



## Interlending & Document Supply

E-lending in digital libraries: a systematic review  
Mehdi Alipour-Hafezi Hamid Reza Khedmatgozar

### Article information:

To cite this document:

Mehdi Alipour-Hafezi Hamid Reza Khedmatgozar , (2016), "E-lending in digital libraries: a systematic review", Interlending & Document Supply, Vol. 44 Iss 3 pp. 108 - 114

Permanent link to this document:

<http://dx.doi.org/10.1108/ILDS-01-2016-0001>

Downloaded on: 31 October 2016, At: 23:02 (PT)

References: this document contains references to 41 other documents.

To copy this document: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)

The fulltext of this document has been downloaded 132 times since 2016\*

### Users who downloaded this article also downloaded:

(2016), "University of Alberta Libraries Interlibrary Loan Department – Creating new relationships, locally and globally", Interlending & Document Supply, Vol. 44 Iss 3 pp. 121-126 <http://dx.doi.org/10.1108/ILDS-02-2016-0010>

(2016), "Resource sharing begins at home: opportunities for library partnerships on a university campus", Interlending & Document Supply, Vol. 44 Iss 3 pp. 127-134 <http://dx.doi.org/10.1108/ILDS-01-2016-0003>

Access to this document was granted through an Emerald subscription provided by emerald-srm:563821 []

### For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit [www.emeraldinsight.com/authors](http://www.emeraldinsight.com/authors) for more information.

### About Emerald [www.emeraldinsight.com](http://www.emeraldinsight.com)

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

\*Related content and download information correct at time of download.

# E-lending in digital libraries: a systematic review

Mehdi Alipour-Hafezi

Department of Knowledge and Information Science, Faculty of Psychology and Education Science,  
Allameh Tabataba'i University (ATU), Tehran, Iran, and

Hamid Reza Khedmatgozar

Iranian Research Institute for Information Science and Technology (IRANDOC), Tehran, Iran

## Abstract

**Purpose** – The purpose of this paper is to systematically review e-lending research studies in the digital library domain to identify their subjects, existing research gap and their research methods.

**Design/methodology/approach** – This is a systematic review. Through several stages of searching in related databases, 30 research works including journal and conference research papers, theses and dissertations, research and technical reports were identified and reviewed based on the guidelines of systematic review protocols.

**Findings** – It was found that research in e-lending domain is growing, and the subject will receive greater attention in the near future. Studies were in the following four categories: e-books (specifications, creation and software and viewpoints), business models, e-book status in libraries and copyright issues, e-book lending and inter-library loan. Some research gaps were identified including e-lending domain, business models and legislation. Little has been done with qualitative and mixed approaches in terms of research methods. Moreover, findings showed that this area has received less attention in developing countries.

**Originality/value** – This is the first review of the e-lending domain in digital libraries. It identifies the key works related to e-lending, categorizes them, provides an overview and identifies emerging research issues.

**Keywords** Digital libraries, Systematic review, Electronic books, Electronic book lending, Electronic lending, Electronic publishing

**Paper type** General review

## 1. Introduction

Authors, publishers, distributors, libraries and end users are the main elements in the information lifecycle (Runardotter *et al.*, 2014). Information and communication technologies (ICT) also has a big impact on the life cycle. ICT facilitates access to information products of which the e-book is one example. Many studies have emphasized the benefits of e-books, especially in education. As an example, Joint Information Systems Committees (JISC's) research shows that 65 per cent of 127 UK higher education institutes use e-books in their programmes (Vasileiou *et al.*, 2012). However, the use of e-books faces big challenges, especially for publishers, because of issues related to copyright and publishers' financial interests. However, these challenges along with benefits such as reducing book production costs in the electronic environment also make it an opportunity. So it is predicted that by 2020, about 75 per cent of publications in the world will be in digital format or will be released in both print and electronic formats (Vasileiou *et al.*, 2012).

To be accessible electronic content may be placed in carriers such as Digital Libraries (DLs). DLs offer an electronic lending (e-lending) service for their patrons as well potentially to

non-subscribed patrons by Inter-library loan service (ILL) which adds to the sensitivity of publishers. In addition, the role of e-books in DLs is not clear, and many different standards are applied to which we must add their technologies and pricing models are varied and numerous (Armstrong *et al.*, 2002).

Therefore, e-books issues and their use in DLs have become one of the significant research topics. Preliminary studies in e-books and their use in DLs showed that this emerging field has evolved widely by using new technologies and its governing requirements. In fact, e-books have many abilities for storage, presentation and usage. For instance, e-books should have metadata which can control access to them; have display ability based on requirements; is not confined to a particular software program, if possible; have ability of annotate, note, etc., according to writing principles based on citation. Accordingly, it is necessary to study the current status of research in the e-lending domain. Therefore, recognizing the needs this study tries to show the subject status of researches in e-lending and identify the existing research gaps.

