

Creating small and ugly OER

Katie Harding

Teaching & Learning Librarian, OER & STEM, McMaster University

Sherman Centre for Digital Scholarship workshop series

October 20, 2026

Overview

- Introduction to open educational resources (OER)
- Small, ugly OER
- Sharing your work
 - Licenses
 - Where to share
- Tools for creating OER
- Q&A / Discussion

What is open education?

- Open education encompasses resources, tools and practices that employ a framework of open sharing to improve educational access and effectiveness worldwide.
- Principles of open education:
 - Community
 - Non-proprietary
 - Participatory and inclusive
 - Transparency
 - Shared decision making and control
 - Customizable
 - Access
 - Collaborative
 - Iterative
 - Meritocracy

Open Educational Resources (OER)

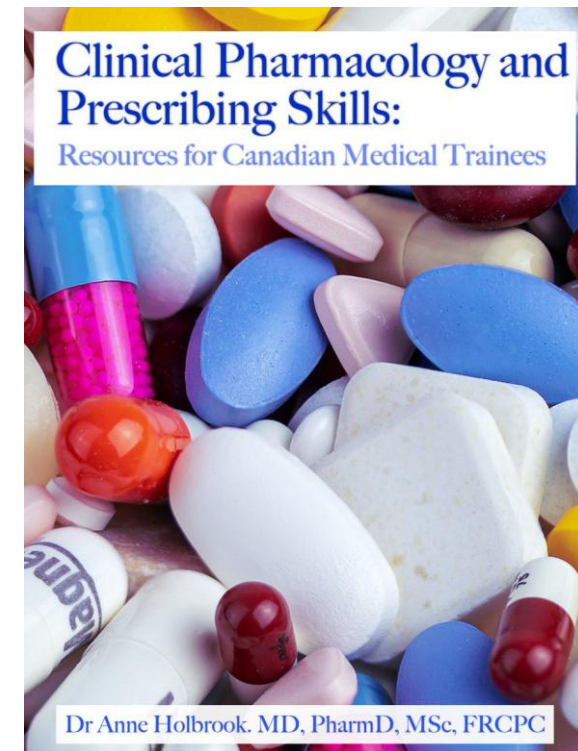
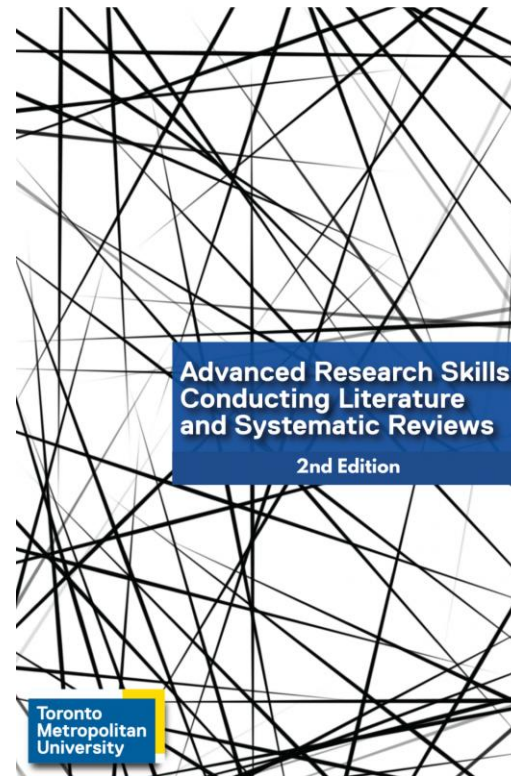
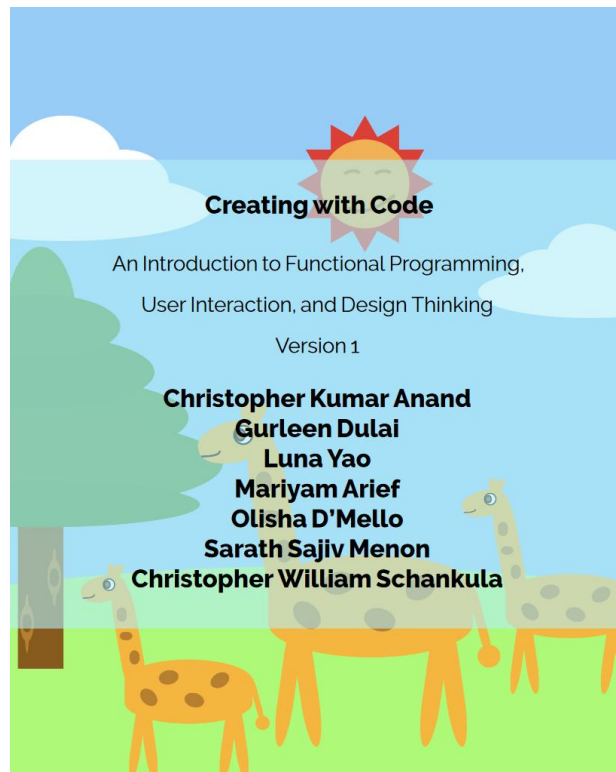
“Open Educational Resources (OER) are learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others.”

