

Students and the e-book dilemma: a case study

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Abstract. Similar to other academic libraries, the University of Ottawa Library makes e-books available on many different platforms - aggregators such as ebrary or Project Muse, or major academic publishers' own platforms such as Science Direct or Cambridge Books Online. The diversity of e-book platforms can users, as they can't take the time to familiarize themselves with the dozen or more platforms available in their field of study. This impacts and limits the use of these platforms. In November 2014, the Library surveyed its students about their behaviour, preferences and satisfaction with e-books used for research and learning purposes. This paper presents the results of the survey and examines how the findings relate to the Library's usage statistics for e-books for 2011-2014.

Keywords. Electronic books, Academic Library, Usage Statistics, User study, Survey.

1. Introduction

There is a wealth of studies regarding e-book usage and practices in academic libraries. Blumer and Kenton (2012) conducted a review of the literature from 2005 to 2011 and found studies touching upon themes such as print over e-book preferences, technology and platform usability and features, as well as library related workflows and processes, such as acquisition, cataloguing and promotion. A main theme explored in the literature is the adoption of e-books in academic libraries. D'Ambra, Wilson and Akter (2013) developed a task-technology fit model and validated it in measuring the perceived fit of e-books to academic tasks. They found that the tasks of faculty and researchers, technology characteristics and individual characteristics influence their use of e-books and overall performance. Adoption of e-books at the University of Ottawa was the research subject of Bratanek's (2013) master's thesis. Interviews were conducted with 6 students and 4 faculty from the department of Communication and 4 librarians. The study noted preference for the print books and recommended better communication between librarians and students and faculty to support and promote e-books. Some researchers studied e-books usage and attitudes of students and faculty in specific disciplines: Bierman,

Ortega and Rupp-Serrano (2010) in pure and applied sciences; Corlett-Riviera and Hackman (2014) in humanities, social sciences and education and Lincoln (2013) in theological and religious studies. The e-book landscape in academic universities has changed significantly in the last 4 years, as library collections grew and the publishers' offerings for e-books grew. Zimmerman (2011) predicted that newer versions of e-book readers and the introduction of tablets on the market will influence the use of e-books in academic libraries. As usage statistics for print books has decreased constantly over the past years and the University of Ottawa Library e-book collection grew to over a million titles, this was an important issue to investigate. A study was designed in order to gather information on users' behaviour and preferences.

2. Methodology

We adapted the survey developed by Corlett-Riviera and Hackman (2014) to serve our own research purposes. The Institutional Research and Planning service of the university provided a sample list of 4,985 students, who were invited by email to complete an online survey. We used FluidSurveys, the surveying tool used by the university. As the University of Ottawa is a bilingual university, the survey was administered in English and French. The survey ran from November 3-28, 2014. Participants were offered a chance to enter their name for a draw for a \$100 gift certificate. The survey consisted of 11 multiple choice questions (or 4, if the student never used e-books) and one open-ended question. Responses were required for the first two questions and students could choose not to answer to the rest. The 863 completed surveys and another 33 incomplete surveys including a minimum of 4 answers, formed the 896 results (response rate of 18%) that were analyzed.

3. Findings and discussion

Compared with the sample population, we received more responses from graduate students (22.1% vs. 16.3%) and fewer responses from 1st and 2nd year students (40.9% vs. 47.1%). Overall, we consider that the responses are a good representation of the University of Ottawa student population. We will highlight some of the results.

The first question asks how often students have used the Library's e-resources since the beginning of the academic year. While 54% responded they frequently or always use e-resources, 15% responded that only rarely and 11% never. Students enrolled in the faculties of management, science and engineering responded they used the e-resources the least. Use of e-resources increased with year of study. At the graduate level only 4% responded rarely and 3% never. Table 1 shows the use by faculty and table 2 by year of study.

	Arts	Education	Eng.	Health Sc.	Law	Manag.	Medicine	Science	Social Sc.	Total
Always	29	19	11	20	18	8	37	12	35	22
Frequently	36	33	20	35	44	18	40	24	38	32
Sometimes	19	22	25	22	20	33	10	20	13	20
Rarely	10	12	25	13	14	22	13	22	8	15
Never	7	13	20	9	4	20	0	21	5	11

Table 1. Use of library e-resources by faculty (%)

	1 st Year	2 nd Year	3 rd Year	4 th Year	Graduate Studies	Total
Always	9	13	17	33	39	22
Frequently	24	26	35	34	39	32
Sometimes	28	22	21	15	15	20
Rarely	22	22	17	9	4	15
Never	17	17	10	9	3	11