## 2. Methodology

A systematic review protocol (Kitchenham and Charters, 2007) is used to identify and analyze past research. The aim in

---

The current issue and full text archive of this journal is available on Emerald Insight at: [www.emeraldinsight.com/0264-1615.htm](http://www.emeraldinsight.com/0264-1615.htm)



Interlending & Document Supply  
44/3 (2016) 108–114  
© Emerald Group Publishing Limited [ISSN 0264-1615]  
[DOI 10.1108/ILDS-01-2016-0001]

---

The authors would like to thank Dr Hamid Reza Jamali for his kind help in editing the article and suggesting some important directions to enhance the article.

Received 16 January 2016  
Revised 16 January 2016  
Accepted 24 February 2016

a systematic literature review is to find gaps in the existing knowledge in a domain and to answer some research questions (Dehghani Champiri *et al.*, 2015). As shown in Figure 1, the review was carried out in three phases.

### 2.1 Planning the review (Phase 1)

The aims of the review were specified in this phase, and the following activities were undertaken:

- *Identification of the need for a review:* This phase notes that there is no equivalent study in the e-lending domain in DLs. Despite publishers' concern for protecting their copyright and financial interests and the importance of the e-lending domain and IFLA consideration (IFLA Governing Board, 2014; Colomb *et al.*, 2013), no previous review of the subject was found.
- *Determining the research questions:* Preliminary investigation of the subject led to the following research questions:

RQ1. What areas are considered by researchers in e-lending?

RQ2. What are the research gaps in this area?

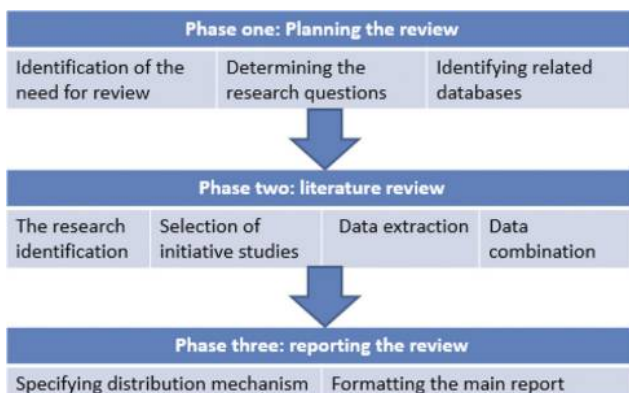
RQ3. Which research methods have been used in the past?

- *Searching related databases:* Searches were conducted in relevant bibliographic and full-text databases including EmeraldInsight, ScienceDirect, ProQuest, Web of Science, ACM, Google Scholar and LISA. Setting a starting and closing date for the review is one of the guidelines of systematic review (Stapic *et al.*, 2012). As the first publication in e-lending and its business models was presented in 2001, the searches were limited to English items (journal articles, conference papers, theses, dissertations and reports) published between 2001 and December 2014.

### 2.2 Literature review (Phase 2)

In previous studies, various terms have been used for e-lending such as digital lending, e-lending, e-book lending, e-book, e-content, digital book and ILL. Likewise, different terms and synonyms have been used for DLs, including scholar DLs, university DLs, academic DLs and scientific DLs (Porcel and Herrera-Viedma, 2010) and, in a few cases, e-library. In this article, the terms e-lending DLs are used instead of other synonyms.

**Figure 1** Systematic literature review phases and activities



To retrieve the maximum number of relevant papers, searches were carried out in databases in two steps. In the first step, the searches were specified by “Boolean strategy” in the title, abstract and keywords; a total of 18 works were retrieved through this step (Figure 2). It is worth mentioning that there were some works without “e-lending” in their titles, abstracts or keywords. Therefore, the search keywords were extended to the above-mentioned ones in this step. After conducting the second step, an additional 63 works were identified. Thus, a total of 81 works were retrieved and added to our database through the two search steps.

The works were then reviewed and works that were written in English and met at least one of the following criteria were selected:

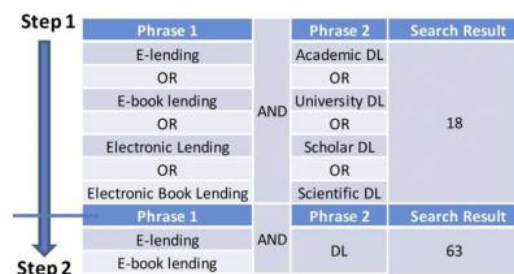
- the works should be research items;
- a model or architecture of e-lending were presented; and
- the work concerned e-lending.

