ASEE PRESENTATION TRANSCRIPT

Library Facilitation of eTextbooks in Engineering Classes: Student Adoption & Perception

---

TIME LIMIT : 15 minutes

The 20-minute Technical Sessions you see on the program are live moderated Q&A sessions with the authors. All ASEE technical session authors will be pre-recording their presentations, PowerPoints with embedded audio, and those presentations will be available to view 24/7 starting Monday June 22nd (if not earlier). So attendees view the pre-recorded presentations they want to see, and then attend the live moderated 20-minute session.

SLIDE ONE - ASEE SLIDE

SLIDE TWO - TITLE + INTRO

Hello, my name is Jamie Niehof and I am presenting on behalf of my co-authors Leena Lalwani, Paul Gro-husky, and Craig Smith at the University of Michigan. Our paper is titled Library Facilitation of eTextbooks in Engineering Classes: Student Adoption & Perception. Craig Smith is UM Library's Assessment Specialist and the rest of us are engineering librarians working in the Art, Architecture and Engineering Library on the Ann Arbor Campus.

SLIDE THREE - QUOTE

In a 2014 report from the Center for Public Interest Research that surveyed over 2000 college students from around the country, 65% of students reported they decided against buying a textbook because it was too expensive. Of those students who didn't buy a textbook, 94% of them were worried that their course grade would suffer because they did not have the textbook.

SLIDE FOUR - ETEXTBOOK LIBGUIDE

In order to help mitigate textbook costs for University of Michigan engineering students, the engineering librarians list available electronic versions of textbooks on our main engineering LibGuide. Before each fall and winter semester our support staff check the list of assigned textbooks for engineering courses, and where we have an electronic version available, it is listed on our LibGuide. Most of these books are available via U-M Library ebook packages. We also actively search for and purchase individual eTextbook titles if we know that they're assigned in classes.

You can see that guide in front of you. This service has been around for more than ten years. We promote this list by sending emails to specific faculty members, posting to our blog, and setting up a table in our library the first week of classes.

SLIDE FIVE - ETEXTBOOK LIBGUIDE CLOSEUP

Here is a close up view of the three eTextbooks we had available to the Climate department. We link out directly to the ebook in our library catalog.

SLIDE SIX - NORTH CAMPUS IMAGE

A little bit about the College of Engineering at the University of Michigan - Ann Arbor.

SLIDE SEVEN - COE INFORMATION

As of the fall of 2019, we have more than ten thousand total students, with the undergrad and graduate breakdown shown here. 900 faculty and researchers, and four librarians to support them.

SLIDE EIGHT - PROJECT ORIGINS

About eight years ago the engineering librarians decided to survey our students on their use of our eTextbooks, the problems they encountered, and whether or not they preferred one vendor over another. The resulting paper, “Students, Vendor Platforms and E-Textbooks: Using E-Books as E-Textbooks”, was presented at the 2013 ASEE Conference in Atlanta. As a follow-up to that survey and to assess current student perceptions and usefulness of our eTextbook Service we conducted a new study and focus groups in the fall of 2019.

SLIDE NINE - METHODOLOGY

Using our LibGuide as a starting point, we compiled a list of the 54 classes that all had etextbooks available to students through our university collections and eliminated optional textbooks resulting in 48 classes represented.

↦

We worked with our Assessment Specialist Craig to generate a list of the almost 2000 students enrolled in those 48 classes, then de-duplicated the students who might be taking more than one class on our list. This resulted in a sample of 1,849 students who were using one of 39 individual eTextbooks.

↦

Our response rate was 20% after several reminder emails,

↦

and after data cleaning we had 335 usable responses.

SLIDE TEN - RESULTS

Let’s take a look at the results from our survey.

SLIDE ELEVEN- RESULTS: EBOOK VENDORS

The 39 eTextbooks included in the survey were available on 11 different platforms, with the number of survey responses received for each of the ebook platforms and representative books on the right.

We had five vendors with more than 45 responses each.

↦

The sample sizes for these vendors allowed us to conduct statistical analyses to test for associations between platform and various facets of student-reported ease of use, such as navigation and note-taking; chi-square analyses did not reveal any significant associations.

SLIDE TWELVE - RESULTS: FORMAT PREFERENCE

Here are the results from our question “If one of your course textbooks was available in both print and electronic formats, which would you prefer?”
there was a slight preference for eTextbooks over print textbooks

SLIDE THIRTEEN- RESULTS: FORMAT VS ACADEMIC LEVEL

Since we had demographic data on our student respondents, we looked at the results of the book format preferences as a function of class standing. A chi-square analysis indicated that undergraduate students were significantly more likely than graduate students to prefer the eTextbook format, whereas graduate students were more likely to prefer print. Results of this analysis are shown here.

We wondered why this was, so asked in the focus groups and determined this is mostly because Graduates like to keep their books for future reference, and Undergrads don’t. Undergrads also have multiple very heavy books assigned for core classes, and ebooks weigh nothing but the laptop or phone they’re carried on.

SLIDE FOURTEEN - RESULTS: LIKE ABOUT THE FORMAT

We asked students what they liked about their preferred format with the options displayed here. They also had the option to write in an “other” response. One of the write-in responses about print textbooks we thought was interesting was

↦

QUOTE “It is much easier to remember where in the book you saw something important with a physical copy than it is electronically” UNQUOTE. One of the write-in responses about eTextbooks we thought was interesting was

↦

QUOTE “Having a control-F function.” UNQUOTE

SLIDE FIFTEEN - RESULTS: DEVICES

The survey asked students which devices they used to access their eTextbooks. While it is not surprising to learn that a large number of respondents used laptop computers to access the books, we found that students are also using their mobile devices. Publishers may wish to take note of this and include mobile-friendly design when developing ebook platforms.

