;
- lack of demand from users;
- lack of e-reading devices;
- staff or administrative resistance;
- worries about the need for additional technical support; and
- other.

Slater (2010) discovered a similar reticence among librarians regarding the lack of consistency among existing formats, as well as a purchasing structure that often does not support the buying of an individual title.

The required purchase of vendor-defined e-book title lists, minimum purchase requirements and digital rights management issues are cited as barriers to e-book adoption by academic libraries (Wexelbaum and Miltenoff, 2012; Blummer and Kenton, 2012). In a review of studies focusing on the spread of e-readers in academic libraries, Wexelbaum and Miltenoff (2012) observed concern for the lack of a universal format, and fears that any devices bought with scarce resources could quickly become obsolete. Blummer and Kenton (2012) explored the persistence of these issues, and offered some best practices guidelines for mitigating internal challenges.

In summary, the literature on the e-book adoption in academic libraries tends to focus on the population of readers who have access to e-books through their academic institutions or examine the rationale behind some libraries' decisions not to include e-books in their collections. None of the reviewed publications examine e-book reading of an academic population that does not currently have access to e-books through their academic library. Understanding the ways in which such a population accesses, uses and values e-books would help many academic libraries make decisions with regard to the selection, integration and marketing of e-books. Additionally, such a study could serve as the basis of a case study that seeks to understand the ways in which people who do not have ready access to technology through their institutions find ways to work around that obstacle.

Methods

As e-book reading habits are still forming and the reliance on traditional print media for academic uses remains high, this study focused on an environment that offers a representative example of the changing reading culture in academia. This study was conducted to examine the reading habits of LIS graduate students at a small private university in the eastern USA who do not currently have access to e-books through their academic library but who are actively using digital resources for academic purposes. By examining academic reading habits of LIS students, a group that is educated on the topics of “collection and dissemination of information in all its formats” (Pattueli and Rabina, 2010, p. 231), it was expected to confirm some of the e-book and e-reader adoption issues identified by prior research. As the participants’ academic library was not offering e-books at the time of the study, it was also expected to identify some unique ways in which students currently incorporate digital tools into their academic routines.

The study specifically focused on exploring questions related to

- the definition of an e-book;
- ownership and use of e-books and e-readers in general and academic contexts in particular;
- reading habits and preferences;
- usability and access issues associated with e-books; and
- projected uses of e-books and e-readers offered by the institutional library.

The data for answering the research questions were collected via a school-wide online survey and through focus groups and interviews with students. The online survey helped to determine demographic characteristics as well as technology and reading preferences of students; data collected through focus groups and interviews provided insights into the reasons behind the students’ academic reading preferences and expectations of academic e-books.

Surveys have been an extremely popular method of assessing the needs of e-book users in academic settings. Revelle *et al.* (2011) used a survey to examine reader demographic and e-book usage trends; Chaurasia *et al.* (2012) opted for the survey method to gather data on the information-seeking behavior of students and scholars in an electronic environment; and Rojeski (2012) used surveys to evaluate student attitudes and use of e-books, and to collect evidence that could guide future collection development decisions and best practices for students and faculty.

While the literature provides less evidence for the use of focus group and interview methods compared to the surveys, the use of these methods produces rich findings that help to understand users’ attitudes and habits of e-book use. One of the studies that collected data using the focus group method focused primarily on the e-book experiences of the University of Arizona faculty (Carlock and Perry, 2008). Another study that used focus groups for investigating academic e-books collected evidence to inform decisions related to selection, licensing, pricing, cataloging, promotion and evaluation of e-books and e-reading software (Armstrong and Lonsdale, 2009). Examples of the use of the interview method for investigating e-book adoption can be found in the papers by Wu and Chen (2011) and Chen *et al.* (2012). Chen *et al.* (2012) used interviews to gather students’ feedback related to the usability of the multi-device environments for reading and annotating electronic academic texts. Wu and Chen (2011)

interviewed students from different disciplines – humanities, social science, science and technology and medicine – to compare their information behaviors and feelings associated with the use of e-books.

