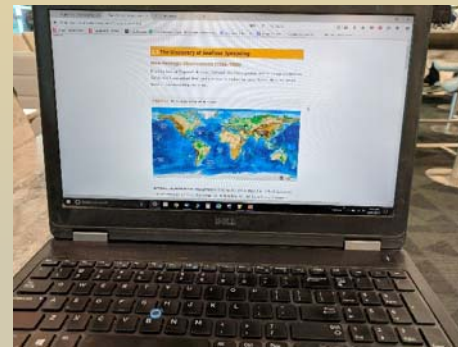


A Case Study in Transforming Higher Education: EBOOKS AS A MANDATORY TEXT IN LARGE FIRST YEAR GENERAL EDUCATION GEOSCIENCE COURSE

Mary-Helen Armour (York University) and Jerusha Lederman (York University)



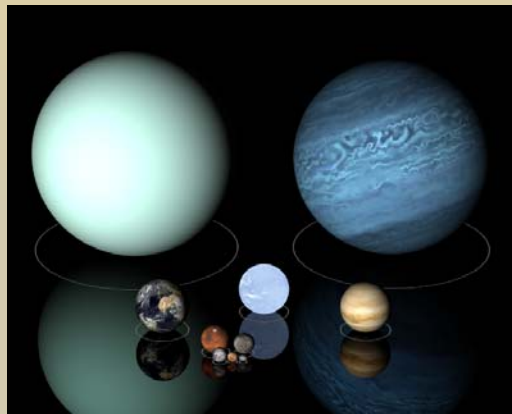
Jerusha Lederman

- H. B.Sc. Space & Communications Science
- M.Sc. Astrophysics
- Ph.D. Atmospheric Physics

Mary-Helen Armour

- B.Sc. Physics & Astronomy
- M.Sc. Astronomy
- Ph.D. Geophysics (in Progress)

York University's DIVISION OF NATURAL SCIENCE, "NATS"



Ebook study - Why?

- In science the cost of textbooks is prohibitive. Ebooks are often as much as 50% cheaper
- Many textbooks companies are moving to more online resources, particularly for large introductory level courses
- For the course in this study, no single hardcopy or even custom text was suitable to the material, W.W. Norton & Company Inc. agreed to provide a package which accessed two texts for the course as an ebook.

Ebook Study – Why?

- On review of the literature, little or nothing was present on the required text in a course being in electronic form *only* most studies address this with the ebook as an option
- This course was offered in both in class lecture and fully online and has a diverse student population from many programs and from all 4 years of study
- As such, it was felt this was a unique opportunity to gauge student reaction and experience in using the ebook format, and to address such issues as might arise.

Study Design

- Three sections of Nats 1570.03 - Exploring the Solar System, as 1 term 3 credit general education requirement for all non-science majors.
 - i. Fall 2016 A section - two 1.5 hour lectures/week~ 270 student enrolled
 - ii. Fall 2016 B Section - fully online version ~150 student enrolled
 - iii. Summer 2016 section – one 3 hour lecture/week ~80 students enrolled

- 3 surveys of 20-25 questions, one at start of term, one around time of midterm, one end of course (open until after final exam written)

