

**Author:** Snyder, Rebecca S

**Title:** *Print Textbooks Versus Electronic Textbooks: What Is the Best Approach to the E-Text Initiative for UW-Stout?*

The accompanying research report is submitted to the **University of Wisconsin-Stout, Graduate School** in partial completion of the requirements for the

**Graduate Degree/ Major:** MS Technical and Professional Communication

**Research Advisor:** Justin Nicholes, Assistant Professor, English and Philosophy

**Department**

**Submission Term/Year:** Summer 2020

**Number of Pages:** 56

**Style Manual Used:** American Psychological Association, 6<sup>th</sup> edition

- I have adhered to the Graduate School Research Guide and have proofread my work.
- I understand that this research report must be officially approved by the Graduate School. **Additionally, by signing and submitting this form, I (the author(s) or copyright owner) grant the University of Wisconsin-Stout the non-exclusive right to reproduce, translate, and/or distribute this submission (including abstract) worldwide in print and electronic format and in any medium, including but not limited to audio or video. If my research includes proprietary information, an agreement has been made between myself, the company, and the University to submit a thesis that meets course-specific learning outcomes and CAN be published. There will be no exceptions to this permission.**
- I attest that the research report is my original work (that any copyrightable materials have been used with the permission of the original authors), and as such, it is automatically protected by the laws, rules, and regulations of the U.S. Copyright Office.
- My research advisor has approved the content and quality of this paper.

**STUDENT:**

**NAME:** Rebecca Snyder

**DATE:** June 9, 2020

**ADVISOR:** (Committee Chair if MS Plan A or EdS Thesis or Field Project/Problem):

**NAME:** Dr. Justin Nicholes

**DATE:** June 9, 2020

**This section for MS Plan A Thesis or EdS Thesis/Field Project papers only**

**Committee members (other than your advisor who is listed in the section above)**

1. CMTE MEMBER'S NAME:

DATE:

2. CMTE MEMBER'S NAME:

DATE:

3. CMTE MEMBER'S NAME:

DATE:

**This section to be completed by the Graduate School**

This final research report has been approved by the Graduate School.

Director, Office of Graduate Studies:

DATE:

**Snyder, Rebecca S. *Print Textbooks Versus Electronic Textbooks: What Is the Best Approach to the E-Text Initiative for UW-Stout?***

**Abstract**

This study explored the perceived comfort that both graduate and undergraduate students reported about using electronic texts (e-texts) to read course materials at a time when the university promoted an e-text initiative. Data-set appropriate nonparametric tests of difference were used for quantitative analysis, and qualitative coding was used to analyze participant feedback ( $N = 74$ ). Wilcoxon Signed-Ranks Tests indicated that Overall Comfort was statistically significantly higher for printed textbooks than those for e-textbooks,  $Z = -2.88, p = .004$ . More specifically, e-texts were reported as eliciting statistically significantly more Agitation ( $Z = -2.90, p = .004$ ), Frustration ( $Z = -2.92, p = .004$ ), and Nervousness ( $Z = -2.26, p = .024$ ) than printed textbooks. This study suggests that e-texts are not perceived as always giving students the best possible resource from which to study and read. A suggested solution to this is for UW-Stout to allow students a choice when it comes to textbook medium in the future.

### **Acknowledgments**

I want to extend my gratitude to the following people who have made this endeavor of completing grad school at forty a reality. First, my husband, Dan Snyder who has encouraged me through every second of this experience. Next, Dr. Julie Watts who has been so instrumental in supporting me as well as moving me along through the process of completing my degree, even when I took a break in the middle and considered stopping completely. Finally, to Dr. Justin Nicholes for being my mentor and guide through the research and writing of this final project. Thank you for the countless hours of work you put in to helping me complete this successfully. I am forever grateful to each of you.

## Table of Contents

Abstract .....	2
List of Tables .....	6
Chapter I: Introduction.....	7
Statement of the Problem.....	8
Purpose of the Study .....	9
Assumptions of the Study .....	9
Definition of Terms.....	9
Limitations of the Study.....	10
Methodology .....	11
Chapter II: Literature Review .....	12
Cost Drives the E-Text Initiative a Universities .....	12
Students do not Learn as Well from E-Texts as from Printed Texts .....	13
Students Prefer Print Texts Over E-Texts.....	13
Chapter III: Methodology .....	17
Subject Selection and Description .....	17
Instrumentation .....	17
Data Collection Procedures.....	18
Data Analysis .....	18
Limitations .....	19
Summary .....	19
Chapter IV: Results.....	21
Demographic.....	21

Quantitative Data Results .....	24
Research Question 1: What is the Comfort Level of Students when Using E- textbooks Versus when Using Printed Textbooks? .....	24
Research Question 2: How Do UW-Stout Students Prefer to Read for Academic Courses? .....	28
Research Question 3: What are Students' Prior Experiences with Using E-texts for Academic Reading and Does More Experience Equate to a Preference for E-texts Over Printed Texts? .....	29
Research Question 4: Do Student Responses and Current Research Suggest that UW-Stout Should Revise the Current E-Text Initiative to Allow Each Student the Option to Choose the Textbook Medium that Best Suits His/Her Individual Learning Style and Individual Preference? .....	30
Qualitative Data Results .....	32
Figure 1: Student Preferences Based on Open-Ended Survey Question 1 .....	32
Figure 2: Student Preferences Based on Open-Ended Survey Question 2 .....	33
Chapter V: Discussion, Conclusion and Recommendation .....	36
Discussion .....	36
Conclusions .....	38
Recommendations .....	39
References .....	42
Appendix: Student Survey .....	45

### List of Tables

Table 1: Demographic Info for Participants .....	22
Table 2: Descriptive Data for Comfort Scales - E-Texts .....	26
Table 3: Descriptive Data for Comfort Scales Printed Texts .....	27
Table 4: Preferred Strategies for Reading Assigned Materials.....	28
Table 5: Percentage of E-texts Used in Education Experience.....	29
Table 6: Preferred Strategies When Given a PDF for Course Reading .....	30
Table 7: Descriptive Data for Policy Item .....	31

## Chapter I: Introduction

The University of Wisconsin-Stout continues to push for e-text usage by professors and students citing cost as the driving force behind the e-text initiative. According to the University of Wisconsin-Stout (UW-Stout) E-textbooks & Digital Resources website,

One of UW-Stout's core values is the pursuit of innovation, technology, and sustainability with a constant eye to the future. UW-Stout also values your learning experience and understands the speed at which information flows. E-textbooks and other digital course resources add to the variety of instructional materials available through Instructional Resources Service (IRS), at an affordable cost to faculty and students. E-textbooks save our students money.

I think I speak for most students when I say that we appreciate efforts to keep down the growing costs of higher education in 2020. No one would argue that it is too inexpensive to go to college! However, questions that go beyond cost savings remain regarding the use of e-texts versus printed texts for academic learning. What do students prefer? Can all students learn the same from an e-text as from a printed text? Should the student be the one to choose which textbook medium fits their style rather than the professor or institution?

In understanding a research study and its findings, it is always important to understand a researcher's positionality; therefore, I want to further explain my relation to the field of technical and professional communication and the topic of e-text usage in my own, personal graduate education.

My undergraduate degree is a Bachelor of Arts in English with a focus in Technical Communication from the University of Tennessee in 2001. I worked in the field as a technical

writer for about three years before taking leave from my career to be a stay-at-home mom and, later, a homeschool mom to my two sons.

As my oldest son neared high school graduation, I felt it was time for me to consider how I would go about re-entering the work force within the next four to five years (when my youngest son would graduate as well). I chose the Master of Science in Technical and Professional Communication (MSTPC) because I had enjoyed my time working in this field and felt that this degree would be the perfect segue back into the work force. I began with my first course in summer of 2016, and the assigned text for that course happened to be an electronic textbook (e-text). This was my very first experience using this format.

