

**University of Massachusetts Amherst**

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**From the Selected Works of Marilyn S. Billings**

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June 16, 2015

## Encouraging Openness at Your Institution: Trends in Open Education and Open Access

Marilyn S Billings, *University of Massachusetts Amherst*



Available at: [https://works.bepress.com/marilyn\\_billings/67/](https://works.bepress.com/marilyn_billings/67/)



# Encouraging Openness at Your Institution:

## Trends in Open Education and Open Access

Marilyn Billings

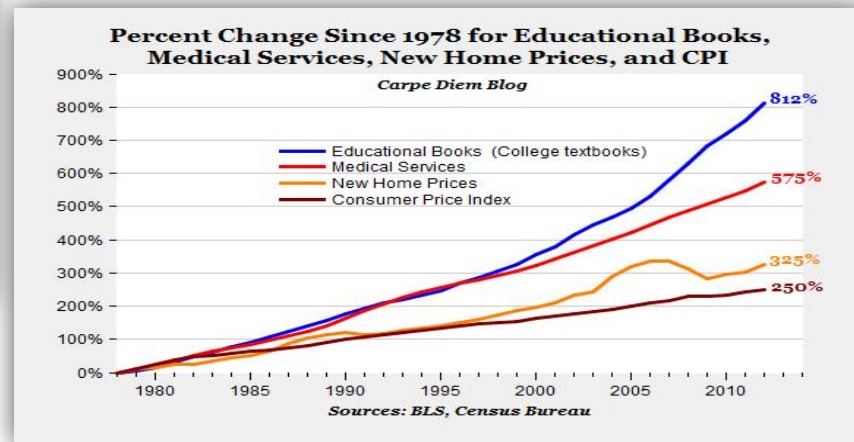
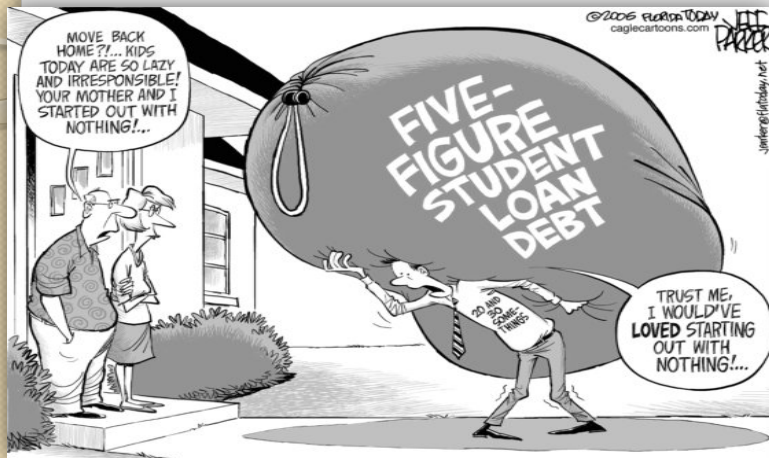
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# Textbook Trends



The high cost of commercial print textbooks is a major concern for parents, students, and even the federal government.

## Key Trends Accelerating Technology Adoption in Higher Education

Long-Term Trends: Driving Ed Tech adoption in higher education for five or more years

- > **Advancing Cultures of Change and Innovation**
- > **Increasing Cross-Institution Collaboration**

Mid-Term Trends: Driving Ed Tech adoption in higher education for three to five years

- > **Growing Focus on Measuring Learning**
- > **Proliferation of Open Educational Resources**

Short-Term Trends: Driving Ed Tech adoption in higher education for the next one to two years

- > **Increasing Use of Blended Learning**
- > **Redesigning Learning Spaces**

## Significant Challenges Impeding Technology Adoption in Higher Education

Solvable Challenges: Those that we understand and know how to solve

- > **Blending Formal and Informal Learning**
- > **Improving Digital Literacy**

Difficult Challenges: Those we understand but for which solutions are elusive

- > **Personalizing Learning**
- > **Teaching Complex Thinking**

Wicked Challenges: Those that are complex to even define, much less address

- > **Competing Models of Education**
- > **Rewarding Teaching**

## Important Developments in Educational Technology for Higher Education

Time-to-Adoption Horizon: One Year or Less

- > **Bring Your Own Device (BYOD)**
- > **Flipped Classroom**

Time-to-Adoption Horizon: Two to Three Years

- > **Makerspaces**
- > **Wearable Technology**

Time-to-Adoption Horizon: Four to Five Years

- > **Adaptive Learning Technologies**
- > **The Internet of Things**

From the 2015 Horizon report

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14

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THE NEW YORK TIMES

SECTIONS HOME SEARCH

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YOUR MONEY | YOUR MONEY ADVISER