Open Educational Resources and 5Rs

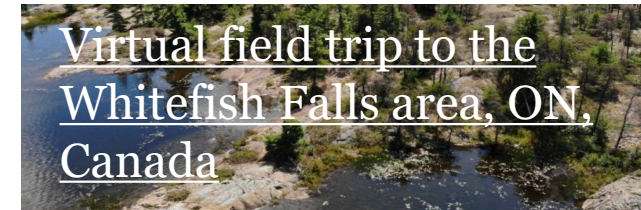
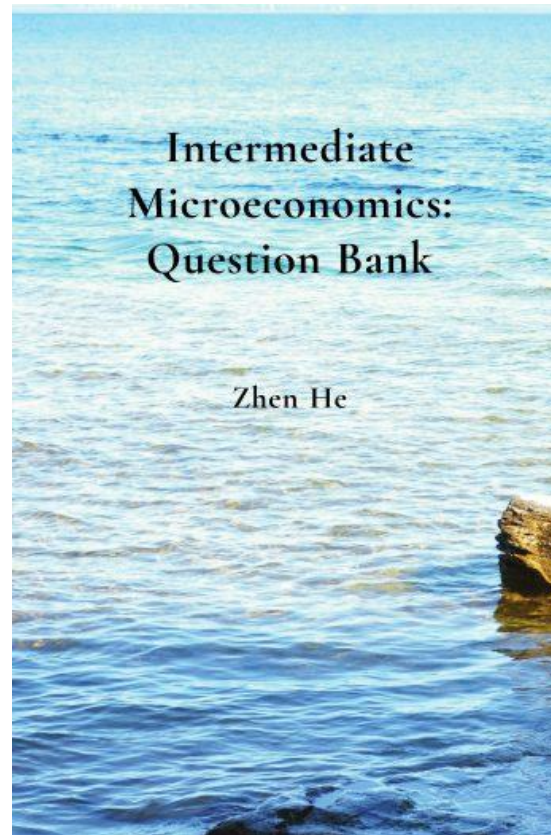
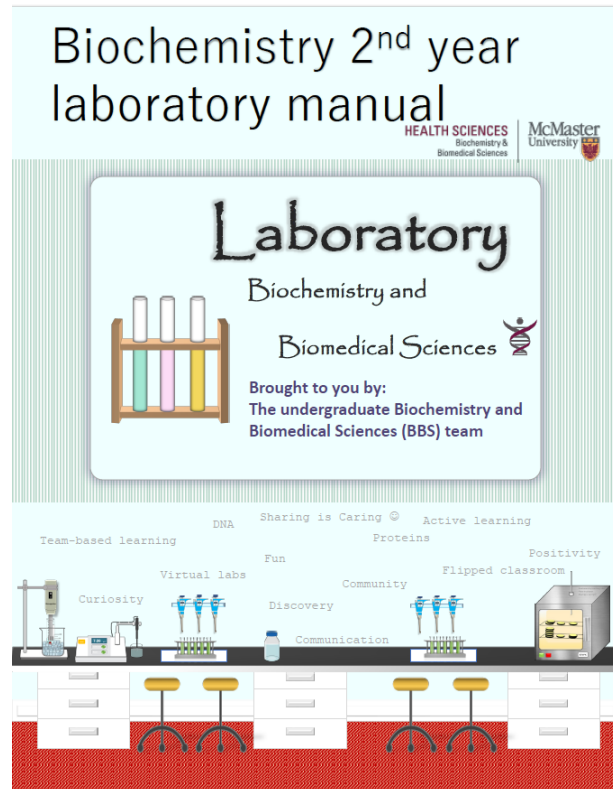
OER are materials that are in the public domain or licensed in a way that allows anyone to engage in the “5R” activities:

1. Retain – Own and control a copy of the resource
2. Revise – Edit, adapt, and modify a copy of the resource
3. Remix – Combine the original or revised copy of the resource with other materials to create something new
4. Reuse – Use an original, revised, or remixed copy of the resource publicly
5. Redistribute – Share the original, revised, or remixed copy of the resource with others.

Examples of Open Textbooks with McMaster authors



Examples of other McMaster OER



What can be an OER?

- Textbooks, obviously.
- But “learning, teaching, and research materials” can include a lot of different things!
- Videos, podcasts, slide decks, lecture notes, assignments, test banks, case studies, activities, work sheets, syllabi, lesson plans, courses, modules, lab manuals, articles, webpages, infographics, images, simulations, software, datasets, etc.

What types of materials might you like to borrow or adapt from someone else?

Examples of small* OER

Lesson Plan:

Introduction to “Doughnut Economics”

SUBJECT	TEACHER	YEAR	DATE
Economics	[Name]	2024	[Date]

OBJECTIVE

This lesson plans to link social and environmental issues to principles of economics that we learn as a part of our economics course. The goal is to learn about changing perspectives and priorities towards economic objectives through exploring the safe and just space for humanity as illustrated by the “doughnut” that emphasizes on resolving the social shortfall and the ecological overshoot of nations.

PHASES	INSTRUCTIONS	NOTES
STARTER QUESTION (5 – 10 MINUTES)	Name a country or region and discuss some of the key social and ecological issues faced by your selected country or region.	[instructions on where to attempt the starter question; digitally or on paper]
INTRODUCTION TO THE “DOUGHNUT” (13 MINUTES)	Introduce “Doughnut Economics” and debate over the seven ways to think like a 21 st century economist.	Utilize the following link for resources: About Doughnut Economics DEAL
TED TALK (17 MINUTES)	View the TED Talk by Kate Raworth titled “Why it’s time for ‘Doughnut Economics’”.	Link is as follows: Why it's time for 'Doughnut Economics' Kate Raworth TEDxAthens (youtube.com)
RESEARCH ACTIVITY (20 MINUTES)	Review quantitative data on country-wise “doughnuts” and compare two countries to show contrasting priorities on social and ecological issues.	Data can be obtained via the following link: Doughnut Economy by Country (doughnut-economy-fxs7576.netlify.app)
PLENARY (5 – 10 MINUTES)	Explore the open letter by academics around the world emphasizing on the need for a course in “regenerative economics”.	Story link: Open Letter for a Course in Regenerative Economics DEAL (doughnuteconomics.org)

Lesson Plan: Introduction to “Doughnut Economics” by [Moosa Yousuf](#) is licensed under [CC BY-SA 4.0](#).