Pretty quickly, I began to struggle with using the text. Because I was returning to graduate school at the age of 36, I assumed my age was a factor in these struggles. Was I too old to read e-texts, perhaps? As the semester continued, I became increasingly frustrated with trying to navigate my e-text. My husband and I had just purchased a boat, and I often wanted to read on the lake but found that internet access there was shoddy, and my pages would not open or turn properly. I finally broke down and paid out-of-pocket to rent the paper version of the textbook.

These struggles early in my graduate studies were the starting point of the topic discussed herein. I wanted to know if, like me, others felt frustration with e-texts, especially when the goal was reading in the high-stakes pursuit of graduate education.

### **Statement of the Problem**

To date, I have completed 28 graduate course hours in the MSTPC program, and many of those courses required at least one e-textbook, with some requiring more than one. While I have become more accustomed to operating the e-text software (Redshelf), I have continued to struggle with reading from an e-text and have, very often, resorted to paying the out-of-pocket



expense to rent the paper text to finish the course. Unfortunately, perhaps not all students can afford to do this, and I feel the university may benefit from being more aware of these issues as well as current research that suggests students do not actually learn as well from e-texts as from their printed text counterparts.

### **Purpose of the Study**

This study focuses on students: how they feel about the different textbook mediums, how they may feel impacted when their chosen textbook medium is not assigned or available, and whether they take any extra measures to obtain the preferred medium when the opposite is assigned by an instructor.

### **Assumptions of the Study**

This study makes the following assumptions about students and the academic careers:

1. Students are in good standing with the university and have a desire to learn.
2. Students have experience using e-texts at UW-Stout.

### **Definition of Terms**

The following terms are utilized frequently in this research paper. I have defined them below in the context for which they are used herein:

**Comfort.** How able one feels when using a certain medium. It considers ease of use, exposure to the medium, etc.

**Electronic textbook (E-Text).** A traditional course textbook in digital format available to students through the University via an e-reader platform.

**E-Reader.** An electronic device or application that is designed to allow for reading of an electronic textbook (E-text).

**Exposure (to textbook medium).** How often a student has used a type of medium (e-text or printed text) specifically for course work.

**Preference for medium.** Personal preference (if any) for either printed textbooks or e-textbooks for college courses.

**Printed textbook (Print Text).** A traditional textbook in printed format used for course studies.

**Reading Strategies.** Reading for college courses needs to be deliberate and meaningful so that the student can make connections to the text and best learn the material. Reading strategies refer to the way one might prefer to read in order to best focus on the material and get the most out of the content.

### **Limitations of the Study**

As expected, this study was subject to limitations. Unfortunately, the limitations went beyond any foreseen issues as our nation faced an unprecedented global pandemic. Impacts of those limitations were as follows:

1. This study was limited most severely by a national pandemic that hit during the research phase of this project. While my research relies on student replies and participation, just after I sent out the surveys, UW-Stout was forced to close and transition to all online learning. Students living on campus were sent home for the remainder of the semester. While I did have 74 student survey responses, I was not able to do any interviews as I had originally intended.
2. While I sought UW-Stout student survey responses from first-year students all the way to graduate students, 77.3% of the results were representative of the first-year

student population. Thus, these findings are most applicable to students first entering the university.

## **Methodology**

I began researching e-textbooks versus printed textbooks in college courses in Fall 2016 through a literature review for my English 700 course at UW-Stout. At the time, what I found was that cost was the major factor driving universities to consider the switch to e-texts for students (Murray & Perez, 2011). However, studies showed that students still preferred to read from printed textbooks regardless of age or familiarity with computers (Woody et al., 2010). When I decided upon this research project, I revisited the literature and found that more recent studies (2017 and beyond) are suggesting that students do not actually learn as well when using e-texts for course reading and study (Alexander & Singer, 2017). This is something that I had noted in my personal experience as well.

To see if other UW-Stout students shared the same views and experiences as myself and those students and researchers in the previous relevant literature, I sent out a survey that focused on student opinions of e-texts. Within the survey, I included several types of questions including items to measure perceived comfort felt toward using e-texts and printed textbooks. These survey items underwent both descriptive and inferential quantitative analysis. I asked two open-ended questions leaving a textbox after each for students to elaborate on their answers or to share something they felt was worth mentioning regarding their own experiences. When asked, “Is there anything you would like to add about how you prefer to read college course materials?” Twenty-one students offered valid written personal responses. When asked, “Is there anything you would like to share regarding your personal preferences for one textbook medium over the other or ways that you adjust when your preferred textbook medium is not chosen by the

professor?” Fourteen students responded in their own words. These answers helped me to further qualify and clarify the qualitative data obtained through the surveys.

## **Chapter II: Literature Review**

Most of the research to date regarding student preferences and the college e-text initiative focuses on undergraduate students in predominately face-to-face courses (although a few researchers do study a wider variety of course settings). I have been able to develop the following three conclusions based on my study of the previous literature: Cost drives the e-text initiative at universities (Murray & Perez, 2011), students show a preference for print textbooks over e-texts (Millar & Schrier, 2015), and new research suggests that students do not learn as well from e-texts as they do from printed texts (Alexander & Singer, 2017). These conclusions have provided the foundation necessary to begin to study the UW-Stout student population with regard to their textbook medium preferences. Ultimately this study aimed to take a practical look at how students perceived the e-text initiative at UW-Stout and aimed to serve to inform those in charge of the initiative of these opinions and preferences so that any necessary changes may be considered.

### **Cost Drives the E-Text Initiative at Universities**

The cost of textbooks has risen for both the university and the student over the last decade with no end in sight: According to a report released on Feb 3, 2016, by studentpirgs.org regarding student (print) textbook prices, “Over the last decade, the price of college textbooks has soared. Since 2006, the cost of a college textbook increased by 73% - over four times the rate of inflation. Today, individual textbooks often cost over \$200, sometimes as high as \$400.” Murray and Perez (2011) studied the e-textbook movement with regards to the e-textbook market and demand, confirming that cost pressures were the driving force behind the e-text initiative as

textbook prices are at an all-time high and electronic texts are offering a more cost-effective alternative to both students and universities (p. 50).

### **Students Do Not Learn as Well from E-Texts as From Printed Texts**

Recent literature suggests that students, regardless of which textbook medium they prefer, are not learning and retaining information as well from printed textbooks; for example, Alexander and Singer (2017) studied the previous literature and conducted their own regarding e-texts and comprehension. Alexander and Singer (2017) found that, while students felt they learned better when reading an e-text, overall comprehension was, in fact, better when reading from a printed text. The authors ended the article by advising students on how to choose the textbook medium that best meets his/her needs, and they raised the idea of a “mixed-medium” approach to e-text adoption, suggesting that students and instructors be allowed a choice based on learning and comprehension before cost.

### **Students Prefer Print Textbooks Over E-Texts**

Within this final conclusion from the review of the previous literature, it is necessary to break down the overall student preference for printed textbooks into the following ideas: Students denote a difference in their reading for pleasure versus their reading for academic courses, they consistently prefer printed textbooks for academic reading, they are able to justify their printed textbook preference, students’ age and familiarity with a computer do not play a role in their preference, and they often make adjustments (such as printing the material) when they must use an e-text. These sections provide a better understanding of what drives the students’ preference for printed textbooks.

**Students differentiate between reading for pleasure and reading for academic courses.** For most students, graduate or otherwise, there is a distinct difference between reading

for pleasure and reading for academic courses (Anthony, 2019). Reading for pleasure involves light reading and usually takes place in a relaxed atmosphere with no real timeline; academic reading is considered much more rigorous reading for the intent of gaining knowledge or understanding in a course of study within a college level course and is often expected to be done in a timely manner (Anthony, 2019). All of the previous literature focuses on the latter, and I will be doing the same. Foasberg (2014), notably, conducted a study of undergraduate students' reading practices over a period of twelve days. Foasberg (2014) found that, while many students preferred to read from an electronic source for pleasure, only 43% of the small group surveyed used their e-device for two-thirds or more of their daily reading, which included academic reading. Student surveys from this study also showed that, while students may prefer to read from an electronic device for leisure, they often desire a paper text for the more complex content of academic readings.