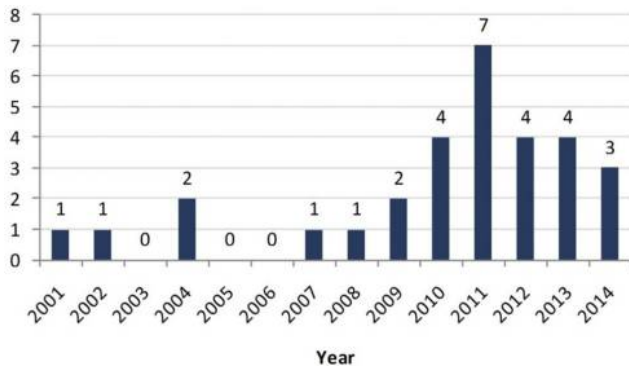
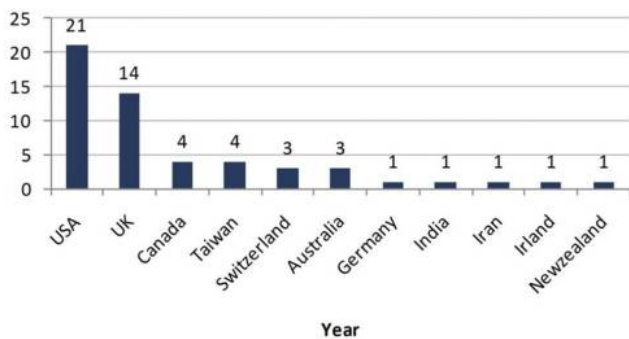
Considering the aforementioned criteria, 30 works were selected for the final review to provide answers to the research questions. To conduct a validity control, 16 (20 per cent) works of the 81 primary retrieved papers were randomly selected and reviewed by another specialist. Among the 16 works, five items met the criteria. To control the maximum number of relevant studies, another control step was performed. The reference list of the 30 selected papers were reviewed and compared with all the retrieved items in the database. The additional control resulted in no added item to the final list. To ensure the validity of results categorization, another control was used by randomly selecting 20 per cent (6) of the 30 selected papers and reviewing them by another subject specialist. The works were classified without any knowledge of the first researcher's ranking. In this case, there were some slight differences which were eliminated by editing.

## 3. Findings

In the findings, the 30 reviewed items are categorized by the year of publication, geographical focus, subject of study and research methods. The first study on the subject was published in 2001 and the largest number of studies occurred in 2011 (seven works) (Figure 3). The majority of the works were carried out in developed countries, which is not surprising as they are the countries that lead e-publishing and e-book technologies. As Figure 4 shows, 54 authors contributed in the reviewed items, of which 35 (65 per cent) were affiliated to American and British institutes.

**Figure 2** Search strategy



**Figure 3** Yearly distribution of publications**Figure 4** Distribution of authors' affiliation

The subjects of the studies were placed in four categories:

- 1 e-books (specifications, creation and software and viewpoints);
- 2 business models;
- 3 e-books status in libraries and copyright issues; and
- 4 e-books lending and ILL.

It is important to note that the third and fourth categories were the most relevant to the coverage area in this study. Details of the categories are presented in [Appendix](#). Each category is described below.

### 3.1 E-books (specifications, creation and software and viewpoints)

In this category, e-books are considered from three perspectives. In the first perspective, definition and specifications, e-books were defined as a text in digital format, printed books that are converted to digital format, digital reading material, books in computer files, images with unique identifiers and readable by computer or other digital devices. Overall, e-books were mentioned as describing content, format, book reader and e-book reading devices. Their format refers to file or document format, e-book reader points to an application that is able to read the files on different devices, and e-book reading device indicates a portable device that is used for reading e-books (Rao, 2004; Vasileiou *et al.*, 2012; Zickuhr *et al.*, 2012; Percy, 2013; Thomson, 2014). Therefore, when we talk about e-books, it entails content, format, application and device specifications.

In the second perspective, production and application, we should pay attention to design and identify applications that

are used for presenting e-books and their use by consumers and DLs. In many cases, these applications are connected to reading devices such as Kindle, Sony e-book reader, Koobits, Mobipocket reader, Martview, Nook, especially smart phones and so on (Fance, 2015). Now publishers use different applications or e-book creating or reading devices. For instance, OverDrive[1] reported that “79 million e-books were borrowed through OverDrive in 2013, a 46 per cent increase over 2012. The action was increasingly taking place over mobile devices” (Thomson, 2014). Publishers in producing e-books encounter issues such as needing devices that are useful, standard and with high reliability and content security.

