

# "But I Want a Real Book"

## *An Investigation of Undergraduates' Usage and Attitudes toward Electronic Books*

**Cynthia L. Gregory**

**Cynthia L. Gregory** is Librarian III and Head of Electronic Resources, Archbishop Alter Library, College of Mount St. Joseph, Cincinnati, Ohio. Submitted for review August 25, 2006; accepted for publication October 12, 2006.

During the fall of 2004, the Head of Electronic Resources at the College of Mount St. Joseph's Archbishop Alter Library conducted a survey using a paper-based questionnaire and administered it to several randomly chosen undergraduate courses. The goal of the study was to investigate the college's undergraduates' usage and attitudes toward electronic books. The study grew from the college librarians' informal observations of students' reactions, many times negative, to e-books over a four-year period. Results ran counter to what one might expect of undergraduates belonging to the Millennial or "net" generation. The findings show that students have mixed feelings about using e-books; students will use e-books but prefer using traditional print books. The study gives insight into where electronic and print media are in the current academic realm.

**W**hen electronic books first appeared on the commercial market in the 1990s, many information technology experts predicted that print books would become obsolete.<sup>1</sup> Despite the paperless-society predictions, the printed book persists into

the digital twenty-first century and remains a much utilized and integral part of our research, media, and leisure cultures. At the same time, e-books (both Web-based and device-based) have experienced continued growth and an undeniable presence despite their own growing pains in recent years.

After the dot-com crash in 2000, many e-book vendors folded or merged with other companies. In fact, of the twenty-four initial e-book firms, only eight are still active.<sup>2</sup> The e-book market initially weathered this change by shifting focus away from device-based models toward Web-based databases. Currently, trends in the e-book market reflect concentrations in three areas: (1) Web-based aggregated collections with academic content, such as reference, business, and information technology; (2) audio e-books, due in large part to the combined popularity and ubiquity of Harry Potter audio books and iPods; and (3) a curious resurgence in dedicated e-book devices, such as the 2006 Sony Reader and the 2007 Kindle Reader from Amazon.<sup>3</sup>

Academic libraries have long served "as repositories of the written word, regardless of the particular medium used

to store the words."<sup>4</sup> As early adopters of e-books, college and university libraries have continued adding these electronic texts and other multimedia to library collections. For students in an academic environment, Web-based electronic books such as netLibrary offer twenty-four-hour access to research orientated e-content from anywhere, whether it is a wireless laptop or a dorm-room desktop. While usage data may indicate that patrons access these e-book databases, what the data does not tell us is our students' attitudes toward e-books.

## BACKGROUND

During the fall of 2004, the Head of Electronic Resources at the College of Mount St. Joseph's Archbishop Alter Library conducted a survey that investigated undergraduates' usage and attitudes toward e-books. The study grew from the college librarians' informal observations of students' reactions (often negative) to e-books over a four-year period. The Archbishop Alter Library obtained the e-book database netLibrary in 2000 through its OhioLINK membership. To replicate simultaneous use, checkout time for each netLibrary book was limited to two hours. In subsequent years, other e-book databases were added to the library's collection, including Safari Tech Books Online, ABC-Clio Reference Books, and Oxford Reference Online. The librarians heavily marketed these resources to students, faculty, and staff. In particular, they promoted these resources with brochures, bookmarks, Web pages, campus-wide e-mail announcements, and during instruction sessions. In an effort to increase access and exposure, the library's Technical Services Department loaded approximately thirteen thousand netLibrary e-book MARC records into FOCUS, the library's OPAC. There is evidence showing that adding e-book titles to a library's catalog is strongly related to an increased use of the collection.<sup>5</sup> Indeed, following this addition, netLibrary usage by College of Mount St. Joseph patrons rose dramatically and remained steady through

2004 (table 1).

But while e-book usage increased from 2000 to 2004, so did students' negative comments about the format. On the "front lines" at the library's reference desk, many of the college's librarians began to notice during reference interviews that students who encountered e-book records while searching the library's online catalog were reluctant to pursue them. In one instance, when a reference librarian explained to a traditional-aged patron that a particular book that interested her was an e-book, the patron shook her head and replied, "But I want a real book," and followed her comment with hand gestures indicating the opening and closing of a book. Other students had similar reactions and requested the "real book" through interlibrary loan while the e-book (that met their information need) went unused. An informal survey of the college's librarians about their observations and interactions with students revealed that e-books were not popular with our undergraduates. Some students seemed to view e-books, unlike the popular full-text journal articles, as hard to navigate and limiting despite the advantage of anywhere, anytime access. Incidental comments from students highlighted their desire for material that could either be printed in its entirety (something not always allowed due to copyright restrictions) or checked out and easily portable.