**Students consistently prefer printed textbooks for academic readings.** Most of the research articles (published from 2008-2015) concerning student preference for one textbook medium over the other point to a student preference for print textbooks over e-textbooks when reading is done for academic courses. This preference seems unwavering throughout the years. For instance, in a study dating to 2008, Shepperd, Grace, and Koch evaluated the issue to determine whether undergraduate students who chose an e-text over a paper text showed any difference in course grades or the amount of time spent reading their course materials. During this study, Sheppard et al. (2008) made two unexpected observations, both with regard to student preference. First, not one student who had previously used an e-textbook for another course chose that medium for the Introduction to Psychology course used in this study. As a matter of fact, out of the 392 students who took the exit survey, 330 had chosen the paper text over the e-

text in the first place. Second, the study noted that “Students who purchased the electronic textbook did not evaluate it favorably” (Sheppard et al., 2008, p. 4). It is noteworthy that e-texts were still quite new and only available on a CD-ROM at the time of this study. However, Daniel and Woody (2013), Foasberg (2014), and Millar and Schrier (2015) all discovered the same preferences, that students consistently preferred printed textbooks to e-texts, in much more recent studies. Even though e-textbooks have evolved from CD ROM in 2008 to online delivery by being linked to online learning management systems such as D2L at present, the reasons for students’ preference for printed textbooks seem to go beyond the e-text delivery method.

**Students justify preference for printed texts.** Students are often forthcoming with their reasons for choosing print texts over e-texts. For some, the answer was a complex series of reasons. Robinson-Szapkiw, Courduff, Carter, and Bennett (2013) allowed students to choose between e-texts and print texts for an upcoming course and then studied the cognitive learning, grades received in the course, and reasons for student textbook choices. Robinson-Szapkiw et al. (2013) found that students cited the following reasons for print textbook preference: portability, familiarity, note-taking/dog-earring pages, cheaper online costs, possession of the text after the course ended, use of loan money for purchase, difficulty reading from a screen, and (8 participants noted) learning preference or style. For other students, the reason for choosing a print text was much more straightforward. Millar and Schrier (2015) found that, of the 109 students who had chosen a print text over an e-text, 45% said that their reason for doing so was, “I simply prefer print to digital” (p. 176).

**Students’ age and computer familiarity do not dictate a preference for e-textbooks.** At the beginning of my research study, I posed the question of whether the age of the student and using a computer at work to read played a role in the graduate students’ preferences for one text

medium over the other. Woody, Daniel, and Baker (2010) researched whether student age and computer familiarity played a role in preference for either an e-text or print text format. Woody et al. (2010) found that these factors did not seem to play a large enough role at the time of their research to warrant further study. They concluded that the vast majority of students, regardless of age or computer skill level, still preferred the printed textbook.

**Students adjust when printed texts are not offered.** When students are not given the option to use a printed text for academic reading, sometimes they feel they must take measures into their own hands for the sake of their inability to read well from an e-text. Students may choose to pay the out-of-pocket cost to rent a print textbook even though their program pays for an e-text, while others may print off each PDF assigned by their professor for reading rather than read it online. Ji, Michaels, and Waterman (2014) studied 101 college undergraduates from two face-to-face courses at the Indiana University at Bloomington regarding the use of reading materials provided by the professor via e-reserves or posted URLs. No print materials were supplied or offered to the students for either of the courses and no e-textbook was used. However, due to the nature of the online reading, this was an important study to analyze. The researchers found that about two-thirds of the students printed at least some of the materials. Ji, Michaels, and Waterman (2014) concluded that students preferred printed materials for academic study.



### **Chapter III: Methodology**

With specific interest in the student body at the University of Wisconsin-Stout, I surveyed 74 students with an IRB board approved Qualtrics survey. The survey results offered the best method to gather student feedback in order to recommend potential changes to the current UW-Stout E-Text Initiative to Instructional Resource Service (IRS) Director, Robert Butterfield.

#### **Subject Selection and Description**

Anonymous subjects self-selected to participate after being invited by their professors with the only requirement being that they were enrolled at the University of Wisconsin-Stout in some capacity (full-time, half-time, or less than half-time). In order to answer the questions asked on the survey, students had to have some experience with using e-textbooks, but experience prior to enrollment at UW-Stout was not required. As this survey was distributed mid-way through the Spring 2020 semester, it was hoped that most students would have a high probability of currently using an e-text for one of more of their courses. No respondents were excluded based on demographics of age, class rank based on credit hours completed, first language, or sex.

#### **Instrumentation**

To create and deliver the survey, I used Qualtrics, which is available through our UW-Stout Student Logins. Items used to measure students' perceived comfort were derived from the technophobia instrument from Sinkovics et al. (2002: See Appendix). The survey used Likert scale questions, check all that apply, multiple choice, and open-ended questions in order to obtain both quantitative and qualitative data. The Likert scale was used on questions regarding

student comfort using both e-texts and printed texts as well as student exposure to e-texts from grad school through graduate school (if applicable). A “check all that apply” question was added to better understand student preferences while reading for academic purposes, and preference for medium was gauged by multiple choice questions. Two open ended questions were placed within the survey along with a text box and students were encouraged to elaborate further. Those questions were as follows:

1. Is there anything you would like to add about how you prefer to read college course materials?
2. Is there anything you would like to share regarding your personal preferences for one textbook medium over the other or ways that you adjust when your preferred textbook medium is not chosen by the professor?

### **Data Collection Procedures**

I submitted this study to the Institutional Review Board (IRB) at UW-Stout and received exemption through February 24, 2025. Along with the IRB paperwork, I submitted the survey questions (See Appendix A). I began by distributing the survey to professors I knew from previous courses with an accompanying e-mail asking them to please forward on to current students. When this approach only yielded 65 results, I emailed professors more randomly using the UW Stout directory and asked the same – that they distribute to their students. This gave me an additional 20 results. Due to incomplete responses, a total of 74 valid surveys were used for data analysis in this report.

### **Data Analysis**

Once the survey was closed, comfort scale data was analyzed using IBM SPSS, a statistical software package. Open-ended responses were then qualitatively coded for themes.

## **Limitations**

At the beginning of this project, I had intended to conduct phone interviews (since I do not live on campus, or even in Wisconsin) with students who may indicate that they were willing to do so via a question on the survey that read: "If you would be interested in participating in a short interview regarding your experiences with e-textbooks at the University of Wisconsin - Stout, please e-mail me at [snyderr6539@my.uwstout.edu](mailto:snyderr6539@my.uwstout.edu) with the subject line, 'Interview.'" A copy of those interview questions was submitted and approved by the IRB even though, due to the complete shutdown of campus due to COVID-19 in mid-March, no one opted to do the phone interview and, therefore, these questions are not included with this study. In place of this data, I have opted to include some of the written, optional responses students gave when asked to further elaborate on personal experiences with e-texts.

Also due to the COVID-19 shutdown of campus in mid-March, I did not receive the 250 UW-Stout Student responses I had originally desired. I feel 74 responses is a fair amount, and enough for trustworthy quantitative analysis, but the study is certainly limited by the number of respondents when the population is the totality of students on campus.

Finally, I had hoped for a mix of students in all levels of study (from Freshman to Graduate). Unfortunately, I ended up with a disproportionate number of mostly Freshman respondents with only a few from each other class rank. Of course, this limits the study with a lack of feedback from upperclassmen and graduate students.