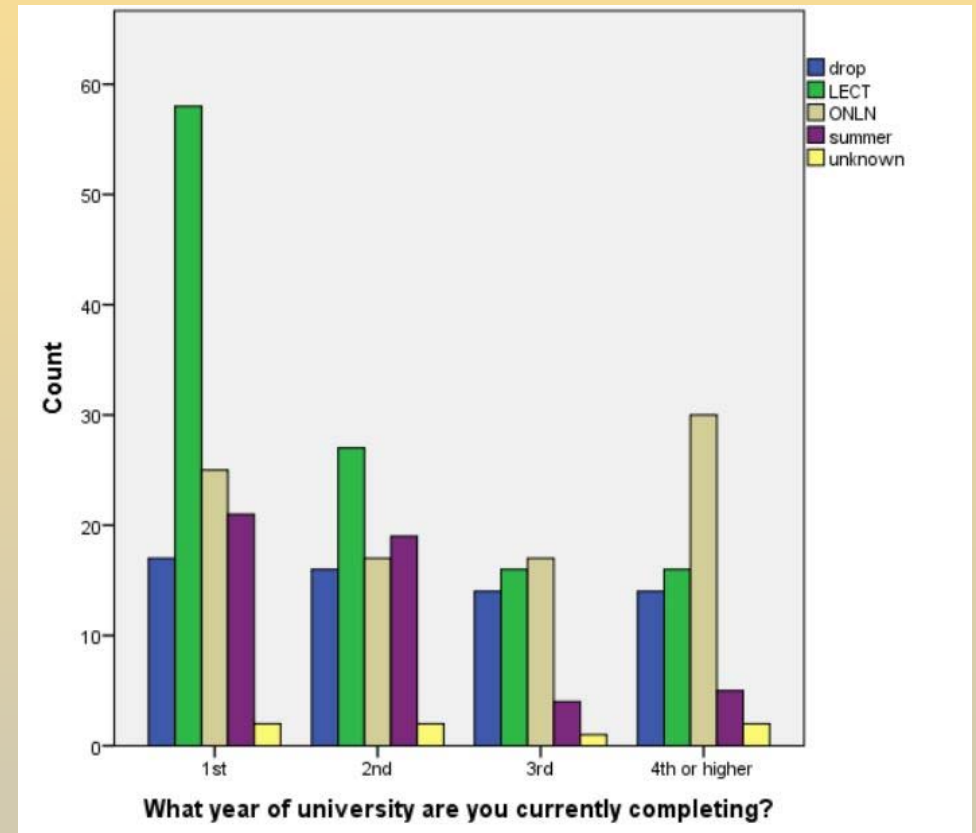
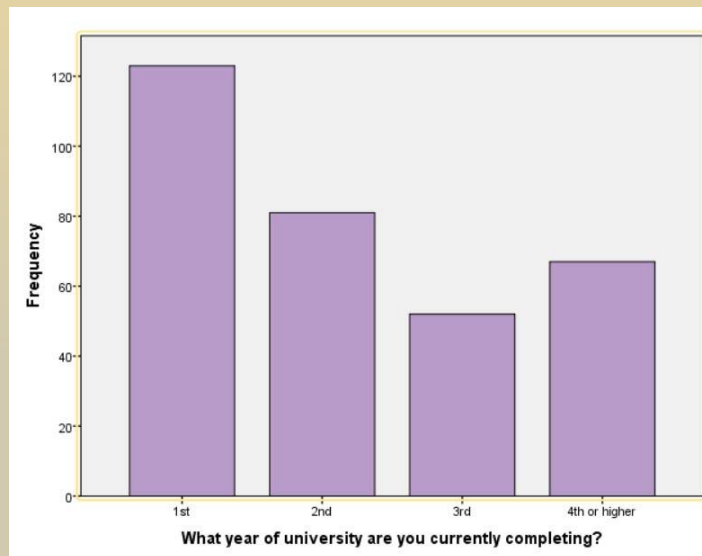
- Responses well over 200 students per survey, ~100 answered all 3

Study Design

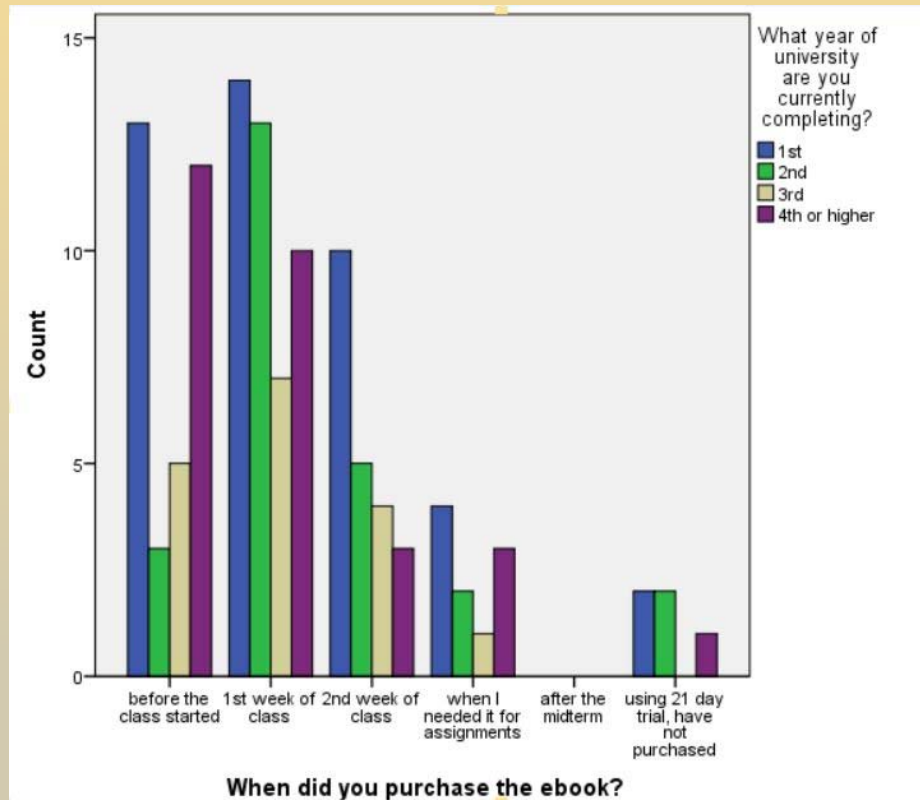
- All 3 surveys had basic demographics – gender, program and year of study, part/fulltime status, international/domestic. Students could also self-identify as having academic accommodations.
- Focus groups after end of course
- Data from all three surveys was imported into SPSS for analysis.

