The Timely Demise of the Paper Textbook

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The Timely Demise of the Paper Textbook

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As Apple Computers unleashes its version of an e-book reader onto the public, the dawn of interactive screen reading is upon us and the tactile feel of paper is fading away. The field is crowded with options such as Barnes and Noble’s “Nook”, the Sony e-Reader, the Hearst/Sprint Skiff Reader, and Amazon’s Kindle. Sales of the devices are skyrocketing, with $1 billion worth of Kindles expected to be sold in 2010 [1]. Jeffrey Barlow has both lamented the loss of the paper book and welcomed the new technology in prior INTERFACE articles, calling the Kindle a “disruptive technology” [2]. While schools struggle to survive in a time of recession and to maintain relevance in a digital age, what are the implications of these reading technologies for students? In this article I explore the growing phenomenon of e-textbooks for these reading technologies and how they may disrupt schools as we have known them. Textbook costs in schools, from Kindergarten to the University, have increased dramatically over the past two decades. Textbooks nearly tripled in price between 1986-2004 [3]. College students are forced to spend up to $1,000 a year, further adding to the burden of paying for a higher education. For school districts, the rising cost of textbooks means pushing other school funding priorities to the side, keeping outdated materials for longer, or simply doing without. For instance, even though California spends $400 million per year on textbooks, [4] 500,000 students did not have textbooks to use in class and 2 million could not take their textbook home last year [5]. In response, 34 states have introduced laws that attempt to scale back prices but only six were successful, possibly due to heavy lobbying by the industry [6].

Schools’ efforts to release themselves from the bonds and constraints of textbook publishers are not new. However, with e-books, a number of new developments make purchasing a reading device for students rather than paper textbooks more attractive, particularly as device competition pushes prices downwards. First, the cost issue drives the market. E-textbooks can be up to 50% less, although the cost difference for many books is currently not significant. As more textbooks hit the e-market, school districts and college students will likely see cost benefits.

Second, and perhaps more importantly for K-12 schools, it makes individualization possible. Three states, California, Florida, and Texas make up 25% of the textbook market. Matt Federoff, the Vail, Arizona School District’s Chief Information Officer notes “Textbooks are basically produced by half a dozen manufacturers to be sold as widely as possible to as many districts as possible” [7]. If the big three don’t like something, it doesn’t go in the book. Other states have had to get along with whatever those three states want to put in a textbook. However, with e-textbooks, publishers can cost effectively produce textbooks that align with each state’s standards. Books can be customized to state’s desires and updated without having to reprint. McGraw-Hill, one of the largest textbook publishers in the United States, already publishes nearly 95% of its
books electronically [8]. More than 6,000 colleges and universities now subscribe to CourseSmart’s
(http://www.coursesmart.com) accumulation of 8,500 e-textbooks. Yet, the market for e-textbooks has
been slow to emerge. One of many hurdles to overcome, is that you can’t sell back an used e-textbook, so
the end cost is not worth it for students yet. However, the growing presence of Kindle-like devices and low
cost “subscriptions” at sites like CourseSmart are likely to set the tipping point in motion.

To push the future for K-12 schools a bit more, California has initiated the Open Source Textbook Project
(COSTP: http://www.opensourcetext.org/). COSTP’s mission is to completely eliminate the $400 million line
item for K-12 textbooks, increase the range of content, and end textbook shortages. COSTP plans to
access free, already-existing, and widely available K-12 educational content in the public domain, use
California’s best K-12 teachers to create resources, and use dormant K-12 textbook content. Last year,
COSTP released the first group of free, online books to schools that meet state education standards.

Also impacting the growing content side of the equation, Project Guttenberg (http://www.gutenberg.org)
was the first site to make ebooks available for free and now boasts 30,000 titles. Any work of Shakespeare,
Dickens, or Twain is just a few clicks away. Google is working with such institutions as the University of
California at Berkley and the University of Michigan to scan 10 million books [9]. While most of these books
will incur some costs, a significant percent will be freely downloadable to schools [10].

Bottom line, so far, is that e-textbooks readers are becoming more accessible, costs for e-textbooks are
coming down, and the content available for these readers is increasing dramatically. But, does it make
educational sense for schools to move towards e-textbooks and how might e-textbooks disrupt schooling?
From my perspective, there are three driving forces educationally for e-textbooks to find their place in
classrooms: currency, interactivity, and individualization.

First, the easy examples addressing the currency issue are history and science books. Yesterday is today’s
history. If the textbooks are online instead of in students’ hands, discoveries, new perspectives, and influential
events can be updated continually without reprinting. Some students are reading ten year old science books.
Consider what we have learned about the brain, genes, technology, and global warming in the past decade.
It is likely that very few textbooks in the United States are up to date on these critical topics for the next
generation. For better or worse, current history is the domain of Wikipedia. Not to knock Wikipedia, but,
what if thoughtful historians and scientists became resources for schools’ textbooks on an ongoing basis?
When e-textbooks make state-of-the-art knowledge available to students, school becomes more relevant.

Second, e-textbooks provide interactivity that paper books can’t. Don’t know that word? “Look it up!” says
your teacher. How many students bother to walk over and pick up the dictionary to look up those words and
learn their meaning and how they function in the context of the current paragraph? If all a student has to do
is click on the word to discover its meaning, learning is at their fingertips. Further, if a student wants to learn
more about a topic they are reading about, a linked word can lead them to a reviewed source rather than
spending wasted minutes searching on Google to find a questionable site. Also, highlighting and note taking
on the reader can lead to increased interaction with the text because it is easy, accessible, and immediately
storable. Interactivity ultimately puts increased depth and breadth of learning in students’ hands.

Finally, e-textbooks can be individualized. In education, we know that the more you meet a student’s
individual needs, the more he or she can find success. For example, I visited Howard Elementary School in
Eugene, Oregon recently where every student has their own laptop. One of the tasks for the day in a fourth
grade classroom was for the students to all read an article about dolphins and then answer some questions.
From his laptop, the teacher set the reading level of the article and questions for each individual student on
their laptop. Based on their comprehension scores, he can set the next article to a different reading level. The class was able to have a large group discussion about dolphins and work together in small groups on projects. This was possible because they had all read the same content, but tailored to each student’s reading skills. Needless to say, their reading scores on the state test have increased.

Whether it is creating appropriately challenging math problem sets, end of chapter questions, or individual readability, e-textbooks have the potential to take students where they are and move them forward. One of the biggest problems in schools is that teachers typically don’t have time to individualize teaching, particularly regarding the resources they use, so they necessarily teach to the middle. The result is that lower students struggle and the higher students are not challenged. Teachers care and want to do the best for their students. E-textbooks could facilitate that effort by helping teachers customize learning.

In the end, e-readers make it an interesting and potentially exciting time for schools from Kindergarten to college. My generation generally enjoys the feel of paper when it comes to reading. My fifteen year old son is not so emotionally attached. When I think about the benefits to students that e-textbooks can provide, I’m willing to make the sacrifice, let the demise of paper play out its course, and the Kindle generation begin.

**Endnotes**


[9] [http://www.cic.net/home/Projects/Library/BookSearch/Introduction.aspx](http://www.cic.net/home/Projects/Library/BookSearch/Introduction.aspx)

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on February 5, 2014 at 9:30 AM said:

Right here is the perfect website for everyone who wishes to understand this topic. You realize a whole lot its almost hard to argue with you (not that I personally will need to