Fall 9-2016

Nursing Students' Learning Experience with E-books

Yingqi Tang
Jacksonville State University, tang@jsu.edu

Paula Barnett-Ellis
Jacksonville State University, pbarnett@jsu.edu

Recommended Citation

Tang, Y., & Barnett-Ellis, P. (2017). Nursing Students' Learning Experience With E-books. The Journal of Academic Librarianship, 43(1), 67–71. https://doi.org/10.1016/j.acalib.2016.08.020

Nursing Students' Learning Experience with E-books

Introduction

As many nursing programs are offered online in colleges and universities, student populations are likely to be working nurses who have no time to come in, or have no physical access to the library building or its print book collections to complete their course work. This has been one of the biggest obstacles for libraries in supporting off-campus faculty and students. In addition to offering document delivery services, such as shipping print books and sending articles in digital format to eligible patrons, more and more academic libraries purchase or license e-books and e-journals to replace or augment their print collections. In recent years, electronic book and journal collections have grown rapidly in academic libraries because of their ease of access and convenience (Briddon et al., 2009; Cassidy, Martinez and Shen, 2012; Walters, 2013). The emergence of e-books creates a variety of issues involving acquisition, management, workflows, and usage statistics (ALCTS, 2013).

The purpose of this study was to examine nursing students' views on e-books and whether the use of electronic books will affect their learning engagement and experience. Findings will help librarians to determine whether students will benefit from the growth of e-book collections, as well as why and how students access e-books. The following research questions guided this study:

1. Does student engagement increase with e-book usage?
2. Do students' learning outcomes improve with e-book usage?
3. Why or why not will students use e-books?

4. What device(s) do students use for reading e-books?
5. How do students read e-books?
6. What e-book features are important to students?

Literature Review

E-books are a digital version of a printed book that can be read on electronic devices such as a computer or handheld device (Oxford Dictionaries, nd). Both e-book reading devices and e-book usage has increased rapidly in recent years. Rainie and Duggan (2012) interviewed 2,252 Americans who were 16 years and older. They found that ownership of either a tablet computer or e-book reading device leapt from 18% to 33% from 2011 to 2012. Meanwhile, the number of e-book readers increased from 16% to 23%, while print book readers dropped from 72% to 67%. E-books have become increasingly popular for leisure reading.

Moreover, scholarly e-book collections have also experienced dramatic growth. In Rebecca Miller's (2011) review of 2010 and 2011 *Library Journal's* Annual E-book Survey, she noted that 95% of the libraries in the United States purchased/subscribed to e-books in 2011. Average e-book titles in academic library were 33,830 in 2010, reaching 65,208 in 2011, a 93% increment. The American Library Association (ALA) advocates that digital content and e-books are the future of libraries. ALA continues its push for expanded e-book access with more aggressive strategies that facilitate libraries and their users to obtain e-books under reasonable terms and costs (Stripling et.al, 2013).

Several studies explore how users accessed and used scholarly e-books. JISC (2009) reported that barriers hindering readers included the discomfort of reading on screen, non-user-friendly design of delivery platforms, and lack of awareness of e-book availability. Other studies backed

up these findings. Cassidy, Martinez and Shen (2012) examined usage of e-books among graduate students and faculty. They echoed previous findings that users value the convenience and ease of access that e-books provide. However, users did not necessarily like e-books more than print books. Brahme and Gabriel (2012) concluded, from their survey of distance learning students that keeping up with evolving e-book features and platforms was difficult for students and often for librarians as well. They wrote that the task was made harder by the wide range of vendors and platforms available to libraries, with many differences among e-book services. They found that some e-book features made users happy, but there were also a number of features of which users were not aware. Physical discomfort, such as eye strain due to long hours reading from a screen, was also reported by various demographics (Narian, 2009; Briddon et al., 2009).

