Towards the Digital University:
a brief introduction to E-Texts and Open Access

Report of the E-Text Subcommittee,
Academic Support Committee of Council
June, 2010

E-Text Subcommittee Members, Frank Bulk (chair); **ASC members** Lois Jaeck, Dave Bocking, Christine Soteros, Daniel McCullough (USSU); **Library** David Fox; **Bookstore** Mark Jagoe. **Additional information** from Shari Furniss (EMAP) and Angie Gerrard (Library)

Introduction

The notion of "E-texts" or "electronic texts" made its way onto the agenda of the Academic Support Committee in April 2009. This interest in E-text was prompted by an inquiry to the Committee Chair by several faculty members who had questions about academic publisher presentations that were occurring on campus. Following from the Committee discussion, a Subcommittee was struck to examine the trends, tools and potential of e-text as it relates to academic resources. The Subcommittee held its first meeting on May 5, 2009 and established the initial Terms of Reference for the working group.

The second meeting of the Subcommittee coincided with a guest visit from Dr. Richard Baraniuk (Rice University), invited keynote speaker for the U of S hosted Learning Commons Conference, June 2009. The Subcommittee was given an opportunity to meet with Dr. Baraniuk for a lively and informative discussion, which let to the Subcommittee decision to adjust the scope of its activity and include a broader view of the digital publishing environment. The Terms of Reference were revised to arrive at the following:

> To assist instructors interested in electronic texts by reporting on the trends, the tools on the market, and the potential for exploration of this area by individual departments, and to discuss developing and using E-texts.

The Subcommittee met an additional six times in 2009 and 2010 to discuss a number of topics, including open access, library systems and journal access, commercial activity in the e-book market space, and models of academic publishing. Subcommittee members provided a great deal of specific information and background in these areas; presentations included USSU Vice-President Academic Daniel McCullough on the Open Access content movement; EMAP representative Shari Furniss on advantages and disadvantages of e-texts; Computer Lab representative Dave Bocking on commercial vendor technology hardware and software; Librarian David Fox on U of S Library initiatives; and bookstore manager Mark Jagoe on U of S Bookstore initiatives.

The following document reports our findings and reflects the nature of these conversations. The report conveys how E-texts are currently dealt with by publishers, by the University Bookstore, and by Library collections. As well, it describes the concept of Open Access as it applies to the

individuals' ability to electronically publish academic materials, as a way of making academic information available to students and faculty alike.

1. E-texts and Academic Publishers

An E-text created by a commercial publisher is generally referred to as e-book or electronic book, and represents the digital equivalent of a conventional printed book. A growing number of publishers now provide electronic versions of dominant textbooks for K-12 and university-level instruction. Given the commercial interest that exists in this market, e-books are typically protected within some form of digital rights management that limits unpaid distribution and duplication of the content. E-books are read from either a standard computer or some type of portable digital device. A portable device can be either a dedicated reader like the Amazon Kindle or Sony Reader, or a less proprietary mobile device such as a PDA or a cell phone for which reading books is a secondary function.

An environmental scan provided the Subcommittee with information relating to the advantages and disadvantages of electronic books and texts as currently produced by academic publishers. E-Texts offer a number of advantages in an academic context, over paper texts. For example, potentially e-books can provide portable, accessible, mobile access to a large number of textbooks on a single reading device. E-texts can be searched automatically and cross-referenced using hyperlinks. E-books may allow animated images or multimedia clips to be embedded. An e-book can be offered indefinitely, without ever going "out of print", and new editions can be downloaded easily. For students with vision problems, font size and font face can be adjusted as needed by the reader, and text-to-speech software can be used to convert e-books to audio books automatically. With some systems the user has the ability to annotate the text as they work through the materials. Future options may include the ability to embed the text book within a learning management system.

There are certain disadvantages with e-texts, including varying hardware and software requirements that have not yet settled into a single standard, and potential difficulties in readability between various readers. Pricing of academic e-books compared to the equivalent print based text seem relatively high considering there is no large printing cost, and due to the digital rights management, reselling or lending out an e-book may have complications. While printed books remain readable for ages, changing technologies and less durable electronic storage media may require e-books to be copied to a new carrier after some years.

See Appendix One for definitions and Appendix Two for descriptions of E-Book hardware and software.

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2. E-texts and University Bookstore initiatives

Given the direction of many academic publishers and the potential that exists in digital publishing, the U of S Campus Bookstore has kept an eye on this emerging market. With the exception of items like the digital study guides which are sold with textbooks, the Bookstore does not currently offer e-text sales linked to major publishers; however it has taken steps to prepare itself for this business opportunity.

The University Bookstore is part of an organization called CCRA (Canadian Campus Resellers Alliance). CCRA is made up of 24 of the largest universities in Canada including McGill, Concordia, Toronto Western, McMaster, Queen's, Waterloo, Manitoba, Alberta, Calgary, British Columbia and Victoria.

In the fall of 2008, the CCRA surveyed its members regarding their involvement in the sale and distribution of e-books, and subsequently developed a set of principles and a plan to guide and support this emerging market potential.

Its principles are:

- Respect for the academic nature of the bookstore business and respect for students. For example, students need to return books to the Bookstore for many reasons, and they also need to be able to return e-books for a full refund.
- Support the inclusion and distribution of locally authored course materials as well as commercial titles, just like you'd find on the Bookstore's shelves right now.
- The method of sale and distribution must be scalable and replicable by all Bookstores within CCRA. This means that Bookstores across Canada use a number of different POS systems and CCRA needs to develop a system that works on all the various POS systems.
- The retailing platform must be owned by the individual Bookstore. Individual Bookstores need to develop their own on-line stores.
- CCRA needs to be quick to market because of all of the competition from Amazon, Google and many others.

CCRA plans on selling and distributing e-books in 3 phases:

- Free titles in public domain
- Fee and Free. Customers would have the choice of buying the traditional course material or a Digital Study Version (DSV) of that book. DSV's are free digital versions of course material content which can be downloaded an unlimited number of times from our on-line store. These titles are in the public domain or are royalty free versions of materials authored by instructors. DSV's are more than just a PDF. They include study tools such as highlighting, annotations and search capabilities.
- Selling publishers' versions of their e-books.

The technology being used by CCRA is from Adobe. Adobe Content Server 4 is the application that manages content for individual stores and customers. Individual stores are considered distributors in Adobe Content Server 4. Course material must be digitized in ePub format in order to be distributed. CCRA has already digitized over a 100 publications in ePub format. Individual bookstores can also potentially have course packs digitized in ePub format, doing away with having to have them sold in printed format.

Customers need to download Adobe Digital Editions software in order to download, view and manage e-books and other digital publications. This is a free application. Customers will be able to view their downloaded e-books on their computer, smart phone or Sony e-reader, but not on a Kindle device from Amazon unless they choose to support the ePub format in the future.

In the summer of 2009, the Bookstore launched its on-line bookstore. Having an on-line store is needed to distribute e-books so launching this initiative is a step toward being able to offer e-texts. The on-line store can be accessed from the home page of the Bookstore's website. The on-line store has all books in stock at the Bookstore available for sale. Customers can search for books by title, author, class or ISBN. Payment can be made with credit card and orders are shipped to customers at a cost of $9.95 in Saskatchewan, Alberta, or Manitoba and $19.95 per order in the rest of Canada. During this past fall rush, approx. 10% of all textbooks purchased at the Bookstore were purchased from the on-line store, so the Bookstore feels this is working very well. Committed to the CCRA vision, the Bookstore plans to integrate the e-book system into the on-line store for the fall term 2010. They will offer free resources as available and expect to eventually include "for purchase" e-books in their system.

Appendix Three provides additional information on purchasing e-book readers, while Appendix Seven provides additional background information on the electronic books in general.

3. University Library's Experience with eBooks and Open Access

E-Books
The Library provides access to approximately 320,000 e-books, representing about 20% of the total Library collection. Many of these are titles the Library also holds in print. Most of this access has been acquired over the past 5-6 years through regional and national consortium purchases.

Library e-book collections support learning and research in all disciplines taught at the U of S. Some examples of recent acquisitions include:
AccessEngineering
AccessMedicine
American film scripts online
Asian American drama
British and Irish women's letters and diaries
Canadian Electronic Library
Medieval Travel Writing
Oxford University Press eBooks
Springer eBooks

E-book content is acquired through licensing arrangements with major publishers: e.g. Oxford, Cambridge, Springer, and aggregators: e.g. NetLibrary, Books24x7, eBrary, MyiLibrary

Additional information about these e-book aggregator interfaces is available in Appendix Four.

