Making a difference in students' lives through use of open educational resources

Professional Development Webinar for Faculty
Consortium for Healthcare Education Online (CHEO) Initiative
April 2, 2015

Delivered through Western Interstate Commission for Higher Education (WICHE)

WICHE

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Mary Burgess Bio

Mary Burgess is the director, BCcampus. Burgess' portfolio includes the BC Open Textbook Project and other Open Educational Resource initiatives, as well as the professional learning offerings and educational communities of practice support delivered by BCcampus.

Prior to her work at BCcampus, Burgess was the director of the Centre for Teaching and Educational Technologies at Royal Roads University where she started the University's first OER project. Burgess has also worked as an instructional designer at several post secondary institutions.

Burgess has a BA In Liberal Studies from the University of Victoria, and an MA in Educational Technology from the University of British Columbia.

BCcampus
connect. collaborate. innovate.

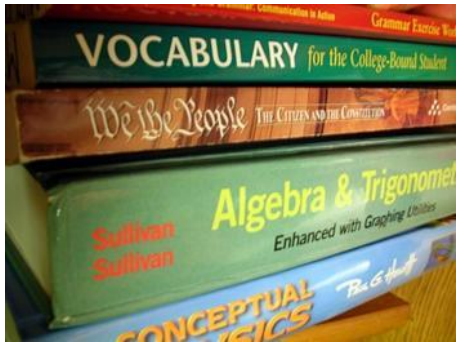
Open Textbooks: An Academic Focus

Mary Burgess, a/ Executive Director
BCcampus

Agenda

- What is an Open (a brief refresher)?
- BC Open Textbook Project
- Open Textbook Review Process

OPEN EDUCATIONAL RESOURCES



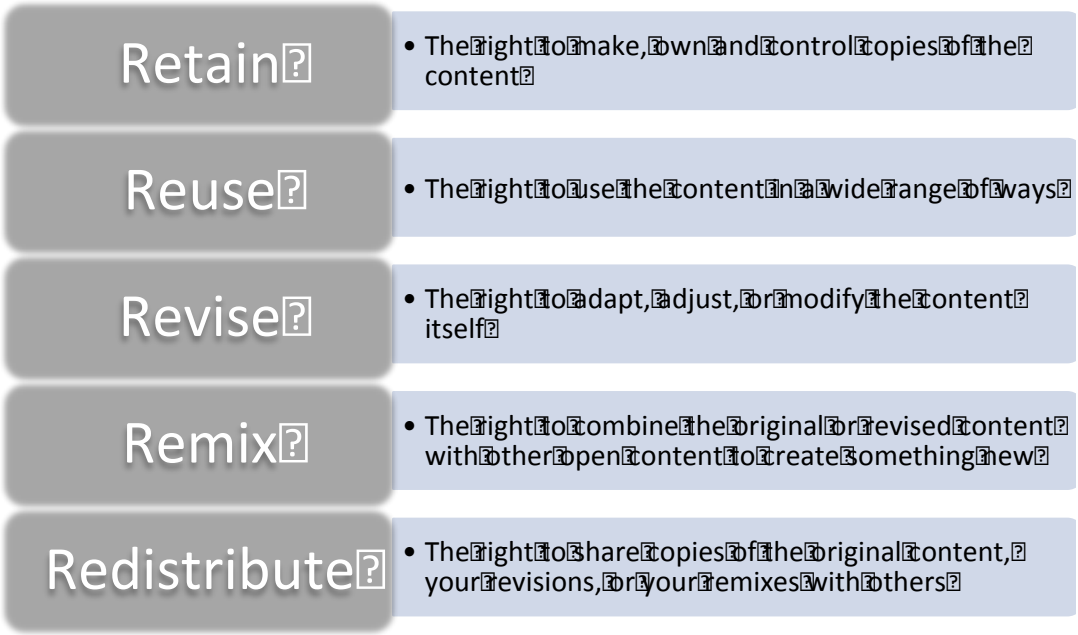
Books image source https://www.flickr.com/photos/peskylibrary/352846113/ CC-BY-NC-SA

What is Open?