Innovative web technology has changed our lives and made communication much easier. Ugaz (2008) found that students used electronic reference/core medical books more than the equivalent print copies. Gueval (2015) reported that nursing students at a large medical center became proficient in using e-books within one semester, but were not satisfied until they had used the technology for a year. Chen et. al. (2010) found that there was a positive relationship between student use of web-based technology and student engagement and desired learning outcomes. Chen also predicted that such technologies will continue to have a positive effect on learning and engagement. A literature review regarding the effect on learning engagement and outcomes of using e-textbooks in class yielded mixed results. Sun, Flores, and Tanguma (2012) reported that students who used e-textbooks in class believed that e-textbook features enhanced their learning experience. Also, e-books positively affected student learning outcomes. However, Daniel and Woody (2013) compared 298 students' performance in using print textbooks and e-textbooks at a medium-sized regional university. They found there was no big difference within those two

groups. They mentioned that the e-textbook group students spent a significantly longer time reading. They also noted that e-textbooks were not popular among college students. Although e-textbooks are promoted as having more advanced features, students and faculty were not yet ready for adoption of e-textbooks (Elias, Phillips, and Luechtefeld, 2012). Few studies have investigated whether acceptance of e-books offered by libraries for reference and circulation purposes is correlated with students' learning experience and learning outcomes. This study therefore aims to fill this gap in the literature.

Nursing and Health Sciences E-book Collection at Jacksonville State University

As of 2014, The Nursing and Health Sciences collection of the Houston Cole Library contains 23,397 print titles and 2,166 e-books in the Library of Congress Classification R. In the QM-QR classifications, the print titles total 4,296 and the e-book count was 369. E-books made up approximately 8% of the collection in total (Barnett-Ellis, 2015). The Library does not have any written policy regarding adoption of e-books. However, in order to accommodate the needs of the rapidly increasing growth of the student population in online nursing programs, librarians favor purchasing or licensing e-books as their funding permits. As a part of its collection development policy, the Library is not inclined to purchase any electronic textbooks for faculty and students. All e-books are available for online reading only.

Method

The survey instrument contained demographic and open-ended questions. Students who had or had not used e-books were asked a separate set of questions. Students with e-book experience were asked: (1) How they perceived e-books as a learning resource that possibly affects their learning engagement and outcome (2) Why and how did they use e-books? Four statements

measured e-book acceptance, three statements quantified student engagement, and four statements assessed their learning outcomes. All eleven statements asked students to rank their answers by 5 a point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). A sample statement of each variable was as follows:

- I think the library should purchase more e-books.
- I am able to interact more with my classmate/instructor because we can access the same e-book.
- Using e-books made my research project easier.

On the other hand, students without e-book experience were asked why they had not used e-books for their course studies.

Students enrolled in undergraduate and graduate nursing programs in the spring term of 2015 were invited to take the survey. The statistical software package SPSS 21.0 for Windows was utilized to perform the analyses. A multivariate correlational analysis was conducted to examine research questions 1 and 2, while questions 3 to 6 were answered with descriptive statistics results.

Results

Demographics

A total of 81 students completed the survey. 89% were female (N=72). The majority of the participants (N = 35) reported being in the 19-25 age range. 75% of the students (N=61) were enrolled in undergraduate or equivalent programs, 6% of the students (N=5) were in graduate or

equivalent programs, and the remaining 19% of them (N=15) were not classified. 58% of the students lived within a 30 mile radius of the campus. Twenty six students (32%) claimed that they lived more than 60 miles away from the campus.

Students with E-book Experience (N=11)

Eleven students in nursing majors, or 11% of the correspondents, reported that they used an e-book during the semester. Seven of them were distance learning students. Students' average score of e-book acceptance, learning engagement and learning outcomes were 3.30, 2.85, and 3.34 respectively (See Table 1). There was no significant difference in e-book acceptance found with distance students (M=3.28) and on-campus students groups (M=3.31). 23% of the students who took distance education courses used e-books, while less than 1% of on-campus students reported that they used e-books.