The survey instrument was developed using Survey Monkey. The survey included 24 questions grouped into the set of demographic questions, questions pertaining to e-reader technology and questions related to e-book usage for general and academic purposes. All questions were optional and participants could exit the survey at any time. A print version of the survey was given to the interview and focus group participants to collect their demographic information.

Twenty questions were prepared for the semi-structured interviews. The interview questions were designed to have participants reflect on their technology skills and then discuss their experiences with e-readers and e-books for academic and non-academic purposes.

Focus groups were designed to solicit participants' reflections about e-book and e-reader use in academic contexts, and included the following themes: general reading habits, e-book and e-reader use for academic purposes, print versus e-materials and suggestions for e-book adoption by participants' academic library.

All research tools were piloted on a small sample of participants and modified for the final data collection stage in the fall of 2012.

Study participants were recruited by e-mail invitation via the departmental listserv. An invitation to participate in focus groups and interviews was also embedded at the end of the online survey. The survey collected 69 responses out of approximately 300 students currently enrolled in the program (23 per cent response rate). Ten students were recruited for the individual interview sessions and nine students were recruited for the two focus groups[2]. Each interviewee was scheduled for a 45-minute individual session, during which time two researchers were present, one conducted the interview while the other took notes and audio-recorded the interview. Focus groups lasted for approximately one hour and were conducted by two researchers, one of whom led the discussion while the other took notes and audio-recorded the conversation.

The notes taken during interviews and focus groups became the primary source for the data analysis. In cases when notes were not clear and more clarification was needed, audio recordings of the interview conversation were transcribed. Content analysis of focus group and interview data was run by teams of two to three researchers who assigned a total of 646 codes with 93 per cent agreement. Specific codes were later organized into broader themes related to the definition of e-books, e-book and e-reader ownership and use in general and academic contexts, reading habits and preferences, usability and access issues and the estimated uses of e-books and e-readers from the institutional library.

Results

The online survey collected 69 responses from part-time and full-time graduate students at a school of LIS. [Table I](#) summarizes student survey responses to the questions related to their use and familiarity with e-reader and e-book technology and specific uses of these technologies for academic purposes.

[Table II](#) summarizes demographic survey responses of the interview and focus group participants.

Variables	Number of responses (%) ^a
<i>Gender</i>	
Female	60 (87)
Male	9 (13)
<i>Age</i>	
23 or younger	12 (17)
24-34	44 (64)
Over 34	13 (19)
<i>Devices used to read text in electronic format (use and own/use but do not own)</i>	
Desktop	26 (12/14)
Laptop	32 (32/0)
Kindle	30 (26/4)
Nook	10 (10/0)
Tablet	22 (19/3)
Mobile phone	32 (32/0)
Sony	1 (0/1)
<i>Reasons to use e-books</i>	
Convenience	40 (58)
No print version available	34 (49)
Ease of use	33 (48)
Costs less	32 (46)
Ability to search text	30 (43)
Interactive features	25 (36)
Use e-books	55 (80)
Use e-books for academic purposes	38 (55)
Total number of survey respondents	69 (100)

Note: ^a In the instances when participants chose multiple answers, percentages of each answer option are not reported

Table I.
Summary of survey
responses

Participants' Demographics	Focus groups	Interviews
<i>Gender</i>		
Female	8	7
Male	1	3
<i>Age</i>		
24-34	5	10
Over 34	2	0
<i>Own or use an e-reader?</i>		
Yes	9	9
No	0	1
<i>E-reader usage</i>		
Academic	9	5
Leisure	9	9
Total number of respondents	9	10

Table II.
Summary of focus group
and interview responses

While the survey found that a majority of respondents are comfortable with e-readers and that 55 (80 per cent) use them for personal or leisure reading, only 38 respondents (55 per cent) reported using e-books for academic purposes (e.g. coursework or research). Desktop computers were the most used but not owned device (14 use for reading e-books but do not own), which is likely related to use at work or in academic computer laboratories. The most popular dedicated e-reader was the Kindle (26 users). Tablets such as iPads (19 users own and use) are still outpaced by Kindles, laptops and mobile phones for usage. Though less popular in terms of ownership than the Kindle, the highest number of daily users used the Nook for reading e-books, followed by Kindle, indicating that Nook owners use their e-reader to read e-books more regularly than Kindle owners use theirs. Respondents who read e-books on their mobile phone reported that they engaged in this activity only a few times a year.

