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eTexts: The wave of the future?

Question: What do principals need to know about the use of electronic textbooks?

In a Nutshell

The use of eReaders and eTexts is an emerging technology with little clear research about its use or impact on student learning. They are an attractive option because students are comfortable with the use of technology, and they often reduce expenditures and allow for more frequent updating of texts. However, their use also has significant instructional implications for teachers and students.

Summary of Findings:

Students, referred to as the Millennials or the Net Generation, born between 1980 and the present, have very different learning styles than those of previous generations. They were born into a world of everyday applications of technology and have utilized it from a very young age.

According to Prensky (2008), one of the leading experts on the Millennial generation, the majority of teachers continue to teach in ways that prepare students for success in the past rather than the future. One survey of teachers reported that 65% said paper textbooks would become obsolete, yet only 14% of them said they thought their district was ready for such a change (Kastner, 2010). In order to stay current and successfully prepare students for the world beyond high school, educators must meaningfully integrate and employ technology in the instructional program.

The latest technological tool is the electronic reader (eReader) that uses digital texts (eTexts). One of its uses is to replace paper textbooks so the students no longer have to lug around heavy books and the district can reduce expenditures. eTexts tend to cost about 40% less than paper books (Briggs, 2009). Sony introduced an early version of the eReader in 2006 and Amazon followed with the Kindle in November 2007. Apple's iPad, released in early 2010, provides another platform for e-books. Several other prototypes have been introduced but are not yet on the market. Meyers (2010) stated that eTexts, "...offer inexpensive, interactive lessons that engage today's technologically savvy students and keeps the content fresh."

The Times They are a Changin

Siegel (2010) reported that the cost of college texts in Ohio rose 6% a year from 1986-2006 and have risen 10% a year since. Educators and policymakers are searching for ways to decrease the cost of purchasing textbooks.

In response, some states are seriously considering use of eTexts. Texas recently implemented a new state law that allows the Commissioner of Education to select electronic texts for adoption in local districts. School districts must have one class set of books for each subject and grade level, then the district may purchase eTexts with its remaining textbook funds. Virginia has approved the use of open-source texts (Meyers, 2010; Robelen, 2010).

While there are examples of school districts that have begun to use eTexts there is no clear data about the prevalence of their use. Similarly, there is limited research on the impact of eTexts on student achievement.

Schools Using eTexts

Many school districts are looking at the use of eTexts. They include schools in Texas where the state will reimburse schools 50% for the savings they achieve through switching to eTexts.

The Indianapolis Public School system has selected twelve schools to participate in a pilot of digital textbooks. Indianapolis will use content provided by Discovery Education. Participating schools will be supported with additional hardware to use the technology and teachers will receive professional development on its use.

Similarly, the Detroit Public Schools has contracted with Houghton Mifflin to use their Learning Village software as a platform for student use of digital versions of print textbooks. The Learning Village software allows students to engage in interactive activities and teachers to assign homework and assess student learning.

Advantages of the use of eTexts

There are several identified advantages of eTexts. They include the following.

- Digital texts generally save districts money. They do not suffer the wear and tear of traditional paper texts.
- Digital texts can include hyperlinks to link students to more information on a given topic including references and audio or video clips that satisfy an innate interest to learn about their content.
- Digital texts are easily updated so that they remain current. The ability to frequently update texts is one of the eTexts major advantages.
- Digital texts can include video clips, interactive quizzes and other assessments of student learning, and social media connections so that students may stay connected to others in the same course.
- Digital texts use the technology of the Millennial generation, so they appeal to and make more sense to them. One researcher stated that this generation looks at computers the way the Boomers look at television screens (Wouduska, n.d.).
- Digital books can be stored in a virtual library and are easily retrieved if the technology fails.
- Some eReaders can be hands-free using Bluetooth technology.
- Some eReaders allow students to use the highlighting, underlining and annotating features
- Some eReaders (i.e. iPad) can do read alouds, which will assist those with reading difficulties and vision issues. This would allow texts to be available to every student regardless of the nature of a disability .

(Bertolucci, 2010, January; Chen, 2010; eSchool News, 2010, March; Shannon, 2010; Wouduska, n.d.).

