The Textbook of Today
Free, open source, interactive, and online

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What's new?

Open source textbooks are an emerging technology which follows the open software model. "Open source" means that anyone can contribute to adding, editing, and creating the project. Open source projects such as Wikipedia, Open Office, and Mozilla Firefox have been very successful in the IT industry. In education, innovators are harnessing the power of open source to create platforms in which multiple contributors can add multimedia in order to create free educational materials, also called learning objects. Depending on the type of collaborative platform, the learning objects can be organized into modules or instructional materials can be drawn from learning repositories. In the latter type, anything an author creates is added to the learning repository so that it is available to be reused by others.

In this Tedtalk video, Richard Baranuik, provides an overview of this emerging technology and how it works.

These new textbooks represent a huge disruption to the publishing industry. They are a cost-effective alternative to the traditional printed textbook. Students and educators alike are discovering that this technology is having a positive effect on the conventional classroom. Educators can use open-source textbooks to offer an interactive, personalized and modular learning experience. The online materials are more engaging and students are more inclined to participate in reading assignments and discussions. The openness of content allows for greater distribution and popularization of the most effective materials. With open learning repositories, anyone can become a published author. The catch is that while everyone is a creator, contributors do not earn money from their efforts.

Benefits for all

Free

Open source text books are free. They are cheap to print, modify, redistribute or translate into other languages. Students are no longer subjected to the rising textbook costs, which have occurred because the publishing industry is attempting to make up for the loss of revenue from free book competition. In economically disadvantaged places, the savings not only benefit students who otherwise might not have access, but help schools as well by saving them a lot of money in providing materials for students.

Open

Open educational resources (OERs) are widely available online which inceases access. Anyone can create their own custom textbook by reusing or writing their own materials. The content of open source platforms has a Creative Commons license, an innovation allowing anyone to use or modify existing content. There are no limitations on where or how these textbooks can be used and shared.

High quality

When textbooks are open and free, the quality is higher because more experts are able to contribute to projects. Print books are usually rife with errors and quickly become outdated. With open source, content can be edited quickly and updated; users can look at user feedback when making choices about ebook content. Professionals in the field of education can offer their opinions on whether the materials are accurate and high quality. Open online assessments and measurements can assist teachers in evalutating learning outcomes..

Useful

Students are not the only beneficiaries of open source textbooks. Teachers are able to custom build the content to create more engaging and effective classes. Teachers now have a large platform in which to incorporate interactive learning activities and as well as access to a wider variety of teaching materials.

Adaptable

The online aspect of open source textbooks allows them to be adopted from anywhere around the world, translated, and customized to fit the needs of learners at different levels and cultures.
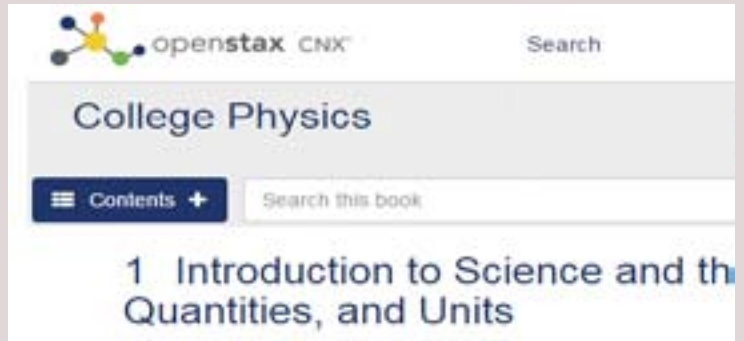

Accessible

Online textbooks are flexible and modifiable for various technological devices. Learners can easily access materials from their cell phones, tablets, desktops, and laptops. In addition to the benefits of accessibility, learners have access to many plug-ins and interfaces.
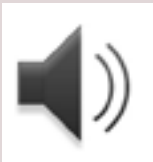
Open Source Sites

Connexions

Connexions is an example of an open source learning repository which is maintained by Rice University. This platform has two components that allow users to access completed ebooks or search through a collection of modules, or "learning chunks". Everything on the site is free to use, edit and redistribute because it is under the Creative Commons license. Users can search by subject, author, or concept. After registering as a contributor, users can create their own

modules or course on the site. However, aspiring authors could also simply copy or download any images, text and exercises into another piece of ebook making software or learning management system.

Listen to this podcast for more information about Connexions and the disruptive power of this new innovation.

OER Platforms

The Flatworld Knowledge (FWL) platform provides students with textbooks in digital form while using an open license model. Unlike most other platforms, the content is peer-reviewed. High quality peer reviewed text books are extremely expensive and offer long-term financial returns to authors and publishers. The FWK organization attempts to merge the credibility benefits of traditional textbooks with minimized costs of open books. Authors on FWL don't get money, but gain access to millions of readers.