[Link between soil health and plant/animal health](#) by Marko Davinic is licensed under [CC BY-NC-SA](#).

Homework Assignment: Mini Literature Review

In this discussion section and homework you will hone your scientific writing skills, including:

- locating appropriate scientific literature
- extracting, distilling and summarizing key qualitative and quantitative information from the scientific literature (including figures)
- setting new findings in the broader context (eg what you’ve learned in class).
- writing, reporting and evaluating scientific data – including referencing sources and supporting figures appropriately in your text.

Bonus! This assignment will get you started on your term paper.

In class:

1. **‘Grade’ the example.** Use the [grading rubric](#) to evaluate the example and identify the strengths and suggestions for improvement. This part of the exercise will build your ability to assess what makes good scientific communication. Do this on your own and then discuss in pairs, there will time to share your ideas with the class.
2. **Use Web of Science (WoS) to find an article that will be a reference for your term paper**, use the skills that you learnt in Discussion session 1 (see [tips](#)), and ask your TA for guidance.

For homework:

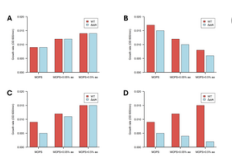
3. **Identify one or more figures within your selected article that shows meaningful data for your project, copy and paste this figure into a Word document using the snapshot tool in Adobe Acrobat reader** (photocopying and pasting, or scanning in a figure are also acceptable alternatives). The location of the snapshot tool varies with different versions of Acrobat, often in the toolbar, under tools, sometimes with an icon like a camera, then copy and paste.
4. **Write a 1 paragraph summary of your selected article.** Include key qualitative and qualitative information from the scientific article (with reference to your selected figure) and assess the significance of these findings within the context of your wider knowledge. Don’t forget to use the referencing convention that you learnt in discussion session 5 to cite your source paper. Use your resources: the [example](#), the [grading rubric](#) and [tips](#).
5. **Bring your printed answer to class on [date].** In that class your assignment will be evaluated by your fellow students, using the [grading rubric](#). You will then have the opportunity to revise, before submitting to the TA for [evaluation](#) and further comment on [\[date\]](#) by email. Your email should include a brief statement of why you chose the paper and how it relates to your term project topic, with two attachments: your assignment (yourname.doc) and the source article (yourname.pdf). The evaluation from your classmates and TA are intended to provide feedback as you proceed with the research for your term paper.

[Literature Review and Scientific Figures](#) by Sarah Feakins is licensed under [CC BY-NC-SA](#).

*Please note that I am **not** describing these OER as ugly.

More examples of small OER

Data analysis for undergraduate bioscience



In Figure 2 (Bajjal et al. 2024), the authors found that amino acid deficiencies do not completely explain the growth defect observed in Δppk cells. If the opposite were true, and amino acid deficiencies WERE responsible for the growth defect of Δppk cells, what would be the expected result for Figure 2B?

