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Libraries Leading the Way on the Textbook Problem

Marilyn S Billings, University of Massachusetts Amherst
Charlotte Roh, University of Massachusetts - Amherst
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Available at: https://works.bepress.com/marilyn_billings/63/
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Charlotte Roh - Scholarly Communications Resident Librarian
William Cross - Director of Copyright & Digital Scholarship
Brendan O’Connell - Libraries Fellow

go.ncsu.edu/libtextbook
Outline

Libraries Leading the Way at UMass-Amherst

The Open Education Initiative

Libraries Leading the Way at NCSU

The NCSU Alt-Textbook Program

Lessons Learned
THE OPEN EDUCATION INITIATIVE AT UMASS AMHERST

Seeking Alternatives to High-Cost Textbooks

Marilyn Billings and Charlotte Roh
Charleston Conference 2014
Based on Marilyn Billings’ OER Summit Presentation (October 2013)
Why Open Education?

“I stopped buying textbooks my second semester here.”
- Marieme T., UMass Amherst Class of 2014
Seeking Solutions

• The Provost’s Office and the University Libraries of the University of Massachusetts Amherst launched the Open Education Initiative (OEI) in the Spring of 2011.

• The OEI is a faculty incentive program (a small grant) that encourages:
  – the creation of new teaching materials,
  – the use of library subscription materials,
  – or the use of existing open (free) information resources to support our students’ learning.
OEI Workshops / Consultations

▪ Workshops reviewing available OERs and library-licensed resources

▪ Individual consulting sessions for faculty with Scholarly Communication and subject liaison librarians, IT staff and others as needed

▪ Topics covered: library databases, OER availability, copyright and licensing issues, accessibility concerns, creating a sustainable curriculum with OERs, managing resources in the LMS, assistance with creation of new content
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

The current application form can be seen at http://goo.gl/forms/NRH9IQTF2L
# Success Stories

<table>
<thead>
<tr>
<th>Faculty</th>
<th>School/College</th>
<th>Course</th>
<th>Proposed Savings Per Student</th>
<th>Proposed Course Savings</th>
<th>Actual Savings as of Spring 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miliann Kang</td>
<td>College of Humanities &amp; Fine Arts</td>
<td>Women's Studies 187: Gender, Sexuality and Culture</td>
<td>$75</td>
<td>$22,500</td>
<td>$45,450</td>
</tr>
<tr>
<td>Charlie Schweik</td>
<td>College of Natural Sciences</td>
<td>Natural Resource Conservation 592: Introduction to Geographic Information Systems</td>
<td>$50</td>
<td>$1,500</td>
<td>$12,400</td>
</tr>
<tr>
<td>Pam Trafford</td>
<td>Isenberg School of Management</td>
<td>School of Management 797: Financial Reporting for Decision Making</td>
<td>$200</td>
<td>$8,000</td>
<td>$13,200</td>
</tr>
<tr>
<td>Patricia Bianconi</td>
<td>College of Natural Sciences</td>
<td>Chemistry 342: Inorganic Chemistry Laboratory</td>
<td>$235</td>
<td>$10,575</td>
<td>$34,075</td>
</tr>
<tr>
<td>Daiheng Ni</td>
<td>College of Engineering</td>
<td>Civil &amp; Environmental Engineering 520: Traffic Flow Theory</td>
<td>$150</td>
<td>$3,150</td>
<td>$6,000</td>
</tr>
<tr>
<td>Nicholas Reich</td>
<td>School of Public Health and Health Sciences</td>
<td>Public Health 697: Introduction to Statistical Computing and Data Visualization</td>
<td>$130</td>
<td>$3,900</td>
<td>$2,730</td>
</tr>
<tr>
<td>Barbara Roche</td>
<td>College of Social and Behavioral Sciences</td>
<td>Journalism 397E: Entrepreneurial Journalism</td>
<td>$100</td>
<td>$1,500</td>
<td>$1,900</td>
</tr>
<tr>
<td>Patricia Gorman</td>
<td>Honors College</td>
<td>Honors 390W: Irish Writers and Cultural Contexts</td>
<td>$65</td>
<td>$1,625</td>
<td>$2,145</td>
</tr>
</tbody>
</table>
Professor Hossein Pishro-Nik

**Course:** Electrical and Computer Engineering 314: Introduction to Probability and Random Processes

**Cost of Regular Textbook:** $143

**Proposed Cost Savings:** $14,630

**Created:** Introduction to Probability

**Semesters Taught:** 8 as of Spring 2014

**Total Enrollment:** 468

**Total Savings:** $43,329+ as it has been used in other courses as well
Student Advocacy

- Students spend an average of $1,200 on textbooks and supplies a year.