Defining an e-book

Due to the lack of a single definition of an e-book or an e-reader in the literature, a grounded theory approach was applied to allow the definition of those concepts to arise from participants rather than prescribing a definition for them. Our participants offered a variety of definitions for e-book and e-reader, and occasionally blurred the distinctions between “e-book” and “e-reading” all together (e.g. one survey respondent noted that he/she uses “e-books” for “internet browsing,” which indicated that he/she likely misunderstood the difference between the e-book and e-reader. Similarly, in response to “In what ways do you make use of e-books for academic purposes?”, one respondent wrote “I use e-books to read for class. Books, library books, PDFs and other assigned reading.”). Interview and focus group participants offered a range of e-book definitions, from the concept that an e-book is any text in an electronic form to an electronic text with an ISBN number. Some participants ($N = 15$) distinguished between e-books created for dedicated e-readers or e-book platforms and other electronic resources, while others referred to PDFs of journal articles and Google Books as e-books ($N = 8$). The definition of an e-book is a topic that can be explored in further study.

Reasons to use e-books

When asked to rank the importance of certain characteristics of e-books, the majority of participants cited convenience as very important or somewhat important, followed by no print version available, ease of use, costs less, ability to search text and interactive features. Conversely, nine respondents (13 per cent) ranked interactive features as being only slightly or not at all important, followed by costs less (five respondents, 7 per cent), ability to search text (five, 7 per cent), ease of use (four, 6 per cent), convenience (two, 3 per cent) and no print version available (one, 1 per cent). Eleven respondents commented on the advantages of saving paper, pointing to the “Environmental Benefits” of e-books. With regard to special e-reader features, respondents remarked that the portability, convenience and space-saving functions were all of great importance. The ability to annotate digitally and the ability to share e-books among devices were also notable functions that respondents indicated were important to their e-reader experience.

Students’ reasons for using e-books were further elaborated during the interviews and focus groups. The theme of “convenience” was one of the most frequently mentioned themes in participants’ responses ($N = 19$), though it tended to take on

different meanings for different participants. When asked to describe what they meant by convenience, participants said, for example:

- “[...] the ability to have something at a moment’s notice[.]” – Interviewee
- In response to why the participant uses e-books: “I guess a lot has to do with convenience, just being able to do it [use e-books] from anywhere from my computer. I feel that’s the major reason and that there is stuff that you wouldn’t be able to find at the library or a library that you would have access to.” – Interviewee
- In response to being asked how participant feels about using e-books for class: “As opposed to having to go to the library and get the book out? It’s an incredible convenience. I don’t think there’s any alternative to that.” – Focus group participant
- “It’s the convenience of having something or being able to get something right away versus having to wait or place an order on Amazon and wait so long.” – Interviewee
- “[...] being able to grab snippets[.]” – Interviewee

These responses reveal that the definition of convenience varies and includes concepts of portability and access to important documents.

Access to e-books

Interview and focus group participants mentioned the following popular sources for accessing e-book content (from the most to the least frequently mentioned): Amazon.com, the local public library, iTunes, Barnes & Noble, HathiTrust and the Course Management System of their university, where professors often post class readings.

When describing their e-book sources, some participants specified how they access academic e-books, though they do not have access to these materials through their own institution’s library. Participants shared ways that they circumnavigate barriers to access e-book content, including accessing e-books via academic libraries at which they work or intern as a way of getting around the barrier of lack of institutional access.

Use of e-books for academic purposes

When asked specifically about which ways they prefer using academic e-books, most survey respondents chose extended reading (34 respondents, 49 per cent), referring to the long-term reading of chapter- or book-length work as opposed to shorter articles, followed by printing out (ten respondents, 14 per cent), fact checking (nine, 13 per cent), annotation (seven, 10 per cent) and collaboration (six, 9 per cent).