The College of Mount St. Joseph is a small liberal arts college located in Cincinnati, Ohio. While the school serves a diverse age range that includes adult learners, a large percentage of its students belong to the often-written-about Millennial Generation or "Net Generation."<sup>6</sup> Millennial students, those born after 1981, possess "the information-age mindset."<sup>7</sup> That is, they stand out from previous generations by having grown up in a "digitally based culture" and most likely "are more comfortable working on a keyboard than writing in a spiral notebook, and are happier reading from a computer screen than from paper in hand."<sup>8</sup> All Mount students, whether Millennials or Baby Boomers, are immersed in a technology-rich

environment. For instance, in the year 2000, the school "became one of the first colleges in the nation to provide students with wireless computers."<sup>9</sup> All full-time undergraduates are required to participate in the school's wireless laptop program, and part-time and adult students have access to computer labs, software, loaner laptops, and a plethora of online library resources.

Given the technology-rich environment and generational characteristics of Millennial students, the informal anecdotal findings by the librarians about patrons' behavior toward e-books were surprising. After all, students typically are open to new media and technologies. These observations, of course, raised numerous questions that netLibrary usage data could not answer. Were our students using e-books? Did they prefer using print or electronic? Did the students' reactions observed by the librarians reflect only a small percentage? Additionally, how were they using e-books? The formal survey that followed sought to gain a better understanding of students' perceptions of e-books at the College of Mount St. Joseph.

## PREVIOUS STUDIES

There is a growing body of literature on e-books. A review shows studies concentrating on e-book collection development, usage trends (especially comparisons made between e-book accesses and print book circulation and usage within subject areas) advantages and

**Table 1.** netLibrary Patron Accesses

Year	Accesses
2000	13
2001	714
2002	797
2003	846
2004	807
2005	677
2006	386

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disadvantages of formats, consumer preferences, and usability of e-books.<sup>10</sup> Few studies focus on the e-book preferences and attitudes of undergraduates. Early studies that examined students' e-book usage and attitudes focused on technological aspects and the usability and design of device-based e-books and how use of these devices impacted the classroom learning environment.<sup>11</sup>

With the changing nature of both the e-book market and the e-book user, it is not surprising that several authors have called for greater information about the e-book user. Gibbons calls for more detailed usage reports from vendors that will help "determine how the ebooks are being used . . . [and] who is using the ebooks."<sup>12</sup> Additionally, Bailey urges more user surveys "to determine user preference" and also to indicate how an e-book is being used.<sup>13</sup>

Of the handful of existing studies that offer insight into the student perspective on Web-based e-books, several give evidence of student format preferences, and others provide insight into how students use e-books. For example, Appleton focused on how students in a midwifery information literacy program used netLibrary e-books, as well as how students experienced and perceived using them.<sup>14</sup> He found that students used e-books in a manner similar to e-journals; "that is in randomly accessed segments, rather than being read sequentially."<sup>15</sup> This supports the "use, not read" current trend found in the e-book marketplace and reflects that handbooks or other reference "books that you consult or read in short sections are more suitable as e-books than those that you read at length."<sup>16</sup> His subjects reported mixed views of e-books: they will use e-books in a distance learning situation, but they prefer using print books, citing more advantages over using e-books. As part of a larger collection development study, Ramirez and Gyeszly surveyed patrons (including undergraduates) to seek attitudes and preferences on electronic resources and found "that most patrons still favor the printed books over e-books."<sup>17</sup> Dilevko and Gottlieb examined undergraduates' use of print

and online resources. Their study found that undergraduates associated use of printed books with more "high-quality work." Students reported preferences for "print books containing exactly the required information" as opposed to e-books containing different but "good enough" information, and print books "were also preferred to the equivalent electronic book, albeit by a much smaller margin."<sup>18</sup> Langston reports on a California State University user survey that was conducted as part of a larger year-long collection development study. The survey sought to learn who was using their netLibrary e-book collection and what their users thought about it. Their research gathered characteristics of the user, the method the patron used to find an e-book, and gauged the user's level of satisfaction from using e-books. Forty-four percent of those surveyed were undergraduates. Langston found that while sixty-eight percent of the subjects indicated that they would use netLibrary again, sixty-two percent of the participants, if given a choice between using the print or electronic format, preferred using the print, and thirty-eight percent preferred the electronic.<sup>19</sup>