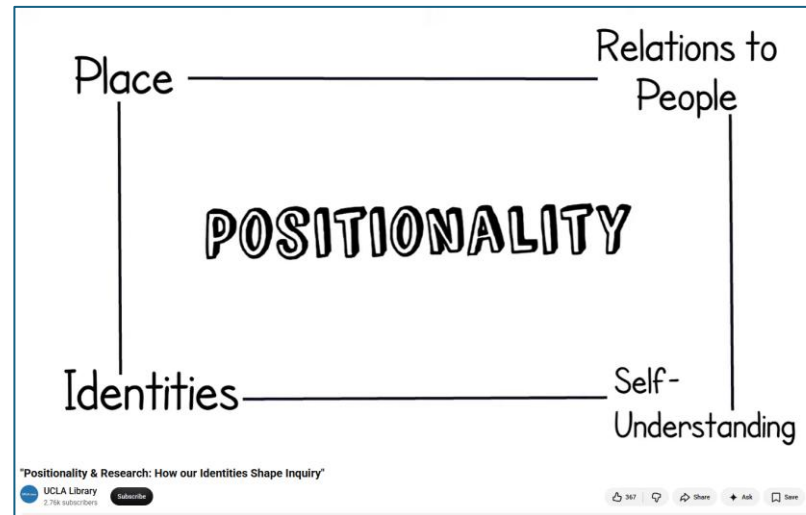
☐ Panel C

☐ Panel D

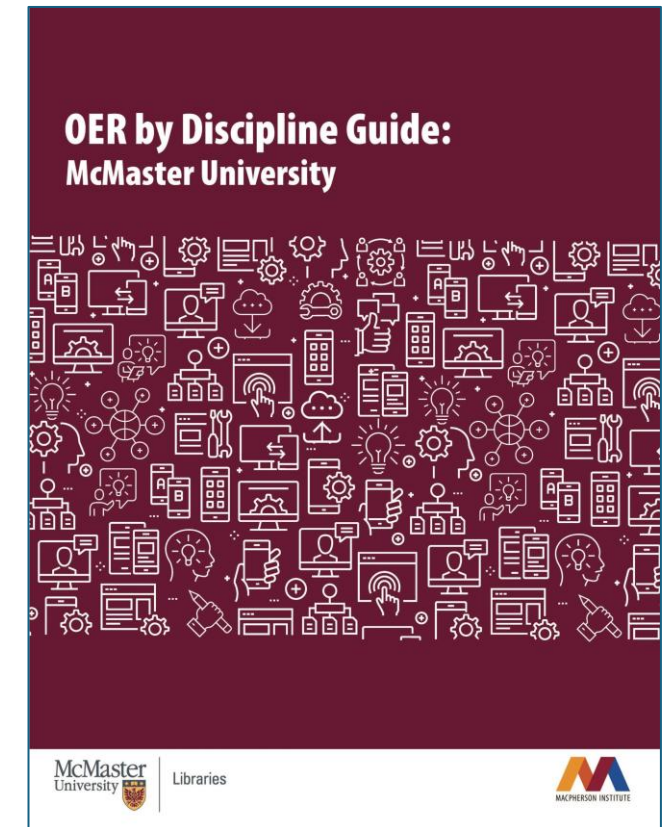
☐ Panel A

☐ Panel B

[Data analysis for undergraduate bioscience](#) by Lisa D'Ambrosio is licensed under [CC BY-NC-SA 4.0](#).



[Positionality & Research: How our Identities Shape Inquiry](#) by [UCLA Library](#) is licensed under [CC BY](#).



[OER by Discipline Guide](#) by Joanne Kehoe, Olga Perkovic, and Supriya Bains is licensed under [CC BY-NC-SA 4.0](#).

What I mean by “small and ugly”

- Functional and accessible
- Not worried about graphic design
- Not concerned with being visually beautiful
- Contain good content that others can learn from, use, or adapt

What types of materials do you already have
that you could share?



Copyright

- Copyright law protects the works of creators, to incentivize creators to create new works. This restricts how works are copied, shared, and adapted.
- New technologies (such as the internet) developed over the past few decades allow for greater sharing. **We have the ability to share more content with each other than ever before.**
- Copyright law means that legal protections hinder sharing, even while we have the technology (and often the will) to support sharing.

Creative Commons Licenses

- There are [6 Creative Commons license types](#) and the [CC0 Public Domain Dedication](#)
- Each license specifies different permitted uses for a work
- Using a CC license lets you allow you to specify more ways for your work to be used

CREATIVE COMMONS LICENSES		 COPY & PUBLISH	 ATTRIBUTION REQUIRED	 COMMERCIAL USE	 MODIFY & ADAPT	 CHANGE LICENSE
	PUBLIC DOMAIN	✓	✗	✓	✓	✓
	CC BY	✓	✓	✓	✓	✓
	CC BY-SA	✓	✓	✓	✓	✗
	CC BY-ND	✓	✓	✓	✗	✗
	CC BY-NC	✓	✓	✗	✓	✓
	CC BY-NC-SA	✓	✓	✗	✓	✗
	CC BY-NC-ND	✓	✓	✗	✗	✗
 You can redistribute (copy, publish, display, communicate, etc.)		 You have to attribute the original work		 You can use the work commercially	 You can modify and adapt the original work	 You can choose license type for your adaptations of the work.