E-book creation needs familiarity with capabilities in designing and producing systems. In this regard, research studies identify factors affecting the adoption of e-books. Results showed that personal satisfaction, using new technologies including e-book readers based on e-ink (Siegenthaler *et al.*, 2010), and the ability of publishers to use new business models, (Rao, 2004) are the most affective factors in this field. It is important to mention that these research studies did not mention the functional topics. Also comparative study results among printed books and e-book readers show that e-book readers still need further development (Siegenthaler *et al.*, 2010; Tees, 2010; Percy, 2013).

In the third perspective, viewpoints, the e-book is an element that is used as a carrier in the information lifecycle. In fact, there are five main elements of accessibility creation in this life cycle: creator, publisher, distributor, librarian and library and finally end user. In the e-book domain, three of these elements play the main role: the creator that produces content and offer it to the publisher and the distributor, which is mainly the publisher in the digital environment. Therefore, most of the researchers study the viewpoints of publishers. Study of the research reports in this case shows that nine researches (about 30 per cent) address viewpoint studies. Research studies on the librarians' viewpoints pay attention to academic librarians (Vasileiou *et al.*, 2012; Lonsdale and Armstrong, 2010) and librarians that engage in public libraries (Percy, 2013). Also, some of the reports focused on topics such as e-book collection development (Lonsdale and Armstrong, 2010), the future of e-books (Vasileiou *et al.*, 2012) and applying e-books in libraries (Percy, 2013). Librarians believe that the main specifications of e-books are their multimedia capabilities, the need for less space, selection convenience, simultaneous lending and greater effectiveness (Vasileiou *et al.*, 2012; Percy, 2013). On the other hand, librarians believe that issues such as e-book technology imperfections, lack of libraries' clear strategy in the e-book area caused problems for libraries (Lonsdale and Armstrong, 2010).

Research studies of end users focused on e-book reader acceptance (Foasberg, 2011), the status of e-books and their use (Jamali *et al.*, 2009), e-book development (Lonsdale and Armstrong, 2010), a comparative study between electronic and printed books (Woody *et al.*, 2010), studying with e-books (Lai and Chang, 2011) and e-book user behavior (Wu and Chen, 2011; Behler and Lush, 2011). Users believe that e-books should have capabilities such as distribution, page similarity, link, cost, readability, accessibility, simple browse and search, effect on learning, online access and print on demand (Jamali *et al.*, 2009; Woody *et al.*, 2010; Wu and Chen, 2011). Moreover, they consider features such as compatibility, simple use and media richness to be important (Lai and Chang, 2011). On the other



hand, e-books in libraries encounter some challenges such as students having “little interest in borrowing e-reader compatible e-books from the library” (Foasberg, 2011), and library issues in promoting e-books to end users (Lonsdale and Armstrong, 2010). The challenges of e-books in libraries are less considered in the research reports.

### 3.2 Business models

The use of business models is one of the important elements in developing a business or service (Sharma and Yi, 2013). The e-book domain is a business that can work with different models. Our study on researches in e-book models showed that this research topic was less well considered. As shown in Appendix A1, some of the research studies were devoted to collection development such as resource selection strategy, e-resource management, to discover users’ experience on using e-books, e-book preservation (Ebook Strategy Working Group, 2014), some others dealt with to e-book pricing models (Hardy *et al.*, 2002; Oppenheim *et al.*, 2001; Wicht, 2011) and just one research dealt with publishers’ e-book models (Thomson, 2014).

Research results showed the economic, technological, licensing and management factors effect on pricing models (Oppenheim *et al.*, 2001) showing that different pricing models can be used in the e-book domain. Models should be simple, understandable to all, transparent for all stakeholders and suitable for existing and future technologies (Oppenheim *et al.*, 2001); in addition, they should consider and analyze short-term pricing models, order and print on demand and consortium purchase (Wicht, 2011). Moreover, Ebook Strategy Working Group (2014) also states that e-book content should have simultaneous user access, be free of digital rights management restrictions with downloadable PDF format, be printable as well as have other user friendly features. Nowadays, diverse models such as Overdrive, Hoopla, ELib, Atingo, Minha Biblioteca, Nuvem de livros, BiblioAccess (Thomson, 2014) are being used in a large number of countries.

### 3.3 Status of e-books in libraries and their copyright issues

The library as an important element in the information lifecycle has a unique role in enabling access to e-books. However, publishers worry about their commercial interests in libraries that present free access to e-resources, and therefore compliance with copyright concerns is an important issue.