- This is 79.8% of a student’s summer earnings if working full-time at Massachusetts minimum wage.

- 65% of students surveyed have decided not to buy a textbook due to its cost.

http://masspirgstudents.org/campaigns/ma/make-textbooks-affordable
Facility 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 OER grant for your proposal NANO-SCI 9999RL NER 9999RL. Your official notification 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 intercession, 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 listed on this email.

Thank you for your interest in this new initiative,

Marilyn
What are Open Educational Resources (OER)?

Open Educational Resources are educational materials and resources offered freely and openly for anyone to use and under some licenses to re-mix, improve and redistribute. They include:

- Textbooks
- Course materials
- Teaching and learning videos
- Image and video resources
- Open software
- Tutorials
- Online courses
- Podcasts
- Open peer-Reviewed journals
- Podcasts
- Brochures
- Presentations
- Webinars
- Library guides

These resources can be used in any manner the user chooses without restriction.
The Textbook Problem @ NCSU
From Caring to Responding to Leading
Revised View from the Library

- Libraries increase learning technologies and curriculum support role
- Education, outreach, and expertise
  - Advocacy – Libraries’ developed expertise; offer consultations
  - Site on Alternative Models – Aim was to educate, and possibly persuade
  - White paper on alternative textbooks
- Resource for faculty seeking alternatives
Course Books Efforts

- Libraries’ policy is to purchase one copy of every required textbook.
  - % of titles circulating up each semester – word of mouth
  - Partnership with bookstore

- Helped, but not changing the fundamental system.
Starting to Lead

- Market alternatives
- Licensing/hosting Open Physics text
- Hosting faculty-authored content
- PoD - Bookstore/Espresso Machine
- New market models - FlatWorld and OpenStax

- Changing the market and the model through incentives
Alt-Textbook Project

The NCSU Libraries invites faculty members to apply for a competitive grant to adopt, adapt, or create free or low-cost alternatives to expensive textbooks in the classroom for the Spring 2015 and Fall 2015 semesters.

How to Apply

All current faculty members of NC State University teaching courses in Spring or Fall 2015 are eligible to apply. Please see the Call for Proposals for application instructions. All applications are due on October 20, 2014.

Information Sessions

Interested faculty are highly encouraged to attend an upcoming information session to learn more about the project:

September 5, 2014, 10-11:30am, Office of Faculty Development conference room (405 Clark Hall). Register Here

September 10, 2014, 10-11:30am, D.H. Hill Library Assembly Room, 2nd floor East Wing. Register Here

Open Textbooks and NCSU Libraries
800% increase in textbook costs in past 30 years

$1,200 spent per student every year

70% of students could not afford a required text
Your materials to support your teaching
Open Educational Resources

Taking a Bite Out of Textbook Costs

During the 2013-2014 academic year, faculty members at UMass Amherst were awarded grants of $1000 each to launch a textbook alternatives program in their courses. The purpose of the grants is to allow professors the freedom to create course materials that will be considered open to students at minimal cost or even free.

Present James Harris and Director of Libraries Jay Schlarb funded the grants after faculty and staff members fished together to create a solution for the cost of open access resources.

Professor of Environmental Conservation Charles Schellkhas has worked to develop such a system for a while, and took this opportunity to build on his interest in the importance of sustainable resources. Professor Schellkhas has taken his own work and published it on open access forms.

Students can now view the course pack for free online or receive a printed copy for just $1.50.

Chris Hees, a student of Professor Schellkhas, spoke the initiative in the same way as the faculty involved. "I didn't have to spend money on expensive textbooks or deal with the stress of finding materials online to keep up with the classes."

"I feel good about that," says Hees. "This $10,000 program has served as an alternative to what the students might have spent on textbook materials."
The Impact of Open Textbooks on Secondary Science Learning Outcomes

T. Jared Robinson¹, Lane Fischer¹, David Wiley¹, and John Hilton III¹

Given the increasing costs associated with commercial textbooks and decreasing financial support of public schools, it is important to better understand the impacts of open educational resources on student outcomes. The purpose of this quantitative study is to analyze whether the adoption of open science textbooks significantly affects science learning outcomes for secondary students in earth systems, chemistry, and physics.