----- Please insert Table 1 here -----

Multivariate correlation analysis results revealed that learning engagement significantly correlated with e-book acceptance ($r=.85$, $p < .01$). Learning outcomes also correlated with E-book acceptance ($r=.58$) (See Table 2).

----- Please insert Table 2 here -----

In correspondence about why students used e-books, six students reported that the e-book was needed for an assignment, five students found an e-book when they conducted a search, and two students stated that the e-books were required reading material.

When asked what devices they used for reading, the majority of students used a laptop device (N=8), followed by desktop (N=3), tablets that include iPad, Android, Kindle Fire, Nook (N=2), and mobile phone (N=1).

Furthermore, students were asked how they read an e-book. Eight students selected a certain chapter or section, four students browsed or skimmed pages, three students read contents based on searching keywords, and only one student read the entire book.

Finally, 73% of the students considered accessibility to multiple users as the most important function of e-books. 18% deemed ease of navigation important, and 9% counted the ability to print as important. A majority of students perceived e-books were useful for completing course work. 73% of them considered e-books as useful (55%) or very useful (18%). The remaining 27% of the students felt e-books were somewhat useful.

Students without E-book experience (N=70)

86% of the students (N=70) did not use the library's e-book collection. The top reason was that they were not aware of e-book collections in the library. One student reported that the book he/she needed was not available in digital format.

Discussion

Student Use of E-books

E-book Acceptance and Learning Engagement, Learning Outcomes

This study surveyed nursing program students for the purposes of finding whether e-book acceptance correlated with student learning experience and outcomes. The results implied that students who feel comfortable using e-books tended to be more engaged in learning, and they were likely to have better learning outcomes. The findings echoed those of Glackin, Rodenhiser and Herzog's (2014) study that nearly 81% of students in graduate social work and both undergraduate and graduate nursing students programs stated that using e-books increased their

ability to access educational materials. E-books had a positive impact on their educational experience.

On a scale of 1 to 5, the average e-book acceptance rate was 3.30. The findings showed that students did not fully understand and accept this innovative reading method. In this study, distance students did not demonstrate a higher level of e-book acceptance than non-distance students, although they used e-books more often. The physical separation hindered distance students in accessing print resources, and e-books might be their only option for accessing necessary course materials. In addition, faculty who teach distance courses may have more concerns regarding course content delivery, so that more e-books have been assigned to students. Jin (2014) applying the Technology Acceptance Model (TAM) as a theoretical basis, explored factors that affect college students' acceptance of e-book use. He found that factors such as compatibility, relative advantage, self-efficacy, and subjective norms played an important role as core determinants of e-book use. In other words, peers, parents and superiors' attitude toward e-books would influence students' decisions about using e-books. Therefore, librarians should collaborate with faculty to promote e-book collection, and encourage students to try them.

Access issues

This study also examined students' perception of e-book usage. A majority of the students think that e-books were helpful. 73% of the students considered e-book accessibility for multiple users as the most important function. More than 50% of the students who use e-books claimed that the e-book they used was assigned by a faculty member as supplemental reading material or a class assignment. This faculty reinforcement seems to be a major reason for e-book usage. It is good to know that e-books are being used in the classroom. However, if only one user can access the e-

book at a time, conflicts can arise over those who attempt to get access when an assignment is due. A library can set up a loan period for reserved course materials so that all students have access. When an e-book is in use, it is hard to tell who is using the book, and when it will be returned. Students could become frustrated when the book they need is not available. Faculty and students are likely to assume that digital books should be available 24/7. In many cases, patrons are not aware that the library only allows one patron to access an e-book at a time, and does not have control over the length of time a patron uses an e-book. Students are not pleased when they are informed that the book they need is temporarily unavailable, or worse, no one can tell when it will be available again. Librarians should remind faculty that certain e-books are under licensing agreements that only allow one user at a time. Students should also be informed that in order to avoid access problems, they should not wait until the last minute to use the e-book. Students may also need a gentle reminder to close the session as soon they finish reading, so that others will be able to access the resource. Adding such a note might become necessary for assignments if intensive use is required during a short time period.