THE WILLIAM AND FLORA HEWLETT FOUNDATION

"OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their ***free use and re-purposing by others***."

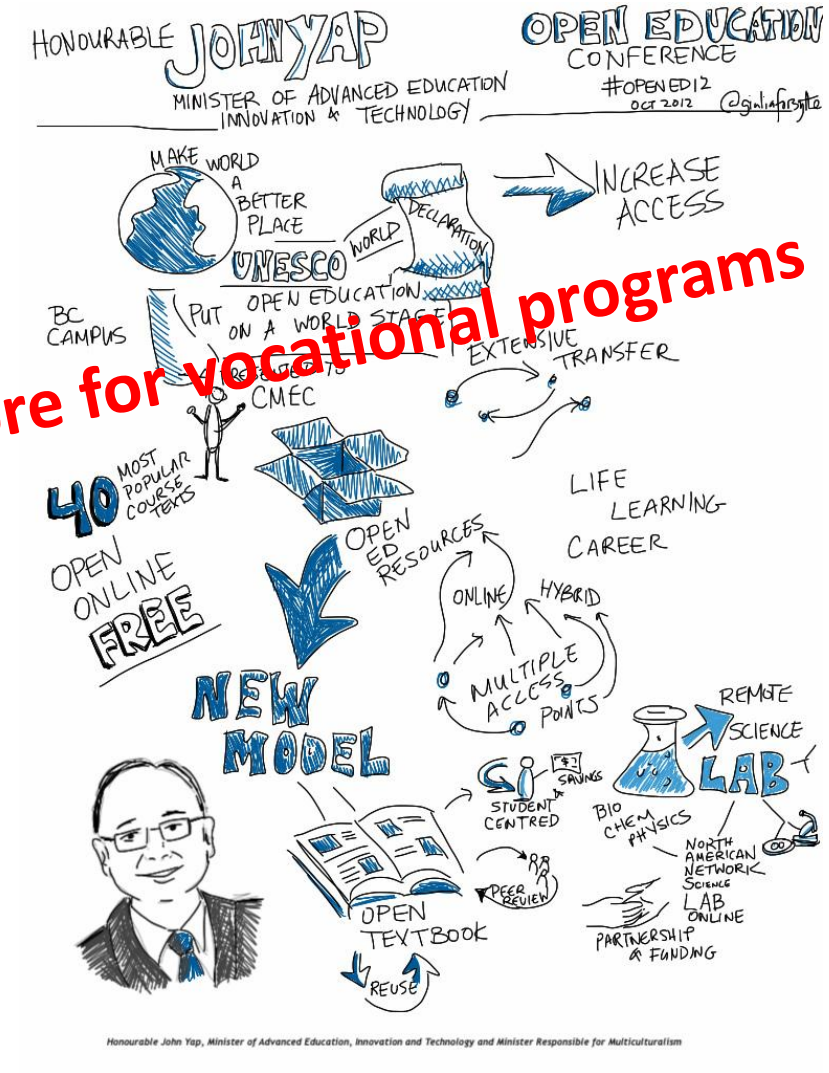
http://www.hewlett.org/programs/education-program/open-educational-resources




SO EXACTLY HOW OFTEN ARE WE GOING TO USE OUR $400 TEXTBOOK?
WE JUST NEED IT FOR THAT ONE PARAGRAPH ON PAGE 12.
SLUGBOOKS.com

