Digital Textbooks at St. Lawrence University

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Abstract

As university and college campuses search for a best-fit solution to incorporate digital textbooks into their classrooms, the transition can involve several distinct elements. This research project identifies issues that need to be considered at the outset of any digital textbook discussion. A survey sent to faculty and students at St. Lawrence University was designed to explore the current definition of digital textbooks; the significant features in both digital textbooks and print; and the perceived limitations and benefits of adopting digital textbooks.

Response to the survey was adequate with 31% of faculty and 14% of students submitting surveys. Although it appears that the respondents are a fair representation of St. Lawrence University across disciplines and status, females responded to the survey in almost a 2 to 1 ratio with males, a statistic that is not representative of either St. Lawrence University faculty or students. Tenured faculty were well represented at 56% but response was low from other categories of faculty.

The question of definition, asked just after the demographic information, informs the survey participants answers to the rest of the survey. Faculty and students appear to have similar perceptions of the definition of digital textbooks. The largest percentage of both groups agreed that books on eReaders or computers constitute a digital textbook.

A significant part of the data dealt with the importance and perception of textbook features. There were several questions on the survey, including ‘Which textbook features are important to you?’ and ‘Rate the importance of Features you would use in a digital textbook’. Responses to the question ‘Which format offers these features better?’ showed the most interesting data. Student trends show a slightly higher interest in digital textbook features and benefits. However, at least 50% of the students preferred notes and sharing in print format which reflects very little change from findings in previous studies. The results did not change when compared by the year of the student.
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The results did change when the data was divided by faculty that have adopted and those that have not adopted digital textbooks, showed a marked preference for electronic format by those faculty that had used digital textbooks. Results showed that a correspondingly high percentage of faculty that had not used digital textbooks, were of the opinion that none of the features were better in electronic format. Although the percentage appears significant, the small number of faculty that is represented by those that had not adopted digital textbooks needs to be taken into consideration. However, the results seem to indicate that a lack of experience with digital textbooks may be influencing opinions on their use and benefits.

The last section of research dealt with the limitations and benefits of using digital textbooks. It is clear from a correlation of student responses that students are following the faculty lead on this issue. Faculty were given the opportunity to comment on why they had not adopted digital textbooks and 82% of them responded with comments. Many faculty commented that students should be able to choose for themselves from available formats. However, one of the three most common limitations mentioned was that laptops or mobile devices, with distractions from social media, would disrupt a class. This limitation is also confirmed by the results of a question about devices that the survey taker would be willing to use, in which 52% of faculty and 48% of students were unwilling to use mobile devices. At least 30% of both faculty and students were unwilling to use iPads or tablets to access digital textbooks.

The researchers concluded from the data that faculty and students have similar definitions for digital textbooks as well as similar preferences in features. Both faculty and students view readability and highlighting as not yet successfully adapted into digital textbooks. The percentage of “No Response” answers could indicate a lack of knowledge of the current state of digital textbooks which is evidenced in both faculty and student comments. The challenges to the use of digital textbooks by students are influenced by faculty. There was no change in perceptions of the survey takers based on demographic differences available from the data. However, there was one significant trend in the comparison of faculty that had used
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digital textbooks versus those that had not used them indicating that a lack of experience with digital textbooks contributed to the difference in perceptions.

The researchers recommend that further steps be taken in the form of professional workshops to raise the level of awareness of faculty to the possibilities and opportunities offered by the use of digital textbooks.
Part 1: Introduction

Several universities are incorporating digital textbooks into their classrooms, however transitioning to these digital textbooks has met with some resistance. Results vary from university to university based on the perceptions of faculty and students in each community. A recent report on some of the pilot projects indicates that the idea is not welcomed by everyone on these campuses, implying some resistance.

This report is based on a survey conducted this fall of faculty and of students at St. Lawrence University in order to determine their perceptions of digital textbooks. The survey questions were formed based upon related literature previously reviewed by the research group and refined based on suggestions presented during interviews and pre-testing prior to the start of the data collection period. The literature review indicated that defining digital textbooks is a changing dynamic as technology advances. This study gives insight into this ongoing process at St. Lawrence University.

Part 2: Literature Review

Classrooms in the 21st century are totally different from classrooms thirty years ago or even three years ago. But if one is going to point to any aspect of the classroom that still has not covered much ground on its trip into the 21st century, it has to be the textbook.