Concerns about the use of eTexts

As with most technology, there are also some identified concerns. For example,

- There is no current information on the efficiency of reading a paper copy over a computer screen. One study from the late 1980s found that it took more time to read on a computer screen than the same material on paper, however, screen resolutions and the scroll screens have improved since then. Another study from 1998 found there was more fatigue and a decline of speed and accuracy when reading from a computer screen (Wouduska, n.d.).
- It is unclear whether school funds used to purchase textbooks can be used for eReaders and eTexts.
- Questions of access remain for students without access to a computer and/or the Internet at home. For example, would they be allowed to use an eReader at home?
- Teachers would need ongoing training and support in the use of eReaders and pedagogy for use of eTexts.
- There are only five major publishers that have texts in an electronic format: Pearson, Cengage Learning, McGraw-Hill, John Wiley and Sons, and Bedford Freeman. However, more and more publishers are investigating making their texts available in digital form.
- As of this writing, there are no set standards for eTexts.

(Briggs, 2009; CSUN, 2004; Kastner, 2010; Meyers, 2010)

Next Generation of eTexts

As with all technology, it keeps evolving and it is difficult to predict the newest features that will be added to the eReader. Some publishers are adding and increasing number of interactive features such as links to other sites, video or audio segments, tests and quizzes that can be scored electronically, and social media functions that allow students to interact with one another about content contained in the book.

Summary

The use of eReaders and eTexts is an emerging technology with little clear research about its use or impact on student learning. They are an attractive option because of the often reduce expenditures and allow for more frequent updating of texts. However, their use also has significant instructional implications for teachers and students.

Online Resources:

- Bertolucci, J. (2010, January 31). Apple iPad vs Kindle DX. Which is better for education? Retrieved online
http://www.pcworld.com/article/188239/apple_ipad_vs_kindle_dx_which_is_better_for_education.html

The competition between the iPad and Kindle DX is described in this piece. It compares prices, characteristics of each and provides links to other articles on this topic.

- Bertolucci, J. (2010, February 7). Publishers short-sighted in e-book price fight. Retrieved online
http://www.pcworld.com/article/188761/publishers_shortsighted_in_ebook_price_fight.html

A brief description of price setting by publishers for e-books is provided in this piece.

- Bertolucci, J. (2010, February 3). Most e-Reader owners satisfied, says study. Retrieved online
http://www.pcworld.com/article/188493/most_ereader_owners_satisfied_says_study.html?loomia_ow=t0:s0:a38:g26:r3:c0.063895:b29712464:z0

The results of a survey conduct in November 2009 of e-book owners are reported in this piece.

- Blio. (n.d.) Home page. Retrieved online <http://blioreader.com/about.html>

This site describes a new e-book reader that has not come onto the market yet. If the description is accurate it could give Kindle and iPad some serious competition.

- Briggs, L. L. (2009, September). Embracing electronic textbooks. Retrieved online from <http://campustechnology.com/Articles/2009/09/30/Embracing-Electronic-Textbooks.aspx>

A description of how one college professor eased his and his students' way into using electronic textbooks is given in this piece.

- Chen, B. X. (2010, March 12). Apple's iPad will read books out loud, support free e-books. Retrieved online <http://www.wired.com/gadgetlab/2010/03/ipad-ebook-features/>

This article provides a brief description of the read aloud feature on the iPad.

- Chenn, G. (2010, March 10). Public classrooms say goodbye texts, hello e-Texts. Retrived online at <http://www.publicschoolreview.com/articles/199>

- Coursesmart. <http://www.coursesmart.com/students>

This is the homepage for a publisher of eTexts.

- CSUN. (2004). Electronic textbooks: U.S. accessibility laws and issues. Retrieved online http://www.icdri.org/electronic_textbooks.htm

A synopsis of equal accessibility to electronic texts for those with disabilities is given here.

- eSchool news. (2010, March 26). Will \$99 Moby tablet swim or sink? Retrieved online <http://www.eschoolnews.com/2010/03/26/will-99-tablet-swim-or-sink/>

A prototype of an inexpensive computer/text reader is described in this piece. It has not been released yet.