Vendors make their e-books available under a variety of economic models. In some cases libraries can purchase "perpetual access" to a title – equivalent to owning a physical copy of the book. In other cases libraries may "lease" access to e-book content for varying periods of time.

Library e-books are accessed remotely from the vendor's site, not stored on local servers. Viewing is primarily through a desktop computer application, although some vendors permit downloading for temporary use or permanent downloading for a fee.

Large-scale e-book acquisition raises a number of administrative and practical issues. Administrative issues include license management, security and user authentication. Practical issues relate to system performance and usability. There is no single standard user interface. There are performance limitations related to multi-user Internet access from a remote vendor's site using a Web browser. Most products have simultaneous user limits and printing/downloading restrictions. Navigation is often slow, awkward, and page-by-page. Some licenses allow for wireless access from mobile devices (not a download), but the same performance issues apply.

The academic e-book market is still developing, and e-book delivery technologies are evolving rapidly. The widespread adoption of portable e-book reader devices may ultimately help to increase use of Library e-books, although most current licenses will have to be re-negotiated to allow for downloading.

Open Access

The Library maintains an open repository known as eCommons@USASK at http://ecommons.usask.ca/, which currently provides access to 100 examples of the academic work of U of S librarians, including refereed papers, conference presentations, reviews, and other forms of scholarly expression. The contents of eCommons are indexed by the major Internet search engines and harvesters. The Library is also participating in the Digital Archives Committee's Federated Digital Repository initiative, led by EMAP, which proposes to provide a common search interface to multiple collections of digital objects owned by colleges and departments across campus.

The Library also hosts an Open Access blog at: http://blogs.usask.ca/open_access.

4. Open Access -- the future direction for academic publishing

While the traditional model for academic publishing will likely continue on for the foreseeable future, it also seems likely that the Open Access model will significantly influence the future of scholarly publishing well beyond the extent that it has already. Certainly the digital affordance of e-text publishing has already changed the way people access academic materials through such activities as described above. With this in mind, the Subcommittee agreed that a further explanation of open access publishing should be provided in this report. Understanding the implications of open access publishing provides a necessary framework for discussing the advantages and disadvantages of electronic texts as well as the library and bookstore procedures for assisting faculty with electronic text decisions.

The Open Access movement is based on the principle that Open Access content must be free of charge to all users with an internet connection, and without permission barriers.

For a work to be Open Access, the copyright holder must consent in advance to let users copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited. [1]

While Open Access is based on accessibility principles, its implementation can also be cost-effective. The idea of removing access fees from academic materials can be an alien concept in an economy that establishes value by profit. As far as academic journals are concerned, however, the amount of money seen by the authors is miniscule, and the real incentive to publish is attribution. Meanwhile high journal subscription costs hamstring both students and researchers alike.

The main difference between Open Access and traditional publishing is who pays the publishing costs. In the Open Access model very often the publishing costs are borne by the author in the form of "page charges" for publishing in an Open Access journal. Authors have various ways of off-setting these charges, for example the U of S University Publications Fund, administered by Research Services, now supports Open Access journal article fees.

The economic recession has cut library budgets deeply, to the extent that reducing journal subscriptions may be considered. As well, the recession has made the publication of specialized books and journals less profitable than ever before.

Open Access allows scholars of all stripes to be published and read, without a large monetary investment on anyone's part.

Open Access materials are broken down into two main categories: Green and Gold.
Gold Open Access resources are fully open access journals. These journals charge no subscription fee or any other charge for reading and using the information in the journal article. The only copyright stipulation is citation. Green Open Access resources are open access repositories, or archives of journal articles that are preprints, postprints or both. Preprints have not been peer-reviewed yet, while postprints have been peer reviewed but may not have been edited yet. These archives may be organized by discipline (arXiv for physics or the E-Commons at the U of S Library), or by institution (eScholarship Repository for University of California,).

Many Open Access resources are already available, and provide models for how Open Access can be effective on a larger scale.

Most research indicates that the availability of articles does lead to Open Access Journals being read and cited more often[2]. On the other hand, the most prominent scientific journals in the

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[1] Budapest Initiative (Feb. 2003), the Bethesda Statement (June 2003) and the Berlin Declaration (Oct. 2003)

[2] Several more recent articles (e.g. Norris, Oppenheim & Rowland "The citation advantage of open-access articles" JASIS 59(12):1963-1972, 2008) http://www3.interscience.wiley.com/cgi-bin/fulltext/120748494/PDFSTART claim that there is an "Open Access citation advantage", the

world -- Science and Nature -- are both subscription based. Some researchers may feel that Open Access Journals do not have the prestige to attract world-class researchers to publish in them.

There is a wide variety of Open Access initiatives currently available:

Creative Commons licenses provide a way to implement copyright that is free of permission barriers. The Creative Commons (CC) is a not-for-profit organization that provides Open Access copyright licenses that prevent unauthorized use without compromising the spirit of Open Access. The key goal is to allow for use of the material for most any purpose, so long as proper attribution is given to the author of work in question. Other restrictions may apply depending on which CC License the work is registered under.

See Appendix Five for a summary of the Creative Commons license categories.

The **Directory of Open Access Journals (DOAJ)** provides thousands of peer reviewed academic journals free of cost, or permission barriers. In the past seven years, the number of journal articles in the DOAJ has been steadily increasing, from none in 2002 to over 4000 today including, 116 Political Science Journals, 61 Biochemistry and Biotechnology Journals and 88 Economics Journals.

DOAJ is hosted, maintained and partly funded by Lund University Libraries Head Office and also funded by the Open Society Institute; an international philanthropic institute, SPARC, SPARC Europe, Swedish library IT equipment supplier Axiell and BIBSAM; part of the National Library of Sweden.

All journals included in the directory must have either peer-review or editorial quality control. Full-text journal articles may be accessed and cited with absolutely no cost to the researcher.

Connexions is a donations-funded modular knowledge repository designed for the creation of for-cost textbooks, either in print or online. All information on the site is licensed with Creative Commons and as such is free to copy, alter, or publish provided that the author is attributed. A team of moderators makes sure that the information is accurate and the provider has the rights to any copyrighted information. Instructors at any level of education, from elementary to post-secondary, can build their own course materials on the website. This can go as far as creating a Connexions based textbook that can be printed and shipped at cost to a University Bookstore or to the student directly. For example, a Connexions produced, hardcover, C++ Computer Science textbook can cost less than US $20.00, though the complete text is available free online.

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magnitude of which varies from discipline to discipline; however the reasons for this citation advantage have not been determined. Stevan Harnad et al. at the University of Quebec have argued convincingly that articles made Open Access by author self-archiving (the "Green" way) are cited significantly more than articles available only to subscribers. See: "SelfSelected or Mandated, Open Access Increases Citation =Impact for Higher Quality Research" by Yassine Gargouri et al.: http://users.ecs.soton.ac.uk/harnad/Temp/yassart.pdf

The **University of the People**. is a new, online Open Access Education platform that allows any person with an internet connection to gain a post-secondary education. The University charges no tuition for classes, but only administrative fees for applications and exams, which vary by country. The University currently offers two and four year programs in Business Administration and Computer Science.

The **Scholarly Publishing and Academic Resource Coalition (SPARC)** is an international alliance of academic and research libraries which aims to reduce journal costs and aid authors in getting published. It is based in the United States, with affiliates SPARC Europe and SPARC Japan. Two Canadians are currently sitting on the thirteen person steering committee: Thomas Hickerson, Director of Information Resources at the University of Calgary and Dean Vicki Williamson at the University of Saskatchewan.

Other Platforms
Many other sites exist for disseminating academic knowledge free of charge, not just to students and faculty, but to the public at large.
http://scienceblogs.com and http://researchblogging.org owned by Seed Media Group have experts in a variety of fields that are blogging about science in the news and peer-reviewed journal articles respectively.
http://science.nasa.gov provides stories on scientific discovery to the public at large. A Spanish language site is also available at http://Ciencia.nasa.gov.
http://www.nsf.gov also provides science stories to the public free of charge, as well as funding some great PBS programming.

See Appendix Six for reference sources for Open Access information.