According to Educause, every year, schools, universities, and students spend a combined $10 billion on textbooks. But textbooks have been undergoing a transition in both content and format as the digital age evolves. Amazon’s Kindle already offers some 30,000 e-books for the school market. And now, several other companies (Barnes & Noble, McGraw-Hill and Pearson) are jumping into this race to replace hardcover textbooks with electronic editions that can be read on laptops, Apple's iPad, and other textbook readers.
What is a Digital Textbook?

According to Oxford dictionary an electronic book (variously, e-book, digital book, or even e-editions) is “an electronic version of a printed book that can be read on a computer or handheld device designed specifically for this purpose”.

The idea of digital book was created by Michael Stern Hart in 1971; he founded Project Gutenberg, which is recognized as one of the earliest and longest-lasting online literary projects. It has become a worldwide phenomena affecting the way we read, and more prominently now, the way we teach. Unlike many of the digital textbook that can be purchased, Project Gutenberg offers its digital texts in a variety of file formats. In other words, the readers are not limited with a title that they can only read on their Kindle. They can read the books on their computer, their Kindle, their iPad, or on their cellphone. In addition, Project Gutenberg allows readers to print out the digital texts. Many other large Internet projects adopted some of Project Gutenberg’ features; for instance, Wikipedia relies on volunteer effort, the Internet Archive is dedicated to the digital preservation of culture, and commercial and nonprofit efforts like the Million Book Project and Google Books can trace their ideas to Hart.

Amazon is one of the world leaders in understanding the importance and the impact of digital textbooks, thus it has a huge selection of books available for download to a Kindle. Amazon even allows customers to rent digital textbooks for the entire semester.

Launched in 2007 as a joint venture with five publishers, including McGraw-Hill and Pearson, the CourseSmart website allows students to read and download textbooks. The company allows professors free access to any book in its extensive library of textbooks. Publishers have worked for the past decade to create highly interactive digital companions for textbooks. Originally on a CD-ROM packaged with each book, this ancillary material now more commonly appears on multimedia websites where students can view animations
and videos, take practice tests, review tutorials, link to related sites on the Internet, and communicate with tutors and subject experts [Hannon, 2008].

Scholarly publishing, which provides content to textbooks, is transitioning via university press programs to a new business model which appears to be predominantly digital [Withey, et al, 2011]. The definition of an electronic textbook is also an issue in transition as evidenced by web based discovery services and custom textbooks provided by universities [Brown & Simpson, 2012], as well as the number of websites and some university bookstores that will produce custom electronic textbooks complete with copyrights management. This has the potential to change the curriculum in a given field.

With the recent advances in technology for reading on-line and changes in curriculum due to the availability of “learning modules” like Blackboard, Angel, or Sakai, the definition of textbook has changed in some disciplines. Reading electronic textbooks versus the traditional reading of text on a printed page may be less of an issue as the current generation of freshman would be considered “digital natives” while the current upper class students and new faculty might be considered “digital immigrants”. Perception might also change in response to changes in business models by university bookstores.

In conclusion, digital textbooks can be defined as core textbooks for students that offer various interactive functions, and provide the learner with a combination of textbooks, reference books, workbooks, dictionaries and multimedia contents such as video clips, animations, and virtual reality, both at school and at home, without the constraints of time and space.

Positive and Negative Perceptions of Digital Textbooks:

Past case studies indicate that a perceived benefit of digital textbooks is the saving in the cost of books. A typical college textbook costs anywhere between $40 to $200. According to Robin Schulze (the English Department Head at the Pennsylvania State University) “the cost of textbooks is a continuing issue
on the Penn State campus; the cost is well over $1,000 per year. Trying to figure out how to manage that cost is very difficult”. *Pasajes (a Spanish textbook for intermediate level)* by Mary Lee Bretz costs $110.56, however you will pay only $70.54 for a Kindle version. A common perception is that a digital textbooks version of a hefty text would be a big cost saver, but it is not always true. *Deux Mondes, a French textbook for elementary level*, by Tracy Terrell sells for roughly $111.33; however the Kindle price is not much cheaper, at $101.01.

In spite of the uneven nature of the costs, some universities are considering forcing students to switch to digital textbooks to help them save money. In 2009, Daytona State College (DSC) set out to become the first institution to pilot digital textbook solutions and then scale best practices to create campus-wide e-text adoption.