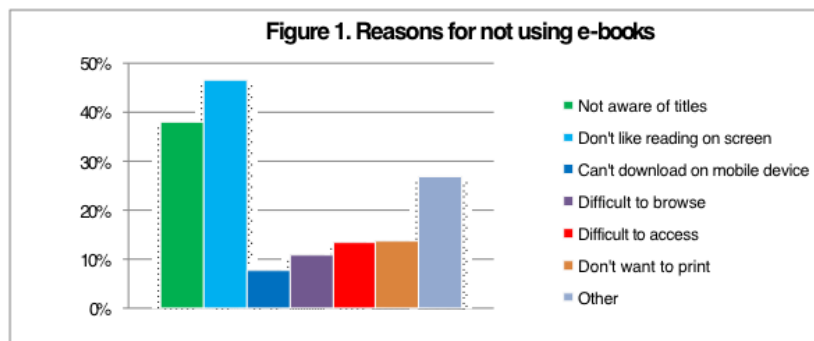
Table 2. Use of library e-resources by year of study (%)

We next asked how often students used e-books since the beginning of the school year. 17% had rarely used e-books and 26% had never done so. 39% students from the faculty of education responded never as well as 35% from science. Only 19% of engineering students had not used e-books. When taking into consideration that 20% responded that they never used the library’s e-resources, this answer is surprising. It is very likely that engineering students are using e-textbooks, which the library can’t provide because of the licensing model.

	Arts	Education	Eng.	Health Sc.	Law	Manag.	Medicine	Science	Social Sc.	Total
Always	8	7	16	9	14	5	10	4	11	10
Frequently	26	18	21	25	22	16	17	14	32	23
Sometimes	26	24	26	19	30	18	20	29	22	24
Rarely	13	12	19	18	14	30	33	19	14	17
Never	27	39	19	29	20	30	20	35	21	26

Table 3. Use of e-books by faculty (%)

Students who responded they never used e-books were asked to choose a reason for not using e-books or indicate their own. Multiple answers were possible. The number one reason was that they don't like reading on screen, followed by the fact that they were not aware of relevant titles. 27% indicated another reason, with answers divided between "don't need to use books" and "didn't know that you had e-books". It is clear that there is a need to showcase and promote e-books among the student population. Figure 1 shows the reasons for not using e-books.



The rest of questions were asked from the 664 students responding that they had used e-books. Answers were not mandatory. We asked students how their use of e-books had changed over the last two years. In the previous two years the library had bought a lot of e-books, as tablets became affordable and more platforms enabled downloading on them. Responses were pretty much consistent, with small differences depending on year of study or the faculty. 64% responded their use had increased, 31% that it had stayed the same and only 5% that it decreased. These responses explain the decrease in use of print books from the library and we will try further to see if they are reflected in an increase of e-book usage.

The next question inquired about how students use e-books, in regards to the format. Would they read it online, print it, download it, etc. Multiple answers were allowed and the question was not mandatory (652 answers received). Figure 2 shows how e-books are used, organized by faculty. Not surprisingly, the least popular choice is downloading to an e-reader. On one hand, e-readers haven't penetrated as much as other mobile devices and downloading to e-readers can be cumbersome. The most popular choice was downloading the PDF, again not surprising, as this is the model students are familiar with from their use of online journals and the only option offered on many platforms. A close second option was reading online; if students need to quickly look up information and because some platforms offer online reading as the only option. What is surprising is that the option of printing a part of an e-book was the second least popular. Only 17% of respondents chose that option. It is worth

noting that engineering students are the ones printing the most; maybe related to the fact that learning models are still print-based.