While the content is not free, prices start in the low twenties. However, some of the books in searchable database are quite expensive. On the site, users pay for access to specific course materials. They are given a choice ranging from "study pass," which consists of highlights and notes, "digital all access pass" allowing full access, a black and white printed book, or a color printed book. The prices for the study pass are comparable to outdated traditional textbooks. The best value is the digital pass.

Key Players

There are many other websites that offer alternative textbooks. Here are some of the best:

CourseSmart has free online book reviews for faculty and discounted ebooks for students.

Boundless has customizable online books, but they are $20 per student.

Flooved features instructors' free lecture notes, handouts and study guides.

OpenStax has peer-reviewed open source textbooks online which can be printed for a fee.

> **"Authors don't get money, but gain access to millions of readers."**
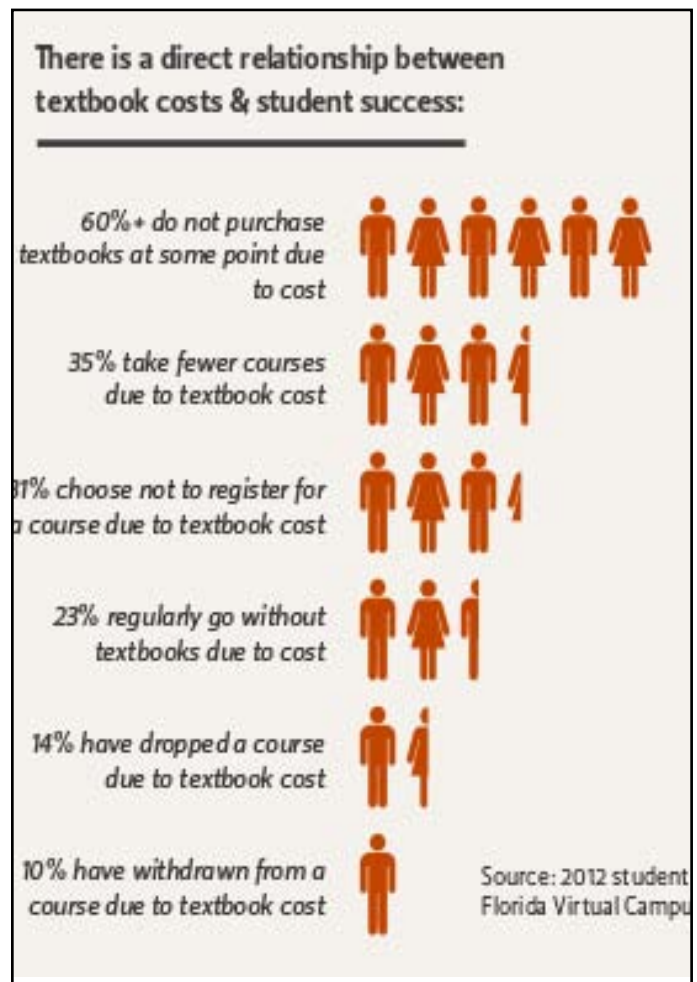
The Impact

Old vs. New

CNN reports that students are increasingly choosing not to purchase expensive textbooks. As a result, some postsecondary schools are offering open source textbooks as required course material. Both students and educators are finding these resources useful more accessibe and

"Higher grades were correlated with courses that used open textbooks"

cheaper. For profit publishers, on the other hand, claim open source textbooks contain many editorial mistakes while printed textbooks offer "unparalleled levels of academic and editorial oversight."

Mixed Results

In one large experimental **study**, researchers examined the data of an entire school district. A control group used traditional textbooks while the experiemntal group used an open source book compiled by a team of teachers. Controlling for age, gender, teacher effeciveness, and a variety of other factors, the researchers found only a small improvement in student outcomes for only one of the three subjects studied. However, **another study,** a multiinstitutional experimental design, found that OER positively impacted passing rates, grades, and course completion rates.

Are open source books really that good?

A **study** was conducted by educational researchers from Brigham Young University and Virginia State University. The researchers studied a group 484 students between seven classes at Virginia State University school of Business over the course of one year. The researchers wanted to analyze textbook access outcomes of students who used openly licensed textbooks and other digital tools. Students used the OER online platform, Flat World Knowledge (FWK), as their open textbook source. In addition to finding a strong connection between OER materials and increased textbook access, the study found that higher grades were correlated with courses that used open textbooks. While this result is still inconclusive, it does suggest that better designed studies could uncover a real impact on educational outcomes.

There is a direct relationship between textbook costs & student success:

60%+ do not purchase textbooks at some point due to cost

35% take fewer courses due to textbook cost

31% choose not to register for a course due to textbook cost

23% regularly go without textbooks due to cost

14% have dropped a course due to textbook cost

10% have withdrawn from a course due to textbook cost

Source: 2012 student Florida Virtual Campu

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