**Portability** is the one area where the e-readers and tablets really shine. Bulky textbooks can be replaced with a thin electronic device. Also, the risk of forgetting one textbook is low, if all of them are saved on the e-reader. The benefit of having all of your textbooks in one lightweight device to carry to class is lost if the device is not charged or a low battery signal interrupts an intense classroom discussion. Another issue concerns the student that splits the cost of a textbook by sharing with a friend, which is prohibited by most e-readers. Many students would not be comfortable loaning out their expensive device.

**Durability** is another key in deciding what to purchase. A book dropping off a table isn't a concern, whereas it might seriously damage a laptop that is open and switched on. A laptop can't be safely operated while walking around holding it. Information inside a book also doesn't get corrupted, accidentally deleted or affected by power shortages. However, the device can travel in a teacher or student bag and get to school, home and back without breaking due to its durability or protective casing.

The edge that digital textbook has over print book, in term of durability, pushed some publishers to change their policies with the librarians. In March of 2011, HarperCollins Publishers began enforcing new
restrictions on its digital textbooks, requiring that books be checked out only 26 times before they expire. Assuming a two-week checkout period, that is long enough for a book to last at least one year. This means after 26 checkouts, the library must pay for a new license if they want to continue lending the book electronically. The rationale offered by the publisher is since paper books wear out and need to be replaced if they are to remain in a library's collection, the same should be true of their electronic formats. The publisher argues that it should not be denied revenues that come from reselling replacement books and resources. Because the publisher assumes digital resources never deteriorate, they have set an arbitrary limit to the number of times an electronic resource can be accessed. Libraries are not pleased with this policy.

Cory Doctorow wrote in his Guardian column in March 2012 that “it's wrong to argue about whether print books last for more or less than 26 checkouts -- the important thing to recognize is that the perishability of a print book is not a feature that we should seek to replicate in successive media.”

Buying e-versions of textbooks may save some money on the cost of books, and it won't strain your back carrying them to class. But using an e-reader isn't always the best choice. In 2011, Alex Thayer of the University of Washington conducted a study on e-reader use for academic purposes. Each student was given a Kindle DX loaded with books in the fall; by spring, almost 60% of them had stopped using the reader. The reason for this was “Usability issues.” 75% of students in the study still used paper to take notes despite the fact that Kindle does allow you to annotate some books.

The same issue was expressed by the students of the University of Notre Dame, when they tested iPads in a management class. Students said the finger-based interface on its glassy surface was not good for taking class notes and didn't allow them to mark up readings. For their online final exam, 39 of the 40 students put away their iPads in favor of a laptop, because of concerns that the Apple tablet might not save their material.
However, increasingly, e-textbooks have excellent search functions and abilities which facilitates a quick and easy search for information. With hard copies, time is often wasted skimming through pages or searching the book’s index. Another beneficial feature is the ability to convert a digital textbook into an audio file, making it easy to listen and learn.

**Limitations and Benefits of adopting e-Textbooks:**

A large portion of the resistance towards digital textbooks is the distraction that comes along with their interactivity. Digital textbooks come equipped with embedded media. Although these embedded resources are viewed as a positive enhancement to student learning when used appropriately, some students and professors view it as an unnecessary distraction.

In January 2012, *The Chronicle at Duke University* published an article mentioning that 95% of its students bring computers to campus, with 95% of those being laptops. Laptops are changing the ways students learn in class, as well as the way (and the places) students study.

Many students and professors agree that laptops can serve as distractions during class. So much so, in fact, that about a third of the sociology department faculty at Duke has banned laptops from their classroom. Students who spend class surfing the web, emailing, and uploading photos to Facebook are not the only ones that may be distracted, as these activities may inadvertently distract their classmates as well. A 2006 study conducted by Winona State University found a negative relationship between laptop use and student learning. The data indicated that laptop usage hindered students’ ability to pay attention and comprehend lecture material. According to the study, students who used laptops in class spent considerable time multitasking, and laptop usage posed a significant distraction to both users and their peers.

In March 2011, Rob Reynolds, the editor of NextisNow.net and Director of Direct Digital wrote a five-year report that projects the future of digital textbooks in higher education. He stated that digital
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textbook is at its tipping point. He defined tipping point as “as that point on the industry/product continuum at which current financial variables and market factors make the eventual dominance of digital over print an inevitable outcome within 5-7 years”. Therefore, we will expect sales of digital textbooks in higher education to increase approximately 25%.