## **Summary**

For this study, I sought to question current UW-Stout students of all class ranks to better understand how students felt about using e-texts for course studies and reading assignments. My research was deemed exempt by the IRB, and I delivered a survey to students first by asking my

current and past professors, as well as a few randomly chosen professors to pass them on to their students. I was unable to conduct the phone interviews I had planned due to a national pandemic crisis that shut down UW-Stout and sent students home in mid-March. When analyzing the data, I found that I had received a large enough number of responses from students that represented the freshman class, but very few from upperclassmen and graduate students. The findings have been analyzed and will be presented in Chapter IV: Results.

## **Chapter IV: Results**

In this Chapter, I will present both the quantitative and qualitative data that I collected from student responses to the survey. The survey was divided into the following question sections:

1. Comfort Scale Questions (e-text, printed text)
2. Reading Strategy Questions
3. Exposure to Medium Questions
4. Preference for Medium Questions

Section 1 used a Likert Scale to assess the comfort or discomfort that students felt when using each textbook medium for course reading, with items derived from the technophobia instrument from Sinkovics et al. (2002). Section 2 used a multiple answer question along with an open-ended response question to determine student reading strategies. Section 3 used multiple choice questions to assess students' previous exposure to e-texts for course reading from elementary school through college and/or graduate school. Section 4 combined multiple-choice questions with a Likert scale and an open-ended question to better understand whether students have a textbook medium preference, and if so, why.

### **Demographic**

Students were asked to indicate class rank, program of study (major or graduate degree program), age range, and whether English was their first language. Table 1 shows the responses from student participants to the demographic questions asked.

Table 1

*Demographic Info for Participants*

Variable	Frequency
Class Rank	Freshman – 58 (77.3%)
	Sophomore – 9 (12%)
	Junior – 5 (6.7%)
	Graduate Student – 2 (2.7%)
Program of Study	Apparel Design – 4
	Applied Biochemistry & Molecular Biology – 1
	Applied Social Sciences – 3
	Art – 2
	Video Game Design – 3
	Business Management – 5
	Business Administration – 4
	Computer Science – 10
	Construction – 2
	Criminal Justice – 2
	Digital Marketing – 1
	Early Childhood Education – 1
	Electrical Engineering – 1
	English Teaching – 1
	Entertainment Design – 2

Variable	Frequency
	Family and Consumer Science – 2
	Graphic Design – 5
	Health Wellness and Fitness – 1
	Hospitality – 3
	Human Development and Family Studies – 1
	Industrial Design – 3
	Interior Design – 2
	Manufacturing Engineering – 1
	Marketing – 1
	Mechanical Engineering – 10
	Pre-Med – 2
	Psychology – 1
	Special Education – 2
	Undecided – 1
Age Range	18-21 – 67 (89.3%)
	22-30 – 5 (6.7%)
	31-40 – 2 (2.7%)
First Language	English – 72 (96%)
	Other – 2 (2.7%)

## Quantitative Data Results

In this section, I revisit each of my original research questions and evaluate those based upon the quantitative data I have collected. Following, I have explained the significance of the data as it pertains to each question.

**Research question 1: What is the comfort level of students when using e-textbooks versus when using printed textbooks?** In Section 1 of the survey, the Comfort Level questions asked students a series of six questions related to comfort/discomfort with using electronic textbooks and printed textbooks. Students were given a Likert scale of 1-5 with 1 being “strongly agree” and 5 being “strongly disagree” on which to choose an answer. The first set of questions focused only on e-texts, while the second set of questions, which were duplicates of the first, focused only on printed texts. Results are shown in Table 2 for e-texts and Table 3 for printed texts. Results for both are described below.

Shapiro-Wilk tests of normality indicated that values of the items and composite variables in the data set were not normally distributed ( $p < .05$ ); therefore, nonparametric statistical tests were appropriate for this data.

Specifically, Wilcoxon Signed-Ranks Tests were used. Statistical analysis indicated that no statistically significant difference was found between,

- a. Anxiety using e-textbook and print textbooks (Comfort Item 1);
- b. Feelings that older students knew how to use e-textbooks and print textbooks better (Comfort Item 3); or,
- c. Intimidation felt for e-textbooks and print textbooks (Comfort Items 6).

However, Wilcoxon Signed-Ranks Tests indicated,



- a. The median Agitation ranks were significantly higher for e-textbooks than the median Agitation ranks for printed textbooks,  $Z = -2.90$ ,  $p = .004$ . (Comfort Item 2).
- b. The median Frustration ranks were significantly higher for e-textbooks than the median Frustration ranks for printed textbooks,  $Z = -2.92$ ,  $p = .004$ . (Comfort Item 4).
- c. The median Nervousness ranks were significantly higher for e-textbooks than the median Nervousness ranks for printed textbooks,  $Z = -2.26$ ,  $p = .024$ . (Comfort Item 5).
- d. The median Overall Comfort ranks were significantly higher for printed textbooks than the median Overall Comfort ranks for e-textbooks,  $Z = -2.88$ ,  $p = .004$ . (Comfort Composite Variables).

Scale	Items	<i>M</i>	<i>Mdn</i>	<i>SD</i>	95% Confidence	
					Interval for Mean	
					Lower	Upper
Comfort with e-textbooks	I feel some anxiety when I have to read from an e-textbook for my college course.	3.53	3.50	1.21	3.25	3.81
	E-texts agitate me.	3.19	3.00	1.40	2.86	3.51
	I think younger students know how to use e-texts better than I.	3.54	4.00	1.20	3.26	3.82
	I sometimes feel frustrated when I use an e-text for college course reading.	2.99	3.00	1.38	2.67	3.31
	Thinking about using an e-text for my college course reading makes me nervous.	3.74	4.00	1.22	3.46	4.03
	E-texts are intimidating.	3.81	4.00	1.21	3.53	4.09
	E-textbook comfort composite ( $\alpha = .90$ )	3.47	3.50	1.04	3.23	3.71

Table 2

*Descriptive Data for Comfort Scales – E-texts*

*Note.* 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree Nor Disagree, 4 = Disagree, 5 = Strongly Disagree.

Table 3

Scale	Items	M	Mdn	SD	95% Confidence	
					Interval for Mean	
					Lower	Upper
Comfort with printed textbooks	I feel some anxiety when I have to read from a printed text for my college course.	3.81	4.00	1.11	3.55	4.07
	Printed textbooks agitate me.	3.82	4.00	1.04	3.58	4.06
	I think older students know how to use printed texts better than I.	3.74	4.00	1.07	3.49	3.99
	I sometimes feel frustrated when I use a printed text for college course reading.	3.61	4.00	1.11	3.35	3.86
	Thinking about using a printed text for my college course reading makes me nervous.	4.12	4.00	.936	3.90	4.34
	Printed textbooks are intimidating.	4.11	4.00	1.08	3.86	4.36
	Printed-textbook comfort composite	3.87	4.00	.861	3.67	4.07
	( $\alpha = .90$ )					

*Descriptive Data for Comfort Scales – Printed Texts*

*Note.* 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree Nor Disagree, 4 = Disagree,

5 = Strongly Disagree.

**Research question 2: How do UW-Stout students prefer to read for academic courses?** The Reading Strategy Questions in Section 2 of the survey were meant to explore how students prefer to read when they are reading for academic courses. It did not mention e-texts or printed texts, but rather focused on student reading preferences such as volume (quiet or noisy), environment (academic or casual), reading ability (slow or fast), reading strategies (scanning the page or reading every word), preferences for note-taking while reading (taking notes or highlighting passages). As shown in Table 4, strong preferences emerged for reading in a quiet setting (73%) and taking notes on paper or the computer versus highlighting passages of text (48%). When students were asked if they preferred to read every word or scan the pages of text, 55% said that they scan. The other question did not present an overwhelming division between students and could be categorized as roughly half-and-half.

