

# Student Attitudes Regarding Ebooks: A Survey with cost savings implications

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## ABSTRACT

Students were surveyed regarding usage of ebooks. Findings demonstrate that their propensity to using Ebooks increases as costs decrease, Technological advancements have led to ebooks being more than a written text displayed in digital format as web sites provide more up to date information. Also, licensing changes such as Creative Commons allow for more data to be accessible for students allowing for more student research opportunity.

**KEYWORDS:** ebooks, technology, Creative Commons, pedagogy, Information Systems, educational delivery

## INTRODUCTION

There have been many changes in educational delivery as the field of education has adopted technology to transform methods of teaching. Education has gone from straight lecture of several years ago to incorporating experiential learning into the student educational experience. This experiential learning does not mean working with a business in the community but an access to a great deal of real world actual data for the purpose of analysis and research.

Learning now takes places with a blending of lecture with technological advancements. “Blended Learning” is a combination of face to face mixed with technology based activities. Studies show a growing trend toward the use of this education model. Researchers estimate that by 2014 there will be 5.1 million higher education students solely in brick and mortar classrooms; 3.5 million students solely in online classrooms; and 18.6 million students in blended courses. [1] [2] Furthermore, findings show that many educators not only expect to increase their use of this approach in the coming years but also, several believe that blended learning is more effective than classroom-based teaching alone.[1] [3]

## CREATIVE COMMONS

A movement towards open source thinking has led to a movement towards more free data availability for the student. Yet certain rights of the researchers gathering data should be maintained. . A result of these two actions is the Creative Commons licensing. This data availability has brought about several related changes. For example, there have been changes related to COPYRIGHT with data downloads easily accessible. The CREATIVE COMMONS licensing is starting to become commonplace. For example the website <http://gs.statcounter.com/> allows one to download monthly data such as social media usage or browser usage by countries. Students can analyze trends in growth rates of mobile browsers and many other variables. This may lead them to further research into the demographics and technical advancements in

the various countries. And although this “free” data can be used for research they cannot sell any of the results they obtain as the data is protected by the CREATIVE COMMONS licensing. The data can be used but not sold. Results of the research could not be published in any text that is sold because that would break the licensing agreement for the “free” data. However, this leads to many new developments for lecturing and course exercises. For example, a current ebook “INFORMATION SYSTEMS FOR THE FUTURE” by Bialaszewski [4] presents many student exercises whereby the student must use data that he may freely obtain in order to solve problems. The data from such websites is made available through a Creative Commons license. In the past, if data was accessible, tables might have been created, tables structured, and results printed in texts. This technique is somewhat limited and does not allow for original research to be performed by the student with original data. However, this new licensing allows for much more data to become available to the instructor, researcher, and student. The Creative Commons licensing allows one to use the data but one cannot sell the free data in any way. There are many more possibilities now for the researcher. Tables with data licensed through Creative Commons cannot be used to create tables in a text that the author could sell, however, exercises can be given to the student to create tables and perform other research using this free data. Again, of course the results cannot be sold.

## EBOOKS

Along with the availability of much more data at no cost, publishers and universities are moving towards the utilization of ebooks. The ebook of the future is not just taking the printed text and allowing it to be placed in a digital format. The new ebooks include many links for direct connectivity to a multitude of videos and that can be accessed in the classroom or by the student without the drudgery of trying to enter in some lengthy URL. The ebooks of the future will be very different than the old books of today. For example, if one was discussing hardware in an introductory information systems course, prior to ebooks, is a Solid State Drive was being discussed; quite some time ago a student would look up the page numbers to find text information and then may see pictures in the text that raised the cost of the text. However, all one needs to do now while reading the ebook is enter the term SSD and a list of pages that contain SSD appear. The student just needs to click on the appropriate link and is taken directly to the relevant page. Of course not all ebooks are written to enable this but the majority of newly written texts are. Further links could be included to either access directly or copy and paste and the student can be taken to further detailed information related to SSDs. Links to relevant videos may be given that the instructor may access during a lecture.

This availability also enhances class lectures as rather than project some Power Point of PREZZI images to the class, the instructor can easily bring up the text, scroll to the appropriate areas, and enter in appropriate links, and present relevant videos

or sites to the class in a very organized fashion. This technological advancement makes lecture presentation easier as it relies on the built in organization and search inherent in the new ebook.

Again, not all ebooks offer all conveniences but what many allow the reader to do is to make notes in the ebook, and highlight passages in various colors. For example, vitalsource.com uses the following color code for highlighting: Perhaps a yellow highlighted passage could be used for material they consider IMPORTANT and their own notes can be added, a red highlighting could be used for NEEDS CLARIFICATION and again notes can be added. For example, if a student has some questions about that material he might include his question as a note at that point. A green highlight could be used for MAY BE ON EXAM so students might note that the instructor hinted that this material might be on an exam.

The color highlighting also can help the instructor with his/her class presentation as the instructor could add his/her own notes with further clarification of material or add their own important URL to go to at that point of their lecture. They can use the ebook as a way to enhance their own material with little additional work. Notes can also be shared.