Research results showed that libraries have encountered many challenges in providing access e-book collections. These challenges have caused the volume of e-books in libraries to be

less than one might expect especially in developing countries. There is still no perfect match between borrowing e-books and the appropriate copyright laws (Müller, 2012). Other aspects in this field are users’ reading behavior and the use of e-books provided by libraries. Findings in this area showed that users are less accustomed to use e-books (Foasberg, 2011). Important obstacles in this regard are the variety of e-book readers, the high costs of e-book preparation and their use, and Zickuhr *et al.* (2012) and O’Malley (2011) identify the users’ lack of awareness, waiting lists, unavailability of e-books and file format incompatibility; O’Malley (2011) and Hockey (2012) identify libraries cutting funds, limited content in non-English languages; Walters (2013) and Garrod (2004) identify lack of uniformity in licenses and limited access. However, there are several techniques for the prevention of inappropriate and illegal use of e-books. Furthermore, some suggestions such as increased marketing to raise awareness of the service in the community and creating a national consortium of libraries (O’Malley, 2011) are suggested to expand the use of e-books. Findings of one study noted that the use of e-books will grow rapidly in the near future (Vasileiou *et al.*, 2012).

### 3.4 E-lending and interlibrary loan

After ensuring the presence of e-books in libraries and their optimal use, the important issue will be e-lending, e-book usage and ILL. The increasing amount of research in this field shows that this field has gained more attention recently.

Research topics in e-books and ILL are existing challenges in e-lending (Garrod, 2004; Gee, 2007; Woods and Ireland, 2008; Percy, 2013), users’ awareness of e-lending service in libraries (Zickuhr *et al.*, 2012), existing obstacles in ILL (Frederiksen *et al.*, 2011; Zhu and Shen, 2013), user experience of electronic sources and analyzing e-lending models (Xu and Moreno, 2014) and providing a framework for the selection, acquisition, access and user experience of e-books and their storage Group, 2014, and use of e-readers in library e-lending services (Clark, 2009). Also challenges in this area that have been revealed by research findings are access to e-books (Woods and Ireland, 2008), waiting list, unavailability of e-books, incompatibility of file format (Zickuhr *et al.*, 2012), being uncommon of presenting e-books in ILL services, licensing restrictions to lend on behalf of publishers (Zhu and Shen, 2013), distance between requests of publishers, creators and users (Xu and Moreno, 2014) and user satisfaction (Ebook Strategy Working Group, 2014).

Research in e-book and e-lending area covers different subjects and they use a range of research methods. Table I shows the research methods used by the reviewed items. A survey is the most popular method.

Table I Distribution of research methods

Categories	Quantitative approach				Qualitative approach		Mixed method
	Survey	Experimental	Library	Case study	Log analyzing	Grounded theory	Case study
E-books (specifications, creation and software and viewpoints)	10		1		1		
Business models	3			1		1	
Status of e-books in libraries and their copyright issues	6						1
e-lending and interlibrary loan	5	1	2	2			

#### 4. Discussion and conclusion

Review of research in e-lending area showed that a total of 30 studies have been carried out so far, and only a few of them are directly related to e-lending in DLs. The studies fall into four categories:

- 1 e-books (specifications, creation and software and viewpoints) (12 studies);
- 2 business models (5 studies);
- 3 status of e-books in libraries and their copyright issues (7 studies); and
- 4 e-lending and interlibrary loan (10 studies).

Findings showed that still the main theme of researches is the e-book (about 35 per cent). In addition, some research (about 29 per cent) has been carried out in the e-lending and ILL domain especially after 2011 in the USA. It is expected that researchers will pay more attention to this domain in the near future.

The year of publication showed that the e-lending domain was considered more in recent years. This growing trend is consistent with the rapid development of DLs. A closer look at the researches shows that this growth is not enough to say that research in the domain of e-lending has come of age. So to achieve an acceptable maturity level, researchers in the future should pay more attention to this issue.

The geographic focus of researches showed that the e-lending domain is more considered in developed countries such as the USA and the UK. Researchers in 89 per cent of the studies were affiliated to one of the 15 developed countries. This might be because e-lending relies on ICT development and DL technologies, both of which are more established in developed countries.

Study of used research methods also showed that a quantitative approach and survey method are the most used research methods in the e-book and e-lending domain. Also conducted surveys have mostly dealt with perspectives of different stakeholders (publishers, librarians and end users). Use of e-books has been studied widely. Future research might use qualitative and mixed-method approaches to investigate some less studied topics in this domain.

Overall, research in the field of e-lending is growing. Utilization of the findings of the past studies can help us to develop strategies and solutions for using e-books in DLs. Suitable and applicable business models need to be developed so that relationships between publishers, libraries and end users are improved. All of these should result in an increase in the publishers' trust in e-publishing environment which in turn might lead to a more active participation of publishers in e-lending activities. The end product of all these activities will enhance the quality and quantity of digital materials in DLs. Consequently, DLs will be developed and end users will increasingly use the DLs and their digital resources.