Conclusion

As the Subcommittee considered possible recommendations for future directions, we realized that in many ways the future of e-texts and open access is already here. It is not a new concept – philosophical discussion and debate of "open access" has been ongoing for more than a decade. The advocacy groups, current initiatives and standards, and technological developments mentioned in this report are founded or grounded in the work of those that helped to shape the early vision of electronic academic publishing - which has reached a level of maturity that goes well beyond a proof of concept.

When MIT, Stanford and many other Universities are posting open courseware, when Athabasca University is offering print-on-demand textbooks, when libraries are assembling massive electronic collections, when research agencies are requiring open publication as a condition to their funding of research and scholarly work, the question is not whether the University of Saskatchewan should participate in the challenge of adopting e-text and open access approaches, but rather how are we going to capitalize on, participate in, and contribute to the ever increasing accessible world of electronic publication in support of learning, teaching and research.

The move toward Open Access initiatives requires a significant cultural shift for universities that find comfort in the traditional publication model. Faculty are encouraged to learn more about

Open Access (see the appendices of this report) and determine how, within their discipline, an academic shift toward use of open access and electronic formats can be achieved. As faculty and students of a university community we are obliged to consider how our scholarly activity in teaching and research can be enhanced, made more accessible, and be recognized.

The Subcommittee hopes that this report is a useful first step in raising the level of awareness at the University of Saskatchewan regarding the possibilities and advantages for e-text access and publishing in general, as well as some of the activities that are already underway here.

As a next step, we would encourage further conversations in appropriate forums such as the Academic Support Committee of Council, to delve more deeply into the implications of committing to open access principles; from philosophical issues such as copyright and intellectual property, to implementation considerations and the need for processes that will support a more open University of Saskatchewan for the future.

Appendices

Appendix One: Definitions

E-paper: http://en.wikipedia.org/wiki/Electronic_paper A display technology that simulates ink on paper, using a reflective technology. Thus, these things need incident light to function, but that is good because you can use them in direct sunlight. More, you don't need to consume electricity to keep the thing displayed as is the case with LCDs, for example, which need a backlight to make the display work.

E-text: http://en.wikipedia.org/wiki/E-text A general term for written information that is encoded in some digital format. Generally, the term applies to textual information encoded in ASCII, but its inclusive meaning includes other formats as well: PDF, for instance.

E-text formats: http://en.wikipedia.org/wiki/Comparison_of_e-book_formats#eReader_.28formerly_Palm_Digital_Media.2FPeanut_Press.29

E-readers: Devices that are available for reading e-texts... They use e-paper display technology. Amazon Kindle: http://www.amazon.com/Kindle-Amazons-Wireless-Reading-Device/dp/B000FI73MA wireless Sony Reader: http://en.wikipedia.org/wiki/Sony_Reader USB Librie: http://en.wikipedia.org/wiki/Librie USB ILiad: http://en.wikipedia.org/wiki/ILiad wireless Hanlin: http://en.wikipedia.org/wiki/Hanlin_eReader USB

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Appendix Two: Hardware and Software Descriptions for E-Book Readers

(Compiled by Shari Furniss, Spring, 2009)

E-Book Readers (Hardware)

Commercially available e-readers	• Kindle (Amazon – US site, not Canadian) • Sony Reader (Sony) – 3 models to date: PRS-500, PRS-505, PRS-700 • LIBRIe (Sony) – Japanese language version of the Sony Reader • iRex (Digital Reader, iLiad) - available in the US • FLEPia (Fujitsu) – available in Japan • Star eBook (Star eRead) – shipped from Taiwan. Linux platform, uses proprietary format. Targeted to China's market – publishes books and comics in Chinese. • Hanlin eReader (Jinke) – company based in China, will ship to Canada. Supports multiple formats including PDF and ePub.

	• BeBook (Endless Ideas). Based in the US, will ship to Canada.
Upcoming or Prototypes	• eSlick (Foxit) – can be shipped to Canada, should be available by end of May • GeR2 (Ganaxa) – will be available "soon". • Plastic Logic Reader (Plastic Logic). Release planned for 2010. • Txtr (Wizpac). German company, targeting the German market. Target release late 2009. • Readius (Polymer Vision). Owned by Phillips. Pocket-sized ebook reader. Not yet available due to some financial difficulties with the company. • Papyrus (Samsung). Being released in Korea in June/09, with an "eventual" release in the US and UK.
Mini/Mobile Ebooks	• Cybook Gen3 (Booken) – French company but will ship to Canada. Supports the Mobipocket format. • Stanza (was owned by Lexcycle, recently purchased by Amazon). Ebook reader application for iPhone/iTouch. Currently a free application.

Current E-Book Formats (Software)

Common Formats	• .txt - plain text, small files. • .htm, .html – for ebooks being viewed on a web browser • .azw – proprietary format used by Amazon Kindle. • FictionBook is an XML-based e-book format, supported by free readers such as Haali Reader and FBReader. • PDF, Adobe Acrobat. PDF files are supported (in varying degrees) on the following e-book readers: iRex iLiad, iRex DR1000, Sony Reader, Bookeen Cybook, Foxit eSlick and Amazon Kindle DX. • .epub - OEBPS format is an open standard for eBooks created by the International Digital Publishing Forum (IDPF). • .pdb - eReader is a freeware program for viewing Palm Digital Media electronic books. Versions are available for PalmOS, iPhone, Symbian, Windows Mobile Pocket PC/Smartphone, desktop Windows, and Macintosh. Stanza can read both encrypted and unencrypted eReader files. • .prc or .mobi - Mobipocket e-book format based on the Open eBook standard using XHTML can include JavaScript and frames. It also supports native SQL queries to be used with embedded databases. There is a corresponding e-book reader.
Less Common Formats	• .opf - OPF is an XML-based e-book format created by E-Book Systems. • .tr2, .tr3 - TomeRaider is a proprietary format. Used by Windows, Windows Mobile, Symbian, Palm. • DAISY – XML-based format for audio and text ebooks, specifically for students with disabilities. • Plucker is a free e-book reader application with its own associated file format and software to automatically generate plucker files from HTML files, web sites or RSS feeds. • CHM format is a proprietary format based on HTML. Multiple pages and embedded graphics are distributed along with proprietary metadata as a single compressed file. • .lit - DRM-protected LIT files are only readable in the proprietary Microsoft Reader program, as the .LIT format, otherwise similar to Microsoft's CHM format, includes Digital Rights Management features. Other third party readers, such as Lexcycle Stanza, can read unprotected LIT files.

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Appendix Three: Buying Guide: How to Choose an E-Book Reader

By Priya Ganapati, Wired Magazine, May 22, 2009
http://www.wired.com/gadgetlab/2009/05/buying-guide-**e-book-reader**/

E-books are the 'it' gadget of the year. But picking an e-book reader is more difficult than choosing a brand of cereal or a bottle of shampoo. Every other week, a new reader is gussied up in the factories of Taiwan, ready to make its debut. At last count, we estimated at least 12 different e-book readers on the market or close to release. How do you know which one is right for you? All e-book readers promise to do one thing well: display text, especially for books. But there are a few more basic requirements: It must offer long battery life, be easy to carry, have a screen that doesn't strain the eyes and can be easily read in all environments including bright sunlight. Fortunately, most e-book readers for sale today meet that basic criteria. There are many devices to choose from, and there's also a lot of homogeneity in looks, style and function. Almost all the e-book readers available are paperback-sized and sport a display sourced from E Ink, the Cambridge Massachusetts-based company. So should you buy the $360 Amazon Kindle (after all, it's the most widely known e-reader and is backed by the Amazon brand) or the $250 upstart Cool-er e-book reader launched just a week ago? Read on for our guide on what you need to think about before buying an e-book reader, whether you want to read the latest book from the *Twilight* saga or *Thank God It's Monday*, the current No. 2 bestseller on Amazon's list.

Location: Whether you are in the lower 48 will determine how well the Amazon Kindle 2 and the upcoming Kindle DX will work for you. Both devices use Sprint's EVDO network to offer wireless downloads of e-books and periodicals. But tough luck if you are in Alaska or the U.K. International buyers might have a tough time getting their hands on the Kindle DX. Users have to trick Amazon into believing their billing address is associated with an address in the United States. Even if they get one, they'll end up with a crippled device that allows only for transfer of e-books using USB. In which case, it may be a better option to buy a cheaper device that only offers USB-based connectivity such as the Sony Reader, the Hanthe Foxit eSlick Reader or even the newly launched Cool-er. Some of the e-book readers are also country-specific. The BeBook is available largely in the Netherlands, the Fujitsu Flepia that promises a color screen will start shipping in a few weeks but only in Japan.