The BC Open Textbook Project

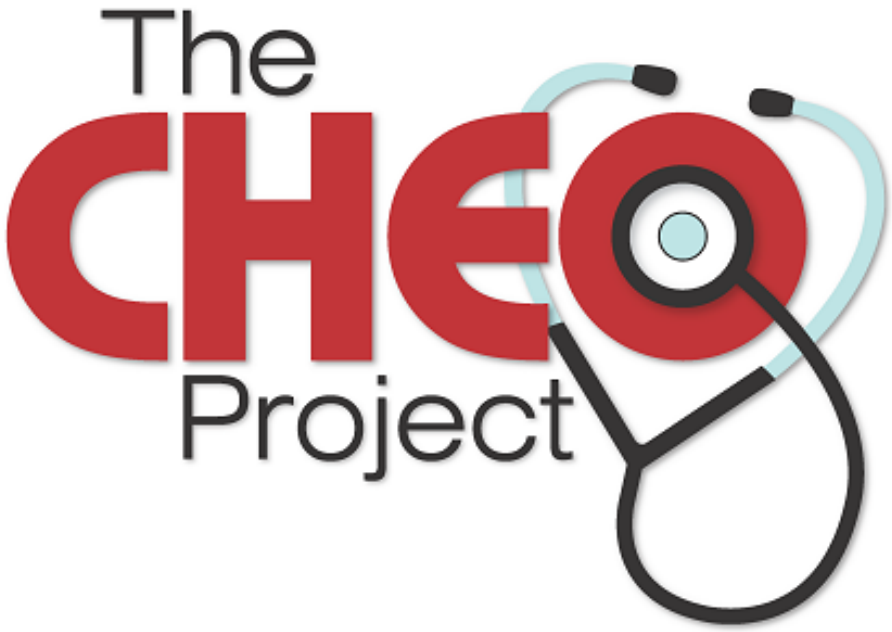
60 Texts + ancillaries



+20 more for vocational programs

Image from Bccampus.ca


NANSLO
NORTH AMERICAN NETWORK
OF SCIENCE LABS ONLINE


The
CHEO
Project

Project Phases

Phase One – Harvest and Review

Phase Two – Adapt

Phase Three - Create

Phase One: Harvest and Review

Image source: http://en.wikipedia.org/wiki/Harvest CC-BY

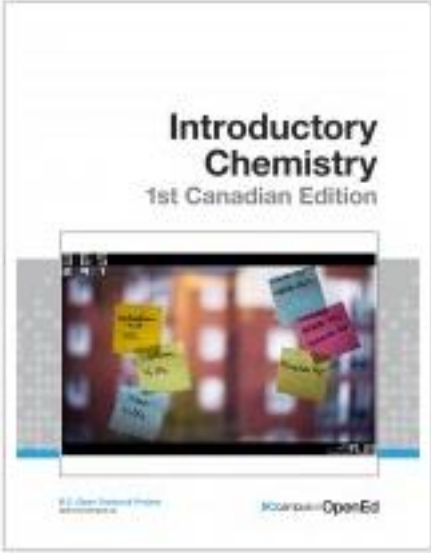
openstax CNX™

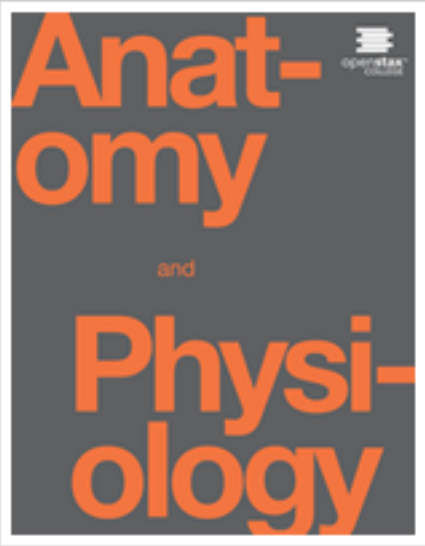
collegeopentextbooks.org

saylor.org FREE EDUCATION

MERLOT
Multimedia Educational Resource for Learning and Online Teaching

Reviewed Texts





Review Criteria

BCcampus Open Textbook Review Criteria	
Comprehensiveness	Content Accuracy
Relevance/Longevity	Clarity
Consistency	Modularity
Organization/Structure/Flow	Interface
Grammatical Errors	Cultural Relevance