Demographics

- As this course is a general education requirement, many students will put it off until a later year, so the courses are a mix of year levels and from many different programs.



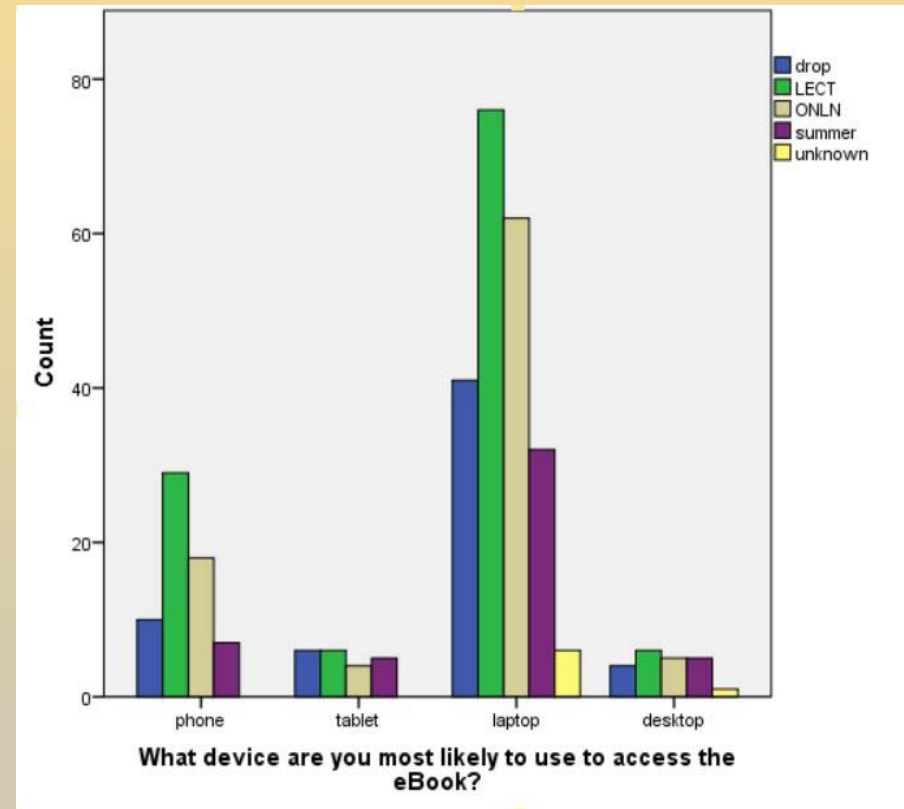
Book Purchase



- Of interest, was when students were obtaining the book and how this would relate to the year and section of the course they were in
- From statistics from bookstore and textbook company purchase of book across all sections was >80%, (higher in the online section)