Among those students who preferred reading their course materials on an e-reader, features such as highlighting and keyword search were the most commonly cited reasons for the e-book preference. Highlighting and keyword searching allowed students to easily locate important terms when reviewing the text in class, thus helping them to participate more fully in class discussions.

Interview and focus group participants mentioned a number of usability issues regarding e-book use. For example, participants complained that taking notes on the e-reader while reading a PDF is difficult and often requires another application, different from the Adobe software or use of entirely different electronic device. Alternatively, some participants used a pen and paper to take notes. There was also an issue with highlighting, a feature that few people could find for the PDF file application; most had to download another application to enable the highlight feature. Students generally

thought that having to download so many applications to their device would take too much time, money and effort and that the tools should automatically come with the PDF application.

Participants also reported a number of interoperability issues including the difficulty of reading the same content across devices and the proliferation of formats in which e-books are offered (one interviewee said that e-books should “get down to one format” but added that this is “wishful thinking in the near future”). Several participants expressed the opinion that technology is not yet advanced enough to accommodate academic users.

Print versus electronic readings

The focus group and interview participants often expressed a preference for printed books over digital. One participant expressed this preference as a “nostalgic or sentimental attachment” to print books, while another enjoyed “using physical artifacts[.]”. Other participants confessed to being “married to print for the time being”, or noted that “you just can’t curl up to read your child a bedtime story on an iPad the same way you can with a book”.

Many focus group participants opted to print out PDFs, which, as mentioned before, may refer to e-resources such as journal articles in addition to e-books. Reasons for printing out part or all of these materials included size, access, interoperability of devices and the ability to use a print copy in class. Regarding size, some participants preferred to read a hard copy when it was a longer piece of academic literature versus a shorter piece. One interview participant cited problems with interoperability as a reason why he/she could not read e-books on his/her e-reader:

[...] because I need to read them on the subway and I can’t read those books on a device. I can access e-book from a library but I can’t transfer that file directly to my reader. So I have to print out the pages. I do it pretty often.

Another participant explained that he/she “used to” print out pages of e-books because he/she “had visions of referring to them in classes”.

Suggestions for e-book adoption by academic library

One of the study objectives was to find out if students would benefit from having more access to e-books through their academic library. Across the survey, interviews and focus groups, a large majority of students expressed a positive attitude toward potential addition of e-books to the library collection, with 80 per cent of participants estimating that they will likely borrow an e-book from the their library should they become available. While several participants were still eager to use print materials, very few were completely resistant to the idea of adding e-books to their library. Of our 69 survey takers, 42 of them responded they had experience using academic e-books. Of those 42, 10 per cent (4) were not very likely or not at all likely to access their library’s e-books. One participant noted that if academic institutions offered online courses, it would be even more beneficial for the libraries to expand their digital collections.

For the most part, participants preferred the active departmental listserv as the primary method to hear about any future offerings of their academic library e-books; students also expressed interest in learning about their academic e-books offerings from the library Web site, professors and library instruction.

Discussion

Our study showed that a large number of students without institutional access to academic e-books actively read e-books and own e-reading devices. A lower number of general e-book readers engage in reading e-books for academic purposes, but most of them would prefer an addition of e-books to their library collection.

A number of our findings point to the transitional nature of academic reading practices influenced by the emergence of e-books and e-readers. One such finding illustrates a lack of established views on the e-book or e-reader phenomena. This finding is supported by [Briddon *et al.* \(2009\)](#) and others who point to the need to understand “how people perceive e-books and in what context they may have been (unknowingly) using them” (p. 54). A number of participant comments point to the transfer of traditional reading practices into the electronic domain and, at the same time, the emergence of new reading routines unique to the digital environment. The study revealed that participants engage in several responsive reading techniques associated with print media, including highlighting and note-taking ([Thayer *et al.*, 2011](#)). However, some participants described difficulties associated with taking notes or highlighting on e-readers, suggesting that the technology necessary to accommodate academic users may not yet exist. Features that are exclusive to e-books and e-readers such as keyword searching and the dictionary were cited by many participants as having aided in their academic research, indicating that print-reading and e-reading each have distinct advantages and disadvantages for students.