### Putting a Dent in College Costs With Open-Source Textbooks

By ANN CARRINS FEB. 25, 2015

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College students could save an average of \$128 a course if traditional textbooks were replaced with free or low-cost "open-source" electronic versions, [a new report](#) finds.

The Student Public Interest Research Groups, state-based advocacy groups that promote affordable textbook options, analyzed open-source pilot programs at five colleges and found that the savings for students can be significant.

While the price of textbooks at four-year schools pales in comparison to the cost of tuition, the cost still can weigh heavily on students with tight budgets. The average cost for books and supplies for the current academic year is between \$1,200 and \$1,300, depending on the type of school attended, according to the College Board.

Textbook costs are particularly burdensome for students at two-year community colleges; the cost, more than \$1,300, is about 40 percent of the average cost of tuition, according to the College Board.

Previous research by the Student PIRGs found that the high cost of textbooks can interfere with education. Some students, for instance, may delay buying the required text for a class, and fall behind; or they simply don't buy it at all, putting themselves at a disadvantage.

Open-source textbooks are created under an open license, so they can be downloaded free or printed at low cost; instructors can even rearrange the sequence of material, to suit their preference. There's a movement to make faculty-written, peer-reviewed open-source textbooks available to professors and students to help bring a lid on the cost of textbooks.

A response to the Student PIRGs Report  
*Open Textbooks: The Billion-Dollar Solution*

# Babson Report

- Faculty not aware of OERs
- Faculty appreciate OER concepts
- Perceived quality of OERs
- Lack of time to find and evaluate OERs
- Faculty are key decision makers for OER adoption

# What are OERs?

- O is for Open – openly accessible
- E is Educational – learning
- R is for Resources – content
- Think Five Rs
  - Reuse - use freely for own purpose
  - Redistribute - share with others
  - Revise - adapt, modify, change
  - Remix - combine / transform
  - Retain: Users have the right to make, archive, and "own" copies of the content

# OER includes

## Curriculum

Syllabi

Content modules

## Course materials

Textbooks

Assignments

Simulations

Learning objects

Labs

## Collections

Journal articles

E-books

Art galleries

Video libraries

## Tools

Software

Calculators

Analytics

And more!



# Goals of Open Education Initiative

- To provide small incentive grants to faculty to adopt alternatives to high-cost textbooks
  - Funded by Provost and University Libraries
  - Other partners as well
- To provide support infrastructure for creation and/or use of open educational resources and library content
- To engage T & L partners and faculty in open education
  - Academic Computing
  - Center for Teaching and Faculty Development
  - University Libraries





# Workshop & Consultation Process

- Two 1 hour workshops reviewing available Open Educational Resources and library resources
- Individual consulting sessions for faculty with Scholarly Communication librarians and partners as needed
- Topics covered: OER availability, copyright and licensing issues, accessibility concerns, creating a sustainable curriculum with OERs, managing resources in the LMS

Last updated: Feb 10, 2017 URL: <http://guides.library.umass.edu/oer> Print Guide RSS updates

Home For Educators For Learners Advocacy Open Education Initiative Library Liaisons

Home Comments(0) Print Page Search: This Guide Search

### Additional Resources


#### Types of OERs

- Learning objects, units, textbooks, scholarly articles IRRODI.org
- Multimedia objects (Flash etc.) MERLOT
- Courses, programs full curriculum
- Tools, FOSS eduforge


Athabasca University Canada's Open University  
Open Educational Resources from Open Access Week - AthabascaU

### Quick Guide

# Open Educational Resources



### Additional Resources



Nicole Allen: Make Textbooks Affordable from SPARC on Vimeo.

[HTTP://GUIDES.LIBRARY.UMASS.EDU/OER](http://guides.library.umass.edu/oer)

Open Educational Resources Guide at UMass Amherst

# Copyright and Author Rights

Two basic questions from faculty

- How do I protect my copyright on the works I create?
- How do I make sure I'm not infringing on the copyright of others?