Table 4

*Preferred Strategies for Reading Assigned Materials*

<i>Strategy</i>	<i>Frequency</i>	<i>Percentage</i>
<i>I find a quiet environment.</i>	55	73%
<i>I have no preference: I can read no matter what is going on around me</i>	16	21%
<i>I read at my desk.</i>	42	56%
<i>I read in a comfortable chair.</i>	44	59%
<i>I scan pages while reading.</i>	41	55%
<i>I read each word while reading.</i>	32	43%
<i>I read slowly.</i>	34	45%
<i>I read rather quickly.</i>	32	43%

<i>Strategy</i>	<i>Frequency</i>	<i>Percentage</i>
<i>I take notes on paper or on the computer.</i>	36	48%
<i>I highlight important passages.</i>	17	23%

**Research Question 3: What are students' prior experiences with using e-texts for academic reading and does more experience equate to a preference for e-texts over printed texts?** The Experience with Medium questions in Section 3 of the survey were designed to better understand each student participant's previous exposure to using e-texts for academic reading going as far back as elementary school. As shown in Table 5, 88% of those surveyed did not use e-texts in grade school, 60% did not use e-texts in middle school, and only 25% did not use e-texts in high school. All of the students surveyed were using e-texts in undergraduate studies and beyond at least 25% of the time with 31% of students using e-texts at least 75% of the time and 23% using them more than 75% of the time.

Table 5

*Percentage of E-Texts Used in Education Experience*

<b>Level</b>	<b>0%</b>	<b>&lt; 25%</b>	<b>25%</b>	<b>50%</b>	<b>75%</b>	<b>&gt; 75%</b>	<b>100%</b>
Elementary School	66 (88%)	7 (9%)	-	-	-	-	1 (1%)
Middle School	45 (60%)	19 (25%)	5 (7%)	4 (5%)	-	1 (1%)	-
High School	25 (35%)	20 (27%)	12 (16%)	9 (12%)	4 (5.3%)	2 (3%)	1 (1%)
College (Undergrad)	-	4 (5%)	10 (13%)	16 (21%)	23 (31%)	17 (23%)	3 (4%)
College (Grad)	1 (1%)	-	-	2 (3%)	2 (3%)	2 (3%)	-

**Research Question 4: Do student responses and current research suggest that UW Stout should revise the current e-text initiative to a more “mixed method” approach, allowing students the option to choose the textbook medium that best suits their learning style and individual preference?** Section 4’s Preference for Medium questions asked students to identify their textbook medium preference if one existed. Of the 85 students surveyed, 40% indicated a preference for paper textbooks while 13.3% prefer E-texts. Additionally, 24% of students said they have no textbook medium preference, and 21.3 % admitted to a preference for whichever medium is going to cost the least.

Next, Students were asked to consider what, if any, strategies they use when reading a PDF or when they are assigned a textbook medium that is not their preference for a course. When using a PDF, only 10% of students print it for reading. As shown in Table 6, the remainder either read the PDF online and take notes electronically or on paper.

Table 6

*Preferred Strategies When Given a PDF for Course Reading*

Strategy	Frequency	Percentage
Print the PDF so I can read it and make notes in pen	8	10.7%
Read the PDF online and take notes on paper.	43	57.3%
Read the PDF online and take notes electronically.	23	30.7%

The University of Wisconsin-Stout includes the cost of textbooks as part of each student’s tuition. Therefore, whichever textbook medium is assigned, the student receives that text free of further charge. Because of this, I was curious to see what, if any, action students may take when their preferred textbook medium is not assigned. The overwhelming majority (89.3%) said that they make do and read from whichever textbook medium is assigned. Only 9.3% of

students indicated that they choose to rent their preferred textbook medium elsewhere and pay out-of-pocket. Perhaps this is not surprising since 21.3% of students preferred whichever textbook medium was the cheapest in the previous questions.

The final question posed to students in this section was done in Likert Scale format with an answer of 1 meaning the student strongly agrees and an answer of 5 meaning the student strongly disagrees. Students were given the following statement, “The University should allow students to choose the textbook medium that best suits their learning style.” Table 7 shows that all students surveyed indicated that their either agree or strongly agree.

Table 7

*Descriptive Data for Policy Item*

Item	<i>M</i>	<i>Mdn</i>	<i>SD</i>	95% Confidence Interval for Mean	
				Upper	Lower
The university should allow students to choose the textbook medium that best suits their learning style.	2.01	2.00	.914	1.80	2.23

*Note.* 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree Nor Disagree, 4 = Disagree, 5 = Strongly Disagree.

## Qualitative Data Results

As mentioned in Chapter III of this report, two optional, open-ended questions were placed within the survey, giving students an opportunity to respond in their own words.

The first question, “Is there anything you would like to add about how you prefer to read college course materials?” received 21 valid responses out of the 74 students surveyed. Only two answers mentioned the environment in which students prefer to read, while 17 students chose to focus their answers on e-texts versus printed texts. Two students indicated that they preferred to read from an e-text unless the course was math related. Two other students noted a preference for e-texts due to the read-aloud option in Windows. Three students indicated a preference for e-texts noting that they were easier to carry. Two students said they had no preference for one medium over the other and mentioned cons for each such as lighting issues and heavy books to carry for printed texts as well as lagging wi-fi connections for e-texts. Eight students indicated a clear preference for printed texts. Figure 1 shows the breakdown of student preferences based upon these qualitative data responses.

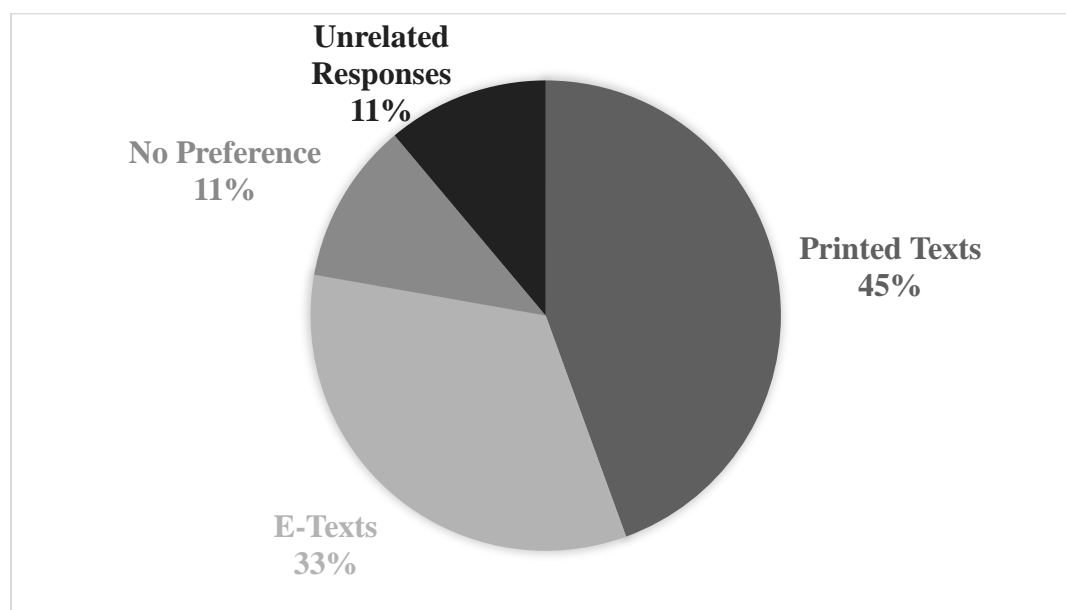


Figure 1. Student preference based on open-ended survey question 1.



The second open-ended response question asked students, “Is there anything you would like to share regarding your personal preferences for one textbook medium over the other or ways that you adjust when your preferred textbook medium is not chosen by the professor?” This question received 14 valid responses, none of which addressed the second part of the question asking for ways students adjust when their preferred textbook medium is not chosen by the professor. One of the invalid responses I received said, “I shared it in the previous writing box, sorry!” It is my assumption that several students did the same since most of the answers to the first question also centered around textbook medium preference. For Question 2, all fourteen valid responses focused on the first part of the question about textbook medium preference. I have no way to know which students repeated their responses to Question 1 in the response box for Question 2, so therefore, this data has been limited. Figure 2 shows the answers received in a pie chart comparable to Figure 1.