Digital Textbooks in the North Country:

In 2011, a group of students at the State University of New York – Potsdam (SUNY) wrote a research paper titled “What Drives Electronic Textbook Usage at SUNY Potsdam?”. In their research, they found that faculty members feel that textbook features are offered in print and electronic formats equally well, however, they still prefer printed textbooks mainly because of the familiarity with the medium. However, they are willing to try electronic methods of textbook delivery, when those methods are in a form that they are already familiar with, such as a computer, Moodle or Blackboard. Thus, in conclusion, because faculty members feel both options offer textbook features equally well, but still gravitate toward the familiar, SUNY Potsdam will not see an increase in the usage of electronic textbooks on campus unless faculty members have the opportunity to become familiar with them in a low-pressure setting, such as an educational forum or review board.

At St. Lawrence University, Canton, a private liberal art university located twelve miles from SUNY-Potsdam, the adoption of digital textbooks is an open question. There are no publicly available documents concerning attitudes towards digital textbooks from students, faculty, or the campus bookstore. However, these issues have a potentially significant role in providing information concerning the benefits or limitations of digital textbooks as well as the capabilities of the University to make them available. Research focused on the uses and perceptions of digital textbooks by faculty and students could provide information for the discussion on where this media fits best.
Part 3: Research Questions, Methodology and Representation

During this study, the research team focused on two groups of participants – faculty and students at St. Lawrence University, and three areas of interest as defined by the research questions. The goal of this study is to determine which issues are significant in the ongoing discussion of digital textbooks. The research questions were:

1. How do you define digital textbook?
2. Which features are significant in digital textbook and in print?
3. What are the limitations and the benefits of adopting digital textbook?

Methodology

Surveys were developed initially based on data gathered during the literature review process, and later were refined based on discussions with a selected group of one faculty, one student, one librarian, one administrator and one information technology staff member. Two surveys were developed, S1- Faculty Survey (Appendix B), and S2- Student Survey (Appendix C), which were distinct but contained questions that were common to both. To ensure that the survey questions were clear and understandable as well as to determine the length of the survey, a pre-test of the survey instrument was conducted in mid-October. It was paper-based and administered in person to the selected group.

After the pre-test, significant revisions were made, mainly to clarify some questions that may have confused the respondents or were too general to contribute significant results in analyzing the data. After approval of the changes from the IRB committee, emails were sent to the Faculty Listserv and the Student Listserv over a two-week period, consisting of one original email and a reminder email during the second week followed by another email the last day of the survey.

The survey instrument was an online Drupal generated form with multiple-choice and short-answer questions. Data was stored on a network server secured by Information Technology behind the St. Lawrence
University firewall. IT also recommended measures to ensure anonymity. By following these steps, no identifying email addresses were retained when the surveys were submitted. All identifying information was stripped from the data before downloading to the researchers.

Once all data was collected, survey responses were entered into Excel spreadsheets, and statistical and qualitative methods were applied in order to describe and interpret the findings. Student and faculty data were analyzed separately using frequency count, cross tabulations, and content analysis of open-ended responses. The findings of our data follow, and have informed our recommendations for future actions.

**Representation**

The research team received 61 surveys back from faculty members, and 330 surveys from students, which represents approximately 31% of all SLU faculty members and 14% of all SLU students. The first three questions on the faculty survey (S1 – Q 1,2,3) and on the student survey (S2 – Q 1,2,3) were demographic questions, which were used to determine the representation of the campus community.

The gender data (S1-Q1, S2-Q1) reveals a disproportionate number of female respondents as seen in Charts 3a and 3b. The 2 to 1 ratio of females to males is not representative of the larger St. Lawrence University population where the number of male and female faculty, as well as students is statistically even (Undergraduate students on campus: Male 1080, Female 1294).
Of the faculty responding to the second demographic question (S1-Q2), 36% listed their discipline as Science and only 8% were from the Arts (Chart 3c below). However, at 56%, over half of the faculty respondents are tenured (S1-Q3) (Chart 3d below). Although this figure seems high, it should be noted that tenured faculty may be more interested in this issue since it could materially change their future teaching methods. Non-tenured and other categories of faculty may not be as interested in the future of digital textbooks at St. Lawrence since they may end up teaching at other institutions. We, the researchers, appreciate the responses from all categories of faculty in the effort to inform further discussion.

Data from the student surveys shows that all major subject areas were represented although multi-majors accounted for 14% of the students that responded. Chart 3e is shown without percentages to illustrate the number of multi-majors that responded. The inclusion of multi-majors made it difficult to break down data across disciplines.
The Science majors are best represented with 32% of the responses of which 18% indicated a multi-major. The Arts seemed underrepresented at 6% considering that 58% of those responses indicated Art as part of a multi-major. Undeclared majors accounted for 21% of the students but 10% of those students also checked a major perhaps indicating intent to declare a major in a specific field.