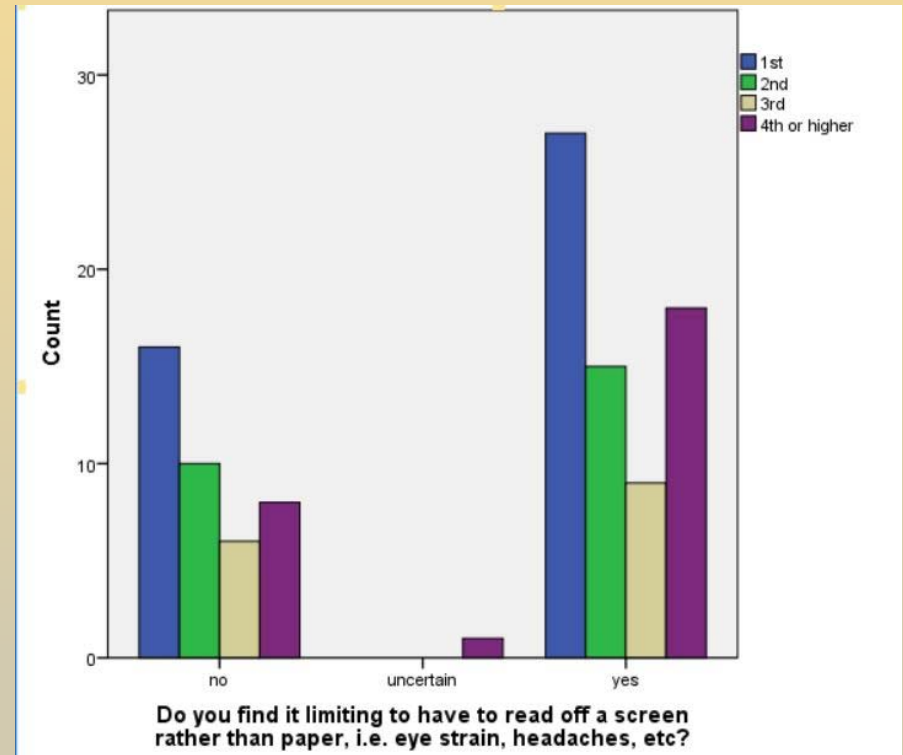
How are students accessing the material?

- One of the attractions as an instructor is the various features available in the ebook, but this is very dependent on device.
- Graph here addresses most commonly used device, but many students accessed from more than one device, the laptop still being most common, but many accessed from phone as well.



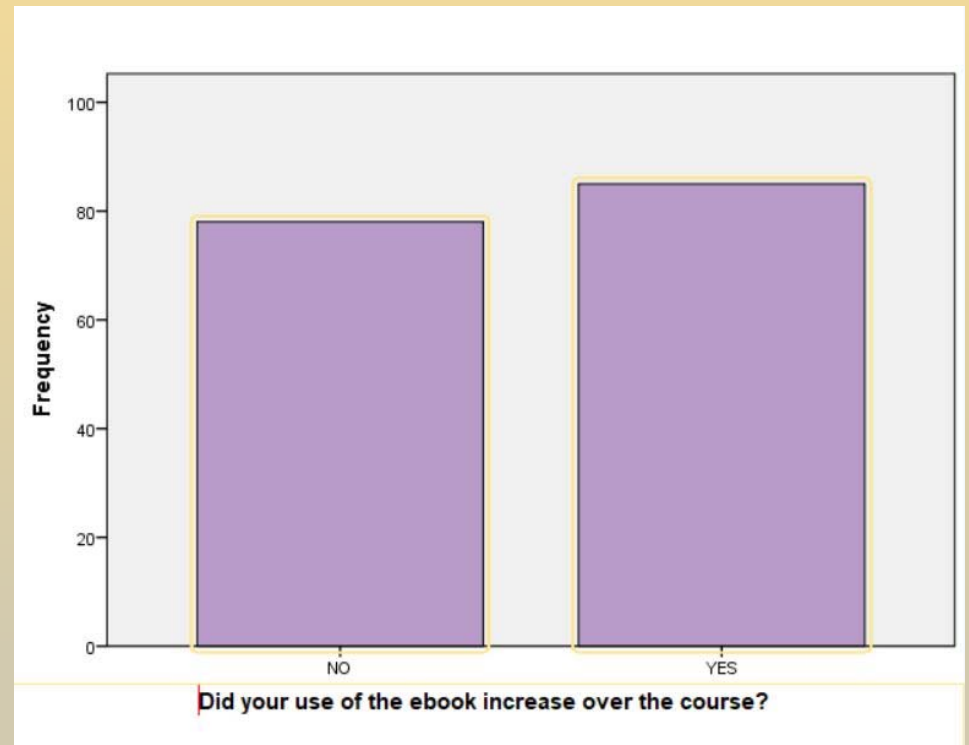
Screen reading

- One of the major concerns expressed by students is the difficulty in reading from a screen, and this was addressed as it does seem to be a concern.
- However in focus group discussion, student did find ways to minimize this issue (adjusting screen brightness, using 'night mode')