#### Note

- 1 The world's biggest distributor of e-books and audio books

#### References

Armstrong, C., Edwards, L. and Lonsdale, R. (2002), "Virtually there? E-Books in UK academic libraries",

*Program: Electronic Library and Information Systems*, Vol. 36 No. 4, pp. 216-227.

Behler, A. and Lush, B. (2011), "Are you ready for e-readers?", *Reference Librarian*, Vol. 52 Nos 1/2, pp. 75-87.

Clark, D.T. (2009), "Lending Kindle e-book readers: first results from the Texas A&M University project", *Collection Building*, Vol. 28 No. 4, pp. 146-149.

Colomb, P., Rosch, H. and Preisig, A.V. (2013), "The thinkpiece 'libraries, eLending, and the future of public access to digital content'", *IFLA*, available at: [www.ifla.org/node/7447](http://www.ifla.org/node/7447) (accessed 24 February 2016).

Dehghani Champiri, Z., Shahamiri, R. and Salim, S.S.B. (2015), "A systematic review of scholar context-aware recommender systems", *Expert Systems with Applications*, Vol. 42 No. 3, pp. 1743-1758.

Ebook Strategy Working Group. (2014), "Report of the E-book strategy working group", University of Guelph Library, Ontario, available at: [www.lib.uoguelph.ca/sites/default/files/ebook\\_strategy\\_working\\_group\\_april30\\_2014.pdf](http://www.lib.uoguelph.ca/sites/default/files/ebook_strategy_working_group_april30_2014.pdf) (accessed 24 February 2016).

Fance, C. (2015), "E-book readers & managers – best of Hongkiat", available at: [www.hongkiat.com/blog/ebook-reader-manager/](http://www.hongkiat.com/blog/ebook-reader-manager/) (accessed 20 July 2015).

Foasberg, N.M. (2011), "Adoption of e-book readers among college students: a survey", *Information Technology and Libraries*, Vol. 30 No. 3, pp. 108-128.

Frederiksen, L., Cummings, J., Cummings, L. and Carroll, D. (2011), "Ebooks and interlibrary loan: licensed to fill?", *Journal of Interlibrary Loan, Document Delivery & Electronic Reserve*, Vol. 21 No. 3, pp. 117-131.

Garrod, P. (2004), "E-books: are they the interlibrary lending model of the future?", *Interlending & Document Supply*, Vol. 32 No. 4, pp. 227-233.

Gee, W. (2007), "The conundrum of e-books and interlibrary loan". *Against the Grain*, Vol. 19 No. 2, pp. 22-28.

Hardy, R., Oppenheim, C. and Rubbert, I. (2002), "Pricing strategies and models for the provision of digitized texts in higher education", *Journal of Information Science*, Vol. 28 No. 2, pp. 97-110.

Hockey, M.A. (2012), "E-Books in public libraries: experiences in Hampshire", Department of Information Studies, Aberystwyth University, available at: [http://cadair.aber.ac.uk/dspace/bitstream/handle/2160/13506/hockey\\_m.pdf?sequence=2](http://cadair.aber.ac.uk/dspace/bitstream/handle/2160/13506/hockey_m.pdf?sequence=2) (accessed 18 July 2015).

IFLA Governing Board. (2014), "IFLA principles for library e-lending", available at: [www.ifla.org/node/7418](http://www.ifla.org/node/7418) (accessed February 24, 2016).

Jamali, H.R., Nicholas, D. and Rowlands, I. (2009), "Scholarly e-books: the views of 16000 academics", *ASLIB Proceedings: New Information Perspectives*, Vol. 61 No. 1, pp. 33-47.

Kitchenham, B. and Charters, S. (2007), "Guidelines for performing systematic literature reviews in software engineering", Keele University, University of Durham, School of Computer Science and Mathematics, Department of Computer Science, EBSE Technical Report, Keele, Durham, available at <http://userpages.uni-koblenz.de/~laemmel/esecourse/slides/slr.pdf> (accessed 24 February 2016).