Devices and Reading Methods

Laptops were the primary devices that students used for reading e-books in the academic environment. Many libraries provide e-book access via vendors or publishers' online databases. Compared to laptops and PCs, tablets are lightweight and easy to take anywhere. However, according to Minčić-Obradović, (2011) vendors and publishers are not well prepared for transition because various tablets are not equipped to support all digital formats. Therefore, academic libraries are cautious when purchasing e-books dedicated for an e-book reader. For these reasons, e-readers are perhaps better suited to leisure reading.

Students use scholarly books more like reference material. They do not read from cover to cover as they do for fiction. This study found that the majority of the students selected a certain chapter or section, or skimmed pages when reading e-books. The reading methods for e-books, when compared to physical books, are similar. Some students claimed to use a keyword search to locate relevant text. Compared with a traditional back-of-the-book indexing function, an e-book can locate a word in a whole book easier and faster. E-books have a feature that allows readers to jump to a certain page. However, this feature did not work well for some e-book platforms. A print book contains front matter, sometimes called the preliminary matter, which may include multiple title pages, a foreword, a preface, and much more. These pages are numbered in lower-case Roman numerals or may not be numbered. In a digital version, these pages are counted as regular page numbers. Therefore, page one in the print book does not mirror page one in the e-book. As a consequence, a patron who keys in a certain page number shown in the table of contents would end up landing on a wrong page on a screen, an inconvenience for readers.

Student Non-use of E-books

Seventy (86%) students did not use the e-book collection. Cassidy, Martinez, and Shen's (2012) study also found that 62% of students and faculty had not used e-books at their institution. They suggested several areas that libraries and e-book vendors could consider in improving e-book usage. However, many citation analysis studies of students' theses revealed that students used periodical materials more than books for their research work (Barnett-Ellis & Tang, 2016; Miller, 2011). In academic libraries, monograph circulation is relatively low. Fenske (1994) evaluated the monograph collection in University of Illinois at Chicago Library of the Health Sciences in Urbana from July 1987 to September 1989. She found that more than 60% of selections had not been checked out or had little use. Rose-Wiles (2013) analyzed the circulation

status of print books at Seton Hall University Libraries. She found that only 21.5% of their collection circulated between 2005 and 2009. Anderson (2011) noted that when taking library holdings and student enrollment into consideration for measuring book circulation per student, the figures of print monograph circulation would yield a greater decline. A low rate of print monograph checkout has been a concern in libraries. Although the emergence of e-books allows ease of access, e-book usage is also very low. Regardless the format of a book, students do not use library monograph collections very often.

But on the bright side, this study showed that acceptance of electronic books has a positive influence on student engagement. Andersen (2012) noted that people are willing to accept new behavior because it was easy, rewarding, and normal. If an e-book is easily accessed, is enjoyable to read, and is commonly be used by others, then students would feel more comfortable using it. Perhaps if reading behavior is changed, students become more motivated to check out e-books, thus triggering an increase in the number of books circulated.

Forty one (50%) students indicated that they were not aware of the availability of e-book collections. Just as in findings from other studies, lack of awareness is the top reason inhibiting e-book usage (Shelburne, 2009; Ebrary, 2007). An Ebrary (2007) survey also reported that MARC records and OPAC integration, professor and staff recommendation, and library websites were the top three methods for boosting e-book usage. The Jacksonville State University Library has integrated electronic resources in the library catalog for many years. Just as Shelburne (2009) wrote that e-books were slipped into the library catalog quietly. Although new e-book collection announcements were sent to the library-faculty liaison listserv and subject librarians to increase awareness, messages may not be delivered to students. Secondly, if the library is building up its e-book collection gradually as a relatively small number of e-book titles, they are being buried