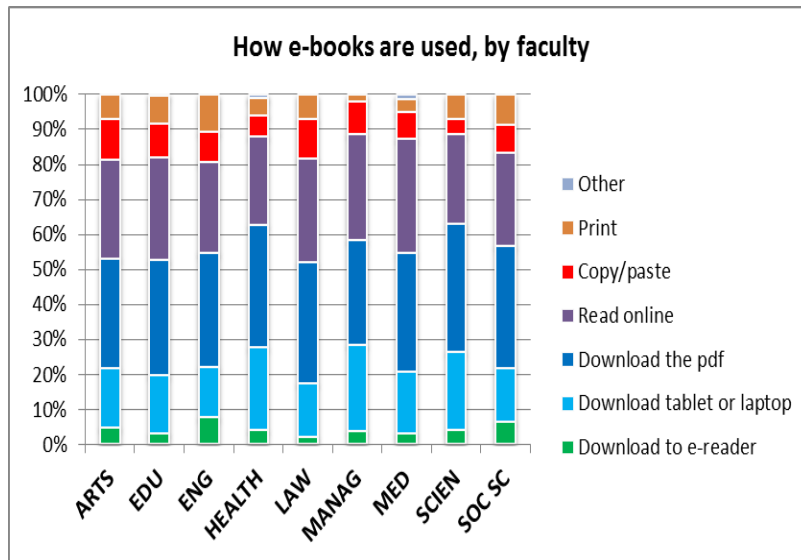


Figure 2. How e-books are used, by faculty

The next question concerned how much of an e-book does a student typically read. 650 answers were received. Students could make a choice from 5 possible answers. While the choice of "a page or less" seemed like a good idea when the questionnaire was developed, it probably was conflated with the "browse for key information" option, as only 1% responded to it. The number one answer was "browse for key information", followed closely by "one or more chapters". As expected, few read a whole e-book, but probably few would read a whole print book either. Figure 3 shows how e-books are read, and we can immediately notice the differences by faculty.

We wanted to know what format the students preferred depending on the type of resource: scholarly monographs, conference proceedings, reference or fiction. 640 answers were received.

E-books are clearly preferred for monographs, conference proceedings and reference, while for reading fiction the print book is preferred. If we add the "no preference" responses to the e-book responses we can conclude that e-books, except for fiction, have been adopted by the majority of students that use them. The library has few fiction books as e-books, as little is licensed for library use and we don't subscribe to Overdrive or the other platforms offering fiction e-books. The great majority of students aren't required to read any fiction for their studies or research. We asked respondents to elaborate if they answered "it depends", however we didn't receive comments from all of them. The reasons were varied, from convenience of accessing the book off-campus to research vs. information purposes needs.

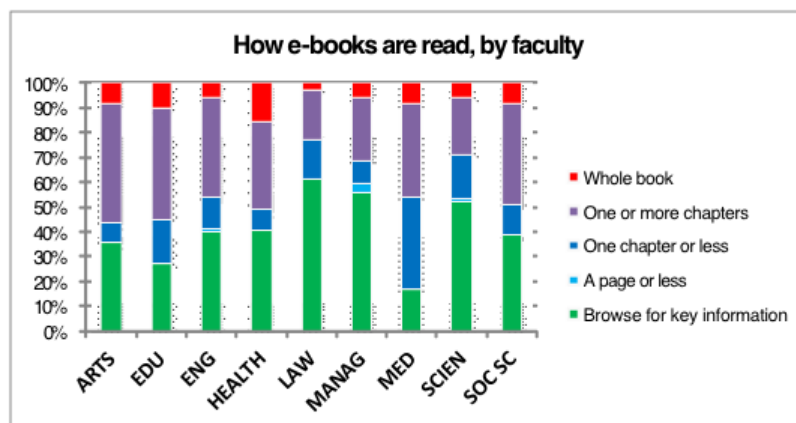


Figure 3. How e-books are read, by faculty

	E-books	Print	It depends	No preference
Monographs	38.0%	25.6%	11.6%	24.8%
Proceedings	43.0%	12.5%	10.2%	34.4%
Reference	48.8%	27.8%	8.6%	14.8%
Fiction	24.4%	50.3%	7.2%	18.1%

Table 4. Preference by type of resource (%)

4. E-books usage statistics

As of the time of this writing, the Library offers e-books on 52 different platforms. This in itself can be a major source of confusion for students. Some of the platforms, mainly those of publishers such as Science Direct (Elsevier) or SpringerLink, offer PDF chapter downloads. Other platforms, mainly from aggregators such as ebrary or Books24x7, were developed as an online reading platform with some added features such as note taking or printing, but with limited or no downloading capabilities. Ontario university libraries have also access to Scholars Portal [<http://books1.scholarsportal.info/home.html>], an e-book platform and trusted digital repository provided as a service by the Ontario Council of University Libraries. This great variety of platforms offered a challenge in compiling and presenting a complete and coherent picture of e-book usage.

Initially we intended to compile usage statistics from 2011 to 2014. However, we acquired a great number of e-books starting in 2011, and statistics were available for most of the platforms starting with 2012. Some platforms offer COUNTER compliant usage reports, while others don't. In most cases, the available report is BR2, the number of successful section requests by month and

title. Alternatively, BR1, the number of successful title requests by month and title, is offered. Version 4 of COUNTER was released in 2012 and vendors were required to comply by the end of 2013. Thus some platforms that previously didn't offer COUNTER compliant reports offered them starting with 2014. Another obstacle in consistency comes from publishers switching or updating their platforms. Changes in the library's discovery environment influenced also e-book usage. For example, the library implemented a discovery system in summer 2013 and e-book packages were activated in SFX, our link resolver. MARC records become available for some platforms and were batch loaded in the catalogue long after we had access to them. As backfiles became available, the collection grew rapidly instead of gradually over the whole period of time, such as in the case of the Taylor & Francis collection. In the end, we decided to identify 30 platforms that offered enough assurance of consistent data across time.