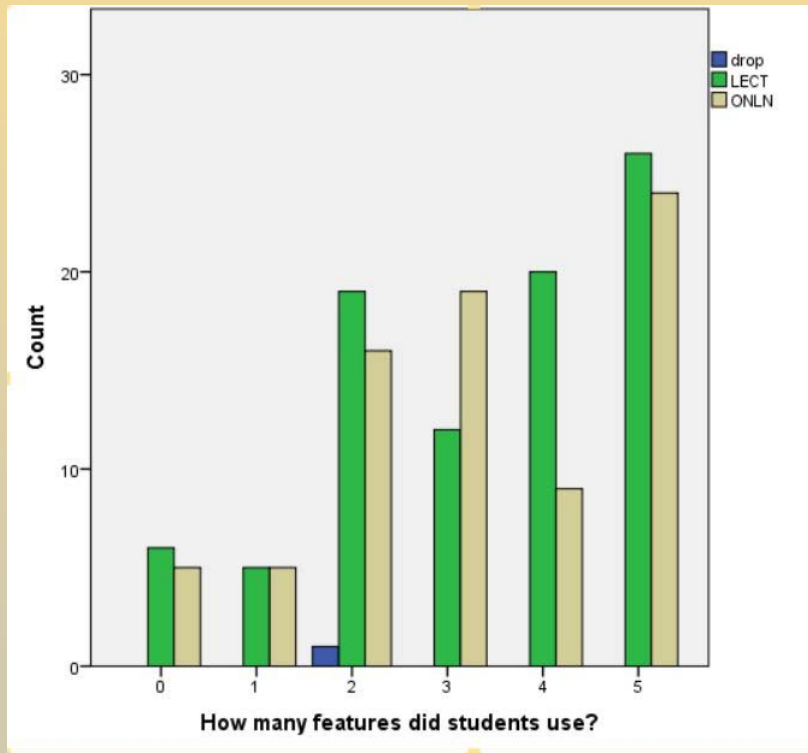


How did students adapt to book?