Answer: It depends.

- How do you want your work to be used? What is it that you want out of this experience?
- Do you want other educators to be able to use it?
- Do you want to commercialize it?
- Do you want attribution?

The image shows a four-panel interface for selecting a Creative Commons license. The panels are connected by arrows indicating a flow from top-left to top-right, then down to bottom-right, and finally down to bottom-left.

- License Features:** This panel allows users to choose options for their work. It includes sections for "Allow modifications of your work?" (with radio buttons for Yes, No, and "Yes, as long as others share alike"), "Allow commercial uses of your work?" (with radio buttons for Yes and No), and "License Jurisdiction:" (with a dropdown menu currently set to "International").
- Selected License:** This panel displays the chosen license, "Attribution 3.0 Unported", with the CC and BY icons. It also features a green "This is a Free Culture License!" badge.
- Have a web page?:** This panel provides a code snippet for embedding the license on a website. The code is: 

```
<a rel="license" href="http://creativecommons.org/licenses/by/3.0/deed.en_US"></a><br/>This work is licensed under a <a rel="license" href="http://creativecommons.org/licenses/by/3.0/deed.en_US">Creative Commons Attribution 3.0 Unported License</a>.
```

 Below the code, there are radio buttons for "Normal icons" (selected) and "Compact icons".
- Help others attribute you!:** This panel is optional and allows users to add machine-readable metadata. It includes input fields for "Title of work", "Attribute work to name", "Attribute work to URL", "Source work URL", and "More permissions URL". It also has a "Format of work" dropdown (set to "Other / Multiple formats") and a "License mark" dropdown (set to "HTML+RDFa").

# Licensing and Sharing Your Work

<http://creativecommons.org>



## Attribution

- You let others copy, distribute, display, and perform your copyrighted work — and derivative works based upon it — but only if they give credit the way you request.



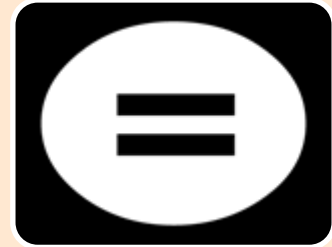
## Share Alike

- You allow others to distribute derivative works only under a license identical to the license that governs your work.



## Noncommercial

- You let others copy, distribute, display, and perform your work — and derivative works based upon it — but for noncommercial purposes only.



## No Derivative Works

- You let others copy, distribute, display, and perform only verbatim copies of your work, not derivative works based upon it.

# Open Access and Fair Use

- Check the CC license to see how the creator would like something to be used.
- Exercise your fair use rights as academic educators and researchers.



<http://copyright.columbia.edu/copyright/files/2009/10/fairusechecklist.pdf>

# Partners Providing OEI Support

## Faculty Award Letter

Hi John Q. Professor,

Congratulations! I am very pleased to let you know that you have been selected as one of the winners of an OEI grant for your proposal NANO-SCI 999RL, NCR 999RL. Your official congratulations letter from the Provost and Director of Libraries with more details will be coming through the mail in a couple of weeks.

If you'd like to get started with your course preparation during intersession, I encourage you to be in touch with your librarian liaisons, Naka Ishii or Maxine Schmidt, Mei Shih in the Center for Teaching and Faculty Development, Matt Sheridan in the Scholarly Communication Office, or one of the rest of the team copied on this email.

Thank you for your interest in this new initiative,

Marilyn

Center for  
**TEACHING & FACULTY DEVELOPMENT**

UMass Amherst **Libraries**



**Liaison Assignment**

Consultation  
with partners  
prior to award

**oit** Office of Information Technologies

Peer-Review by:  
CTFD  
IT Program faculty  
Librarians  
OIT

# OEI Grant: Faculty Proposals

- Basic course information
  - Number of students
  - Current textbook(s) and cost
- Anticipated implementation date
- Narrative (500 words)
  - Outcomes
  - Sustainability
  - Challenges
  - Assessment



Photo credit: Derek Jensen aka FireChickenTA99



# Success Stories

Carlos Gradil



- Animal Sciences 421: Fundamentals of Reproduction
- Initial Cost Savings: \$2,400

Uses video to teach 3 different classes, a far superior teaching tool than text/static images