While the BR2 report is generally suited for assessing usage over time on one platform, it doesn't paint an accurate picture when we use it across several platforms, as the definition of 'section request' is different for a platform offering page by page reading and a platform allowing chapter by chapter or entire e-book downloading. The presence of a handful of reference books on a platform might yield thousands of views even when users are looking for only for a definition or a formula. As we have seen, students are often browsing quickly to find information. To avoid this problem, we decided to use the number of titles accessed in a year on each platform. We asked ourselves how many titles were used during the three year period (in some cases for two years, for books that were purchased at the end of 2012) and how they compare with the total number of titles offered on the platform. Titles that were used (i.e. accessed) in more than one year of the two or three years were counted only once. The ratio of titles used during a given period of time and the total number of titles on a platform is an important metric to assess e-books usage. It is useful in retrospective studies, when data hasn't been collected regularly and it would be difficult, if not impossible, to obtain. It can certainly be improved. In our example, the number of titles on the platform has been counted as of March 2015 and not the end of 2014. Some platforms in Engineering are dynamic since they will add new titles and delete old ones during the reference period, so the total number of unique titles could be higher than if none would have been deleted.

Platform Publisher	2012	2013	2014	Period totals (unique titles)	Available on platform	Usage / total (%)
AccessEngineering (McGrawHill)	203	272	122	370	530	70
ACLS	919	862	905	1,752	3,867	45
APA (PsycBooks)	367	467	514	905	3,572	25

ASCE	144	422	347	529	775	68
Books 24x7	1,483	1,338	821	2,877	3,682	78
Brill	202	134	132	409	2,217	18
Cambridge UP	537	1,121	1,344	2,289	6,338	36
Classiques Garnier	21	38	184	170	8,391	2
CRCnetBASE	1,086	830	783	1,839	3,899	47
EBL	1,270	1,382	1,057	2,801	3,769	74
Ebsco	1,044	843	1,148	2,301	9,189	25
Edward Elgar	0	252	240	428	925	46
Elsevier	3,022	5,947	5,145	9,511	18,461	52
ICE	0	95	98	168	1,414	12
IGI Global	16	364	547	787	2,499	31
Informa	65	60	62	146	N/A	N/A
Ovid	861	885	958	1,496	N/A	N/A
Oxford UP	0	3,274	3,304	5,355	6,920	77
Palgrave	498	862	1,191	1,862	4,754	39
RSC	40	221	186	354	1,248	28
Safari	229	163	144	335	469	71
Sage	0	816	1,123	1,413	3,878	36
SIAM	0	60	66	109	418	26
Scholars Portal	12,14 9	12,97 1	10,12 8	26,950	124,908	22
Springer	5,408	18,24 2	14,62 1	25,622	59,584	43
Taylor & Francis	113	3,197	2,890	4,752	13,693	35
Thieme	46	43	45	89	206	43
Wiley	1,327	2,229	1,911	3,787	4,916	77
World Bank Library	0	376	1,175	1,391	8,596	16
World Scientific	0	152	194	302	892	34

Table 5. Title usage for e-book platforms, 2012-2014

While promoting e-book platforms on the library website and through the research guides is helpful, the inclusion of the MARC records in the catalogue is vital for discovery. Garnier Classique records were only added in 2015 and while there was some usage of this resource by word of mouth, it was extremely low. We can indeed see that some engineering platforms, such as Books 24x7, AccessEngineering or Safari, offering only online reading (or printing) are less used in 2014 than in 2012.

5. Conclusions

We have seen that the digital world presents many complexities for e-book implementation and can't be measured the same way as the physical environment of print books. While the COUNTER Code of Practice is now at version 4, vendors have few incentives to develop robust data reports which even fewer librarians would have the time to analyze. However, most students have adopted or adapted to e-books. It depends on the library to promote them, to ensure effective access points, to offer enough information and troubleshooting help, and lobby for better platforms from vendors, so that technology will not be an obstacle to use. This will ensure that we can obtain better value from our major investments in e-books, and will align the e-book strategy with the academic library's mission to advance research and teaching. This is also a clear reminder of one of Ranganathan's five laws of library science – books are for use!

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