Besides enhancing lectures these new books will dramatically reduce costs to students. The costs to purchase of an ebook are much lower than the cost of a hard copy book. Many ebook costs can even be lowered by opting to rent an ebook with a usual rental time of 6 months. However, these ebooks, at this time, are also offered in a printed version as some students still would rather carry around the text wherever they go. On the other hand, with the new ebooks, the student does not even need to carry around a laptop as the book could be accessed by just going to an open lab at the university or library.

These developments also bring about the need for standardization. I have had no problems accessing material regardless of device used. When I lecture I just access the site and am ready with my lecture. Of course they are also accessible on mobile devices. If a student has their smart phone with them they then have their ebook with them. There is no need to buy special devices or particular ebook readers. Fonts can be adjusted. Although I confess, I enjoy using a wide screen desktop at home for my reading.

Some may view these changes to be adopted gradually by some faculty. However, the question also is how adaptable are students to these changes. In the next section we will discuss survey results obtained from a study of the current situation at a Midwestern university. We will get a glimpse of how prevalent the use of ebooks are and how desirable the ebooks are for students at a typical large university.

## **THE SURVEY METHODOLOGY AND USING EBOOKS**

An eighteen question survey was developed which covered areas such as the cost of texts, availability and preference of traditional printed version versus and ebook, propensity to purchase online, propensity to purchase used texts or to rent texts, as well as several related questions. Demographics were

also collected such as gender, class standing, living on campus versus off campus and so forth.

A method was devised for distributing the surveys randomly and originally 361 surveys had been collected. However, not all students answered all questions. It was also apparent that not all students took the time to carefully read all questions. For example, Questions 4 stated "I am taking \_\_\_\_\_ courses this semester." There were students who entered in the value of 15 and perhaps they interpreted the question as how many credit hours are you taking this semester. However, it was decided to remove all surveys which had questionable responses rather than to assume an answer a respondent might have meant. All surveys collected with any question not answered were also removed. There was a strict removal process in order to ensure that the most accurate data was the only data included for the study. After removing any questionable data the data set contained 317 completely usable respondents.

There were 176 undergraduate male respondents and 141 female respondents. There were 168 lower level (Freshmen or Sophomores) and 149 upper level (Junior or Senior) respondents. The respondents were primarily full time students as only 10 of the 317 respondents were currently taking less than 4 courses. There are 1 credit courses offered at this university and that may account for the fact that 81 of the 317 respondents stated they were taking either 6 or 7 courses during the spring 2013 semester.

One interesting result was that 8 students stated that they did not purchase texts for any course this semester. It is possible to use all online sources or even use free texts. In the past I had used texts from Flat World Knowledge and at that time could obtain an electronic version at no cost. However, it may be more the case that they were renting texts and did not actually buy a text. It could also be the case that some of these 8 students just borrowed classmate's texts. When I was an undergraduate a friend of mine never purchased a text for a Theology course because of a lack of money and just borrowed a text when needed for the length of a semester and so I know that it is being done. There were 235 respondents who stated that they purchased texts for 4 or more courses. However, there were only 35 respondents who stated that they were given an option to purchase an ebook for 4 or more courses. This result clearly shows that all faculty are not clearly gravitating to the use of an ebook!!!

Perhaps this is because some faculty have not been exposed to the use of ebooks and how they might be quite useful to students and that they could improve lectures while also cutting costs for students. I would like to add that I firmly believe that my lectures have been greatly enhanced with the use of an ebook. I am using the text INFORMATION SYSTEMS FOR THE FUTURE by Bialaszewski. I would like to add that I recently served under contract for the College Board/Educational Testing Service for three years on a committee responsible for constructing the the College Level Examination Program (CLEP) exam in Introductory Information Systems. CLEP exams assess college-level knowledge in several subject areas that are administered at more than 1,700 colleges and universities across the United States created by the College Board. [5] There are 2,900 colleges which grant CLEP credit. [6] Being extremely familiar with what is covered in an introductory IS course serving on the

committee constructing and analyzing the questions on this standardized exam I am certain that the Bialaszewski text covers key introductory course concepts. However, since it is an ebook which can direct the reader to websites with pictures and videos it is not necessary to use much "print" space to include pictures of new technologies. The student can either click on a link or copy and paste the URLs given into their web browser to get the most current information about the new technology.

I can also state that using an ebook has helped decrease the organization time for my lectures. I am fortunate that the classrooms that I use have a computer, internet connection, and projector. Often upon entering class I login to <http://vitalsource.com/Pages/home.aspx> [7] and select the text I am using for that course. I can easily scroll to pages I am discussing or highlight text that I feel students should spend more time researching. There is no need to develop Power Point presentations using this technology when lecturing. Moreover, I can copy a link from the references given at the end of a chapter and provide more in-depth material which may include a video presentation of a new technology. Lastly, exercises can be developed making use of the most current data available. This is something that we should strongly consider as it is understood that students can now buy almost any test bank, exercise set, or study guide that exists by obtaining a source for them via the internet. Fraternities and sororities may help to make them available to their members. These types of breaches of ethics may be even more prevalent when online courses are not strictly monitored. I have had a student (not mine) tell me that in a course where there was no real oversight on exams and exercises that their girlfriend took the course for them. With an online text and using current data and exercises this activity would be somewhat minimized as the exercises can easily change from semester to semester.