Physics
Philosophy
Psychology
Sociology

Reviews for 'Introduction to Sociology'

Number of reviews: 5

Average Rating: 4.28 out of 5

▼ **1. Reviewed by:** Murray Shaw

- **Institution:** Douglas College
- **Title/Position:** Sociology Instructor
- **Overall Rating:** 4.6 out of 5
- **Date:** Aug 5, 2013
- **License:** CC BY-ND

Comprehensiveness
Content Accuracy
Relevance
Clarity
Consistency
Modularity
Organization
Interface
Grammar
Cultural Relevance
Final Thoughts

Q: The text covers all areas and ideas of the subject appropriately and provides an effective index and/or glossary

The coverage of topics in this text is comprehensive. In a 1-semester [4 month] course, out of the 21 chapters, I would use 14 full chapters, and incorporate parts of other chapters. The glossaries and references listed by section at the end of each chapter are useful, and the multiple choice and short answer questions are a helpful study aid for students. One issue is that the index at the end of the text could be lengthier and more detailed.

Comprehensiveness Rating: 4 out of 5

▶ **2. Reviewed by:** Rita Isola, Michele Scmidt
▶ **3. Reviewed by:** Francis Adu-Febiri
▶ **4. Reviewed by:** Charles Quist-Adade
▼ **5. Reviewed by:** Neil Guppy

- **Institution:** University of British Columbia
- **Title/Position:** Professor
- **Overall Rating:** 3.9 out of 5
- **Date:** Sep 4, 2013
- **License:** CC BY-ND

Results

of books in collection = 81

# of reviews = 85 reviews of 41 texts

# of adoptions = 143 +

# of participating institutions = 14 + but none at SFU that we are aware of.

$ Known student savings = 706,221 + $

Early Adopter and Adapter: Dr. Takashi Sato Physics Professor – Kwantlen Polytechnic University

Students: 240
Previous Textbook: $187
OpenStax Textbook: $0

Student savings: **$60,000**

1 course
1 institution
4 terms

Thanks!

http://open.bccampus.ca

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@maryeburgess

Kate Lormand Bio

Kate Lormand is the CHEO curriculum lead, biology, and an adjunct faculty for CCConline, Great Falls College Montana State University, and Missouri Valley College. She has over 20 years of experience teaching at the community college level in biology, anatomy and physiology, genetics, and botany for both majors and non-majors. Her experience includes both traditional face-to-face and online teaching. Additionally, Lormand worked on the development of an online biology course through the Monterey Institute, writing an online text and creating the activities and learning objectives for these chapters.

Evaluating Open Source Science Texts

Kate Lormand
Adjunct Faculty
CCConline
Great Falls College Montana State University
Missouri Valley College
NANSLO Biology Curriculum Expert

Importance of Open Source Textbooks

- Cost
- Availability
- Peer Reviewed
- Customizable
- Trends of the future?

Why do it?

- "Peer review of open textbooks and other learning content provides the quality assurance necessary for making knowledge sharing viable."

- "Experts contribute to Peer Reviews by 1) selecting appropriate content for review, 2) evaluating the content based on standard criteria, and 3) sharing their feedback."

Quotes from
http://collegeopentextbooks.ning.com/page/review-2

Process of the Review

- Reviewers are asked to participate.
- Given a selection to review.
- Provided with a series of questions to respond to.
- Time frame to complete the review.

Review Questions

Comprehensiveness

- The text covers all areas and ideas of the subject appropriately and provides an effective index and/or glossary.
  - Sample comments -- The text appears to be very comprehensive and matches the content of other majors level biology textbooks such as the Campbell Biology text.
  - The glossary is comprehensive, Useful listing of key words with definitions at the end of each chapter, it would be good to have key terms at the beginning of a chapter as well -no definitions just a list of terms to keep in mind as they read.