SLIDE SIXTEEN - RESULTS: WHEN/HOW DID YOU LEARN

One of the things we were most looking forward to finding out from this survey was whether or not students even knew etextbooks from the library existed. We dedicate a significant amount of staff time to this service, so awareness among students was of interest to us. Looking at the numbers from when students learned about eTextbooks,

↦

85% knew on or before the first day of class. And a large percentage found out from Instructor Announcements or on Course Syllabi. These high numbers lead us to believe our emails to faculty are making an impact and our promotion of the books has been a success.

Several of the write-in “other” responses to this question mentioned seeing librarians at our tabling event the first week of class. You can see in this picture of tabling an open pizza box. The pizza makes us infinitely more interesting to students.

SLIDE SEVENTEEN - RESULTS: EASE OF USE

We asked students to rate how easy seven functions of eTextbooks were to use on a scale of Very Easy to Not Possible; those functions are shown at the bottom of this graph. We were particularly interested in the “not possible” responses.

↦

While we trust students were sincere when they stated that a feature was not possible, in some cases, we knew otherwise. This pointed to a need for librarians to offer better instruction on the features and quirks of eTextbooks.

SLIDE EIGHTEEN - COMMENTS

We had 48 responses in our open comment section at the end of the survey. Here are three comments that were revealing to us. Not being able to use eTextbooks in an open-book exam was of particular interest to us, so we explored it more fully in our focus groups. The pictured Orbital Mechanics book for aerospace students is almost 800 pages and weighs several pounds, so it’s not a surprise students wouldn't want to carry it around. We also saw many students frustrated with the cost of textbooks.

SLIDE NINETEEN- FOCUS GROUP METHODOLOGY

We held Focus Groups over two lunchtimes in December 2019, with food and drink provided. 62 of the survey respondents indicated a willingness to participate, and ten students had schedules that allowed them to take part. We had a pretty even split between undergrads and graduate students, and five out of 13 of the departments in the College of Engineering were represented.

SLIDE TWENTY - FOCUS GROUP COMMENTS

One of the most fascinating things that came out of our Focus Groups is that students at our university have student-run departmental Facebook pages where they share PDFs of textbooks used in their classes. Using a combination of these FB pages, their friends, the library, and basic pirating, students estimate 85%

of their assigned textbooks are available free online. This of course varied by class standing and specialty. We had time to analyze the survey results before the Focus Groups, so asked a lot of questions about problems with eTextbooks. Basically any barrier to accessing the book was a major concern. This included having to sign in with a username and password, and having to re-check out a book constantly. One student just stopped using the textbook altogether after being forced to check it out every three days. Finally, almost every student in the focus groups preferred downloadable, smart PDFs to any other format.

SLIDE TWENTY ONE - WHAT HASN'T CHANGED

So, what hasn't changed since we surveyed our students almost a decade ago?
-There is still a strong preference for downloadable PDF over anything else
-Highlighting and taking notes is important
-Students commented in all three surveys of an affinity for the tactile nature of print, whether that's bookmarking an equation to return to, or forming spatial memory while reading and flipping pages.
-Some professors still don't allow electronic devices in open-book exams, so

SLIDE TWENTY-TWO - WHAT HAS CHANGED

What ***has*** changed in a decade? Almost all of the things that have changed have been for the better. The actual quality of the ebooks has improved, likely because many are born digital rather than scans. More eTextbooks overall are available to students. And more students are aware of our services due to the promotional efforts of staff and librarians.

SLIDE TWENTY-THREE - CONCLUSION

We conducted this study to learn about our engineering students' use and perception of eTextbooks. Even though 35 percent of students prefer print books, they will happily use eTextbooks when they are free.
Though neither the survey nor focus group responses allowed us to draw any conclusions about vendor platforms, students did indicate some clear preferences: The best format for them is a downloadable PDF file; highlighting and taking notes are important functions. As was apparent from both survey and focus group results, students would like for us to continue publishing eTextbook lists on our website and continue prompting faculty to include the eTextbook information in their course syllabi.

SLIDE TWENTY-FOUR - FUTURE WORK

Our next steps are to survey and communicate to faculty. Through our current methods, we're aware of instructional materials assigned by faculty in only 18% of the 674 lecture courses in engineering.

We would like to increase that number. We would also like to advocate for etextbooks to be allowed on open-book exams. We plan to share our results with publishers and ebook aggregators as well, with the hopes of improving the ebook experience for all students. Before the pandemic we met with ScienceDirect's ebook Project Management Team, and we have a pending meeting with ProQuest when the world begins to spin again. Lastly, our outreach efforts surrounding eTextbooks can improve. We need to do more to promote the eTextbook availability and we need to do more to make certain that students are fully aware and make good use of eTextbook features.

SLIDE TWENTY-FIVE - Acknowledgements

We want to thank all of the students who took the time to provide thoughtful responses to the survey and focus group questions, and also our colleagues Janet Livingston, who prepares the eTextbooks LibGuides and Rebecca Price, for her helpful comments on our draft paper.

SLIDE TWENTY SIX - LIVE Q&A

Please join us for a Live Q&A about this textbook project on Thursday, June 25 at 10:40am Eastern. It will be hosted by my colleague Leena Lalwani. Thanks for listening, stay healthy.