

Open Educational Resources Can Save Money

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EDL 524

February 26, 2010

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Abstract

A brief exploration of the implications of using open educational resources that might save school districts and the New York State Education Department significant resources.

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1. Electronic texts have become ubiquitous in all but K-12 schools in recent memory. Daily we read of more and more traditional media outlets either going out of business or discontinuing their print editions. A bellwether event occurred at President Obama's first press conference when "Huffington Post" was allowed to pose a question to the president. Huffington and other sources of news available on the web through real simple syndication (RSS) or announced via social media have become commonplace occurrences in our increasingly mobile electronic culture. However, this growing trend is not reflected in our public schools. A simple text search for "open content," "open source," revealed nothing when searching the P-12 Common Core Learning Standards for New York State. The same source revealed the words "text" and textbook numerous times but did not specify a particular text (NYSED, 2011). Ironically the New York State Senate has embraced open source software and electronically publishing information via the Internet from the legislature and has moved philosophically to more open content (Hoppin, 2009).

The California Open Source Textbook Project began in 2001 as a collaborative – a public/private undertaking; it was the first organization created to address the high cost, content range, and consistent shortages of K-12 textbooks in California. (COSTP, 2002)

The California Open Source Textbook's early goals were leveraging free, already-existing, and widely available K-12 educational content in the public domain; better leveraging the substantial curriculum-based intellectual capital of the best K-12 and college teachers; and

deploying Open licenses to secure new and dormant K-12 and college textbook content that would not otherwise be made available. The foregoing goals are well on their way to being accomplished. (COSTP, 2002)

Kellner (2010) states that In May 2009, Governor Arnold Schwarzenegger announced a plan to use open e-textbooks to reduce costs, encourage collaboration between school districts, and ensure that students have access to the most up- to-date information available. California is the first state to issue a mandate for schools to transition to using e-textbooks. So far California has identified ten electronic texts that meet at least 90 percent of the state's content standards or math and science. Their open format allows these digital texts to be projected on a screen, read on a computer, and/or printed in part or in whole within the classroom (Kellner, 2010).

Schwarzenegger said, "It's nonsensical and expensive to look to traditional hard-bound books when information today is so readily available in electronic form, especially now, when our school districts are strapped for cash and our state budget deficit is forcing further cuts to classrooms, we must do everything we can to untie educators' hands and free up dollars so that schools can do more with fewer resources.(Tran, 2009)"

California Open Source Textbook Project advocates for strict adherence to California curriculum framework standards; the creation of high quality, peer-reviewed content; well-designed support standards; universal accessibility, no matter one's physical challenges; and, a sustainable model of deployment that does not depend on taxpayer or foundation dollars (COSTP, 2002).

New York now faces much the same situation that California faced and that is how to close the budget gaps, educate our students and meet the higher standards of the Common Core. Not all electronic formats provide the kinds of savings that New York Schools's need. The move to open content and open source software in general has gained traction as government entities look to save money while continuing to provide resources for taxpayers. The New York State Senate has moved in that strategic direction (Hoppin, 2009) and the New York State Board of Regents is actively examining the feasibility of providing books in electronic format. Electronic texts are more familiar in higher education where “build your own formats” have been available for years. Challenges to the effective use of this format in K-12 have been the availability of inexpensive computers and e-readers to accommodate these formats. The advent of the “net book” computer and lower cost iPad and other open format e-readers is changing this demographic (Cannell, 2010). The latest fad in many schools is Amazon's Kindle Reader, Apple Computer's iPad or the Barnes & Noble Nook. These three platforms contain proprietary elements and may not necessarily spell the kinds of savings that New York State Schools are looking for. Use of proprietary e-reader formats merely change the problem from traditional publishing to e-publishing but without any savings and in some cases may actually increase costs (Kellner, 2010).

California spends approximately \$400 million per year on textbooks, Texas spends approximately \$500 million per year while Florida spends approximately \$260 million on textbooks. While state budgets are getting tighter textbook costs are rising, the K-12 textbook

market reached \$6.4 billion in 2007, and the average spending per pupil for books in U.S. public schools amounted to \$64.51 annually or 36 cents per instructional day (Saitern, 2009).

Saitern (2009) states, because the average lifespan of a K-12 textbook is two to three years (though some states use books much longer), new ones must be purchased frequently. And, if as much as one paragraph in the text is wrong, a new edition could be required, according to the AAP. With digital books, however, there's no cost to update incorrect text.

Traditional publishing options and textbook purchasing may no longer be affordable given the ready availability of free and open content that can ensure that our students have the best available materials and that they are up to date. Textbooks cost money too and every time a school purchases a new textbook series or a new set of classroom encyclopedias it was always associated with a major outlay of funds. New York State Textbook loan program allocates \$58.30 per student for textbook aid. Given the price of most textbooks that figure is extremely low. Nonetheless a school with 700 students can expect to receive $700 \times \$58.30$ or \$40,810 per year at current rates for textbook aid. Schools who fail to use their textbook aid each year find that aid decreased to the amount used. There is no incentive to save money in the current system. It is use or lose according to Franklinville Central School Business Manager Daniele Vecchio (D. Vecchio, personal communication, February 22, 2011). An intelligent alternative would reward school districts for money saved using free and open source alternatives to traditional textbooks.