Content Accuracy

- Content, including diagrams and other supplementary material, is accurate, error-free and unbiased.
  - Sample comments- these tend to be very specific to errors each evaluator finds and are often based on each evaluators area of expertise.
  - Biases needs to be kept in mind as different authors have different approaches to topics based on their education and location.

Relevance/Longevity

- Content is up-to-date, but not in a way that will quickly make the text obsolete within a short period of time. The text is written and/or arranged in such a way that necessary updates will be relatively easy and straightforward to implement.
  - Sample comment-We have a much better understanding of the Archea and their origins than is presented in Chapter 1. The introduction of domains and the division of kingdoms is a great way to introduce students to the way science changes as we get more information.

Clarity

- The text is written in lucid, accessible prose, and provides adequate context for any jargon/technical terminology used.
  - Sample comments -- some of the terminology is too simplistic for a major's level textbook.
  - The text does a good job of explaining concepts but sometimes the terms are introduced prior to the explanation.

Consistency

- The text is internally consistent in terms of terminology and framework.
  - Sample Comment – The text seems to be consistent in writing style and terminology.
  - There are several instances where a term is used prior to being defined.

Modularity

- The text is easily and readily divisible into smaller reading sections that can be assigned at different points within the course (i.e., enormous blocks of text without subheadings should be avoided). The text should not be overly self-referential, and should be easily reorganized and realigned with various subunits of a course without presenting much disruption to the reader.
  - Sample Comment -- It seems well organized and can be divided up into "chunk able" sections for the reader.
  - The chapters build on one another but can used independently of one another.

Organization

- Organization/Structure/Flow – The topics in the text are presented in a logical, clear fashion.
  - Sample comments tend to focus on a comparison of the open source text to the organization of some of the more commonly used textbooks.

Grammatical Errors

- Check to see that the text contains no grammatical errors
  - Reviewer focuses on looking over the text for any obvious grammatical errors.

Interface

- The text is free of significant interface issues, including navigation problems, distortion of images/charts, and any other display features that may distract or confuse the reader.
  - This is an important aspect of the review as the text will be read on a device and distortions/navigation and other display issues will impact and potentially distract from reader comprehension.

Cultural Relevance

- The text is not culturally insensitive or offensive in any way. It should make use of examples that are inclusive of a variety of races, ethnicities, and backgrounds.
  - Sample comment -- There is some terminology that is more "American" based but it was not unfamiliar so it should not be a problem for use in different cultures.

Other

- Any other comments
- Year/Text Level

Pro and Con

- Pro
  - See the entire layout for the text
  - Be apart of new directions in textbooks
- Con
  - Basically a volunteer project
  - Too much to effectively cover

Recommendations

- I liked having the entire book to look through but feel like it was though to give the entire text a full read.
- Allow access to the text but have reviewers focus on smaller sections.
- This would allow the reviewer to focus on areas of expertise and give a more thorough evaluation.
- Have a few reviewers look over the entire text for interface and cultural relevance.

Questions

Thank you,

Kate Lormand

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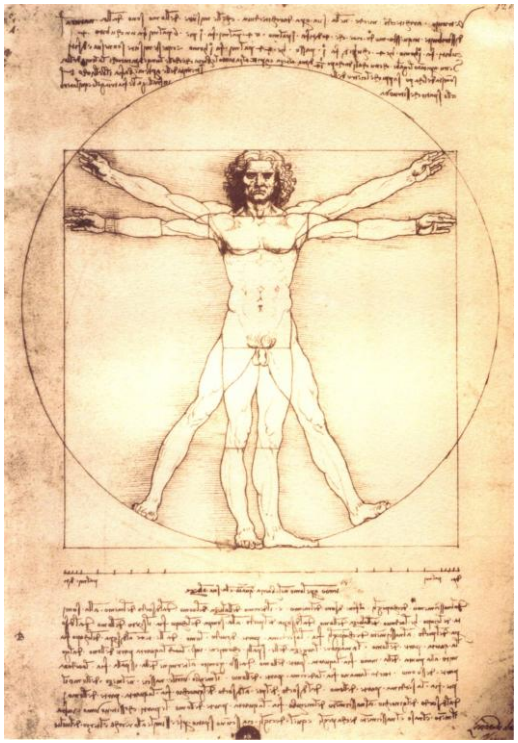
Pattie S. Green Bio

Pattie Green is biology faculty at Tacoma Community College teaching anatomy and physiology and microbiology. She has developed both the pre-nursing anatomy and physiology and microbiology course curriculum in hybrid-online forms.