- Lai, J.Y. and Chang, C.Y. (2011), "User attitudes toward dedicated e-book readers for reading", *Online Information Review*, Vol. 35 No. 4, pp. 558-580.
- Lonsdale, R. and Armstrong, C. (2010), "Promoting your e-books: lessons from the UK JISC national e-book observatory", *Program: Electronic Library and Information Systems*, Vol. 44 No. 3, pp. 185-206.
- Müller, H. (2012), "Legal aspects of e-books and interlibrary loan", *Interlending & Document Supply*, Vol. 40 No. 3, pp. 150-155.
- O'Malley, C. (2011) "What challenges and opportunities have been created by the Introduction of e-Books to the Irish Public Library?", Dublin Business School, Information and Library Management", Dublin Business School, Dublin, available at: [http://esource.dbs.ie/bitstream/handle/10788/314/msc\\_omalley\\_c\\_2011.pdf?sequence=1](http://esource.dbs.ie/bitstream/handle/10788/314/msc_omalley_c_2011.pdf?sequence=1) (accessed 18 July 2015).
- Oppenheim, C., Hardy, R. and Rubbert, I. (2001), "PELICAN – Pricing Experiment Library Information Co-operative Network: final report", Loughborough University, Loughborough, available at: [https://dspace.lboro.ac.uk/dspace-jspui/bitstream/2134/1799/1/PELICAN\\_5.pdf](https://dspace.lboro.ac.uk/dspace-jspui/bitstream/2134/1799/1/PELICAN_5.pdf) (accessed 24 February 2016).
- Percy, J. (2013), "E-book lending: the challenges facing interlibrary loan", *Interlending & Document Supply*, Vol. 41 No. 2, pp. 43-47.
- Percy, M.A. (2013), "What are the opinions of New Zealand public library staff?", Victoria University of Wellington, School of Information Management, Victoria University of Wellington, Wellington, available: <http://researcharchive.vuw.ac.nz/xmlui/bitstream/handle/10063/2693/thesis.pdf?sequence=1> (accessed 24 February 2016).
- Porcel, C. and Herrera-Viedma, E. (2010), "Dealing with incomplete information in a fuzzy linguistic recommender system to disseminate information in university digital libraries", *Knowledge-Based Systems*, Vol. 23 No. 1, pp. 32-39, available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.163.3591&rep=rep1&type=pdf> (accessed 24 February 2016).
- Rao, S.S. (2004), "Electronic book technologies: an overview of the present situation", *Library Review*, Vol. 53 No. 7, pp. 363-371.
- Runardotter, M., Quisbert, H., Nilsson, J. and Hägerfors, A. (2014), "The information life cycle – issues in long-term digital preservation", LTU, available at: [www.ltu.se/cms\\_fs/1.82663/file/TheInformationLifeCycle.pdf](http://www.ltu.se/cms_fs/1.82663/file/TheInformationLifeCycle.pdf) (accessed 24 February 2016).
- Sharma, R.S. and Yi, Y. (2013), "Trend-casting in the interactive digital media industry: some results and guidelines", *Asian Journal of Innovation and Policy*, Vol. 2 No. 1, pp. 20-36.
- Siegenthaler, E., Wurtz, P. and Groner, R. (2010), "Improving the usability of e-book readers", *Journal of Usability Studies*, Vol. 6 No. 1, pp. 25-38.
- Stapic, Z., López, E.G., Cabot, A.G., de Ortega, L.M. and Strahonja, V. (2012), "Performing systematic literature review in software engineering", *Central European Conference on Information and Intelligent Systems*, Varazdin, pp. 441-493, available at: [www.cecis.foi.hr/app/public/conferences/1/papers2012/se1.pdf](http://www.cecis.foi.hr/app/public/conferences/1/papers2012/se1.pdf) (accessed 24 February 2016).
- Tees, T. (2010), "Ereaders in academic libraries - a literature review", *Australian Library Journal*, Vol. 59 No. 4, pp. 180-186.
- Thomson, D. (2014), "Innovation in E-book lending", International Publishers Association, available at: [www.internationalpublishers.org/policy-issues/publishers-librarians/knowledge-bank-literacy-and-reading/247-innovation-in-e-book-lending-new-ipa-report?showall=&start=5](http://www.internationalpublishers.org/policy-issues/publishers-librarians/knowledge-bank-literacy-and-reading/247-innovation-in-e-book-lending-new-ipa-report?showall=&start=5) (accessed 24 February 2016).
- Vasileiou, M., Rowley, J. and Hartley, R. (2012), "Perspectives on the future of e-books in libraries in universities", *Journal of Librarianship and Information Science*, Vol. 44 No. 4, pp. 217-226.
- Walters, W.H. (2013), "E-books in academic libraries: challenges for acquisition and collection management", *Portal: Libraries and the Academy*, Vol. 13 No. 2, pp. 187-211.
- Wicht, H. (2011), "The evolution of e-books and Interlibrary Loan in Academic Libraries", *Collaborative Librarianship*, Vol. 3 No. 4, pp. 205-211.
- Woods, B. and Ireland, M. (2008), "eBook loans: an e-twist on a classic interlending service", *Interlending & Document Supply*, Vol. 36 No. 2, pp. 105-115.
- Woody, W.D., Daniel, D.B. and Baker, C.A. (2010), "E-books or textbooks: students prefer textbooks", *Computers & Education*, Vol. 55 No. 3, pp. 945-948.
- Wu, M.D. and Chen, S.C. (2011), "Graduate students' usage of and attitudes towards e-books: experiences from Taiwan", *Program: Electronic Library and Information Systems*, Vol. 45 No. 3, pp. 294-307.
- Xu, A. and Moreno, M. (2014), "Journey of discovery: challenges of e-book lending in a digital world", *Interlending & Document Supply*, Vol. 42 Nos 2/3, pp. 51-56.
- Zhu, X. and Shen, L. (2013), "A survey of e-book interlibrary loan policy in US academic libraries", *Interlending & Document Supply*, Vol. 36 No. 2, pp. 105-115, available at [www.emeraldinsight.com/doi/full/10.1108/ILDS-05-2014-0025](http://www.emeraldinsight.com/doi/full/10.1108/ILDS-05-2014-0025) (accessed 24 February 2016).
- Zickuhr, K., Rainie, L., Purcell, K., Madden, M. and Brenner, J. (2012), "Libraries, patrons, and e-books", available at: <http://libraries.pewinternet.org/2012/06/22/libraries-patrons-and-e-books/> (accessed 24 February 2016).