## RESEARCH METHOD

The method of data collection chosen for this study was a paper-based questionnaire. The survey included twenty-four questions: twenty were close-ended and four were open-ended. Closed-ended, categorical, and Likert-scale questions collected data about the subjects' demographic information, computer experience, and e-book and print book usage. Open-ended questions sought the students' attitudes, preferences, and thoughts about e-books. Three colleagues and three student assistants volunteered to pretest the questionnaire. They provided valuable comments that were included in the survey's revisions, and their assistance helped establish that the questionnaire took about ten minutes to complete.

Desired subjects for this study were undergraduates at the College of Mount St. Joseph. Enrollment data received

from the college's Research and Planning department helped identify undergraduate core curriculum classes with twenty-five or more students in them. Since the response goal was one hundred completed questionnaires, the survey administrator randomly selected four undergraduate core courses offered during fall 2004. Core curriculum classes were desirable because all undergraduates have an equal chance to enroll in them and thus helps achieve a random sample of the population. Once the classes were selected, the administrator asked permission to visit each instructor's selected class for fifteen minutes and administer the survey to volunteer participants. All four instructors agreed to participate.

## PROCEDURE

The survey was conducted during the months of August to October 2004 at the College of Mount St. Joseph. Prior to administering the survey in each selected class, the administrator introduced herself, explained the reasons for the survey, reminded the subjects that participation was voluntary and responses to the survey were anonymous, and gave other directions for completing the survey, such as instructing students if they had already taken the survey in another class to not complete one a second time. Those students who chose to participate were given a questionnaire and instructed not to put their names on the survey. To encourage their participation, students were invited to submit their names and e-mail addresses into an optional and separate random drawing to win one of five gift certificates to the college's bookstore.

## SNAPSHOT OF THE PARTICIPANTS

A total of 106 questionnaires were completed: 105 were from undergraduates and one was from a graduate student. Since the study focused on undergraduates, data from the one graduate survey was eliminated. The subjects were 60 percent female and 40 percent male, which is reflective of the college's en-

rollment data. The academic status of the participants was 38 percent sophomores; 30 percent juniors; 17 percent seniors; and 15 percent freshmen. Ages of participants ranged from 17 to 46, with the average age being 21 years and the median age being 20 years.

Several questions sought to determine the subjects' computer comfort level and usage. On average, students indicated that they were "somewhat comfortable" using a computer, and 86 percent reported participating in the college's wireless laptop program. The latter is significant since it indicates that the majority of the subjects have easy access to e-books anytime, anywhere with a portable laptop and a wireless connection. Eighty-nine percent of subjects reported that they use the Internet daily, and on average use the library's Web site monthly.

## E-BOOK USAGE

Of those surveyed, 75 percent indicated an awareness of e-books; that is, they had heard of them prior to the survey. Despite their high e-book awareness, only 39 percent had used an e-book. Open-ended explanations for why subjects had not used an e-book were analyzed using content analysis. The top five categories explaining why students had not used an e-book were (in order of frequency) awareness, preference for print, eyestrain, lack of need, and ease of use (table 2).

For those who had used e-books (n=41, or 39 percent), a series of questions targeted how students read e-books, reasons for using them, the type of e-books used, and how they locate them. All of these questions were closed-ended and subjects could have chosen all answers that applied. In addition, their e-book satisfaction level and their likes and dislikes of using e-books were also sought. Responses to how they read e-books showed that 44 percent read directly from the computer screen, followed closely by 34 percent who print pages to read, and 22 percent who do both. When asked why they used an e-book, the most frequently indicated reasons were research (n=35),

homework assignment (n=30), or for reference (n=24). There were only eight indications of using e-books for leisure reading. Subjects were also asked what type of e-book they used. This question sought to determine if students were aware of the different types of e-book databases available to them. The assumption was that students would not know. Indeed, most respondents were unsure of the type or vendor of e-book used and the majority identified their e-book type as OhioLINK, which is our library consortia and not an e-book vendor.