License elements

There are four elements that may be present in a CC license.

-  • **Attribution “BY”** – Means appropriate credit must be given by citing the creator of the work, linking to the license, and indicating if any changes were made from the original work. The attribution requirement is included in all CC licenses
-  • **NonCommercial “NC”** – Means that the work may only be used in ways that do not intend to result in commercial gain.
-  • **ShareAlike “SA”** – Means that adaptations must use the same license as the original work.
-  • **NoDerivatives “ND”** – Means that adaptations cannot be shared.

Choosing a Creative Commons license

- Use the [Creative Commons License Chooser](#) to identify an appropriate license for your work.
- Answer a series of questions about how you would like others to be able to use your work, and it will recommend a license.

- 1 Do you know which license you need?
☐ Yes
☒ No
- 2 Require attribution for your work?
☐ Yes
☐ No
- 3 Allow others to use your work commercially?
☐ Yes
☐ No
- 4 Allow others to remix, adapt, or build upon your work?
☐ Yes
☐ No
- 5 Require adaptations of your work to be licensed under the same CC license?

Where to share

- [eCampusOntario Open Library](#) – “The Open Library welcomes original or adapted open textbooks and other open resources suitable for use in Ontario postsecondary settings...a robust collection of over 1,900 free and openly licensed educational resources, including open textbooks, modules, interactive activities, and other learning materials.”
- [OER Commons](#) or [MERLOT](#) – Both include a wide range of different types of OER

OER repositories by material type

General	Courses	Simulations	Images	Videos
eCampusOntario Open Library	Open Learn	Phet Interactive Simulations	CC Search	Wabash Lilly Library
OpenStax	Edx	Wolfram	PixaBay	University of Nevada Library
Open Textbook Library	MIT Open Courseware	Learn Chem E	Pexels	
OER Commons	TUDelft Open Courseware	OPhysics	Noun Project	
Merlot	MIT Open Learning Library	Javalab Science Simulations	University of Washington Libraries	

Repositories – a requirement?

- Do you need to put your work into a repository to make it OER?
 - **No! Though it can make it easier for others to find.**
- You might share materials another way
 - By email
 - On a website

Tools for creating OER

- Small and ugly OER don't require special tools
- You can use the tools that you're already working with
 - Word, PowerPoint
 - Google Docs, Slides
 - Video capture tools (e.g. Camtasia,
- OER are most useful and most open if they are available in formats that are editable