This study uses a quantitative quasi-experimental design with propensity score matched groups and multiple regression to examine whether student learning was influenced by the adoption of open textbooks instead of traditional publisher-produced textbooks. Students who used open textbooks scored .65 points higher on end-of-year state standardized science tests than students using traditional textbooks when controlling for the effects of 10 student and teacher covariates. Further analysis revealed statistically significant positive gains for students using the open chemistry textbooks, with no differences for earth systems of physics courses. Although the effect size of the gains were consistently smaller across all textbooks, the finding that open textbooks can be as effective or even slightly more effective than their traditional counterparts has important considerations in terms of school district policy in a climate of finite educational funding.

Keywords: open educational resources; open textbooks; science education; secondary education; propensity score matching

Introduction

For better or for worse, the textbook is the single most predominant curriculum delivery vehicle in schools in the United States (Lehrer, 2011). The textbook’s role, however, extends beyond just the delivery of knowledge. The textbook is a tool for students to learn. The William and Flora Hewlett Foundation, an early leader of the OER movement, defines open educational resources as “teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license or other arrangement that permits their free use and re-purposing by others.”
Do Something

Textbooks Can’t!

“Students in Immersion Theater”
© North Carolina State University
Our team

Brendan O’Connell
Library Fellow
Collection Management
User Experience

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Director
Copyright & Digital Scholarship Center

Kim Duckett
Associate Head
Research & Information Services

Sydney Thompson
Associate Head
Access & Delivery Services

Jason Casden
Acting Associate Head
Digital Library Initiatives

Greg Raschke
Associate Director for Collections & Scholarly Communication
Internal Outreach & Promotion

LIBRARIAN ROLE

You can:
- Help us identify faculty applicants
- Point faculty to tools
- Connect them with librarians

You’re not:
- Their TA
Faculty Outreach & Promotion

NCSU LIBRARIES

- All
- Articles
- Books & Media
- Our Website

Search books, articles, library website...

More Research Tools: Databases | Journal Titles | Citation Builder

Technology
- Create Digital Media
- Makerspace

Studying
- Reserve a Room
- GroupFinder

Courses
- Course Tools
- Course Reserves
- Textbooks

Libraries' grants available for faculty to create free and low-cost open textbook alternatives
Peer Review Process

• Bring all stakeholders to the table:
  • Students
  • Faculty
  • Campus partners
  • Librarians

*Peer Review, Flickr user ajc1*
Applications - Identifying the Problem

“Because data science is an emerging field, and because the topics span multiple disciplines, there was no single textbook we could adopt.”

“Not only are the textbooks expensive, but the currency and configurability of the resources are limited by market-driven edition updates and copyright restrictions.”

“I plan to use the library-compiled guide to Open Educational Resources to find appropriate chapters for many of the basic topics.”
“The classic form of organic lab instruction is to provide students with a list of experiments. My students developed several videos highlighting individual useful techniques used in our labs. The creation of a “book” to house these videos and organize them in a logical way is the natural next step in this project.

“We propose to create prototype crowdsourced educational resource documents... that formalize the tools, processes, and products of academic crowdsourcing. Graduate students Think and Do to achieve the goals of digitally transformed education.”
Next Steps at NC State

- Awards
- Leverage librarians
  - More funding!
- Assessment

"NEXT", Flickr user functoruser
Assessment

**Methods Used**
- 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.
Lessons Learned: What Worked

✓ Value of mini grants

✓ Meet faculty where they are

✓ Capitalize on your strengths

✓ Articulate value of existing library services
Best Practices

- Mix and match content from multiple sources to best suit your learning objectives
- For YouTube Videos use the Mashup tool
- Embed non-YouTube videos when possible
- For e-books with a detailed table of contents, provide web links to specific book sections
- Add short PDF documents as Files to open in the content frame
- Add long documents as Web Links and set to Open in New Window
Next Steps for Libraries

- Assessment
- Sustaining progress over time
- Building a national Libraries & OER movement
- See you at OpenEd 14!
Gather and leverage success stories for faculty discovering OERs

http://opencontent.org/blog/archives/3619
Your Questions
Thank You!

Marilyn Billings - Scholarly Communication & Special Initiatives Librarian
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go.ncsu.edu/libtextbook
OER for Online instructors: Sample 1

<table>
<thead>
<tr>
<th>Table of Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy 120 Syllabus</td>
</tr>
<tr>
<td>Basic Concepts of Logic Unit 1 Overview</td>
</tr>
<tr>
<td>Welcome to Logic HD - YouTube.mp4</td>
</tr>
<tr>
<td>Exam on predicate logic, translations and inductions</td>
</tr>
</tbody>
</table>

**Philosophy 120 Syllabus**

**Basic Concepts of Logic Unit 1 Overview**

**Welcome to Logic HD - YouTube.mp4**

Duration: 1:09
User: opencourselib - Added: 9/6/11
YouTube URL: [http://www.youtube.com/watch?v=9P0HvglWyo](http://www.youtube.com/watch?v=9P0HvglWyo)

**Exam on predicate logic, translations and inductions**

Please complete all questions.
For YouTube Videos use the Mashup tool
Connexions: http://cnx.org
<Embed> non-YouTube videos

The mysterious workings of the adolescent brain

SARAH-JAYNE BLAKEMORE
THE MYSTERIOUS WORKINGS OF THE ADOLESCENT BRAIN
TED
Mix and match to meet teaching objectives

Philosophy (Bookshelf)

From Project Gutenberg, the first producer of free ebooks.