One other question on the two surveys could be considered a dependent variable depending on interpretation. Faculty were asked if they had ever adopted a digital textbook for class (S1-Q10) and students were asked if they had ever used a digital textbook for class (S2-Q4). The results are shown in charts 3f and 3g.
The one “No Response” as well as the free text comments associated with this question on the faculty survey, which are summarized in Part 4: Results, make it clear that the answers to this question depend on the perceived definition of a digital textbook. There is a similar finding on the student answers to this question (Chart 3g above) in which one student checked both choices.

The researchers believe that the demographics show a fair representation of the St. Lawrence University population with the exceptions noted above.

**Part 4: Results**

In discussing the results from the survey, it is perhaps most helpful to look at the data in terms of our research questions. The first research question, “How do you define a Digital Textbook”, is also a survey question (S1-Q4 and S2-Q6) which both students and faculty were asked and answered by selecting all the definitions that applied. This was a conceptual question and was asked to help determine user knowledge of digital textbooks formats. The results are summarized in Chart 4a:

![Facility and Student Definitions of eTextbooks](image)
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It is obvious from the chart that both students and faculty perceive digital textbooks to be books whether it is on a “Computer” or an “eReader”. Opinions start to diverge when digital textbooks are defined as “Online material” or “Files on Sakai”.

Of more interest, are the perceptions of both faculty and students that have adopted or used a digital textbook versus those that have not used one. The results indicated that the definition didn’t change dramatically whether a faculty or a student had used a digital textbook or had not used one.

After defining a digital textbook, faculty and students were asked questions about features in both digital textbooks and print textbooks (S1-Q5, Q7, Q8; S2- Q5, Q8, Q9, Q10). The answers to these questions show the importance of specific features in using textbooks.

Results for the question “Which textbook features are important to you?” (S1-Q5 and S2-Q5) show that 93% of faculty chose “Content” and 69% chose “Price” as important features, while 89% of students chose “Cost” and 85% chose “Required by course” as important reasons to purchase a textbook. Interestingly, 41% of faculty chose 3 features: “Content, Price, and Ease of access” as important. Of the 34% of students that chose 3 factors, “Cost, Requirement for class, and Critical to success in class” were chosen most often. The data also showed that 38% of students chose at least 4 reasons to purchase textbooks. (Charts 4b and 4c)
Both groups were asked to rate the importance of specific features that they would use in a digital textbook. This question was asked using a rating scale of “Important”, “Not important”, or “No response”. Review of the data shows that faculty and students tend to agree on the importance of specific digital textbook features although a larger percentage of students rated the same features as significant. “Ease of Access”, “Readability”, “Ability to print”, and “Cost of the electronic version” were rated highest by students and faculty while “Ability to share books with others” and “Ability to share notes electronically” were rated least important. “Ability to highlight electronically” and “Ability to add electronic notes” were rated in the middle (Chart 4d). It is interesting to note that the percentage of students that rated features important was over 50% for all categories. Faculty responses were over 50% except for the “Ability to share notes electronically”.

![Important eTextbook Features](chart4d)
Students were asked an additional question (S2 – Q10) to determine if previous findings from the literature review hold true at St. Lawrence University - such as students prefer digital textbooks because they are cheaper. The results (Chart 4e) indicate that “Cost” is still the most important and appealing feature followed by “Instant availability.” The lower response percentage may reflect students that have not had experience with digital textbooks.

In fact, for most of the features questions, there was no significant difference between those that had used digital textbooks and those that had not used them. A difference does show up when faculty were asked which format was better for specific features.

The last question concerning perceptions of features (S1-Q7, S2-Q8) also reveals attitudes towards the limitations and benefits of adopting digital textbooks. Both Faculty and students felt that print offered the best “Readability” and “Ability to highlight” and faculty felt that the “Ability to print copy” and “Access” were best offered electronically. Students also felt that the “Ability to print copy” is best offered electronically however they differed by choosing “Quality of graphs or illustrations” as the second best feature electronically. The results show in the actual data but can be extrapolated from Chart 4f which shows one of the few examples of the divergence of faculty and student interest and opinion on features that are better in print format.
It is of some interest that we had a number of “No Response” mainly related to features involving notes. It is unclear from the data whether this is due to a lack of a clear understanding of the option or whether it is due to lack of familiarity with digital textbooks.