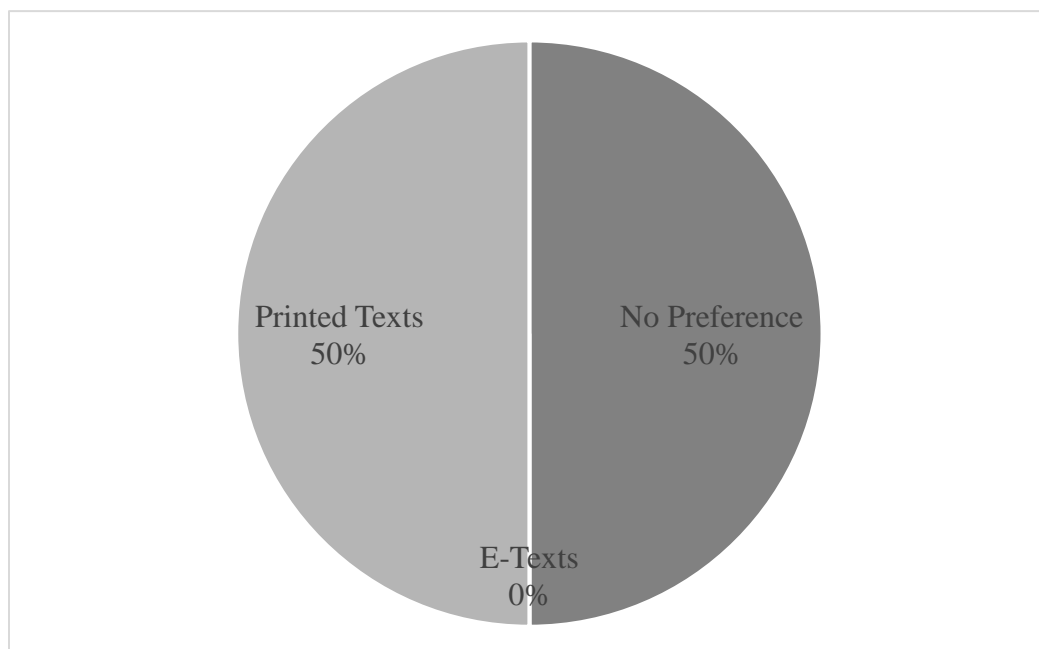


Figure 2. Student preference based on open-ended survey question 2.

Four respondents made additional statements that I feel are valid to this research. Those comments are as follows:

- Student 1 – “Electronically is is (sic) easier to navigate a text book with find features, but is is (sic) harder for me to interact with the text.
- Student 2 – “I believe that the current systems for ebooks (sic) is very basic (i.e. you can pick page numbers and chapter numbers but skipping pages sequentially causes the book to lag which hinders my ability to take open book tests).”
- Student 3 – “I don't have any major learning issues so I can make due (sic) with what is given no problem but for students who might need one version or another for learning, they should have access to which one they need without it being overly expensive.”
- Student 4 – “Some etexts (sic) don't have the same content as a hard copy even though they are labeled as the same textbook. The navigation of etext (sic) is also generally more tedious than a traditional textbook.”

To conclude this section, I will revisit the sections of the survey along with a summary of the major findings for each section.

**Comfort scale questions (e-text, printed text).** This research found that students were much more comfortable reading from and interacting with printed textbooks than they were interacting with e-texts. Specifically, students showed significantly more agitation, frustration, and nervousness, as well as significantly more overall discomfort, when reading from an e-text than when reading from a printed text for course assigned work.

**Reading strategy questions.** Students showed a marked preference for reading in a quiet setting and taking notes versus highlighting a passage of text for studying. The latter is

significant to studying with e-texts as some students in the open-ended responses mentioned having issues with note taking while reading from an e-text. Students were split pretty evenly on reading skill, reading methods (scanning versus reading every word), and location (academic setting or comfortable setting).

**Exposure to medium questions.** This set of questions revealed that the study participants included many digital natives who were exposed to e-texts in an academic setting as early as grade school. By high school, 75% of respondents had used an e-text. This is imperative to the research because speculation has been made that digital natives will prefer e-texts due to computer familiarity and exposure from an early age (Stoltzfus, 2019). This research suggests that is not necessarily the case.

**Preference for medium questions.** Overall, this data showed that students still seem to prefer printed texts, by a small margin, to digital textbooks when given the choice. For the first open-ended question with 21 valid responses, 45% of students preferred e-texts while only 33% preferred e-texts. For the second question, none of the 14 students who offered valid responses preferred e-texts, while 50% preferred printed texts (the other 50% did not have a preference).

This findings have helped me determine the conclusions and recommendations presented in Chapter V of this report.

## Chapter V: Discussion, Conclusion and Recommendation

In this final chapter, I will discuss the significance of my findings in relation to the current literature, draw conclusions based on the data I have collected, and give recommendations for potential changes within the UW-Stout e-text initiative as well as recommendations for further research.

### Discussion

The following discussion compares the relevant literature review findings to the data I collected with the survey. Note that some of these findings were not covered in the survey or did not yield any valuable results with which to compare.

**Cost drives the e-text initiative at universities.** According to UW- Stout's E-textbooks and Digital Resources website (2019), "E-Textbooks save our students money." That sentence is also underlined in blue to bring highlight to its importance. It is obvious that, just as the previous literature suggests, UW-Stout's e-text initiative is also driven by costs savings.

The survey asked students, "For college course reading, which medium do you prefer?" and they were given the multiple-choice answers of: A. printed textbooks; B. E-textbooks; C. I do not have a preference; or D. Whichever is cheaper and they could only choose one. Twenty-one percent of students chose Option D. However, this means that 79% of students did not see cost as the driving factor in textbook medium preference, if one existed.

**Students do not Learn as well from e-texts as from printed texts.** My research did not seek out this specific information; however, it did yield a bit of insight based on a couple of the comments received in my open-ended survey questions. One student said, "I am a slow reader, and it is much better to read on paper than from a screen." Another pointed out that, "I like the feeling of a physical textbook, I feel as though I can do more things like highlight and

bookmark important texts in a more affective (sic) manner, rather than trying to find what I'm looking for on a screen.” Two students mentioned that math courses were especially non-compatible with e-texts. One explains, “The only time I have a preference for a physical textbook is when it comes to math courses. Having that book in front of me while answering a question on some sort of software makes my situation easier, instead of flipping through links and tabs on my browser.” The blanket idea that students do not learn as well from e-texts as they do from printed texts is relatively new, and more research is needed to determine the accuracy of this statement, but it seems that, per my research, a few UW-Stout students feel they have experienced issues when learning from e-texts.

**Students prefer printed texts over e-texts.** Previous studies suggest that students prefer printed texts over e-texts. My research suggests the same. In the Comfort Level scales, students reported feeling statistically significantly more comfortable using printed texts than e-texts for course related reading. For the first open-ended question with 21 valid responses, 45% of students preferred e-texts while only 33% preferred e-texts. For the second question, none of the 14 students who offered valid responses preferred e-texts, while 50% preferred printed texts (the other 50% did not have a preference). From this, I can conclude that, from the first research mentioned in the literature (2010) to the present (2020), students have adjusted to using e-texts and some have even come to prefer them. However, the fact remains that students are still more comfortable using printed texts, and the majority still prefer them over e-texts for course related study.

