Exploring & Adopting OER in Online Math Courses

February 9, 2024
Introduction

Gayathri Manikandan
Professor, Mathematics
Compton College
Open Educational Resources (OER) are educational materials freely and legally available through open licensing for instructors and students alike to use, adapt, share and reuse.
The 5 Rs

Creative Commons Licensing permissions for OER are typically defined by the 5 Rs, outlining an individual's right to:

• **Retain**: create, archive, and own copies of the content

• **Reuse**: content can be reused in its unaltered form

• **Revise**: content can be adapted, adjusted, modified, and altered

• **Remix**: original or revised content can be combined with other content to create something new

• **Redistribute**: copies of the content can be shared with others in its original, revised or remixed form.
<table>
<thead>
<tr>
<th>Icon</th>
<th>Right</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Attribution (BY)" /></td>
<td>Attribution (BY)</td>
<td>Credit must be given to the creator</td>
</tr>
<tr>
<td><img src="image" alt="Share-alike (SA)" /></td>
<td>Share-alike (SA)</td>
<td>Adaptations must be shared under the same terms</td>
</tr>
<tr>
<td><img src="image" alt="Non-commercial (NC)" /></td>
<td>Non-commercial (NC)</td>
<td>Only noncommercial uses of the work are permitted</td>
</tr>
<tr>
<td><img src="image" alt="No derivative works (ND)" /></td>
<td>No derivative works (ND)</td>
<td>No derivatives or adaptations of the work are permitted</td>
</tr>
<tr>
<td>License Name Abbreviation</td>
<td>Icon</td>
<td>Attribution Required?</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>No Rights Reserved CC0</td>
<td><img src="icon1" alt="PUBLIC DOMAIN" /></td>
<td>No</td>
</tr>
<tr>
<td>Attribution BY</td>
<td><img src="icon2" alt="CC BY" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Attribution-Share Alike BY-SA</td>
<td><img src="icon3" alt="CC BY-SA" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Attribution-Non-Commercial BY-NC</td>
<td><img src="icon4" alt="CC BY-NC" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Attribution-Non-Commercial-Share Alike BY-NC-SA</td>
<td><img src="icon5" alt="CC BY-NC-SA" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Attribution-No Derivatives BY-ND</td>
<td><img src="icon6" alt="CC BY-ND" /></td>
<td>Yes</td>
</tr>
<tr>
<td>Attribution-Non-Commercial-No Derivatives BY-NC-ND</td>
<td><img src="icon7" alt="CC BY-NC-ND" /></td>
<td>Yes</td>
</tr>
</tbody>
</table>
In General

• OER are generally digital in format but can include print works as well.

• They include any type of teaching, learning, or research content, such as: syllabi, textbooks, lesson plans, study guides, assignments, exams, exercises, videos, etc.

• OER also extend to digital learning tools, such as: homework management system, software for web design or programming, video creation or word processing programs, etc.
Choosing a license

Anyone (instructors and students) can make their work openly available for others and give permission under copyright law.

The six licenses and the public domain dedication tool give creators a range of options. Check out the CC License Chooser Tool

Before licensing your work, some important things to consider:
• The licenses and CC0 can’t be revoked.
• You must own or control copyright in the work.
Textbook Costs

Student’s Financial Struggle:

• How many students can afford to buy expensive textbooks?
• How many classes does each student take in a semester?
• How long it takes for the students to buy the textbooks?
• What if a student dropped a course and retake again to find that the student need to buy a different textbook?

One Possible Solution:

• Consider Using OER Textbooks
Use of OER

Instructor’s Concerns:

• Quality
• Ease of adoption
• Articulation
• Time needed to revamp the course
• Availability for Ancillaries
• Reliability on these free resources
• Accessibility
• Support to troubleshoot
ASCCC – OERI

• Join the OERI Community.
• Find OERI Discipline Lead
• Find OER Discipline Resources
• Find OER by CSU GE
• Find OER by TMC
First Step: Explore

Let us take time to explore:

• Choose a course that you teach often or any course you would like to find OER materials

• Use the links provided to search to locate the resources

• Jot down things you need to adopt the OER textbook for your class.
Math OER

Openstax
• LMS Integration
• Test banks
• Answer guides
• Powerpoint slides
• Lecture Notes

OpenTextBookStore
• Textbook doc, pdfs
• Easy LMS integration
• Schedule, syllabus
• Homework, quizzes
• Videos, textbook links
Create and/or Curate your own Textbook

LibreTexts

• Build Digital Textbooks using intuitive visual text editor that matches your course outline with seamless LMS/Canvas Integration; Print-on-Demand for physical textbooks

• Create personalized and adaptive Assessments that supports formative and summative evaluation

• Design interactive media that allows fun and intuitive games and activities

• Collaborate and socialize with your peers, evaluate, curate and manage your OER
OER Ancillaries

Video lessons:
• Khan Academy
• Mathispower4u

Search Tool:
• Canvas Commons
• OER Commons

Homework Tool:
• MyOpenMath

Interactive Simulations:
• 3DCalcplot
• Desmos
• GeoGebra
• CK-12
• WolframAlpha

Google Advance Search:
• to filter by usage rights
Second Step: Get Started

Learn if these websites needs registration.
Let us take time to create an account for:

- Openstax
- MyOpenMath
- OER Commons
More OER Collections

- Merlot
- MIT Open Courseware
- BCcampus OpenEd
- OpenTextbookLibrary
- California Open Online Library for Education (COOL4Ed)
- Teach OER
- Teaching Commons
Final Step: Make the Commitment!

You can do it and we can help!

Register for the next webinar on “Online Math OER & ZTC”

- Date: Friday, March 1st, 2024
- Time: 10:00 – 11:30 a.m.

Join and learn on how to use OER textbook, and MyOpenMath (MOM) in your Math course to make your class a Zero Textbook Cost (ZTC) section!
Questions?
Thank you!

Recorded webinars and a schedule of upcoming events are available at onlinenetworkofeducators.org/spring-2024-webinars.

Email support@cvc.edu with any questions!