Miliann Kang



- Women's Studies 187: Gender, Sexuality and Culture
- Initial Cost Savings: \$22,500

OERs downloaded over 3,600 times, far over initial class of 300 students

Hossein Pishro-Nik

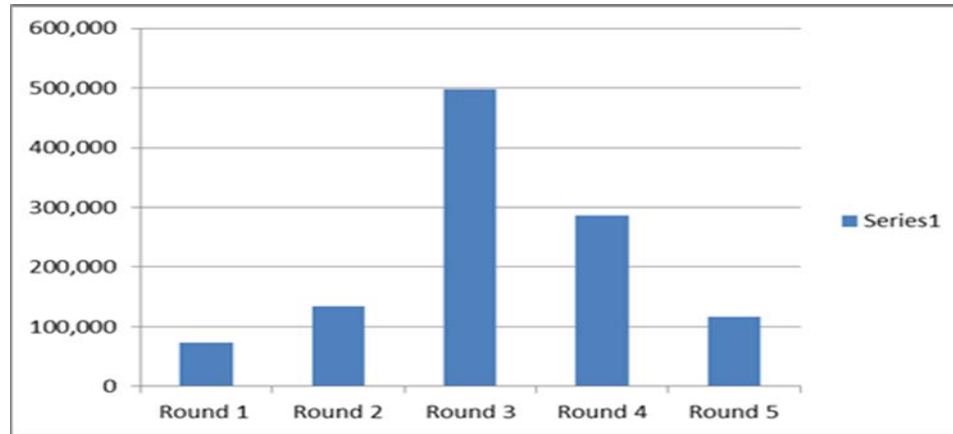


- Electrical and Computer Engineering 314: Introduction to Probability and Random Processes
- Initial Cost Savings: \$14,630

Used his book in 6 courses, representing 6 times projected savings (\$87,700); other professors are using it too



# Dollar savings to students with Open Education Initiative



- Predicted savings (# of students x expected text cost) each round 2011-1014

# Assessment

## Methods

- Surveys
- Qualitative interviews
- Enrollment numbers

## Objectives

- Was there a cost savings?
- Did students learn effectively?
- Did faculty implement the parameters of the grant?

Results can be used for improvement and marketing.



# Faculty Survey Results

On a scale of 1 to 5, 5 being the highest

- My teaching needs were met by the Open Educational Resources implemented in the course. (4.27)
- Student performance improved compared to past semesters when a traditional textbook was used. (4.36)
- Student engagement increased compared to past semesters when a traditional textbook was used. (4.09)



# Faculty Comments

- The students are much more satisfied with the new materials; they are more engaged and more prepared than I have ever seen them.
- Grades have improved drastically since using [Open Educational Resources] in my course ... the support from the Libraries was outstanding.
- My students are reading more, they are much more organized, and they are happy that they no longer need to spend so much money on materials.
- I was highly satisfied with the resources provided by the Libraries, as are my students.
- I received excellent technical support from the Libraries.




# Outcomes

- **Intended Outcomes**
  - 50 faculty + over 85 classes taught = over \$1 million saved for students
  - Course evaluations show same quality of student satisfaction, or better
  - Service points on campus are partnering for student success
- **Unexpected Outcomes**
  - Instructors using new teaching styles and flipping their classrooms
  - Increased awareness on campus and queries from instructors about OERs
  - Professors report students better prepared for class and more engaged
  - Created resources add to available open education resources for everyone
  - Relationships between service point partners are stronger
  - Student involvement and passion are stimulating change



# Lessons Learned: What Worked

- Value of mini grants and peer review
- Meet faculty where they are – create cohorts
- Capitalize on library strengths and value of existing services
- Leverage complementary strengths of the partners



# And What Didn't, or “Challenges”

- Lack of knowledge by faculty
- Time consuming to find or develop OE content
- Lack of search tool or comprehensive catalog
- May lack prepared quizzes and other content
- Students may prefer print
- Time commitment from partners
- Getting beyond the “pilot” phase

# Student Advocacy

facebook

MASSPIRG-UMass Amherst Chapter is on Facebook.

To connect with MASSPIRG-UMass Amherst Chapter, sign up for Facebook today.

Sign Up Log In

Update the Bottle

MASSPIRG-UMass Amherst Chapter

558 likes · 11 talking about this

Political Organization

Together we can make change happen.