Faculty answers to this question show a significant difference between the opinions of those that have used digital textbooks and those that have not used them.
It should be noted that the percentage of faculty in the survey that have used digital textbooks is less than 20% of the responses (Chart 3f in Part 3: Representation). However, the fact that almost 90% of faculty that have used digital textbooks found printing to be better in electronic format lends weight to the data. The responses from faculty that perceive features that are better in Print show a corresponding uptick in format preference for Faculty that have not adopted digital textbooks.

Student responses indicate no difference in perceptions based on whether the student has used a digital textbook or not, as shown in Chart 4i.

Further perceptions of the limitations and benefits of adopting digital textbooks were addressed through the last two questions on the faculty survey (S1-Q9, Q10) and the last three questions on the student survey (S2-Q11, Q12, Q13) as well as faculty survey (S1-Q6) and student survey (S2-Q7) concerning textbook access.

On both surveys (S1 – Q 6 and S2 – Q 7), “indicate your willingness to try these methods of textbook access” had the response options “Would never use it,” “Might use it,” “Would definitely use it,” and “No
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response”. The three point ordinal rating scale was to determine if the method of digital textbooks delivery made a difference in their willingness to try it while providing an option to not respond. It is also useful to compare data between students and faculty members.

The results clearly indicate that the least favorite method was “Mobile device” and that faculty prefer to use “Print textbook” but are willing to work with a “Course website” (Chart 4j).

The student data echoes faculty opinion on this issue in that they are most willing to use “Print textbook”, “Course website”, and “Laptop and desktop”. It is surprising that about 50% of students and faculty are unwilling to use a mobile device (Chart 4k). This result is also shows up in the faculty survey (S1-Q9) concerning format (Chart 4l)
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Students were asked, “If it were possible, would you prefer to have eBooks for all of your textbooks?” (S2 – Q13) 52% of the students made it clear that their choice “Depends on the class” and 29% were decisive by saying “No”. (Chart 4m)

![Chart 4m](chart.png)

Faculty were asked if they had ever adopted a digital textbook for a class (S1 – Q 10) and students were asked if they ever used a digital textbook for a class (S2 – Q4). The results indicate that only 15% of faculty had adopted digital textbooks (Charts 3f and 3g in part 3 in this paper).

Faculty had the option to explain their answer and 82% of them used this option. The reasons for not adopting digital textbooks, according to faculty, can be summed up in three groups:

1- Faculty don’t allow laptops or mobiles in class because of the risk of distraction that they cause.
2- Students prefer to use printed format not digital textbooks.
3- Faculty think that it is hard to creates lectures and read on screen (Personal preference)
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The faculty answers were also reflected in the students’ responses to the reasons students didn’t purchase digital textbooks (S2 – Q12) 32% of the students mentioned that they didn’t purchase a digital textbook because “Professor uses print copy”. (Chart 4n)

Students were asked “What challenge do you see with using eTextbook? This was a “check all that apply” (S2 – Q11). “Writing and highlighting” was the biggest challenge followed by concerns for “Not being able to use eTextbooks in the exams.” (Chart 4o)
Although most of the results indicate that the perception of available features in digital textbooks did not change with use, it should be noted that both the rated features and the limitations and benefits are dependent on the respondents’ definition of a digital textbooks. This is a potentially significant factor involving a granularity of data analysis that has not been addressed in this report.

**Part 5: Conclusion**

This research survey has attempted to demonstrate the level of understanding and acceptance of digital textbooks on a university campus. The results should inform the discussion about how to integrate digital textbooks into a university setting. The data results indicate that faculty and students have similar perceptions of how to define a digital textbook as well as similar preferences in features. If the definition was more narrowly defined, the results may have been different. It is not possible to determine from this survey whether the respondents answered the questions using the definitions of ‘course files on Sakai’ and ‘online material’ which are not traditional textbook definitions.

The clearest indicator from the data is that both faculty and students view readability and highlighting as not yet successfully adapted into digital textbooks. These features are still overwhelmingly preferred in print. There is still no significant difference between the perceptions of the first year students and the upperclassmen although there is a decided trend towards student interest in digital textbooks. Evidence for this is in the percentages of students that found features to be important or appealing, as well as the willingness to use digital textbooks.