Access to content: This is probably the single most important factor to consider when you buy an e-book reader. Most e-book manufacturers have their own e-books store. And size matters here. The more publishers the manufacturers can ink deals with, the greater the chances that the book you want is available. That's where Amazon's Kindle scores. As the biggest online retailer of books, Amazon has been able to leverage that relationship for the Kindle and its e-book store is probably the largest, with more than 285,000 books, according to Amazon. But Sony is fast catching up. It announced a partnership with Google to bring about half-million classic books to its digital book store. Sony Readers can get those books for free. Sony had about 100,000 titles in its e-book store at the end of 2008. Other e-book readers such as the iRex iLiad or the Hanlin eReader don't have that kind of muscle and though these e-book owners can buy books from other online book stores, it doesn't offer a smooth, integrated experience. Think buying music through iTunes for the iPod vs. buying music on iTunes for the SanDisk music player.

Formats supported: Almost all the e-book readers support HTML, Txt, MP3 and JPG. The battle of formats in the world of e-books is largely between the proprietary format that Amazon uses called .azw, a flavor of Mobipocket, and the open source ePub. Amazon's Kindle does not support ePub; almost all other e-book readers do. Why should you care? Many of the largest publishers have books available in the ePub format, including Google's classic books. Because ePub is an open source format, it allows book designers to create better-formatted titles than Amazon's proprietary file format. Also, if you don't

like DRM on your books, you have a better chance of finding DRM-free books in the ePub format than the .azw format. There's speculation that Amazon might open up the Kindle to support ePub. But till that happens, you have to make the decision: Which side of the fence do you want to be on?

Going beyond just books: What do you want to use your e-book reader for? If the answer is just books, e-book readers such as the Cool-er start at $250. But the Cool-er won't do much beyond books because it does not support magazines and periodicals. Like to read blogs or newspapers on your e-book reader? You'll have to get Kindle 2 for that because Amazon lets users publish blogs to the Kindle. Thanks to its wireless connection, the Kindle also offers basic web surfing. Even better, would you like to hack your machine and make it run some cool applications? You're better off choosing a lesser known e-book reader that runs the Linux operating system

Price and brand: What's your budget and how important is the brand for you? In this recessionary economy, everyone's watching their dollars. And while the Kindle is attractive, at $360 it isn't cheap. If you'd like to save a few bucks, the Bookeen Cybook is an alternative priced at $350. Or go for the Cool-er at just $250. There are cheaper alternatives to the Kindle, but hey, it isn't a Kindle. Can you live with that? See also: Detailed e-book reader matrix wiki from Mobile Read. The wiki offers a list of the most popular e-book models and how they compare in terms of price, formats supported, and features.

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Appendix Four: Additional Information about E-Book Aggregator Access

(Compiled by Angie Gerrard, University Library)

MyiLibrary
There are no restrictions to simultaneous use for MyiLibrary. However, simultaneous access to individual electronic book content may vary
Typical layout with a PDF Viewer in the middle and a table of contents on the side. What is a bit different than normal PDF viewing is that that you navigate using the menu on top. PDF viewer always says 1 of 1
Top menu has additional features like a direct export of the citation to RefWorks, citations, print/print multiple pages (don't use browser's print), download multiple pages as PDF
My Content has personalized features. Requires that you setup up an account

NetLibrary
Each e-book copy permits only one patron to access it at one time.
Has intro metadata screen. Add to "favorites" from here before accessing the e-book
Have to create login to get favorites functionality

Ebrary
QuickView permits instant document viewing but does not include printing, InfoTools, or some of the other advanced features of the ebrary Reader Plug-in. You may wish to use QuickView to easily find and scan the information you need, then use the ebrary Plug-in for more in-depth research.
Ebrary plugin requires a quick download. Must be in ebrary reader to add to bookshelf.
Bookshelf requires you setup an account, but gives you the ability to save, highlight and put notes in.
Number of pages allowed to print set by the publisher

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Appendix Five: Creative Commons Licenses Description

(Compiled by Daniel McCullough)

Each CC License has been created with legal input, however, no licensing issue involving a CC license has ever been taken to court.

CC Licenses
CC-BY(Attribution): The CC-BY license is a simple attribution license. Any work with this license allows others to "distribute, remix, tweak, and build upon your work, even commercially, as long as they credit you for the original creation."
CC-BY-SA(Attribution-Share Alike): This license requires, like CC-BY, that the author be properly attributed on all derivative works; however, it also requires that any derivative work be licensed "under identical terms."
CC-BY-ND(Attribution-No Derivatives): This license is disallows the ability of users to make derivative works from your work, while still allowing free commercial or non-commercial redistribution of an unchanged, credited work.
CC-BY-NC(Attribution-Non-Commercial): Allows others to "distribute, remix, tweak, and build upon [a] work" for non-commercial purposes provided the author is attributed.
CC-BY-NC-SA: A combination of BY-SA and BY-NC. Others may "distribute, remix, tweak, and build upon [a] work" for non-commercial purposes and must attribute the author and license any derivative works under the same license.
CC-BY-NC-ND: Nick-named the "free advertising license," this allows free distribution of the author's work, but it must be properly attributed, stay unchanged and not be used for commercial purposes. It is the most restrictive CC license.

Users of CC Licenses
The two latest albums from the band Nine Inch Иails (NIИ) ("Ghosts I-IV" and "The Slip") have been licensed with the CC-BY-NC-SA. Both albums are free downloads on-line. The band has also created a website dedicated to allowing users to remix their own work with NIИ's and other consenting band's songs or samples.

The Canadian versions of CC licenses are implemented in eCommons@USASK.

Stick This in Your Memory Hole by Tristan Clark is the first Australian book ever licensed through Creative Commons via a CC-BY-NC license. The publisher, Aduki Independent Press, has stated that offering the full text online has not hurt sales of the book, but has actually helped to sell more copies.
The USSU Executive Blog is currently licensed under a CC-BY-SA license.
Several Directory of Open Access Journals are CC licensed to reduce costs of research in a variety of fields including Biochemistry, Economics and Political Science.

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Appendix Six: Sources for Open Access

(Compiled by Daniel McCullough)

Himanen, P. 2001 *The Hacker Ethic and the Spirit of the Information Age*. Random House Inc.
Roberts, L.G. "Multiple Computer Networks and Intercomputer Communication"
http://www.packet.cc/files/multi-net-inter-comm.html

Suber, P. "Open Access Overview" http://www.earlham.edu/~peters/fos/overview.htm

FFAQ - Creative Commons http://wiki.creativecommons.org/FFAQ

Licenses - CreativeCommons http://creativecommons.org/about/licenses/

Creative Commons Canada: http://creativecommons.org/international/ca/

Ghosts - FAQ http://ghosts.nin.com/main/faq

nin.com [download]- the slip http://dl.nin.com/theslip/signup
Stick This in Your Memory Hole - CC Wiki
http://wiki.creativecommons.org/Stick_this_in_your_memory_hole

U of S Library Open Access Blog - http://blogs.usask.ca/open_access/

Attribution
Kirkland W. A., *et al.* USSU Executive Blog http://blogs.usask.ca/ussu_exec/

Directory of Open Access Journals http://www.doaj.org/doaj?func=home

Williamson, V. *Scholarly Communication & Publishing Open Access and Other Things* April 2009.

