STEM is already involved Open Access

* Federal law demands that federally funded research must be open access - In 2008, George W. Bush signed a bill requiring all research funded by the NIH to be archived in the free-access repository PubMedCentral no later than one year after their initial publication. This bill opened the path to the Green OA in the US. - The White House's Office of Science and Technology Policy issued a [memo in 2013](https://obamawhitehouse.archives.gov/blog/2013/02/22/expanding-public-access-results-federally-funded-research) directing ***all federal agencies that provide $100 million or more in research funding to come up with plans requiring grant recipients to share the results of their research with the public***.
* arXiv.org. [*arXiv*](https://arxiv.org/) is a free distribution service and an open-access archive for 1,848,136 scholarly articles in the fields of physics, mathematics, computer science,

**Affordability**

* Rise in textbook costs - between 2006 and 2016 text book costs increased 88 percent as reported by the Bureau of Labor Statistics - <https://www.vox.com/the-goods/2019/3/6/18252322/college-textbooks-cost-expensive-pearson-cengage-mcgraw-hill>
* A Top Hat white paper released in 2018, [*The Death of Textbook Publishing & The Future of College Course Content*](https://tophat.com/teaching-resources/ebooks-and-guides/death-textbook-publishing-future-college-course-content/) by Canadian Philip Preville quotes a survey showing that
* 65 percent of college students admitted they had not bought a required textbook because of cost.
* The paper also states that textbooks have increased in price by more than 1,041 percent since 1977. - Over the past 40 years, college textbook prices have risen about 1,000 percent, which is extraordinary. Much faster than the Consumer Price Index, much faster than even parts of our economy that we say are out of control, like medical spending. Textbooks are outpacing that by a large factor." ( [Higher Education Article](https://www.insidehighered.com/news/2018/07/26/students-sacrifice-meals-and-trips-home-pay-textbooks) )
* Rise in Textbook costs - PIRG - Public Interest Research Group - Released by: U.S. PIRG Education Fund and the Student PIRGs

Release date: Monday, January 27, 2014 ([Fixing the Broken Textbook Market](https://uspirg.org/reports/usp/fixing-broken-textbook-market))

* 65% of students said that they had decided against buying a textbook because it was too expensive.
* The survey also found that 94% of students who had foregone purchasing a textbook were concerned that doing so would hurt their grade in a course.
* More than 50% of the students felt significant concern for their grade.
* Nearly half of all students surveyed said that the cost of textbooks impacted how many/which classes they took each semester.
* 82% of students felt they would do significantly better in a course if the textbook was available free online and buying a hard copy was optional.
* [PIRG study](https://blog.gutenberg-technology.com/en/students-avoid-buying-textbooks) said that This study found that about a third of students (amounting to more than 5.2 million students in 2013) had to get financial assistance to be able to pay for their printed textbooks.
* 2018 study - A [new study by Morning Consult for Cengage](https://news.cengage.com/corporate/new-survey-college-students-consider-buying-course-materials-a-top-source-of-financial-stress/), an educational technology and services company, asked 1,651 current and former college students how purchasing textbooks figures into their financial picture.
* Forty-one percent of those students said that textbooks and other course materials had "somewhat of an impact" on their financial situation,
* and 46 percent said that it had "a big impact." Immediately above is the web address for this info.

**EDUCATIONAL EFFICACY**

* [Hilton Report](http://openedgroup.org/review)- 2016, 16 empirical studies - That examined classrooms where OERS had replaced traditional textbooks
* Some studies looked at learning outcomes and student success rates - Compared students who used OERs to students who used traditional textbooks.
* Students of OER had higher test scores
* Lower failure rates
* Lower dropout rates
* Only one study suggested that OERs were connected to lower performance by students -
* Perceptions faculty and students had of open educational resources - majority of faculty and students viewed OERs positively -
* About ½ said OERS had similar quality as traditional textbooks -
* Only a few felt OER’s were inferior
* Students liked them because they were free
* Faculty like them because of the content and that they were up-to-date

Open Access Publishers

[Openstax](https://openstax.org/)

[Open Culture](https://www.openculture.com/free_textbooks)

[Open Textbook Library](https://open.umn.edu/opentextbooks/)

[Library of Congress Open Access Books](https://www.loc.gov/collections/open-access-books/)

[DOAB Directory of Open Access Books](https://directory.doabooks.org/)