Comments from faculty were very helpful in providing a better picture of challenges to using digital textbooks. Distractions from electronic devices in class, perceived student interest in using digital material,
and specific problems with faculty use of digital material, are all issues that need to be explored in further studies.

It is possible that the faculty and students that responded to the survey represent the segment of the community that are interested in or have already formed an opinion on the discussion of digital textbooks in the curriculum. The percentage of ‘no-response’ on particular questions may indicate a lack of knowledge of the current state of digital textbooks. The effect is inconclusive from this survey.

The research team recommends moving forward with the discussion on using digital textbooks. In the classroom at St. Lawrence University, by introducing faculty and students to the electronic options available to them. The University would benefit from continued discussion and education of more faculty on the potential for using digital textbooks. Faculty can act as a gateway to student usage. If opportunities to use digital textbooks are not offered by faculty, students are not ready to force the issue. This balance may change in the near future as students begin to request digital textbook options.

Both IT and the libraries at St. Lawrence University could advance the discussion by staying informed concerning digital textbook technology and offering educational opportunities to faculty on appropriate digital textbook options. The research group recommends further in-depth surveys of the use and perceptions of faculty and student to help determine areas that would benefit. The research group also recommends professional workshops on the possible curricular use of digital textbooks.


Carter, C. E. (2011). Undergraduate Science Students are Uncertain of How to Find Facts in E-books Compared to Print Books. Evidence Based Library & Information

CourseSmart project: http://www.coursesmart.com/


Deux mondes (French Textbook): http://www.amazon.com/Deux-mondes-communicative-approach-


http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1003&context=journalismdiss


Gutenberg project: http://www.gutenberg.org/

http://www.educause.edu/ero/article/study-four-textbook-distribution-models


http://www.educause.edu/ero/article/e-textbooks-%E2%80%9C-interesting-ride%E2%80%9D


Rowlands, I. Document Type: book


Pasajes (Spanish Textbook): http://www.amazon.com/Pasajes-Student-Mary-Lee-Bretz/dp/0073385239/ref=dp_ob_image_bk


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http://chronicle.com/article/iPads-for-College-Classrooms-/126681/

cship), 31 (January).

Appendix A

Online Survey Consent form
Online Survey Consent form

You have been invited to participate in a research survey of faculty and student attitudes toward digital textbooks at St. Lawrence University.

Research will be supervised by Gisele El Khoury as Principal Investigator P.I.(Director of the Language Resource LRC- St. Lawrence University), Tish Munt (ODY Library staff, St. Lawrence University), Maya Atchan (graduate student –SUNY Potsdam), and Lindsay Barkley (graduate student-SUNY Potsdam) as part of a student research project for the course, IT-635 Research and Theory on Communication and Performance Technology offered at SUNY-Potsdam by Dr. Anthony Betrus.

This online research survey consists of multiple-choice and short-answer questions. The survey should take approximately 3-5 minutes to complete. Participation in this survey is completely voluntary. If you decide to participate, you do not have to answer any specific question and you may choose to withdraw from the survey at any time. Your decision whether or not to participate, or to answer all the questions, will not affect your current or future relations with St. Lawrence University.

Submission of the completed survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

Your responses will be kept anonymous and the individual survey responses from this study will be kept private. All data from this survey will be used in aggregate only. We will not include any information that would make it possible to identify a participant and only researchers will have access to the original data. We will work with St. Lawrence University Informational Technology staff to establish a secure location for our data.

The survey website being used for this study has safeguards to keep your responses confidential. Please remember that it is not possible to provide a 100% guarantee that information collected on-line is safe and there is a slight risk of that information leaving the direct control of the researcher and being accessed by
Digital Textbooks at St. Lawrence University

others. When sending information over the Internet, you should take precautions to make sure the information you provide on-line cannot be viewed by others. Please remember to clear your browser’s cache and page history after you submit the survey in order to better protect your privacy. Despite this possibility, the risks to your physical, emotional, social, professional, or financial well-being are minimal. Your participation in this research survey will yield no benefits.

If you have any questions about this research or the results of this survey, please contact Gisele El Khoury at gelkhoury@stlawu.edu or by phone at 315-229-5088. If you have questions about the treatment of human subjects at St. Lawrence University, please contact Dr. Karen Dillon O’Neil, Chair of St. Lawrence University Institutional Review Board at koneil@stlawu.edu.

By answering the questions on this survey, you have given your consent to participate. If you wish to withdraw from the survey at any time, you may exit the survey by clicking on the “x” located in the upper right-hand corner of the screen on a Windows operating system or the upper left-hand corner on a Mac operating system.
Appendix B

Faculty Survey
Faculty Survey

1- What is your gender?