Connexions - Sharing Knowledge and Building Communities http://cnx.org/
Richard Baraniuk on open-source learning | Video on TED.com
http://www.ted.com/talks/richard_baraniuk_on_open_source_learning.html

University of the People > ABOUT US > FAQ
http://www.uopeople.org/ABOUTUS/FAQs/tabid/191/Default.aspx

About SPARC http://www.arl.org/sparc/about/index.shtml

Student Statement on the Right to Research http://www.righttoresearch.org/

Rapid Responses for: Davis , P.M., *et al.* "Open access publishing, article downloads, and citations: randomised controlled trial" http://www.bmj.com/cgi/eletters/337/jul31_1/a568

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Appendix Seven: Literature/Research Related to E-books

(Compiled by Shari Furniss, EMAP)

"But I want a real book": An Investigation of Undergraduates' usage and attitudes toward electronic books. Cynthia L Gregory. Reference and User Services Quarterly, vol.47, no. 3, pp. 266-273.
Key points:

- Study to investigate the college's undergraduates' usage and attitudes toward electronic books.
- Findings show that students have mixed feelings about using e-books; students will use e-books but prefer using traditional print books.
- Students use e-books to look for certain topics or sections of content, but do not use them to read sequentially.
- Student responses revealed a desire for the physical aspect a book provides; student remarks such as "like to have book in hand/hold and take home" further indicate that our human love of the book as cuddle object remains quite strong in the digital age.
- Trends in the e-book market reflect concentrations in three areas:
  - (1) Web-based aggregated collections with academic content, such as reference, business, and information technology;
  - (2) Audio e-books, due in large part to the combined popularity and ubiquity of Harry Potter audio books and iPods; and
  - (3) A resurgence in dedicated e-book devices, such as the 2006 Sony Reader and the 2007 Kindle Reader from Amazon.

ePub: The standard that may finally launch the e-book market. George Alexander. Volume 9, Number 2, The Seybold Report (2009). **Key points**:

- Leading book reading devices use E-Ink display technology – compact, lightweight, long battery life.
- Amazon Kindle and Sony Reader two main e-book readers currently available. They use a proprietary file format, which means limited book selection available, since publishers have to convert to two different file types.
- Why not just use PDF? PDF format doesn't work well on Kindle. PDF also resizes to either fit the screen (making most text too small) or fills the screen and the reader has to scroll (something readers want to avoid and one of the reasons they bought an e-book reader in the first place).
- The need for a standard e-book file format has been recognized for some time. The first standard in the lineage leading to ePub, the Open eBook Publication Structure (OEBPS), was published in 1999 by the Open eBook Authoring Group. The last of the three elements of the ePub format was adopted as a standard by the organization whose name had evolved to become the International Digital Publishing Forum (IDPF).
- Several dozen publishers have publicly indicated they will support ePub, including: Random House, HarperCollins, Harlequin, Simon & Schuster, Hachette, John Wiley, Penguin Group USA, and Macmillan.
- Sony and other reader manufacturers (such as iRex) will continue to support ePub. However, Amazon's Kindle has its own format, called .azw. E-books purchased via the Kindle come in this format, which no other device can read.
- Viewing ePub files. Even if you don't have an ebook device (or an iPhone running Stanza), you can download and view unencrypted ePub files on your computer.

Electronic books in public libraries: A feasibility study for developing usage models for web-based and hardware-based electronic books. James Dearnley, Anne Morris, Cliff McKnight, Linda Berube, Martin Palmer and Joanne John. New Review of Information Networking, Vol. 10, No. 2, 2004. **Key points**:

- Research project for Essex Public Libraries based in the UK – examining the implementation of an e-book collection for their public library system.
- Worked with 2 suppliers: OverDrive and ebrary.
  - OverDrive offer libraries the ability to build up collections based on purchase of individual titles which are then loaned to patrons on a one copy per user basis. This system therefore replicates existing p-book borrowing.
  - ebrary works on purchasing a complete collection which is then available on a concurrent basis to patrons with Internet access and those choosing to read from PCs in the library.
- The OverDrive collection proved relatively straightforward to adopt. An issue that became apparent concerned e-book formats. During the course of the nine-month period OverDrive migrated from the Palm format to the MobiPocket format. OverDrive replaced the Palm format titles that Essex had bought, but this raises a fundamental problem which has dogged e-book development since 1998. Formats have become redundant - there is the potential to develop collections which could become obsolete.
- The ebrary model works best for systems where users register with individual libraries, not systems where registered users can borrow from any library in the public system. Moreover, purchasing e-book collections potentially results in the same problem that arises from the purchase of electronic journals databases: only a fraction of the titles provided may actually be of interest to a public library audience.

The elusive e-book: Are e-books finally ready for prime time? Stephen Sottong. American Libraries, May 2008. **Key points**:

- E-books ignore important visual ergonomic factors about how the eye reads print. The issue isn't resolution, but angle, and that hasn't been resolved yet.
- Consumers are less willing to have electronics that are dedicated to a single use. Until there is a good multi-use e-book reader, the demand will be limited.

Dispelling five myths about e-books. James E. Gall. Information Technology and Libraries, March 2005. **Key points**:

- Myth 1—E-books represent a new idea that has failed. Books themselves have a long history dating back hundreds of years. It is too early to say the ebook has failed; we will likely continue to see iterations and refinements of the technology.
- Myth 2—E-books are easily defined. There are multiple definitions of ebooks – for example, purists consider them books developed specifically for an electronic format and not for print. Adding to the confusion is that ebook readers and formats are associated with concepts of ebooks to varying degrees.
- Myth 3—E-books and printed books are competing media. The issue is not whether e-books will replace the printed word. The concern of librarians and others involved in the infrastructure of the book should be on developing the proper role for e-books in a broader culture of information. Unless this approach is taken, the true goal of libraries—disseminating information to the public—will suffer.
- Myth 4—E-books are expensive. There is a high-cost to publishing print books too, but this is masked by supply and demand. As demand for e-books increases, costs should decrease.
- Myth 5—E-Books are a passing fad. If e-books are viewed as a tool or way to access information, the questions change. Instead of asking how digital formats will replace print collections, we can ask how will an e-book version extend the reach of our current collection or provide our readers with resources previously unavailable or unaffordable.

A circulation analysis of print books and e-books in an academic research library.
Justin Littman and Lynn Silipigni Connaway. Library Resources and Technical Services, 48(4).

Key points:

- Preliminary evidence provided in this study suggests that e-books do provide value. Despite the recent introduction of e-books at Duke University Libraries, the use of e-books is already substantial relative to their print counterparts.
- Attention should be paid to titles that particularly benefit from additional functionality offered by an electronic format, such as reference books. In certain subject areas, such as the social sciences, e-books may provide more benefit (assuming usage is an indicator of benefit) than other subject areas. Lastly, e-books are excellent candidates for additional copy purchases when print copies of titles are receiving heavy use.

Academic Publishers and E-Books

Wiley Interscience

Wiley Interscience currently offers approximately 6,000 titles available as online books. Books are available in PDF format and via online access. Access is provided via IP authentication. Concurrent multiple-user access is allowed.

John Wiley and Sons (parent company) also offers e-books. These are available for purchase and may be downloaded to 4 different computers. They are viewable using free Adobe Reader software.

Prentice-Hall/Pearson Education

E-books are available through a subsidiary company, Course Smart. They have approximately 6,500 titles available in e-textbook format. The fine print of the agreement states that for both the download and online models of accessing books, these are not purchases but leases with expiration dates. For printing, 150% of the book may be printed per purchase.

McGraw-Hill Ryerson

E-books are available through Primis Online. E-books may be purchased for download and viewed using Adobe Reader or Zinio. Purchasing an online version of the book allows for a limited number of page views (they deem the number sufficient to read, study and review). If more page views are needed, the subscription must be extended. As well, book pages can be printed once for free. If a download is purchased, it is only viewable on one computer but can be printed multiple times. E-books available include both textbooks as well as materials developed specifically for a course by an instructor.

123 Library

123 Library is an e-book aggregator, developed by the UK's 123DocEducation. They claim to be a fast growing and innovative eBook and digital content aggregation provider for libraries and publishers across the world.

Diesel e-Books

Although not primarily an academic publisher, they do offer some non-fiction titles. Diesel e-books offers 175,000 titles from publishers including Harper Collins, Simon & Schuster, John Wiley & Sons, McGraw-Hill, Harlequin and Random House. They offer e-books in multiple, secure formats including Microsoft Reader, Mobipocket, Adobe Reader and Palm/eReader.

E-Books and Academic Institutions

Stanford University

SULAIR (Stanford University Libraries and Academic Information Resources) has 13 e-book databases, ranging from LION (Literature Online, a collection of poetry, prose and drama titles) to Safari Tech Books. As well, the e-books home page provides links to e-book aggregators such as ebrary and myilibrary,

Penn State
In addition to online collections, Penn State has also partnered with Sony for the Sony Reader Project, a study to investigate ways the Sony Reader Digital Book works in the academic library and university environments. Penn State also works with iChapter. iChapter is a division of Centage Learning; they offer online purchase of textbooks, etextbooks or chapters of books.

Athabasca University
Athabasca has numerous authenticated links to online collections and e-book aggregators including Books 24x7, ebrary, myilibrary, and netLibrary.