**Students' age and computer familiarity do not dictate a preference for e-textbooks.** Findings in my study agree that younger students who are more familiar with computers and e-texts do not seem to automatically prefer e-texts to printed textbooks. According to the

demographics, 89.3% of students surveyed were between the ages of 18 and 21. When asked about previous experiences with e-texts, 40% began using e-texts for academic learning, to some degree, as early as middle school. By high school, 75% of those surveyed were using e-texts for academic learning. This suggests that most of these younger students were quite familiar, not just with using a computer, but specifically with using e-texts for academic courses. Still, my results showed that e-texts were not the preferred reading choice, and e-texts elicited statistically significantly greater levels of discomfort.

**Students adjust when printed texts are not offered.** While Ji et al. (2015) found this to be the case, my research did not concur. When students were asked if they made adjustments, such as renting the opposite textbook medium when their preferred was not assigned, an overwhelming 89% indicated that they just made do with what was assigned. Additionally, most students (88%) reported preferring to read PDF assigned reading directly from the screen and opt to not print it out for reading.

## **Conclusions**

After reviewing the survey data and students' shared opinions and experiences with using both e-texts and printed texts for academic learning, I have drawn the following conclusions about UW-Stout students using e-texts and printed texts for academic courses:

- Students are statistically significantly more comfortable using printed textbooks than e-textbooks for academic purposes. Specifically, e-texts elicit significantly more agitation, frustration, nervousness, and overall discomfort than do printed textbooks.
- While some have no preference, those who do have a preference prefer printed texts to e-texts.

- Some find e-texts difficult to use due to internet connection speeds, Redshelf software performance, and difficulties interacting with the text. According to individual responses, some students also found it hard to highlight and take notes within the text.
- Students care about keeping textbook costs low.
- Students find that e-text reading abilities vary with different courses/subject matter. One student said, “The only time I have a preference for a physical textbook is when it comes to math courses. Having that book in front of me while answering a question on some sort of software makes my situation easier, instead of flipping through links and tabs on my browser.”
- Students agree that, “The university should allow students to choose the textbook medium that best suits their learning style.”

## **Recommendations**

I will make recommendations for the following: A change in the current e-texts initiative to allow students to choose their preferred textbook medium and further research with a focus on other areas of the student population and into the idea that students are not learning as well from e-texts overall.

First, I recommend a change in the University of Wisconsin-Stout e-text initiative. While the research I have conducted here supports that students are split on preferences, printed textbooks yielded statistically significantly more comfort and positive feelings. An article by Shannon Riffe (2017) further discusses a study conducted by Carnegie Mellon University in Qatar Reference & Instruction Librarian A. M. Salaz, alongside researchers from Qatar University and Edith Cowan University in Perth, Australia. I was unable to access this study directly, but the article shares the following quote from Salaz: “Many people seem to look at this

research and immediately think it's an argument for reverting to print forever, which is not how I see it," Salaz said. "It's an argument for being careful and thoughtful about how and where we deploy digital resources in learning contexts and for continuing to advance research into which devices, platforms, tools, behaviors and knowledge will move us toward erasing the digital disadvantages." Promoting a mixed medium and student's rights to choose, Riffe cites a recent talk by Diane Mizrachi, the social sciences and undergraduate instruction librarian at the University of California, Los Angeles, titled "Preferring Print in a Digital World: Studies of Students' Academic Reading Behaviors." Quoting Riffe, "Mizrachi ... discussed the importance of ensuring equity in the classroom by accommodating students who may struggle with assignments when readings are only available in digital format but are unable to afford increasingly costly paper-based texts." This "mixed medium" approach is what I recommend for UW-Stout. Students should have the ability to choose the textbook medium from which they learn best. The research presented herein indicates that students are likely to just "make do" when their preferred textbook medium is not assigned.

As a graduate student at UW-Stout, I personally chose not to simply "make do" but to spend money out-of-pocket on top of what I already paid for my courses so that I could obtain the textbook medium from which I learned best. Why not meet students in the middle, and allow them to choose their textbook medium preference? Once the instructor assigns the text, if it is available in both formats, students could choose which they prefer to receive. Perhaps a small fee could be assessed when a student chooses paper texts, but, overall, the university will likely not have to keep as many paper texts in stock. This could also be outsourced with a contract with a textbook rental company. Ultimately, I argue here, a student's ability to learn should be the first priority.



Secondly, I recommend that further research be done. It is of utmost importance to understand whether students are having issues learning as well from e-texts as they do from paper texts. Recent studies suggest an issue that students may not even realize (Alexander & Singer, 2017). I also suggest further research at UW-Stout on this same topic with an effort to reach the graduate population as well as older students since this survey was primarily answered by first-year students.

## References

- Alexander, P. A., & Singer, L. M. (2017, October 15). A new study shows that students learn way more effectively from print textbooks than screens. *Business Insider*. Retrieved from <https://www.businessinsider.com/students-learning-education-print-textbooks-screens-study-2017-10>
- Anthony, A. (2019, January 10). Reading material for pleasure vs. reading material for class. *The Classroom*. Retrieved from <https://www.theclassroom.com/reading-material-pleasure-vs-reading-material-class-13860.html>
- 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.  
doi:10.1016/j.compedu.2012.10.016
- E-textbooks & digital resources. (2019, January 2). Retrieved from <https://www.uwstout.edu/academics/academic-services/textbooks/e-textbooks-digital-resources>
- Foasberg, N. M. (2014). Student reading practices in print and electronic media. *College & Research Libraries*, *75*(5), 705-723. doi:10.5860/crl.75.5.705
- General questions about eTextbooks*. (2016). *Rutgers.bncollege.com*. Retrieved June 4, 2020, from <http://rutgers.bncollege.com/eBooks/EBooksFAQ.html>
- Ji, S. W., Michaels, S., & Waterman, D (2014). Print vs. electronic readings in college courses: Cost-efficiency and perceived learning. *The Internet and Higher Education*, *21*, 17-24.  
doi:10.1016/j.iheduc.2013.10.004
- Millar, M., & Schrier, T. (2015). Digital or Printed Textbooks: Which do Students Prefer and

Why? *Journal of Teaching in Travel & Tourism*, 15(2), 166-185.

doi:10.1080/15313220.2015.1026474

Murray, M. C., & Perez, J. (2011). E-Textbooks are coming: Are we ready? *Issues in Informing Science and Information Technology*, 8, 49-60. doi:10.28945/1404

Riffe, S. (2017, May 16). Print isn't dead: Students prefer it over digital for academic reading, study finds. *Carnegie Mellon University*. Retrieved from

<https://www.cmu.edu/news/stories/archives/2017/may/study-finds-print-is-not-dead.html>

Rockinson-Szapkiw, A. J., Courduff, J., Carter, K., & Bennett, D. (2013). Electronic versus traditional print textbooks: A comparison study on the influence of university students' learning. *Computers & Education*, 63, 259-266. doi:10.1016/j.compedu.2012.11.022

Shepperd, J. A., Grace, J. L., & Koch, E. J. (2008). Evaluating the electronic textbook: Is it time to dispense with the paper text? *Teaching of Psychology*, 35(1), 2-5.

doi:10.1080/00986280701818532

Sinkovics, R. R., Stottinger, B., Schlegelmilch, B. B., & Sundaresan, R. (2002). Reluctance to use technology-related products: Development of a technophobia scale. *Thunderbird International Business Review*, 44(4), 477-494. doi:10.1002/tie.10033

Stoltzfus, K. (2016, November 8). Do 'Digital Natives' prefer paper books to e-books?

*EducationWeek*. Retrieved from <https://www.edweek.org/ew/articles/2016/11/09/do-digital-natives-prefer-paper-books-to.html>

*Student group releases new report on textbook prices | Student PIRGs*. (2016, February 3).