*Philosophy* is the discipline concerned with questions of importance to us which we cannot answer (ethics), what sorts of things exist and what are their essential natures (metaphysics), what counts principles of reasoning (logic). The word itself is of Ancient Greek origin: φιλοσοφία (philosophia).

Philosophical works in Project Gutenberg’s catalog are listed below in roughly chronological order:

Contents [hide]

1. General introductions
2. History of philosophy
3. The meaning of life
4. Metaphysics (the nature of reality)
5. Epistemology (theory of knowledge) and philosophy of science
6. Philosophy of mind and language
7. **Logic and reasoning**
8. Aesthetics and philosophy of art
9. Ethics and moral philosophy
10. Political philosophy
11. Philosophy of education
12. Philosophy of religion
13. Philosophy of history
14. Non-western philosophical traditions
15. Lives and work of individual philosophers
CHAPTER I

PROPOSITIONS GENERALLY

§ 1.

Introductory.

Technical meaning of "some"  8
’Proposition’  
’Normal form’ of a Proposition  
’Subject’, ‘Predicate’, and ‘Terms’  9

§ 2.

Normal form of a Proposition.

Its four parts:—

(1) ‘Sign of Quantity’  
(2) Name of Subject  
(3) ‘Copula’  
(4) Name of Predicate  

§ 3.

Various kinds of Propositions.

Three kinds of Propositions:—

(1) Begins with “Some”, Called a ‘Particular’ Proposition; also a Proposition ‘in I’  10
(2) Begins with “No”, Called a ‘Universal Negative’ Proposition; also a Proposition ‘in E’  
(3) Begins with “All”, Called a ‘Universal Affirmative’ Proposition; also a Proposition ‘in A’  

A Proposition, whose Subject is an Individual, is to be regarded as Universal  

Two kinds of Propositions, ‘Propositions of Existence’, and ‘Propositions of Relation’  11

CHAPTER II

PROPOSITIONS OF EXISTENCE

’Proposition of Existence’  11
CHAPTER I.

PROPOSITIONS GENERALLY.

§ 1.

Introductory.

Note that the word “some” is to be regarded, henceforward, as meaning “one or more.”

The word ‘Proposition,’ as used in ordinary conversation, may be applied to any word, or phrase, which conveys any information whatever.

[Thus the words “yes” and “no” are Propositions in the ordinary sense of the word; and so are the phrases “you owe me five farthings” and “I don’t!”]

Such words as “oh!” or “never!”, and such phrases as “fetch me that book!” “which book do you mean?” do not seem, at first sight, to convey any information; but they can easily be turned into equivalent forms which do so, viz. “I am surprised,” “I will never consent to it,” “I order you to fetch me that book,” “I want to know which book you mean.”]

But a ‘Proposition,’ as used in this First Part of “Symbolic Logic,” has a peculiar form, which may be called its ‘Normal form’; and if any Proposition, which we wish to use in an argument, is not in normal form, we must reduce it to such a form, before we can use it.

A ‘Proposition,’ when in normal form, asserts, as to certain two Classes, which are called its ‘Subject’ and ‘Predicate,’ either

(1) that some Members of its Subject are Members of its Predicate;

or (2) that no Members of its Subject are Members of its Predicate;

or (3) that all Members of its Subject are Members of its Predicate.
Use institution databases when available
Psychologists in Word and Image (Bradford Books) Paperback
by Nicholas Wade (Author)

Be the first to review this item

We are all fascinated by physiognomy, intrigued by the appearance of the people we admire. These perceptual portraits of more than 100 thinkers who have fashioned our understanding of mind and behavior provide an alternative view of the history of psychology that is both pleasing and puzzling.
Psychologists in Word and Image
Nicholas Wade

We are all fascinated by physiognomy, intrigued by the appearance of the people we admire. These perceptual portraits of more than 100 thinkers who have fashioned our understanding of mind and behavior provide an alternative view of the history of psychology that is both pleasing and puzzling.