Other Projects
The Google Books Library Project is being described as an enhanced card catalog of the world's books. The goal is to create a comprehensive, searchable card catalog of all books in all languages. Current partners on the project include: Bavarian State Library, Columbia University, Committee on Institutional Cooperation, Cornell University Library, Harvard University, Ghent University Library, Keio University Library, Lyon Municipal Library, The National Library of Catalonia, The New York Public Library, Oxford University, Princeton University, Stanford University, University of California, University Complutense of Madrid, University Library of Lausanne, University of Michigan, University of Texas at Austin, University of Virginia, and University of Wisconsin – Madison.

News and Commentary
Analysis: How technology is killing the book: Reading takes a new digital spin
PC Advisor, May 9, 2009
In today's technological society, the way we read literature is changing. And we don't just mean reading a web page instead of your daily paper. Take for example, author Aya Karpinska. She hired a programmer, paying him to create an Apple iPhone application that allowed Karpinska to tell a visual story, with white text on a black background that makes the actual appearance of the words - whether blurred, twisted, or different sizes and fonts - integral to the plot itself, as you zoom in on it to follow the story through. Karpinska calls it "zoom narrative". http://www.pcadvisor.co.uk/news/index.cfm?newsid=115546

eBooks fail to attract young readers
TG Daily, May 01, 2009
If Amazon's Kindle e-book reader is looking to make reading fab, hip and groovy, it is failing miserably. A few months back, CNET mused about whom exactly was using Kindle, as Amazon itself seems somewhat recalcitrant to discuss the matter in public. Some 700 people replied, leading the mag to conclude that, at $359, younger folk would prefer to buy a gaming console, an iPod or to rent a copy of Porky's VIII - Revenge of the Vomit with a side order of a mega bucket of Buffalo Wings and chilli sauce. http://www.tgdaily.com/content/view/42273/135/

E-books battle for next chapter; Publishers are now willing to embrace e-books
The Guardian, April 23, 2009
The clear message from this week's London Book Fair was that UK publishing and retailing are finally ready to embrace the e-book. But don't dump your bookshelves yet. Before the e-book can really challenge its paper equivalent, the industry has to avert a format war a whole lot more complicated than VHS v Betamax. http://www.guardian.co.uk/technology/2009/apr/23/ebooks

A future filled with e-books
IT World, April 21, 2009
This morning I was reading Steven Johnson's How the E-Book Will Change the Way We Read and Write over at the Wall Street Journal. In this article, he outlines a number of ideas about where e-books will take us. Some of them sound interesting, but honestly a lot of them sound horrific to me. Per chapter purchasing? Tailoring a book's content for better search results in Google? No thanks. But what I find

really interesting is how comfortably Johnson equates e-books with the Amazon Kindle.
http://www.itworld.com/personal-tech/66722/future-filled-ebooks

How the e-book will change the way we read and write
The Wall Street Journal, April 20, 2009
Every genuinely revolutionary technology implants some kind of "aha" moment in your memory -- the moment where you flip a switch and something magical happens, something that tells you in an instant that the rules have changed forever. I still have vivid memories of many such moments: clicking on my first Web hyperlink in 1994 and instantly transporting to a page hosted on a server in Australia; using Google Earth to zoom in from space directly to the satellite image of my house; watching my 14-month-old master the page-flipping gesture on the iPhone's touch interface.
http://online.wsj.com/article/SB123980920727621353.html

Indigo Books targets e-book market chapter by chapter
CBC, March 2, 2009
Canadian book retailer Indigo Books & Music Inc. has launched a web service for people who read books and articles online or on mobile devices. With Shortcovers.com, launched officially on Thursday, the Toronto-based owner of chapters.indigo.ca seeks to expand its audience from people who buy books electronically to people who read them that way — a market that other online retailers such as Amazon.com have targeted heavily in the past two years. Indigo, which bills itself as Canada's largest book retailer, sells books both online and at stores across the country.
http://www.cbc.ca/arts/books/story/2009/03/02/tech-shortcovers.html

Google makes thousands of books readable on cellphones
CBC, February 6, 2009
Canadians who use mobile phones to access the internet can now read 500,000 public-domain books via a new Google service. Emma by Jane Austen, Oliver Twist by Charles Dickens and Notes on Nursing by Florence Nightingale are some titles made available Thursday on the mobile version of Google Book Search, more than four years after the company introduced the original version for PC users, formerly called Google Print. http://www.cbc.ca/technology/story/2009/02/06/tech-google-book-search.html

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Appendix Eight: Excerpts from the Horizon Report 2010

Following are excerpts from the 2010 Horizon Report regarding open content and electronic books.

The annual *Horizon Report* describes the continuing work of the New Media Consortium's Horizon Project, a qualitative research project established in 2002 that identifies and describes emerging technologies likely to have a large impact on teaching, learning, or creative inquiry on college and university campuses within the next five years. The *2010 Horizon Report* is the seventh in the series and is produced as part of an ongoing collaboration between the New Media Consortium (NMC) and the EDUCAUSE Learning Initiative (ELI), an EDUCAUSE program.

In each edition of the *Horizon Report,* six emerging technologies or practices are described that are likely to enter mainstream use on campuses within three adoption horizons spread over the next one to five years. Each report also presents critical trends and challenges that will affect teaching and learning over the same time frame.

For a copy of the complete Horizon Report 2010, please see: http://wp.nmc.org/horizon2010/

Citation
Johnson, L., Levine, A., Smith, R., & Stone, S. (2010). *The 2010 Horizon Report.* Austin, Texas: The New Media Consortium.

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OPEN CONTENT

Time-to-Adoption Horizon: One Year or Less

The movement toward open content reflects a growing shift in the way academics in many parts of the world are conceptualizing education to a view that is more about the process of learning than the information conveyed in their courses. Information is everywhere; the challenge is to make effective use of it. Part of the appeal of open content is that it is also a response to both the rising costs of traditionally published resources and the lack of educational resources in some regions, and a cost-effective alternative to textbooks and other materials. As customizable educational content is made increasingly available for free over the Internet, students are learning not only the material, but also skills related to finding, evaluating, interpreting, and repurposing the resources they are studying in partnership with their teachers.

Overview

A new educational perspective, focused on collective knowledge and the sharing and reuse of learning and scholarly content, has been gaining ground across the globe for nearly a decade. Open content has now come to the point that it is rapidly driving change in both the materials we use and the process of education. At its core, the notion of open content is to take advantage of the Internet as a global dissemination platform for collective knowledge and wisdom, and to design learning experiences that maximize the use of it.

Open content, as described here, has its roots in a number of seminal efforts, including the Open Content Project, MIT's Open Courseware Initiative (OCW), the Open Knowledge Foundation, and work by the William and Flora Hewlett Foundation and others. Many of these projects focused on creating collections of sharable resources and on devising licenses and metadata schemata. The groundswell of interest in open content described here is differentiated from early work by its primary focus on the use of open content and its place in the curriculum. The role of open content producers has evolved as well, away from the idea of authoritative repositories of content and towards the broader notion of content being both free and ubiquitous. Building on the trailblazing models of institutions like MIT, schools like Tufts University (and many others) now consider making their course materials available to the public a social responsibility.

An outgrowth of that perspective is the emergence of open-content textbooks that can be "remixed" — that is, customized, modified, or combined with other materials — and a number of publishers are finding ways to support authors of such materials. One such publisher, Flat World Knowledge, provides access to textbooks authored for open use, making it very easy for faculty to individually tailor a text for use in their own class. Flat World Knowledge operates as a publisher, reviewing book submissions and using a traditional editing process before release; however, electronic copies of the textbooks are free. Students only pay for print copies, and authors receive royalties for these purchases whether the book has been customized or not.

At the center of many discussions of open content are the challenges of sharing, repurposing, and reusing scholarly works; related to those discussions are concerns about intellectual property, copyright, and student-to-student collaboration, and solid work has been done by groups such as Creative Commons, the Academic Commons, Science Commons, and others to address many of the concerns commonly voiced. Many believe that reward structures that support the sharing of work in progress, ongoing research, highly collaborative projects, and a broad view of what constitutes scholarly publication are key challenges that institutions need to solve. Also to be addressed are reputation systems, peer review processes, and new models for citation of the new

forms of content that are likely outgrowths of open content initiatives.

While a number of highly structured projects exist to provide access to open content, in general, the open content community is diffuse and distributed; learning to find useful resources within a given discipline, assess the quality of content available, and repurpose them in support of a learning or research objective are in and of themselves valuable skills for any emerging scholar, and many adherents of open content list that aspect among the reasons they support the use of shareable materials.