among other physical books in the system. In addition, print books and e-books are commonly labeled with the same icon in the OPAC, which makes them hard to identify in a list of search results. Even if a filter is available for limiting search results to e-books only, the filter name is not marked "e-book", and is grouped with other filters in a sidebar, which makes the function easy to overlook. Only 6% of the students were able to find an e-book through a catalog search. What is the success rate of finding an e-book by searching the catalog? What are users' experiences in using the online catalog in finding an e-book? These questions remain to be answered.

In today's information environment, where information can be found anywhere, anytime, online, libraries are facing the challenge that users rely on information from the Internet rather than library resources. It is regrettable that the library collection is not being sufficiently utilized, particularly those expensive digital collections. Libraries need to find more creative ways to promote e-book collections and guide patrons in their use. Some ideas include, but are not limited to: creating an e-book website with a canned catalogue search box solely for e-book collections, posting new e-books on LibGuides, sending out a subject-related e-book list to college and department liaisons quarterly, displaying a "catalog card" with a brief description of the book and access QR code on shelves or a bulletin board, and making an announcement on the library website and social media sites.

Limitation and Further Study

As an exploratory, preliminary study, a major limitation of this study was the small sample size of its population. In particular, the number of students who have experience with e-books were relatively low. More data needs to be collected to give credence to the findings in the future. For

the purpose of further explaining nursing students' attitudes, behavior, and perceptions toward using scholarly e-books, future research should collect qualitative data from a group of e-book users. The study population could also be expanded to other disciplines and majors to present a clearer picture.

Conclusion

The findings from this study support that e-book usage has a positive effect on student learning engagement and outcomes. The results also show that many students are unaware of or have not accepted the innovative benefits of scholarly e-books. Implementation of these findings should take into account that academic libraries need to do much more to make the technology benefit their students by continuing to expand digital collections; and optimizing library online resources such as the catalog and discovery service, to enhance the user experience. Moreover, librarians need to develop innovative practices and partner with faculty to design a meaningful learning experience for students through technology and curriculum design, promote digital collections, and provide more training on how to locate and use e-book collections effectively.

References

ALCTS. (2013). E-Book acquisitions: Methods, management, and workflows. Retrieved from http://www.ala.org/alctsnews/features/e-book-acquisitions

Andersen, E. (2012). 3 Things you can do to change people's behavior. Retrieved from http://www.forbes.com/sites/erikaandersen/2012/08/17/3-things-you-can-do-to-change-peoples-behavior/2/#3748e4a75bb6

Anderson, R. (2011). Print on the margins. *Library Journal 136*(11), 38-39.

Barnett-Ellis, P. (2015). Nursing and health sciences collection. Retrieved from http://www.jsu.edu/library/docs/assessments/NursingHS2014.docx

Barnett-Ellis, P. & Tang, Y. (2016). User-centered collection development: A citation analysis of graduate biology theses. *Collection Management 41*(1), 3 - 22.

Brahme, M., & Gabriel, L. (2012). Are students keeping up with the e-book evolution? Are e-books keeping up with students' evolving needs? Distance students and e-book usage: A survey. *Journal of Library & Information Services in Distance Learning 6*(3-4), 192.

Briddon, J., Chelin, J., Ince, G., Redman, J., Sleat, A., and Williams, E. (2009). E-books are good if there are no copies left: A survey of e-book usage at UWE Library Services. *Library and Information Research 33*, 45–65.

Cassidy, E. D., Martinez, M., & Shen, L. (2012). Not in Love, or Not in the Know? Graduate Student and Faculty Use (and Non-Use) of E-Books. *The Journal of Academic Librarianship 38*(6), 326–332.

Chen, P., Lambert, A. D., & Guidry, K. R. (2010). Engaging online learners: The impact of web-based learning technology on college student engagement. *Computers & Education 54*(4), 1230.