Francis Bacon, René Descartes, Pierre Broca, Sigmund Freud, Carl Jung, Ruth Benedict, Allen Newell, David Marr and scores of others whose ideas have made psychology an empirical discipline emerge from motifs specifically drawn by the author or derived from a figure or text in one of the portrayed person's books, or an apparatus he or she invented. The ingenious treatment of portrait/motifs often challenges the viewer to discern the faces embedded in them and always tells us more than how these students of mind looked: these portraits reflect their thoughts and lead us to forage further into their lives and legacies.

The portraits and motifs have been manipulated in a variety of ways, using graphic and photographic procedures. They are arranged in order of birth date in a format of one page of descriptive text facing a full-page perceptual portrait. The text presents a brief synopsis of the person portrayed, that person's ideas, and the source of both the portrait and the motif. Interrelations between people are stressed, bringing to light common threads that run through the work of particular groups and adding yet another level to this unique gallery of psychology's pioneers.

Table of Contents

Preface
Introduction
1 Francis Bacon: Inductive Scientist
2 Thomas Hobbes: Leviathan
3 James Gregory: Observing the Mind
4 John Locke: Empiricism
5 John Stuart Mill: The Scientist
6 John Dewey: The Educator
7 Charles Darwin: Evolution
87 Jean Piaget: Genetic Epistemologist
88 Lev Semionovich Vygotsky: Vygotsky's Blocks
89 Gordon Willard Allport: Portrait
90 Alexander Romanovich Luria: Neuropsychologist
91 Carl Ransom Rogers: Non-directive Therapist
92 Jean Bruner: Schematic Families

256 pp.
104 illus.
Jean Piaget

If this item does not open automatically you can open Jean Piaget here

Genetic Epistemologist

Jean Piaget (1896–1980) isolated specific stages of cognitive development through which children pass and which could be assessed by particular tasks. That is, he argued that intelligence progresses in discrete steps, which he called the sensori-motor and preoperational stages, followed by the stages of concrete and formal operations. This was contrary to Binet’s view that intelligence increased steadily with age. The sensori-motor stage applies from birth to about two years of age and is mainly concerned with relating motor responses to patterns of stimulation. Cognitive concepts emerge in the preoperational stage (from two to around seven years), but there remain tasks, like conservation, that are not solved until the concrete operational stage (from about seven to eleven years). “Until about 11, to think is to speak—either with the mouth or with the little voice situated in the head—and speaking consists in acting on things themselves by means of words, the words sharing the nature of the things named as well as of the voice producing them.” Abstract reasoning develops in the formal operational stage, beyond eleven years of age. Throughout the stages of cognitive development processes of assimilation and accommodation interact. Recognizable features of the world are assimilated into the cognitive framework, whereas novel ones require learning to accommodate them.

Piaget was born in Neuchâtel. He developed an early interest in natural history and received his doctorate in that subject from his home university. His introduction to child psychology was under the guidance of Simon in Paris, where he investigated reasoning tests in children. Piaget did not simply note whether children performed the test items correctly or not, he asked them why they gave the answers they did. One outcome was the appreciation that tasks involving parts and wholes were particularly difficult for children under twelve. “First of all it became clear to me that the theory of the relations between the whole and the part can be studied experimentally through
ABSTRACT

THE BEHAVIORAL EFFECTS OF INCREASED PHYSICAL ACTIVITY ON PRESCHOOLERS AT RISK FOR ATTENTION DEFICIT HYPERACTIVITY DISORDER

MAY 2011

JASMIN L. ROBERTS, B.A., OBERLIN COLLEGE
M.S., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Matthew C. Davidson

Physical activity (PA) has many health benefits, both physical and psychological. PA has been linked to improved cognitive functioning, superior overall health, and enhanced emotional well-being in populations ranging from school-age children to older adults. There has been less research, however, examining the benefits of PA in atypical preschool populations.

The present study examined the efficacy of a PA intervention in preschool-aged children at risk for attention deficit hyperactivity disorder (ADHD). ADHD symptomatology, response inhibition, and physical activity were measured at three time points over a 6-month period. Results provide support for the efficacy of PA as an alleviative tool in preschoolers with ADHD. This research is some of the first to use objective measures to examine PA as viable intervention in atypical preschool populations.
Copyright and Author Rights

Two basic questions from faculty

1. How do I protect my copyright on the works I create?
2. How do I make sure I’m not infringing on the copyright of others?
How do I protect my copyright?

- 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?
How do I make sure I’m not infringing on copyright?

- 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.