## SURVEY RESULTS

A five point Likert Scale was used for several of the questions. The scale used is 1 = strongly agree, 2 = agree, 3 = neutral or no opinion, 4 = disagree, and 5 = strongly disagree. Question 9 on the survey is "In general I prefer to use a printed textbook rather than an ebook." I was slightly surprised but not shocked by the result. The findings are: 141 strongly agreed, 75 agreed, 65 neutral, 24 disagreed, and only 12 strongly disagreed. Thus at this particular university at this time it is quite evident that students have not been gravitating towards the purchase of ebooks. Only 36 of the 317 respondents disagreed to some extent with preferring to use a printed text. That is only 11.3% of the students in the sample disagreed with preferring a printed text even though all of these students are continually using their laptops, tablets, and smartphones. Constructing a 95% confident interval for the population percent we find that we are 95% certain that at least 8% to at most 15% of the students of all students surveyed state that they disagree with a printed text being their choice. With ebooks not being introduced in many classes the students might be unaware that they could have access to their text on any device. In my own classes I do not require an ebook. The students are given an option to purchase a printed text. But after purchasing the printed text many students in class see how other students have been able to use their ebooks and have regretted their decision of buying a traditional printed text. However, my evidence is anecdotal as I have not surveyed my class on this matter.

Some students may have had a bad experience using an ebook which perhaps was no more than the printed version placed in digital format. Although that may loosely be considered as an ebook it may not have access to current data or current videos captured and it may even include pictures which may not translate well to all devices. However, these students were asked if cost was a factor, and I stated the question to be "If an ebook only cost 50% of the cost of a printed text I would still prefer the printed text" to make the savings more tangible. And as an aside, the ebook in Information Systems that I am using is actually less than one third of the price of most competing new hard cover texts purchased new. When costs of a 50% savings were being considered by the respondents the number who would disagree with a printed version being their preference rose from 36 respondents to 124 respondents and an additional 53 were neutral. The sample proportion who did not agree in some way that a printed version would still be preferred is 55%. Constructing a 95% confidence interval we see that we are 95% certain that at minimum at least 50% would not prefer a printed ebook to at most 61% would not prefer a printed text. However, many students have not had the opportunity to try and use an ebook.

When factoring out only the subset of students who said they have used an ebook 138 of 205 were neutral or disagreed to some extent that they have a preference for using a printed version when cost is factored into the situation. That is, when costs are considered, and for those who have used an ebook, we obtain a sample proportion of 67% who are not agreeing with a preference for a printed text. Once again, we find that at least 60% would not agree to some extent to at most 74% would not agree to some extent with a preference to a printed version.

There is much more analysis to be completed for this research. Data was collected on many related topics and the relationships between questions and also relationships to demographic variables have not yet been presented. This analysis will be presented in a final version intended for journal publication.

## CONCLUSION

Although there is much analysis that remains to be completed there are some important conclusions to be drawn. Whereas only student information was captured from one university it does give some insight to what may be the existing situations at other universities and begs for more research to be performed in this area. It is certain that many courses are not offering the option of using an ebook. It is also certain that costs for an ebook are much less than the cost of a printed text. Students seem to not prefer a printed text when there is a dramatic cut in costs and yet we are not always making ebooks an option for the students. Why is this not an option in more courses than currently available? I would conjecture that there has been limited training for long standing training for faculty and that they may not be aware of all technological possibilities. That is not to say that current faculty do not use technology. However, I would conjecture that universities are not spending the dollars on training and faculty development that they should be spending.

The research presented in this study leads to much more research related to student preferences and their use of technology for learning. Moreover, this study leads to further

research related to faculty preferences for teaching methodologies. Are faculty making conscious decisions to shy away from ebooks or are they unaware of the new possibilities that they bring. Ebooks lend themselves to using current data and videos. Are faculties more concerned with the content of the text of choice or are they more concerned with the ancillaries including test banks. Are administrators truly aware that large classes almost force faculty to moving towards objective testing and that test bank answers may be currently obtainable from sources over the net. Perhaps a line of future research this paper might lead to is to actually determine the percent of test bank answers that may be obtainable via the internet. When I served under contract for the Educational Testing Service we met in person in privacy to construct questions. However, we also submitted and critiqued potential questions via e-mail. However, we used Pretty Good Privacy (PGP) software as a data encryption and data decryption program. I wonder if a part time instructor teaching one course for say \$1,800 would be willing to sell his copy of the test bank or just make a copy of the test bank if he/she was offered \$10,000. I wonder if students knew a particular test bank was being used what they might be willing to pay for a copy of the test bank. I wonder how many universities actually explore whether any of their students might have a copy of their test bank and if there are firm penalties in place. Does this really happen in today's world? Well, when I was a graduate student I saw an undergraduate student who had a printed copy of test bank questions and that was in 1972. I believe it still happens today but, again, I believe that is an area for further research. However, I do believe we all should be aware of how we can make use of current technologies and today money budgeted for faculty development may be more important than ever before.

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