Join us to work on campaigns to increase recycling, alleviate hunger and homelessness.

MASSPIRG-UMass Amherst Chapter

April 14 · 49

Come to the Faculty Senate meeting on Thursday at 3:30 in Hater 227 to hear MASSPIRG's affordable textbooks coordinator, Stephanie, talk about the Student PIRG's campaign efforts!

In the meantime, check out this video to see how you can get involved and help spread the Open Education Initiative.

"It is outrageous as well as regrettable how expensive textbooks can be. As a college student, there are necessary books and supplies that I can't afford. These are the things that students who perform well in class due to inability to afford textbooks don't have to experience. #textbooksdon'tbeexpensive #accessibility #myChoiX Class Fall 2015"

Like Comment Share

Recent Posts by Others on MASSPIRG-UMass Amherst Chapter

Jason Becker  
Hey, I'm signed up for 8-11hr at Craig's Race Sunday. Can I...  
4/11 · April 11 at 7:25am

Carly Korman  
G. If you haven't voted yet, \$54 elections are right now! Yes...  
4/11 · March 9 at 4:13pm

UMass Student Government Association  
G. Look at us going with the MASSPIRG-UMass Amherst Cha...  
4/10 · March 9 at 3:10pm

Ellie Hulse  
G. Can't wait to see you all at the Talking paper!  
4/11 · February 27 at 8:45am

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Political Organization

Daily News of Newburyport  
Newspaper · Arts & Marketing · Advertising Service

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## 3 UMass students, librarians want more faculty to use open source textbooks to save students money

MASSPIRG  
Massachusetts Student Public Interest Research Group

THE ALTERNATIVE  
OPEN SOURCE

By Diane Lederman | [lederman@repub.com](mailto:lederman@repub.com)  
Follow on Twitter  
on February 25, 2015 at 12:01 PM, updated February 25, 2015 at 5:21 PM

AMHERST — About 65 percent of college students don't buy textbooks because of cost, said Matt Magalhães, the affordable textbook campaign coordinator for MassPirg at the University of Massachusetts.

Textbooks can cost students \$1,200 a year.

He and other students and librarians at the university are hoping that students will pressure their professors to adopt open source textbooks.

MassPirg organized a press conference Wednesday to highlight a new report issued Tuesday by student public interest groups urging institutions to use open source textbooks in their classrooms and report that students would save more than \$1 billion nationally a year.

Marilyn Billings, scholarly communication and special initiatives librarian at UMass, and Jay Schaefer, director of libraries, both spoke at the news conference, also urging more faculty to

UMASS-AMHERST HEADLINES

North Amherst apartment complexes banning guest parking, warning residents in anticipation of Blarney Blowout Saturday

Medical examiner determines cause of Amherst woman's death

Amherst Town Manager John Musante responds to lawsuit filed against town police

14 police agencies to aid Amherst police Saturday, video cameras to monitor 'high liability areas'

UMass basketball, former football coaches are top-paid Massachusetts employees in 2014

POPULAR PHOTO GALLERIES

International Biogarden in Springfield

Pets available for adoption in Western Mass. shelters

Girl Scout's Fork It Over event in Worcester

POPULAR PHOTO GALLERY

Active Discussions

- Those who boycotted Netanyahu's speech should be applauded: Letter to the Editor (224 comments)
- Animal rights group: 'Every animal deserves to live just as we want to live': Reader viewpoint (41 comments)
- A challenge for Hillary Clinton? E-mail flap just the start: Editorial (33 comments)
- What's in Hillary Clinton's secret emails? House committee issues subpoenas to find out (114 comments)
- Elizabeth Warren chooses politics over stardom: Viewpoint (197 comments)

See more comments

Most Read

MASS LIVE Massachusetts state

<http://masspirgstudents.org/campaigns/ma/make-textbooks-affordable>



# Resources

- Babson Survey Research Group Report 2014  
<http://www.onlinelearningsurvey.com/oer.html>
- Horizon Report 2015  
<http://www.nmc.org/publication/nmc-horizon-report-2015-higher-education-edition/>
- Open Textbooks: The Billion-Dollar Solution  
<http://studentpirgs.org/news/sp/report-open-textbooks-billion-dollar-solution>
- UMass Amherst's OER LibGuide  
<http://guides.library.umass.edu/oer>