Similar to studies by [Hernon *et al.* \(2007\)](#), [Pattueli and Rabina \(2010\)](#) and [Wu and Chen \(2011\)](#), our study showed that the convenience, ease of access and high portability of e-readers and e-books were influential in user e-book preference. However, unlike [Wu and Chen \(2011\)](#), who found that students often printed out their e-resources, our results indicated that the majority of students did not print e-books or did so infrequently.

Our study identified a number of e-reading technology features that academic readers perceive as beneficial, including:

- Cost: for the most part, e-books are less expensive than print copies.
- Portability: e-readers allow users to easily carry multiple books without the added weight and reduced carrying space that the printed versions would require (e.g. in a bag used to carry books to class).
- Advanced features such as highlighting, keyword search and annotation capabilities can help streamline the research process.
- Enhanced research capabilities: e-book collections can expand the number and provide instant access to titles available to the user.
- Environmental benefit: e-books are perceived to be a more environmentally sustainable choice than books in print.

Understanding the advantages of e-book technology in relation to traditional media can support decisions to incorporate e-books into academic collections, positively influence teaching and research practices and aid in developing e-book marketing campaigns.

One potential area of future research could be the use of mobile phones as e-readers. While the study found that users who say they read e-books on their mobile phones do so rarely, there is great potential for this area of research to evolve significantly even in the short-term, given the exponential rate of advancement in smartphone technology.

Dedicated e-readers will also continue to advance over time, giving rise to new avenues of study.

This study had a number of limitations, including small response rate for all three data collection instruments. Despite the small size and a high degree of homogeneity of the study sample, the themes that emerged from this study parallel the findings of previous studies, which suggest that the results were reflective of general trends that can be easily transferred to other institutions of similar size and similar populations. In addition, the respondents were self-selected, which increased the possibility that only students with strong opinions about e-books chose to respond to the study. Future studies should aim at recruiting higher number of participants from various academic departments and populations (e.g. professors, undergraduate students, art and design students, etc.) and comparing reading needs and habits of different academic populations. The study relied on participants' definitions of the emerging concepts of e-book, e-reading and features and practices associated with them (e.g. convenience). Future studies should consider defining these concepts from the get-go to increase consistency of the findings and refine the composition of the complex constructs like e-book or e-reading.

Conclusion

The study examined e-book adoption by an academic population that does not currently have access to e-books through their academic library. The findings suggest that the reading behavior of these students does not differ from the behavior of the students who have easy access to e-books and that a lack of e-book offering through participants' academic library did not critically obstruct use of this technology for academic purposes. For example, the study participants identified similar strengths of academic e-books (e.g. portability, ease-of-access) and preference for print as participants of the studies conducted in academic libraries that offer e-books (Folb *et al.*, 2011; Camacho and Spackman, 2010; Foote and Rupp-Serrano, 2010). Despite inconveniences and annoyances caused by the lack of e-book offerings from their library, most of the study participants found creative ways to locate and access desirable digital content. The findings suggest that the broad social reading culture and preferences for print and digital media might be more influential to students' behavior than library-supported culture. The findings also suggest that readers will find creative ways to satisfy their emerging needs and preferences for digital content and media. While the lack of library e-book offerings might have limited effect on students' reading habits and preferences, it places additional burdens and costs of accessing digital content on students and faculty. Academic libraries can minimize this burden by integrating e-books into their collections that are currently sought by their readers, and marketing their new offerings through the user-preferred channels.

The presented case of e-book usage helps to understand technology adoption in academia as a process of establishing new preferences, definitions and norms of new technology use, and underscores the pervasiveness of e-book use, which thrives in an academic environment where ready access is lacking. The findings also strengthen the case for establishing technical standards related to e-books and e-readers, and improving content availability and usability of this emerging technology.

Notes

1. A recent survey conducted by Library Journal and School Library Journal ([Survey of ebook usage in U.S. academic libraries, 2012](#)) found that 17 (5 per cent) of the 339 total respondents reported that their library had no current e-books program.
2. The data collection phase coincided with a major storm that disrupted many academic and non-academic routines and contributed to the low participation rates.

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