O Male
O Female

2- What discipline do you teach in?

O Humanities
O Sciences
O Social Sciences
O Arts
O Interdisciplinary

3- What is your academic status?

O Tenured
O Non-tenured
O Visiting
O Part-time
O Adjunct

4- How do you define a Digital Textbook? (check all that apply):

O Online Material (videos from YouTube, online articles, reference materials…)
O Files posted on Sakai
O Books made for eReaders
O Books made to be read on a computer
O Don’t Know

5- Which textbook features are important to you? (check all that apply):

O Content
O Price
O Publisher recommendation
O Ease of access
O Viability
O Links to related materials
O Other (specify below)

other textbook features: 

6- **Indicate your willingness to try these methods of textbook access:**

<table>
<thead>
<tr>
<th>Method</th>
<th>Would never use it</th>
<th>Might use it</th>
<th>Would definitely use it</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>iPad / tablet PC</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Mobile device</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>eReader(Kindle/Nook)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Laptop/Desktop</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Printed textbook</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Publisher website</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Course website (e.g. Sakai - Blogs)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

7- **Which format offers the following features better?**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Print</th>
<th>Electronic</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to print/copy pages</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Readability</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to highlight</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to share notes</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to share the book</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to share notes made in the book</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ease of access</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

8- **Rate the importance of the following features that you would use in an eTextbook:**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Important</th>
<th>Not Important</th>
<th>No Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to print from an eTextbook</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Readability (change font size/screenreading)</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to highlight electronically</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to add electronic notes</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to share the book with others</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
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<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ease of access</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Cost of the electronic version</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
9- If your textbook was available in multiple formats, which would you recommend to your students? (check all that apply):

- Printed textbook
- Mobile device
- eReader (eg. Nook, Kindle, etc)
- Computer

10- Have you ever adopted an eTextbook for a class?

- Yes
- No

Why have you, or have you not adopted an eTextbook?:


Appendix C

Students Survey
Students Survey

1- Gender:

O Male
O Female

2- Major (If you are combined or multiple major check all that apply):

O Sciences
O Social sciences
O Humanities
O Arts
O Undeclared

3- Please select your class year:

O First Year
O Sophomore
O Junior
O Senior

4- Have you ever used an eTextbook for a class?

O Yes
O No

5- What is important when buying a textbook? (check all that apply):

O If the book is required
O Where the book can be purchased
O The cost of the book
O How critical the book will be to my success in the course
O If the subject is within my major
O If I think I can resell it later

6- Which of the following do you consider to be an example of an eTextbook? (check all that apply):

O Online Material
O Files posted on Sakai
O Books made for eReaders
O Books made to be read on a computer
7- Indicate your willingness to try these methods of textbook delivery:

<table>
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<th>Would definitely use it</th>
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<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ability to share notes made in the book</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Ease of access</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Quality of graphs or illustrations</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>No response</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

9- Rate the importance of the following features you would like to use in an eTextbook:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Important</th>
<th>Not Important</th>
<th>No Response</th>
</tr>
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<tr>
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<td>O</td>
<td>O</td>
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<td>O</td>
</tr>
<tr>
<td>Cost of the electronic version</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
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<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

10- Which features of eTextbooks are appealing to you? (check all that apply):

- O Current Edition
- O Cost
- O Online search
- O Instant availability (no waiting in lines, or for a book to be shipped)
- O Interactive multimedia (videos, audio, quizzes)
- O Built-in dictionary
- O Customizability
- O Other
- O No response

11- What challenges do you see with using e-textbooks? (check all that apply):

- O I like to write/highlight in my textbooks
- O I'm concerned I won’t' be able to use e-textbooks in the classroom (ex. open book exams)
- O I need the Internet to access any e-textbooks that I can't download
- O I've never used e-books/am unfamiliar with how they work
- O I only have access to the Internet at school (not at home)
- O Other
- O No Response

12- For which of the following reasons have you not purchased an eTextbook?(select ONE):

- O Professor uses the print copy
- O No digital/electronic version available
- O Unsure if digital/electronic version available
- O Books expire at the end of the semester
- O No buyback option
- O Price is too high
- O Readability/Functionality
- O Other
- O No response
13- If it were possible, would you prefer to have e-books for all of your textbooks?

- Yes
- No
- Maybe/Depends on the class