A Faculty View of OER
TACOMA COMMUNITY COLLEGE
TCC OER Project
Planning, growing, and sustaining OER at an institution.
Images by Simon Harvey, Paul Moody, and Brian Wolfe, Attributions to follow.
Paul Moody, CC-BY-NC

Textbook Affordability

TCC students spent an average of $1,267.00 in the 2010/2011 academic year!



Books in healthcare fields can be particularly expensive and changes in our understanding can limit use of older editions.

How to Start

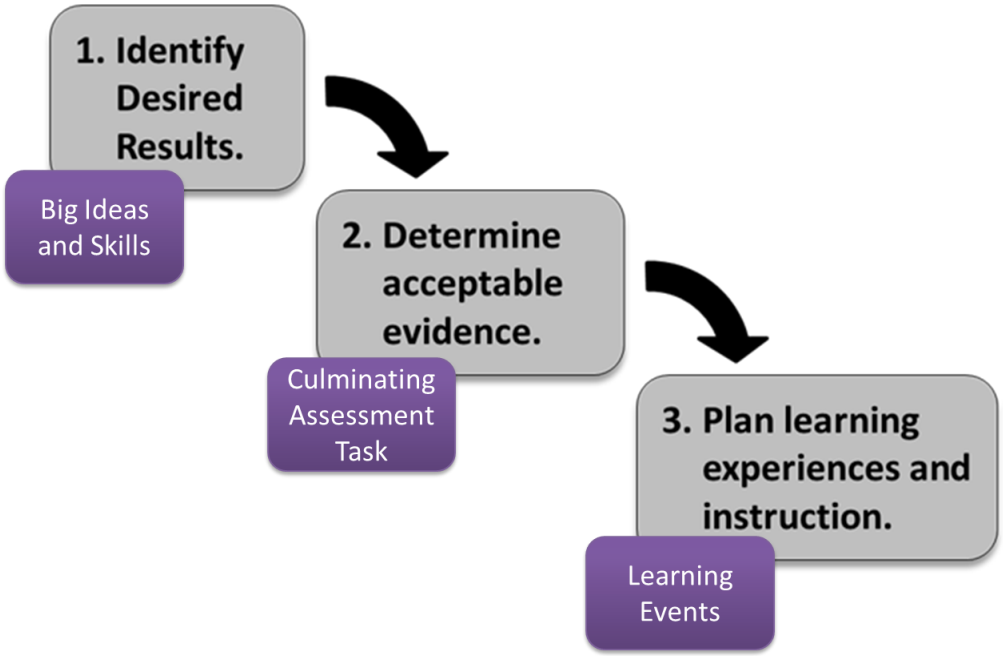
Dip toes in water or jump right in?

Travis Swan https://flic.kr/p/psD3o9

Danielle Zanni https://flic.kr/p/f4bU5z

Depends….