Results show that the college's undergraduates, on average, were "somewhat satisfied" with their e-book experience. Data from the open-ended questions about what they liked and disliked about e-books further explores students' satisfaction levels. Content analysis was used to classify and tabulate student responses into top three categories (table 3).

All participants were asked several questions about their future e-book usage. To the question about the likelihood of using e-books in the future, the majority indicated "somewhat likely." When asked if they would use an e-book if the electronic version were the

only format available, an overwhelming 89 percent said "yes." If students were to be given the choice between using either a print book or the book's electronic equivalent, 66 percent would choose the print book while only 34 percent would prefer the e-book. Respondents to this last question were prompted with an open-ended question to explain their preference. The explanations were analyzed and grouped into the following categories found in tables 4 and 5.

## DISCUSSION

Student responses to the questionnaire both confirm and contradict what reference librarians had observed. On the one hand, that 66 percent of those students surveyed preferred using a physical book if given a choice between print and electronic formats validates what the college's reference librarians were witnessing during reference interviews. However, that 89 percent of the subjects indicated that they would use an e-book if it were the only copy available along with a majority reporting they were "somewhat likely" to use an e-book in the future contradicts student behavior observed by the librarians.

**Table 2.** Reasons Why Students Had Not Used an E-Book

### Top five categories, listed by frequency followed by example responses

1. **Awareness**  
 "Never heard of them."  
 "Just found out about them."
2. **Preference for Print**  
 "Traditional books are more reliable."  
 "Books are more convenient."
3. **Eyestrain**  
 "Staring at the computer is uncomfortable."  
 "Don't like reading off computer screen."
4. **No Need**  
 "I have just never really had a reason or needed to use an e-book."  
 "If it's not required, I probably won't use it."
5. **Ease of Access**  
 "Hard to access."  
 "Easier to get a book instead of sitting in front of a computer or printing a lot."

## FEATURE

Students—even NetGen Millennials who are characteristically more at home in front of a computer screen—have mixed feelings about e-books, as comments such as “E-books would be a good source to find things but I wouldn’t like it if all print went away” and “E-books are handy but nothing compares to a print book” help illustrate. These mixed views of e-books also speak to the recognition of the flexibility that having both print and e-book formats offer. While they prefer using printed books, students reported seeking e-books for specific purposes, such as research, reference, and homework, and if a printed book is not available, they indicated that they are highly likely to pursue an electronic version.

How students reported using e-books corresponds to where the e-book market is currently, that is, the “use, not read” trend. In other words, results suggest that students use e-books in a manner similar to how they use

e-journals. For instance, students reported that they read small portions of text on screen combined with printing portions of digital text needed and do not spend long periods of time reading from a computer screen, opting instead to read from printouts. Reading from a hard copy, of course, corresponds to the tactile quality of traditional books. Interestingly, student responses revealed a desire for the physical aspect a book provides, using language such as “hold” and “tangible” for reasons why they preferred a physical book to the digital format. Moreover, student remarks such as “like to have book in hand/hold and take home” further indicate that our human love of the book as cuddle object remains quite strong in the digital age. Perhaps the desire for a physical book is a way for students to vary their information intake in such a heavily online, hi-tech culture. As one student remarked, using print books is preferable because “I’m constantly on a computer already

so I like to do research with different materials.”

The flexibility students see between the two formats also highlights how each lends itself to varying learning styles. Feedback from the survey indicates that a “one-size-fits-all” digital preference is not a correct assumption when it comes to what format our patrons—especially Net Genners—want or need. Some students reported a preference for print books because they felt they understood what they were reading better from the printed page and were less likely to be distracted by other aspects of computing, such as e-mail or instant messaging. One subject preferred using a traditional book “[b]ecause it is easier to miss information given on the computer. With a printed book I can highlight and take notes knowing that I am processing information.” Conversely, students who indicated a preference for e-books also reported that their reading comprehension was better from a computer screen. What is remarkable here is that while students’ print and e-book preferences differed, their reasons for their preferences were uncannily similar. For instance, some of the reasons the 34 percent said they preferred e-books included access anywhere, reading comprehension and concentration, and portability. The responses of the sixty-six percent who preferred print books included identical reasons.