Many textbooks are out of date almost as soon as they are published. Scott McNealy, co-

founder of Sun Microsystems is infuriated and he asserts basic mathematics texts are bloated monstrosities that could be replaced by free online textbooks. (Vance, 2010) This is especially true of encyclopedias and other reference books and tools. Some corporations are stepping into the mix and providing used textbooks as schools grapple with methods to trim textbook costs from their budget (Follett Corporation, 2010). Pre-owned texts have proven to be a lifesaver for some school districts as the textbooks frequently cost $\frac{1}{3}$ the cost of a new text. In the past two years 1,600 New York State schools have saved \$4.6 million dollars purchasing books from Follett Educational Services (FES). (Follett Corporation, 2010)

There are some who maintain that textbook costs at K-12 are not the same as those for higher education and that the assertions made by Scott McNealy and others are erroneous or at least misleading. K12 is a bulk institutional purchase where the textbook decision is made at the State or District level. The buyers have huge bargaining power which they have instantiated in legislation and regulations around the adoption and purchase of instructional materials. The typical K12 textbook costs \$35-\$60 and is used for 4-5 years at a cost of \$7-\$12 per student, according to Wilson (2010). The fact that Mr. Wilson writes for the publishing business may jade his view slightly. Nonetheless there are compelling reasons to look at open texts that have been prepared by fellow professionals often surpassing the caliber of content found in traditional textbook publishing and freely available. These open formats are covered not by traditional copyright but by Creative Commons which allows for share and share alike. All Creative Commons licenses have many important features in common. Every license helps creators,

which they call licensors if they use our tools retain copyright while allowing others to copy, distribute, and make some uses of their work at least non-commercially(Creative Commons, 2010). This is tremendously useful within an educational setting where copies or the ability to make copies legally is extremely important.

Recent years have seen the development of a number of free texts that are provided in a variety of non-proprietary formats online. Among these sites are Project Gutenberg. Project Gutenberg has over 33,000 free e-books which can be downloaded and used in a number of formats that include text, HTML, ePub, Kindle. Project Gutenberg, <http://gutenberg.org> supports iPad, iPhone, iPod, Kindle, Android, FB Reader and Aldiko (Project Gutenberg) Gutenberg users can also take advantage of 100,000 titles from all of their affiliates. One of the Project Gutenberg affiliates is Librivox, <http://librivox.org>. Librivox, is Project Gutenberg's main partner for new audio eBooks, and recommended for people who would like to volunteer to do readings. All Librivox recordings are granted to the public domain, which enables very widespread distribution. MP3 and other common audio formats are used, so that these may be listened to on computers, mobile devices, and recent CD/DVD players (Project Gutenberg). Librivox recordings are made available through Creative Commons licensing to their users (Creative Commons) with no rights reserved. This allows schools to download their works and reproduce them for free and distribute them freely to students. LibriVox volunteers read and record chapters of books in the public domain and make them available for free on the Internet. Practically, this means they record books published before 1923. All of their recordings are

contributed to the public domain (Librivox, 2008)

Open Educational Resources is yet another source of open source texts that can be used freely and distributed without cost. Open Educational Resources (OER) are teaching and learning materials that are freely available online for anyone to use, whether you are an instructor, student, or self-learner. OER can exist as smaller, stand-alone resources that can be mixed and combined to form larger pieces of content, or as larger course modules or full courses. (Open Educational Resources, 2007) Wikibooks contains 2,348 free books with over 35,000 pages that can be used as is or edited for a particular classroom. Licensed under Creative Commons Share-alike they are free for duplication and redistribution freely (Wikimedia, 2011). Wikipedia is perhaps the most famous free site with over 17,000,000 articles on a variety of topics. Three and a half million of those articles are in English (Wikimedia, 2011). There are some who question the reliability of Wikipedia and those include its competition Encyclopedia Britannica (Wikimedia,2011). But one cannot help but realize the pervasiveness and free access to Wikipedia which makes it a boon to any school system looking to trim its budget. Massachusetts Institute of Technology's MIT Open Courseware initiative is yet one more example of free courseware available on line. MIT makes some high school courses available and is quick to point out on there site that these courses come from a variety of programs and initiatives that are affiliated with MIT, but aren't necessarily classes a typical MIT student would take. (Massachusetts Institute of Technology). Bookshare.org is yet another free resource available to school districts. It is a federally funded program with its roots in IDEA 2004.

Bookshare® is free for all U.S. students with qualifying disabilities, thanks to an award from the U.S. Department of Education Office of Special Education Programs (OSEP). Bookshare books are available in both DAISY and Braille Reader Format (BRF). Bookshare books may be converted by Bookshare members into MP3 and EPUB format and shared with qualifying students. This program and the software to read the books and convert them into accessible formats is free to qualifying students. (Bookshare, 2011)

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Other sources of free electronic texts may be found at Google Books, <http://books.google.com>. Not all of the books on Google books are presented in their entirety but many are. Also the Center for Applied Special Technology is an excellent source of free ebooks which can be produced in a classroom and shared with students. CAST's Learning Tools, <http://www.cast.org/learningtools/index.html> are an incredibly rich resource which can provide text to speech books that can be used with disabled students too. (CAST, 2011)

It is easy to see that there are myriad resources waiting to be tapped by school district's willing to think differently when it comes to providing instructional resources for their staff and

students. The looming budget shortfall and deficits invite such a new approach. It seems imperative that both New York State Education Department and New York State School Districts must find a method that rewards innovative uses of open educational resources. The current system offers a disincentive to save any money by withdrawing textbook aid to school district's that do not expend their allotment each year. There must be an equitable solution to this dilemma.

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