### Further reading

- Malik, K. (2014), "Human development report 2014: sustaining human progress: reducing vulnerabilities and building resilience", United Nations Development Programme, New York, NY, available at: <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.Pdf> (accessed 18 July 2015).

### Corresponding author

Mehdi Alipour-Hafezi can be contacted at: [meh.hafezi@gmail.com](mailto:meh.hafezi@gmail.com)

## Appendix

Table AI E-book lending literature in DLs

Main category	Author	Country	Year	Research topic	Context	
E-books (specifications, creation and software and viewpoints)	Subba Rao	India	2004	E-book technology	Without context	
	Jamali <i>et al.</i>	Iran, UK	2009	Scientific e-books	UK students and faculty members	
	Lonsdale and Armstrong	UK (2)	2010	E-book	UK	
	Siegenthaler <i>et al.</i>	Switzerland (3)	2010	Usability of e-book readers	Without context	
	Woody <i>et al.</i>	USA (3)	2010	Textual e-books	USA	
	Tees	Australia	2010	E-readers	Australia academic libraries	
	Foasberg	USA	2011	Acceptance of e-book readers	Students	
	Lai and Chang	Taiwan (2)	2011	E-book readers	Taiwan	
	Wu and Chen	Taiwan (2)	2011	E-book use behavior	Taiwan	
	Behler and Lush	USA (2)	2011	E-book use behavior	USA	
	Vasileiou <i>et al.</i>	UK (3)	2012	Future of e-books in academic libraries, e-book portable devices	UK	
	Business models	Percy	New Zealand	2013	E-books	New Zealand public libraries
		Oppenheim <i>et al.</i>	UK (2)	2001	E-book pricing	UK
Hardy <i>et al.</i>		UK (3)	2002	E-book pricing	UK	
Wicht		USA	2011	ILL	Without context	
Group, E.S.		Canada	2014	E-book lending	Golf library	
Status of e-books in libraries and their copyright issues	Thomson	UK	2014	E-book lending	Developed countries	
	Garrod	UK	2004	Copyright issues	UK	
	Foasberg	USA	2011	Acceptance of e-book readers	Students	
E-lending and interlibrary loan	O'Malley	Ireland	2011	E-books	Ireland public library	
	Hockey	UK	2012	E-books	Hampshire public libraries, UK	
	Muller	Germany	2012	Copyright and ILL	Copyright systems of Germany, USA and Canada	
	Zickuhr <i>et al.</i>	USA (5)	2012	Libraries, Users and e-books	USA libraries	
	Walters	Canada	2013	E-books	Academic libraries of USA and UK	
	Garrod	UK	2004	e-book ILL challenges	UK	
	Gee	USA	2007	e-book ILL challenges	Without context	
	Woods and Ireland	Canada (2)	2008	E-book lending	Without context	
	Clark	USA	2009	Kindle e-book lending	USA	
	Frederiksen, Cummings, Cummings, and Carroll	USA (4)	2011	e-book licensing and interlibrary loan use	USA	
	Zickuhr <i>et al.</i>	USA (5)	2012	Libraries, Users and e-books	USA libraries	
	Zhu and Shen	USA (2)	2013	ILL	USA academic libraries	
	Percy	USA	2013	e-book ILL challenges	USA	
Group, E.S.	Canada	2014	E-book lending	Golf library		
Xu and Moreno	Australia (2)	2014	E-book lending	National Library of Australia		