It is not surprising that educational costs are a major concern to most undergraduates and feedback received from students in the study reflected this concern in relation to e-books. From open-ended questions, responses revealed that students thought they either had to pay to use e-books or believed that they are freely available. Several subjects made specific references to electronic textbooks, and the general pulse of those responses indicated students assumed that e-textbooks would cost less than traditional college textbooks, especially if “free” access were offered through the library. Take, for instance, these two student comments: “Would be great to have online textbooks because of cost,” and “Make all electronic so we don’t have to buy

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**Table 3.** What Students Like and Dislike about E-Books

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### What Students LIKE about E-Books

#### (Top Three Categories, Listed by Frequency Followed by Example Responses)

##### 1. Convenience

“Don’t have to order or check out book.”

“Access is easier from home.”

##### 2. Cost

“Don’t have to . . . pay to copy book.”

“Don’t have to buy the book.”

##### 3. Ability to print

“Like printing only pages I need.”

“Print pages needed.”

### What Students DISLIKE about E-Books

#### (Top Three Categories, Listed by Frequency Followed by Example Responses)

##### 1. Searching/navigation

“Menus confusing.”

“Dislike searching for them.”

##### 2. Eyestrain

“Reading from the screen.”

“Screen glare is annoying.”

##### 3. Prefer print book

“I would rather have the book on hand.”

“Would rather read in bed or on the couch or on the beach—not at a computer.”

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them." Along the same lines, numerous comments focused on the cost of printing portions of e-books. Students noted liking the ability to print e-book pages, but responses show a concern about wasting paper both as a resource and an expense when printing e-book pages.

Given the mixed messages undergraduates in this survey have sent about e-books, what are the implications for academic libraries and e-book vendors? For libraries, it is important to keep in mind that patrons are approaching information-seeking with different learning styles and format preferences. Ideally, libraries should continue to offer a balanced variety of print and e-book options. Of course, if physical storage and money were no objects, providing duplicate copies of print and electronic would be easy, and both the e-book and non-e-book user would be satisfied. Nevertheless, libraries should not underestimate the importance of their print collections to their patrons, including NetGen Millennial students. For the non-e-book user, libraries can supplement a print book collection with other traditional services including ILL, consortial sharing, or purchase on demand from used-book suppliers.

In addition to consortial borrowing of physical books, sharing electronic collections is another viable and effective way to bring content to patrons. In an undergraduate setting, this is especially favorable if e-book vendors allow a text to be printed in its entirety through print-on-demand or a user-friendly format such as PDF. Depending on licensing agreements, libraries that pool resources and collectively buy content from e-book publishers, rather than individually subscribing to a database, can then host that content for shared use, and, using open-source software, can customize the e-book interface to make it "student friendly." An excellent example of this type of consortial sharing is the recent OhioLINK Electronic Book Center, which contains e-book content purchased by Ohio academic libraries from ABC-CLIO, Oxford University Press, and Springer. Publishers such as Springer offer high quality PDF versions of their

e-books which, along with a well-stated acceptable use policy, allow entire book texts to "be printed out or saved for teaching or research" as long as it is for "individual and educational and research purposes."<sup>20</sup> A model like the EBC offers a promising user-friendly alternative for not only students who want to print e-books just as they print e-journal articles and smaller libraries with limited budgets, but also for the reluctant e-book user.

Another implication for academic libraries is the need for ongoing marketing of library services. Even though the Archbishop Alter Library heavily promoted its e-book collection (in addition to its other resources) the most frequent reason students reported for not using an e-book was lack of awareness. Librarians seem to worry too much about annoying patrons with announcements of new (or forgotten) services, but as responses in this study indicate, patrons want to know. Shortly after this study was completed, usage data for e-book access for the years

2004 through 2006 became available. Of significance was the slight decline in netLibrary accesses (from 846 in 2003 to 807 in 2004) and more dramatic decreases in accesses in subsequent years (table 1). These unexpected drops in e-book use were surprising, especially if one considers the aforementioned ongoing marketing by librarians, presence of e-book records in the library WebPac, as well as students' reported high awareness of e-books. (Of those surveyed, 75 percent had heard of e-books prior to the survey, but only 39 percent had used one.)