*Studentpirgs.org*. Retrieved June 4, 2020, from

<http://www.studentpirgs.org/news/sp/student-group-releases-new-report-textbook-prices>

The advantages of e-textbooks. (2020, February 15). *Universities, Colleges & Schools*. Retrieved from <https://www.universities-colleges-schools.com/the-advantages-of-e-textbooks>

Woody, W. D., Daniel, D. B., & Baker, C. A. (2010). E-books or textbooks: Students prefer textbooks. *Computers & Education*, 55(3), 945-948. doi:10.1016/j.compedu.2010.04.005

## Appendix: Student Survey

### UW-Stout Informed Consent Statement for Research Involving Human Subjects

#### Consent to Participate In UW-Stout Approved Research

**Project Title:** Print Textbooks Versus Electronic Textbooks: What is the Best Approach to the E-Text Initiative for UW Stout?

**Description:** I am trying to better understand whether college students prefer to read from printed textbooks or electronic textbooks for their UW Stout courses and how they are impacted by reading from the non-preferred textbook medium. You will be taking a brief survey about your comfort level when using e-texts and printed texts, your college course reading strategies, your level of exposure to e-texts both previous and current, and your preference for one medium over the other (if one exists).

**Risks and Benefits:** Ultimately this study will take a practical look at how students perceive the e-text initiative at UW Stout and will serve to inform those in charge of the initiative of these opinions and preferences so that any necessary changes may be considered. The results of this research have the potential to affect a change in the current UW Stout e-textbook initiative.

**Confidentiality:** All surveys will be submitted anonymously. Not even the researcher will be able to identify students by name. The only information that will be used is a range of student ages, class rank (Freshman, Sophomore, Junior, Senior, or Graduate student), and degree concentration of those who participate. No other identifying information will not be gathered or reported. Anyone interviewed will be asked to use pseudonyms, and no documentation will be kept that can link pseudonyms with actual names.

**Time Commitment:** The survey should take approximately 5-10 minutes of your time.

**Right to Withdraw:** Your participation in this study is entirely voluntary. You may choose not to participate without any adverse consequences to you. You have the right to stop the survey at any time. However, should you choose to participate and later wish to withdraw from the study, there is no way to identify your anonymous document after it has been turned into the investigator.

**IRB Approval:** This study has been reviewed and approved by The University of Wisconsin-Stout's Institutional Review Board (IRB). The IRB has determined that this study meets the ethical obligations required by federal law and University policies. If you have questions or concerns regarding this study, please contact the Investigator or Advisor. If you have any

questions, concerns, or reports regarding your rights as a research subject, please contact the IRB Administrator.

**Investigator:**

Rebecca Snyder  
Graduate Student – MSTPC Program  
423-895-9582  
Snyderr6539@my.uwstout.edu

**IRB Administrator**

Elizabeth Buchanan  
Office of Research and Sponsored Programs  
101 Vocational Rehabilitation Bldg.  
UW-Stout  
Menomonie, WI 54751  
715.232.2477  
Buchanane@uwstout.edu

**Advisor:**

Dr. Justin Nicholes  
*Assistant Professor*- English & Philosophy  
715.232.1200  
nicholesj@uwstout.edu

**Statement of Consent:** By completing the following survey, you agree to participate in the project entitled, “Print Textbooks Versus Electronic Textbooks: What is the Best Approach to the E-Text Initiative for UW Stout?”

CONSENT (4)

WITHDRAWAL (5)

*Skip To: End of Survey If UW-Stout Informed Consent Statement for Research Involving Human Subjects Consent to Participat... = WITHDRAWAL*

Q1 Rate the degree to which you agree with the following statements:

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
I feel some anxiety when I have to read from an e-text for my college courses (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-texts agitate me. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think younger students know how to use E-texts better than I. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes feel frustrated when I use an e-text for college course reading. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking about using an e-text for my college course reading makes me nervous. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-texts are intimidating. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 Rate the degree to which you agree with the following statements:

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
I feel some anxiety when I have to read from a printed text for my college courses (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed textbooks agitate me. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think older students know how to use printed texts better than I. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes feel frustrated when I use a printed text for college course reading. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thinking about using a printed text for my college course reading makes me nervous. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed textbooks are intimidating. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Q3 For reading in your college courses, how do you prefer to read course materials? (check all that apply)

- I need a quiet environment (1)
- I have no preference: I can read no matter what is going on around me (2)
- I prefer to read at my desk or in an academic setting (such as the library or classroom) (3)
- I prefer to read in a comfortable chair/area (i.e. at home or in my dorm room) (4)
- I prefer to scan pages while reading (5)
- I prefer to read each word of a text while reading (6)
- I read slowly (7)
- I read rather quickly (8)
- I prefer to take notes on paper or via computer/tablet as I read (9)
- I prefer to highlight or make notes in the margins of the text as I read (10)
- I do not often take notes or highlight as I read (11)

Q4 Is there anything you would like to add about how you prefer to read college course materials?

---

---

---

---

---

End of Block: READING STRATEGY SCALE

---

Start of Block: EXPOSURE TO MEDIUM SCALE

Q4 In elementary school, what percentage of your books were e-textbooks?

- Less than 25% (1)
- About 25% (2)
- About 50% (3)
- About 75% (4)
- More than 75% (5)
- 100% (6)
- I did not use e-textbooks in grade school (7)

Q5 In middle school, what percentage of your books were e-textbooks?

- Less than 25% (1)
- About 25% (2)
- About 50% (3)
- About 75% (4)
- More than 75% (5)
- 100% (6)
- I did not use e-textbooks for courses in middle school (7)

Q6 In high school, what percentage of your books were e-textbooks?

- Less than 25% (1)
- About 25% (2)
- About 50% (3)
- About 75% (4)
- More than 75% (5)
- 100% (6)
- I did not use e-textbooks for courses in high school (7)

Q7 For undergraduate study, what percentage of your books have been/were e-textbooks?

- Less than 25% (1)
- About 25% (2)
- About 50% (3)
- About 75% (4)
- More than 75% (5)
- 100% (6)
- I did/have not use(d) e-textbooks for courses in undergraduate studies (7)

Q8 For graduate study, what percentage of your books have been e-textbooks?

- Less than 25% (1)
- About 25% (2)
- About 50% (3)
- About 75% (4)
- More than 75% (5)
- 100% (6)
- I did/have not use(d) e-textbooks for courses in graduate studies (7)

I am not in graduate school (8)

Q9 For college course reading, which medium do you prefer? (select one)

Printed textbooks (1)

E-textbooks (2)

I do not have a preference (3)

Whichever is cheaper (4)

Q10 When your instructor provides a PDF in Canvas for reading, which are you more inclined to do? (select one)

Print the PDF so I can read it and make notes in pen (1)

Read the PDF online and take notes on paper (2)

Read the PDF online and take notes electronically (3)

Q11 When the opposite of your preferred textbook medium is assigned by the professor for reading in your college courses, are you likely to...? (check all that apply)

Rent the preferred textbook medium and pay out-of-pocket (1)

Make do and read whatever medium is assigned by the professor (2)

Q12 Rate the degree to which you agree with the following statement:

	Strongly Agree (1)	Agree (2)	Neither agree nor disagree (3)	Somewhat Disagree (4)	Strongly Disagree (5)
The university should allow students to choose the textbook medium that best suits their learning style. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 Is there anything you would like to share regarding your personal preferences for one textbook medium over the other or ways that you adjust when your preferred textbook medium is not chosen by the professor?

---

---

---

---

---

Q14 What is your class rank based on credit hours:

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)
- Graduate Student (5)

Q15 What is your program of study or major?

---

Q16 What is your age range?

- 18-21 (1)
- 22-30 (2)
- 31-40 (3)
- 41-50 (4)
- Over 50 (5)
- Prefer not to answer (6)

---

Q17 Is English your first language?

Yes (1)

No (2)

Q18 If you would be interested in participating in a short interview regarding your experiences with e-textbooks at the University of Wisconsin - Stout, please e-mail me at [snyderr6539@my.uwstout.edu](mailto:snyderr6539@my.uwstout.edu) with the subject line, "Interview."