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

Marilyn Billings
Scholarly Communication Librarian
University of Massachusetts Amherst
mbillings@library.umass.edu
@Billings.Marilyn
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 Ed

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

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

The New York Times

Putting a Dent in College Costs With Open-Source Textbooks

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 is often considered the cost of tuition, the cost can weigh heavily on students with tight budgets. The average cost for books and supplies for the current academic year is between $1,700 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 taking the required test for a class, and fail 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 preferences. There’s a movement to make faculty-written, peer-reviewed open-source textbooks available to students and teachers, which could add to the cost savings.
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
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?
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.

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 intervention, I encourage you to be in touch with your librarian liaisons, Nola Ishii or Maxine Schmidt, Mei Shi in the Center for Teaching and Faculty Development, Matt Sheildan 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

UMass Amherst Libraries

Liaison Assignment

Consultation with partners prior to award

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

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

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

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

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

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 2011-2014
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
http://masspirgstudents.org/campaigns/ma/make-textbooks-affordable
Resources

• Babson Survey Research Group Report 2014
  http://www.onlinelearningsurvey.com/oer.html

• Horizon Report 2015

• Open Textbooks: The Billion-Dollar Solution

• UMass Amherst’s OER LibGuide
  http://guides.library.umass.edu/oer