Relevance for Teaching, Learning, or Creative Inquiry

Open content shifts the learning equation in a number of interesting ways; the most important is that its use promotes a set of skills that are critical in maintaining currency in any discipline — the ability to find, evaluate, and put new information to use. Almost as important is that the same set of materials, once placed online and made sharable via the appropriate licensing, can inform a wide variety of learning modalities, not the least of which is learning for the sheer joy of discovery.

Communities of practice and learning communities have formed around open content in a great many disciplines, and provide practitioners and independent learners alike an avenue for continuing education. OpenLearn (http://openlearn.open.ac.uk), a project of the Open University in the U.K., offers anyone the opportunity to join a study group while working through their open course content. OpenLearn practices a method known as "supported open learning," in which students work through content at their own pace with help and guidance from a tutor. Faculty communities of practice are flourishing as well; at Trinity University, for example, faculty endorsed an Open Access policy that enables them to place copies of their scholarly works in an open-access repository shared by several liberal arts colleges.

Many sources of open content can easily be found in Creative Commons (http://creativecommons.org), Teachers Without Borders (http://www.teacherswithoutborders.org), and other online communities, while portals like Folksemantic (http://www.folksemantic.com) offer a single point of entry to many open content offerings. Learning communities associated with services like Diigo or Twine can point educators in the right direction via the social networking equivalent of "word of mouth."

A sampling of other open content projects across disciplines includes the following:

- **Art History.** Smarthistory, an open educational resource dedicated to the study of art, seeks to replace traditional art history textbooks with an interactive, well-organized website. Search by time period, style, or artist (http://smarthistory.org).
- **Graduate Studies.** The Tokyo Institute of Technology offers 35 graduate level courses, open and free of charge, in the schools of science and engineering, bioscience and biotechnology, innovation management, and others.
- **Health Sciences.** The Johns Hopkins Bloomberg School of Public Health provides open-access classes to further the goal of improving global understanding of health-related issues. Courses include the school's most popular subjects, including adolescent health, infectious disease, genetics, and aging.
- **Literature.** *Looking for Whitman* (http://lookingforwhitman.org) is an open-access, multi-institutional experiment, dedicated to the study of the life and works of Walt Whitman.

Open Content in Practice

The following links provide examples of open content.

American Literature before 1860
http://enh241.wetpaint.com

Students in this course, held at Mesa Community College, contribute to the open course material as part of their research. MCC also features a number of lectures on YouTube (see http://www.youtube.com/user/mesacc#p/p).

Carnegie Mellon University's Open Learning Initiative

http://oli.web.cmu.edu/openlearning

The Open Learning Initiative offers instructor-led and self-paced courses; any instructor may teach with the materials, regardless of affiliation. In addition, the courses include student assessment and intelligent tutoring capability.

Connexions

http://cnx.org

Connexions offers small modules of information and encourages users to piece together these chunks to meet their individual needs.

DnaTube

http://www.dnatube.com

This site offers a YouTube-like library of science videos, including lectures, interviews, animations, and demonstrations. Search by category (mathematics, archeology, physics); topics (viruses, mitosis); or featured videos, which include the editors' choices.

eScholarship: University of California

http://escholarship.org/about_escholarship.html

eScholarship provides peer review and publishing for scholarly articles, books, and papers, using an open content model. The service also includes tools for dissemination and research.

MIT OpenCourseWare

http://ocw.mit.edu

The Massachusetts Institute of Technology publishes lectures and materials from most of its undergraduate and graduate courses online, where they are freely available for self-study.

Open.Michigan's dScribe Project

https://open.umich.edu/projects/oer.php

The University of Michigan's Open.Michigan initiative houses several open content projects. One, dScribe, is a student-centered approach to creating open content. Students work with faculty to select and vet resources, easing the staffing and cost burden of content creation while involving the students in developing materials for themselves and their peers.

OTTER

http://www.le.ac.uk/otter

The University of Leicester's OTTER project (Open, Transferable and Technology-enabled Educational Resources) pilots and evaluates systems for releasing educational content under an open license.

For Further Reading

The following articles and resources are recommended for those who wish to learn more about open content.

Center for Social Media Publishes New Code of Best Practices in OCW

http://criticalcommons.org/blog/content/center-for-social-media-publishes-new-code-of-best-practices-in-ocw

(Critical Commons, 25 October 2009.) The advocacy group Critical Commons seeks to promote the use of media in open educational resources. Their *Code of Best Practices in Fair Use for OpenCourseWare* is a guide for content developers who want to include fair-use material in their offerings.

Countries Offer Different Takes to Open Online Learning

http://chronicle.com/article/Countries-Offer-Different/48775

(Simmi Aujla and Ben Terris, *The Chronicle of Higher Education,* 11 October 2009.) Many countries are using open educational resources to reach students who would otherwise be unable to attend university.

Creative Commons

http://www.creativecommons.org

Creative Commons has created a set of legal tools consistent with the rules of copyright that make it not only possible but easy for people to share and build upon the work of others. The organization provides free licenses that allow anyone to create, share, and use open content.

Flat World Knowledge: A Disruptive Business Model

http://industry.bnet.com/media/10003790/flat-world-knowledge-a-disruptive-business-model

(David Weir, *BNET,* 20 August 2009.) Flat World Knowledge is enjoying rapid growth, from 1,000 students in the spring of 2009 to 40,000 in the fall semester using their materials. The company's business model pays a higher royalty percentage to textbook authors and charges students a great deal less than traditional publishers.

Open Content and the Emerging Global Meta-University

http://www.educause.edu/EDUCAUSE+Review/EDUCAUSEReviewMagazineVolume41/OpenContentandtheEmergingGloba/158053

In this article drawn from his 2005 Clair Maple Memorial Address at the Seminars on Academic Computing, MIT President Emeritus Charles Vest discusses open content and outlines the promise and opportunity that drove the creation of MIT OpenCourseWare.

Delicious: Open Content

http://delicious.com/tag/hz10+opened

Follow this link to find additional resources tagged for this topic and this edition of the *Horizon Report.* To add to this list, simply tag resources with "hz10" and "opened" when you save them to *Delicious.*

ELECTRONIC BOOKS

Time-to-Adoption Horizon: Two to Three Years

As the technology underlying electronic readers has improved and as more titles have become available, electronic books are quickly reaching the point where their advantages over the printed book are compelling to almost any observer. The convenience of carrying an entire library in a purse, pocket, or book bag appeals to readers who find time for a few pages in between appointments or while commuting. Already firmly established in the public sector, electronic books are gaining a foothold on campuses as well, where they serve as a cost-effective and portable alternative to heavy textbooks and supplemental reading selections.

Overview

Electronic books have reached mainstream adoption in the consumer sector; in 2009, the Kindle was Amazon.com's best selling product, with more than 390,000 titles available. The very first electronic versions of books were those digitized by Project Gutenberg in the 1970s. Electronic books were meant to be read using a computer until the late 1990s; at that time, special devices for reading electronic books, known as e-readers or simply readers, began to appear on the market. The latest readers offer a high fidelity reading experience that offers most of the affordances of the printed book, with enhancements like wireless connectivity and ample storage that allow the typical device to hold more than 1,000 titles.

This ready availability of a selection of capable readers is one of the factors contributing to the success of electronic books. Not only are there many models available to please a variety of tastes — besides the Amazon Kindle, the Sony Reader, the new Barnes & Noble Nook, and a number of reader applications for iPhones, Android phones, and other smartphones have entered the market — but the capabilities of readers have advanced to the point where the experience truly rivals that of reading a paper book. Paper and ink color, font, type size, even the way pages are turned, are all customizable. Text is clear and crisp, with enough contrast to make it easy to read, and the devices are comfortable to hold for long periods of time.

Supported by such a wide variety of readers, electronic books have enjoyed a dramatic rise in popularity over the last year — Kindle editions, for example, now account for half of Amazon's sales of books available both in print and for the Kindle. Readers of electronic books may be reading more, as well. Kindle owners, according to Amazon, buy three times as many books as they did before they had Kindles; Sony reports that Reader owners download about eight books per month — as compared to fewer than seven books per year purchased by the average American book buyer in 2008[1].

The list of available titles, already broad and growing rapidly, is spurring that interest. Virtually all new books are available in electronic form, as well as classics, and popular books from the last 50 years. Collections of copyright-free texts, including great works of literature, are available at little or no cost. Publishers are releasing more titles in electronic formats as the popularity grows, leading to a wider selection of current books and new releases. Cost is generally a little lower than buying a paperback edition.