For e-book vendors, the student feedback from the survey indicates that the two areas in which undergraduates have strong interests are research/reference content and the ability to print that content. In particular, there is great student interest in e-textbook products, as many student responses not surprisingly cited cost, storage, and portability benefits of electronic or online textbooks. Many academic libraries already struggle with textbook collection-

**Table 4. Reasons 34 Percent Preferred an E-Book**

**Responses Were Analyzed and Grouped Into the Following Categories, Ranked in Order of Frequency, Followed by Example Responses**

**Access (Convenience)**

"Access anywhere, anytime."  
 "Easier to get online than go to library."  
 "Always have access."

**Cost**

"Wouldn't have to buy book."  
 "No late charges."  
 "Cheaper than the print book."

**Reading Comprehension/Concentration**

"Can focus on a computer screen better than trying to flip through a book."  
 "Reading faster from website."  
 "Easier to find and comprehend things."

**Portability**

"Some books are heavy to carry."  
 "No extra weight of books."  
 "Like computer storage vs. carrying the book around."

**Ability to Print**

"Print a few pages rather than carrying books."  
 "Always print."  
 "Print off an e-book for hard copy."

## FEATURE

development decisions. While some libraries state in collection policies that they do not collect textbooks and others offer copies on class reserves, undergraduate patrons nevertheless ask for them, and some students go as far as making repeated ILL requests for textbooks. Perhaps utopian and somewhat naive is the suggestion for e-book vendors to consider offering e-textbook databases with aggregated content from various textbook publishers. Additionally, since students are likely to print sections or chapters of e-books and read hard copies offline (similar to how they use full-text articles), hassle-free printing, as previously mentioned, without compromising copyright restrictions would greatly ease access and increase student use.

E-book vendors also can aide librarians by improving e-book usage data, such as offering more detailed usage reports and statistics. With that said,

one also has to wonder where and how e-books fit into the growing Web 2.0 world of personalization, feedback, and interactivity. Two of the public domain e-book firms, Project Gutenberg and Librivox, offer some collaborative features such as volunteer editing, recording audio books, and participating in online forums. If e-book firms in general were to augment personalization and feedback features characteristic of new media, then this might become another way to continuously engage with the e-book user, receive valuable patron usage feedback, and perhaps allow patrons to customize their own e-book experience.

## CONCLUSION

Overall, the feedback received from students paints a portrait of where electronic and print media's places are in academia. That is, these formats are coex-

isting. Print books and e-books present students with options, allowing undergraduates to meet different information needs and learning styles. Instead of "competing media,"—a metaphor that Gall considers counterproductive and inappropriate—perhaps a more apt description is one that relays balance.<sup>21</sup> Undergraduates certainly recognize the collaborative, flexible relationship between the two formats, and they seem to have found the middle ground between these perceived battling media. Which will win the format war in the future is not the right focus libraries and information technologists should be taking. As Levy puts so well, "These modes of operation are only in conflict when we insist that one or the other is *the only way* to operate."<sup>22</sup> For libraries, the focus will remain our patrons' information needs and options for their access to information regardless of format. Of course, given this study's limitations and the changing nature of information environments, continued investigation into users' e-book experiences and how to accommodate both the e-book and non-e-book user is needed. One such area to watch is Google's digitization of academic library print collections for its Google Book Search service. Although still in its beta infancy, how Google's fully realized Book Search of the future will impact libraries and their undergraduates' use of and attitudes toward e-books remains to be seen.

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**Table 5.** Reasons 66 Percent Preferred an E-Book

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**Responses Were Analyzed and Grouped Into the Following Categories, Ranked in Order of Frequency, Followed by Example Responses**

### Access (Portability)

- "Access anywhere."
- "Print books are easy to take everywhere."
- "Prefer carrying around a book compared to carrying around my computer."

### Computer Issues

- "Computers are sometimes unreliable, a print book is always there."
- "You don't have to carry a computer, turn anything on, or have any hassles that a computer has."
- "E-books aren't convenient: i.e., servers down, computer problems, etc., whereas you can read a print book anytime."

### Eyestrain

- "I can't stare at a computer screen for too long, but I can with a print book."
- "Hard to read from screen."
- "Don't like reading from a screen."

### Physical Aspects of Print Books

- "Like to be able to hold material."
- "Easier to have something tangible."
- "A book can always be in your grasp."

### Read Comprehension/Concentration

- "Because it is easier to miss information given on the computer. With a printed book I can highlight and take notes knowing that I am processing information"
  - "Get distracted reading from the computer screen."
  - "Process info better."
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## References and Notes

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