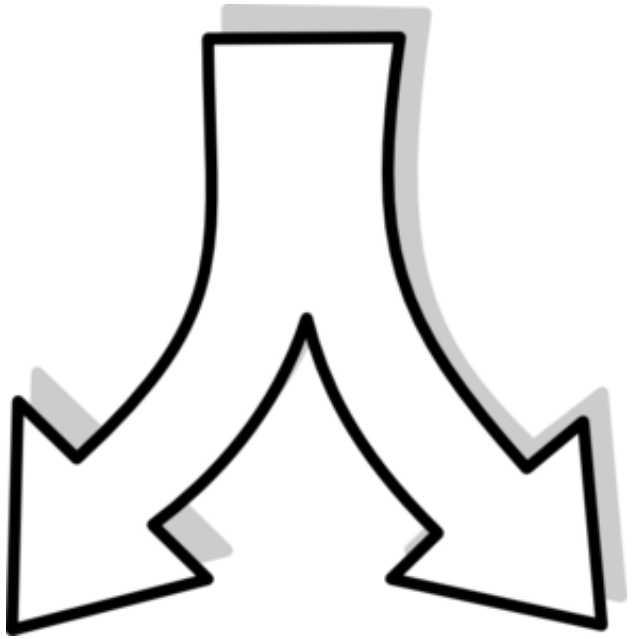
OER Materials and Backward Design



Wiggins, G. P., & McTighe, J. (2005). *Understanding by design*. Association for Supervision & Curriculum Development.

The desired results determine the acceptable OER sources.

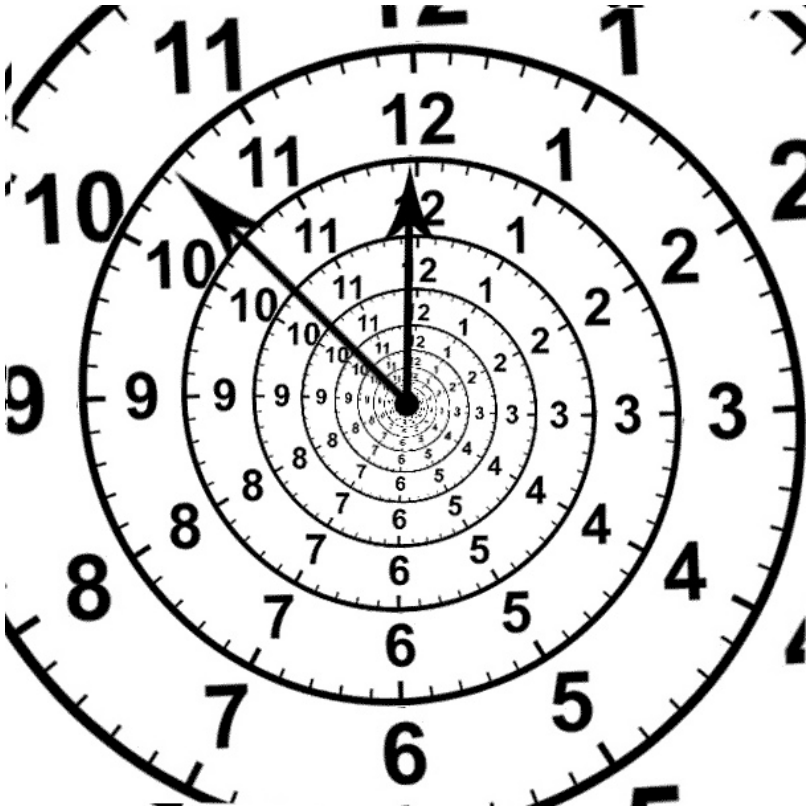
Two Pathways



Find OER textbook that covers one's learning objectives

Use pieces of different OER content possibly mixed with some self-authored content

The biggest issues with switching to OER: TIME



- Finding good OER sources
- Evaluating OER sources
- Piecing together different OER content
- Lack of publisher provided materials – test banks, slides, online support materials

OER Textbooks

- Less of a time commitment than customizing sources
- Not customized – all of the problems of a typical textbook (but FREE!)
- Varying quality
- Many do not have instructor resources such as test banks, slide images, online resources
- Generally poorer figures and images than a traditional text – very important for A&P

Customizable

Krezzlee https://flic.kr/p/7U3wh7

OER content can be pieced together to fit your class perfectly!

It doesn't have to be a one size fits all solution – especially useful for lab manuals where it can be customized for available supplies.