Wirelessly connected readers make purchasing an electronic book a simple matter, often delivering a new volume in less than a minute. Purchases can be made at any time, from virtually any location, at no additional cost, and with no subscription or access fee. The convenience of having an entire library of books, magazines, and newspapers — each remembering exactly where you left off the last time you looked at them — and all in a single, small device is one of the most compelling aspects driving electronic reader sales.

1 See *E-Book Fans Are Proving to be Enthusiastic Readers,* NYTimes.com, 20 October 2009 (http://www.nytimes.com/2009/10/21/technology/21books.html?_r=2).

Relevance for Teaching, Learning, or Creative Inquiry

While the typical electronic reader could conceivably hold the entire sum of textbooks and readings for the entirety of one's academic experience, campuses have been slower to adopt electronic books than the general public for three primary reasons, but all of them are becoming less of a constraint.

The primary obstacle was simply availability. While a great variety of consumer titles are available electronically, textbooks or academic works have been published in electronic formats far less frequently. Secondly, as the reader technology developed, the ability to easily render high quality illustrations was initially limited. The last obstacle was related to the publishing model. Where electronic versions were available, they were most commonly viewed as ancillary to the printed version, which had to be purchased before the electronic version could be accessed — and the early versions were not in formats compatible with most readers.

Over the past year or so, however, those obstacles have each started to fall away. Many academic titles are now available, and many more are in the pipeline. Amazon, for example, now lists some 30,000 academic titles; all of the major textbook publishers have electronic versions in the Amazon education catalog. Advances in electronic reader technology have brought electronic versions of academic texts to a level with printed ones. The newest readers can display graphics of all kinds and make it easy to bookmark and annotate pages and passages. Annotations can be exported, viewed online, shared, and archived. In addition, electronic readers offer keyword searching, instant dictionary lookups and, in some cases, wireless Internet access. The experience of reading and note taking is becoming as easy in electronic form as it is in paper. Major publishers have largely uncoupled print and electronic sales of academic texts as well.

An encouraging number of colleges and universities are running pilot programs with electronic books. The Kindle DX, a larger format version of the device expressly built for academic texts, newspapers, and journals, is being piloted at Arizona State University, Ball State University, Case Western Reserve University, Pace University, Princeton, Reed College, Syracuse University, and the University of Virginia Darden School of Business. Northwest Missouri State University and Penn State have embarked on pilots using the Sony Reader. Johns Hopkins is piloting the enTourage eDGe, which combines the functions of an e-reader, a netbook, a notepad, and an audio/video recorder and player in one handheld device. Many other similar projects could be listed here, as the number of campus-based evaluation pilots is large and growing rapidly.

An obvious draw for students is the advantage of having a single handheld reading device that can easily accommodate the entirety of readings involved in one's study, as well as all the essential reference texts. In a pilot program, Seton Hall University's Teaching, Learning & Technology Center found that students appreciated the ability to store and review a semester's worth of material in electronic form.

Princeton University — which spent over $5 million on paper last year, one-fifth of which comprised printouts in student computing clusters — has launched a pilot program with the goal (among others) of determining whether students with electronic readers will print less paper. The Kindles contain course readings that would normally be put on reserve in book, PDF, or photocopy form.

A survey of current projects shows that electronic books are being explored in virtually every discipline, although full-scale movement to electronic books is still two to three years away. A sampling of projects includes the following:

- **Extracurricular Reading.** The library at Fairleigh Dickinson University offers a selection of electronic readers that students may check out, including Amazon Kindles, Sony Readers, and iPod Touches. Each reader includes a selection of reference books, popular titles, literature, and more.

- **Foreign Language.** First-year French students at the University of Texas at Austin use an online interactive textbook with a print-on-demand component, available in color or black-and-white. The online portion includes audio clips of each part of the text and video clips to explore the culture of France (http://www.laits.utexas.edu/fi).
- **Humanities.** The Humanities E-Book (HEB), offered to institutions on a subscription basis by the American Council of Learned Societies, is a digital collection of 2,200 humanities texts. Students at subscribing institutions may browse and read the collection online or order printed copies on demand.
- **Physics.** MIT, in conjunction with Ball State University, produced an electronic book to visually demonstrate the principles of electricity and magnetism. (http://web.mit.edu/viz/EM/flash/E&M_Master/E&M.swf).

Electronic Books in Practice

The following links provide examples of the use of electronic books for educational purposes.

Darden Students Test the Amazon Kindle DX

http://www.virginia.edu/uvatoday/newsRelease.php?id=9509

The University of Virginia's Darden School of Business is participating in an Amazon-sponsored program to test the Kindle DX. The pilot aims to assess the effect of electronic books on teaching and learning, determine whether the school can reduce its carbon footprint by employing the devices, and explore potential cost savings for students and the university.

DeepDyve

http://www.deepdyve.com

DeepDyve is an extensive online collection of scientific, technical, and medical research. Articles are either open access or premium; premium articles may be rented and read online for twenty-four hours at a cost of $0.99.

Sony Reader Project at The Penn State University Libraries

http:///libraries.psu.edu/psul/lls/sony_reader.html

Students may check out a Sony Reader from the library, complete with leisure reading titles including both fiction and non-fiction.

Sophie

http://sophiecommons.org

Sophie is an open source tool, maintained by the University of Southern California's School of Cinematic Arts, for creating and reading rich media documents in a networked environment. Sophie authors can easily combine a variety of media — text, images, video, and audio — to develop sophisticated multimedia works.

Swapping Textbooks for E-books

http://www.edtechmag.com/higher/march-april-2009/swapping-textbooks-for-e-books.html

(Lee Copeland, *EDTECH,* March-April 2009.) In a pilot program at Northwest Missouri State University, 500 of the school's 6,500 students will receive electronic textbooks instead of, or in some cases in addition to, printed copies.

For Further Reading

The following articles and resources are recommended for those who want to learn more about electronic books.

7 Things You Need To Know About Sony Readers in a Higher Ed Environment

http://libraries.psu.edu/etc/medialib/psulpublicmedialibrary/lls/documents.Par.53256.File.dat/7things_SonyReader.pdf

This white paper from the Penn State University Libraries describes relevant uses of Sony's Reader in the classroom, in the library, and as a tool for the visually disabled. Pros and cons of using e-books are discussed.

Clive Thompson on the Future of Reading in a Digital World

http://www.wired.com/techbiz/people/magazine/17-06/st_thompson

(Clive Thompson, *Wired Magazine,* 22 May 2009.) Thompson makes a case for digitizing books: in addition to enhancing sales of the printed book, e-books enable ongoing reader dialogs.

Devices to Take Textbooks Beyond Text

http://www.nytimes.com/2009/12/06/business/06novel.html

(Anne Eisenberg, *The New York Times,* 5 December 2009.) New e-book readers, in addition to displaying standard text, offer liquid-crystal displays to better show graphics and other items found in color in textbooks.

E-Book Fans Are Proving to be Enthusiastic Readers

http://www.nytimes.com/2009/10/21/technology/21books.html

(Brad Stone, *The New York Times,* 20 October 2009.) Fans of e-readers suggest that the convenience of using these products, which offer a sense of control and customization that consumers have come to expect from all their media gadgets, has created a greater interest in books.

How the E-Book Will Change the Way We Read and Write

http://online.wsj.com/article/SB123980920727621353.html

(Steven Johnson, *The Wall Street Journal,* 20 April 2009.) While electronic readers satisfy our desire for instant gratification, they may compromise the sanctity of an author, a reader, and a book. The author predicts that electronic books will fundamentally change the way we interact with the printed word.

Kindle for the Academic

http://www.insidehighered.com/views/2009/11/03/golub

(Alex Golub, *Inside Higher Ed,* 3 November 2009.) The author discusses the pros and cons of electronic readers, particularly the Kindle, from the point of view of a reader of academic works (as opposed to textbooks or leisure reading).

Students Give E-readers the Old College Try

http://www.columbiatribune.com/news/2009/oct/20/students-give-ereaders-old-college-try

(*Columbia Daily Tribune,* 20 October 2009.) Students weigh in on the Kindle. Included are benefits and drawbacks from a number of participants in this year's Kindle pilot program.

Delicious: Electronic Books

http://delicious.com/tag/hz10+ebooks

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