- eSchool news. (2010, January). New electronic devices could interest schools. Retrieved online <http://www.eschoolnews.com/2010/01/07/new-electronic-devices-could-interest-schools/?ast=30>

A description of new electronics such as notebooks and text readers are provided in this article.

- Follett Corporation. (n.d.). Digital textbooks are ready for prime time says NYU bookstores. Retrieved online http://pr-usa.net/index.php?option=com_content&task=view&id=351780&Itemid=96

This is a brief description of NYU sale of electronic texts and the company from which they buy them.

- Kastner, L. (2010, March 9). Survey says textbooks going digital, ready or not. Retrieved online <http://www.mysanantonio.com/news/education/87084122.html>

The results of a survey regarding the advent of electronic texts are reported in this article.

- Meyers, J. (2010, April 19). More school districts look at whether to switch to online texts. Retrieved online http://www.dallasnews.com/sharedcontent/dws/news/politics/state/stories/DN-onlinetexts_19met.ART.State.Edition2.4c70f7b.html

This article describes the trends of using digital texts mostly in Texas.

- Oberley, C. (2010, April). Press release: Recorded books one-click audio brings audio books to the iGeneration. Retrieved online <http://www.eschoolnews.com/2010/04/23/recorded-books-one-click-audio-brings-audiobooks-to-the-igeneration/>

A brief description about One-Click Audio and the need for students to have access to eBooks is provided in this article.

- One-Click Audio Academic Collection. (n.d.) Retrieved online
<http://www.oneclickaudio.com/>

This is the home site that links to descriptions of what eBooks and different programs are available for students.

- Perenson, M. (2010). 2010: Year of the e-Reader. Retrieved online
http://www.pcworld.com/article/186437/2010_year_of_the_ereader.html?loomia_ow=t0:s0:a38:g26:r1:c0.152321:b29742440:z0

This site provides pictures and a brief description of different types of e-Readers that either are or will be available.

- Prensky, M. (2008). Back up education? Retrieved online
http://www.marcprensky.com/writing/Prensky-Backup_Education-EdTech-1-08.pdf

A brief and succinct article about why teachers need to teach to the future and not the past.

- Robelen, E. W. (2010, April 22). Texas' clout over textbooks could shift with market. Retrieved online
http://www.edweek.org/ew/articles/2010/04/22/30texts_ep.h29.html?tkn=ROMFSqn2MnKy5KIKQ6xol0G2%2BkVr2NP6ZRwL&cmp=clp-edweek

This article describes the changes in the laws in Texas that allow districts to purchase electronic textbooks and access open-source documents.

- Shannon, Kelly. (2010). Governor: Texas should move to online textbooks. Retrieved online
<http://www.businessweek.com/ap/financialnews/D9EUFAVG0.htm>

This is an article that describes the governor's rationale for moving to electronic textbooks.

- Siegel, J. (2010, March 26). Bill calls for e-book versions of textbooks. Retrieved online
http://www.dispatchpolitics.com/live/content/local_news/stories/2010/03/23/bill-calls-for-e-versions-of-textbooks.html?sid=101

The Ohio Legislature is examining ways in which to lower the cost of texts for students and this article provides some support for eTexts.

- Skiff Reader (nd.) Retrieved online <http://www.skiff.com/skiff-reader.html>

A description of a yet to be released eText reader is provided on this site.

- Stansbury, M. (2010, January). Future of eReading might not be iPad, but Blio. Retrieved online <http://www.eschoolnews.com/2010/01/31/blio-free-ereader-makes-impression/?ast=30>

This is a description of the Blio, a yet to be released, supposedly free eReader.

- Windsor, T. (2009, January 2). Zero percent idle. Retrieved online <http://timwindsor.com/2009/01/02/who-are-the-digital-natives-and-what-do-they-want/>

A list of the characteristics and needs of the current generation of students is provided in this article.

- Woudstra, W. J. (n.d.). The future of textbooks: Ebooks in the classroom. Retrieved online <http://publishingcentral.com/articles/20030813-68-4409.html?si=5>

This article discusses some pros and cons of etextbooks.

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