- More than 50% of respondents felt their usage increased over the course

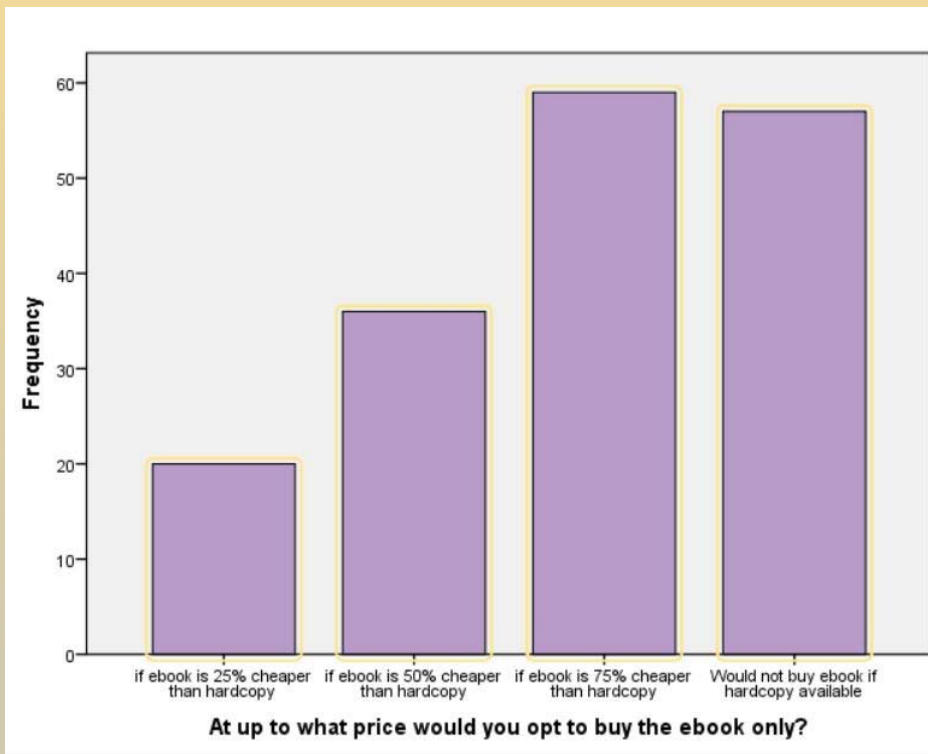


Features in ebook



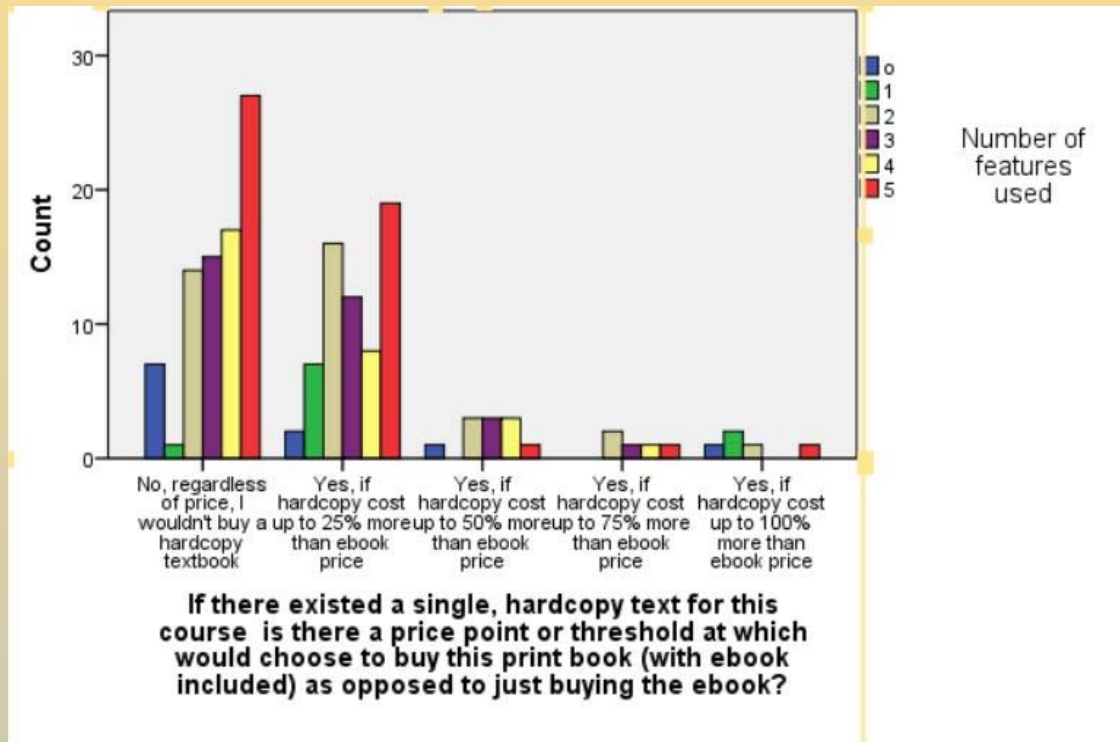
- Here we asked students how many of the features, such as highlighting, searching, note taking they used.
- Most students used two or more features.
- Highlighting and searches were more commonly given as the preferred feature.

Cost



- An advantage of ebooks is cost. With the increasing cost of education, ancillary costs become of major concern to students.
- In focus groups, student also indicated the idea of the mandatory subscription fee that would lower the cost of the text would be appealing option (also felt this would reduce the time obtaining books – ease of access was important)

- Further breaking down preference, we found people who used more features were more likely to not wish to buy a hardcopy (even with ebook included)



Students dislikes

- Biggest complaint of students was that reading on a screen was more difficult than reading hardcopy, though when asked in more detail during focus group, participants felt that the reduction in cost offset this issue. Students also indicated they could find work arounds such as adaptive brightness etc available on many systems
- Students also resented the cost of 'renting' a book where online access was for only a limited (typically 1 year) period.
- Trying to flip back and forth between pages

Student likes

- Portability
- Features such as highlighting and searching
- Smartworks homework function with direct links to text.

Further work

- Survey to be run again in Winter 2018, with adaptations to ebook use based on feedback. This survey will use a standard text as a required ebook
- Detailed longitudinal analysis of data for students who answered 2 or 3 of the surveys to see how attitudes may have changed over the course.

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