Doree Kornfeld https://flic.kr/p/8zWuf

Hand-picking OER Material Creates a 'Narrative'

"It felt more like reading a novel with all the information connected. I didn't feel I was having to sift through a lot of information . . . .This option brings the real world into this class. The information in the selected reading were easy to understand and related to up-to-date research and written by people who aren't writing it for a textbook, but instead for esteemed colleagues and in a way that was understandable to budding microbiologists." – Former microbiology student

Classes I have taught with OER

- Anatomy and Physiology sequence using self-authored lab manual
- Anatomy and Physiology sequence using OER textbook
- Human Biology using publically available websites (NIH has some awesome sites) and various chapters of OER texts
- Microbiology using publically available websites, articles from journals, some online textbook
- Microbiology using TCC faculty authored labs
- Human Nutrition using OER textbook (Kansas State)

	Topic	Reference
9/23	Introduction	1)http://textbookofbacteriology.net/Impact.html All 4 Pages
9/24	Safety	1)Lab Manager Magazine on Biosafety 2) CDC Summary of Biosafety guidelines
9/25	Origins and Diversity	1) Pages 1-3: Evolution and Phylogenetics 2) Pages 1-4: Microbial Diversity 3)http://www.ncbi.nlm.nih.gov/books/NBK9841/ Read Evolution of Metabolism, Present day Prokaryotes, and Eukaryote sections. 4)http://learn.genetics.utah.edu/content/begin/cells/organelles/ 5)Types of Microbes: http://www.microbeworld.org/types-of-microbes 6) Rules of Nomenclature Opt) For interest: http://www.pnas.org/content/95/19/11043.full
9/27&30	History	1)https://docs.google.com/document/d/1HDaIplt79PuGr-AXdJSTXt5BM WaqLxADGgngknoBdlg/pub
10/1	MIcroscopy	1)https://docs.google.com/document/d/1_Va1aT569T-ICPf-8A8_ckIPlJ CvWVD5wMsHhM3e5I/pub
10/2-7	Prokaryotic Anatomy	1) http://www.cellsalive.com/cells/bactcell.htm 2) Todar's Online Textbook of Bacteriology:

Concerns with OER – students like physical books

"not a big fan of reading online materials" but "the book would be too heavy and have more things than we need to be carrying around"

"kind of person that prefers to have something tangible that I can pull out and look at"

Concerns with OER – computer access

- Some students lack easy computer access
- Many OER materials not easily accessible on smartphones
- Some students not comfortable reading on computers

OER benefits – easy integration with online classes

bluefieldphotos https://flic.kr/p/o15EKn

Students are accessing course materials online anyway.

Students expecting online materials more.

Benefit – Student Perception

- “gives us a variety of perspectives on the material we are learning instead of just one book source.
- “its relevant to how YOUR teaching us, instead of an author.”
- “The readings that you had for us on-line where helpful and less intimidating than the text.”

In surveys, nearly all students preferred our TCC authored lab manuals but only about half preferred OER textbooks in the various forms I tried.

OER Project Survey Results by Quarter

Fall 2012	
Number of Participants:	81
Normally pay out of pocket:	87%
Paid for resources for this course:	35%
Accessed materials online or CMS:	90.1%
Favorable on access to resource:	82%
Favorable on ease of use of resource:	85%
Resource used often in class:	65.1%
Studied using the source:	76.3%
Favorable on understandability of resource:	81.3%
Take another course using OER:	88.5%

Winter 2013	
Number of Participants:	96
Normally pay out of pocket:	88.5%
Paid for resources for this course:	13.5%
Accessed materials online or CMS:	98.9%
Favorable on access to resource:	90.3%
Favorable on ease of use of resource:	91%
Resource used often in class:	86%
Studied using the source:	82.8%
Favorable on understandability of resource:	91.4%
Take another course using OER:	96.7%

Where am I now with using OER?

- In all of my labs
- As supplemental readings in some classes.
- I use the materials assembled for students who do not have the money for a book but also having a normal textbook.

Questions for
Today's Speakers?