Daniel, D. B., & Woody, W. D. (2013). E-textbooks at what cost? Performance and use of electronic v. print texts. *Computers & Education 62*, 18–23.

Ebrary. (2007). Ebrary's Global eBook Survey. Retrieved from http://www.ebrary.com/corp/collateral/en/Survey/ebrary_eBook_survey_2007.pdf

Elias, E. C., Phillips, D. C., & Luechtefeld, M. E. (2012). E-books in the classroom: A survey of students and faculty at a school of pharmacy. *Currents in Pharmacy Teaching and Learning 4*(4), 262–266.e1.

Fenske, R. E. (1994). Evaluation of monograph selection in a health sciences library. *Bulletin of the Medical Library Association 82*(3), 265–70. Retrieved from http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=225922&tool=pmcentrez&rendertype=abstract

Glackin, B. C., Rodenhiser, R. W., & Herzog, B. (2014). A Library and the Disciplines: A Collaborative Project Assessing the Impact of eBooks and Mobile Devices on Student Learning. *The Journal of Academic Librarianship 40*(3-4), 299–306.

Gueval, J., Tarnow, K., & Kumm, S. (2015). Implementing e-books: Faculty and student experiences. *Teaching and Learning In Nursing*, (4), 181. doi:10.1016/j.teln.2015.06.003

Jin, C.H. (2014). Adoption of e-book among college students: The perspective of an integrated TAM. *Computers in Human Behavior 41*, 471–477.

JISC (2009). National e-books observatory project: Key findings and recommendations. Online. London: JISC. Available: http://www.jiscebooksproject.org/reports/finalreport

Miller, L. N. (2011). Local citation analysis of graduate biology theses: Collection development implications. *Issues in Science and Technology Librarianship 64*. doi: 10.5062/F4RF5RZZ

Miller, R. (2011). Dramatic growth | LJ's second annual Ebosok survey. Retrieved from http://www.thedigitalshift.com/2011/10/ebooks/dramatic-growth-ljs-second-annual-ebook-survey/

Minčić-Obradović, K. (2011). *E-books in academic libraries*. Oxford: Chandos Pub.

Nariani, R. (2009). E-books in the sciences: If we buy it will they use it? *Issues in Science and Technology Librarianship*. Retrieved from http://www.istl. org/09-fall/article3.html).

Oxford dictionary (American English) (US). (n.d.). E-book. Retrieved July 16, 2015, from http://www.oxforddictionaries.com/us/definition/american_english/e-book

Rainie, L. and Duggan, M. (2012). E-book reading jumps; print book reading declines. Pew Research Center's Internet & American Life Project. Retrieved from http://libraries.pewinternet.org/files/legacy-pdf/PIP_Reading%20and%20ebooks.pdf.

Rose-Wiles, L. (2013). Are print books dead? An investigation of book circulation at a mid-sized academic library. *Technical Services Quarterly 30*(2): 129-152.

Shelburne, W. A. (2009). E-book usage in an academic library: User attitudes and behaviors. *Library Collections, Acquisitions, and Technical Services 33*(2-3), 59–72.

Stripling et.al. (2013). ALA, future of libraries, digital content, and Ebooks. Retrieved from http://americanlibrariesmagazine.org/2013/06/12/ala-future-of-libraries-digital-content-and-ebooks/

Sun, J., Flores, J., & Tanguma, J. (2012). E-Textbooks and Students' Learning Experiences. *Decision Sciences Journal of Innovative Education 10*(1), 63–77.

Ugaz, A., & Resnick, T. (2008). Assessing print and electronic use of reference/core medical textbooks. *Journal of the Medical Library Association 96*(2), 145-147.

Walters, W. (2013). E-books in academic libraries: Challenges for sharing and use. *Journal of Librarianship and Information Science 46*(2), 85-95.