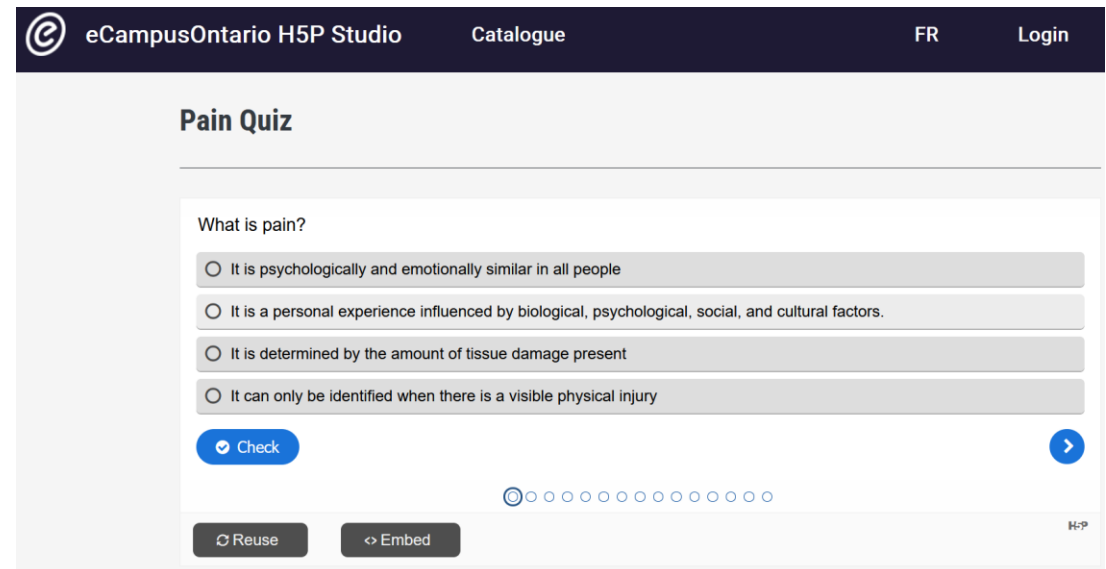
More tools for creating OER

Pressbooks



[Accessibility Toolkit, 2nd edition](#) by Amanda Coolidge, Sue Doner, Tara Robertson, and Josie Gray is licensed under [CC BY-NC 4.0](#).

h5p



[Pain](#) by Julian Faulkner.

Fastest Way to Create an OER

1. Take a learning resource you have created and for which you are the copyright owner
2. Add an open license
3. Share it somewhere

Why don't we share small OER more often?

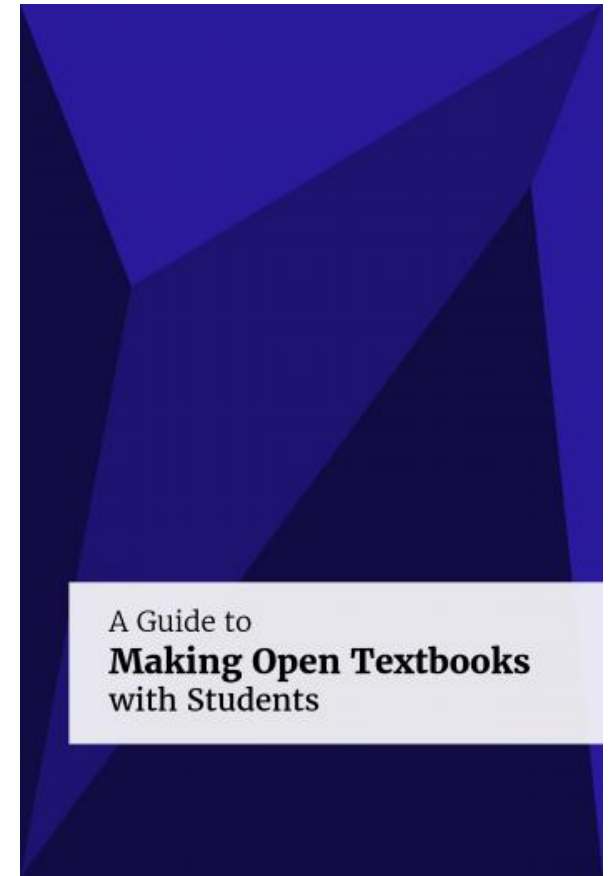
- We're not sure they're “enough”
- It's completely voluntary
- It takes time (and no one has any)
- It's not incentivized
- It's hard to know if it's made a difference

Bonus: Creating small, ugly OER with students

Open pedagogy describes teaching practices that

1. Commit to learner-driven education that is access-oriented, and
2. Enable students to engage in the field of public knowledge and content creation through assignments and learning tools.

Open pedagogy can include creating, adapting, or updating OER with students, building course policies, outcomes, assignments, rubrics, and schedules of work collaboratively with students, or facilitating student-created and student-controlled learning environments.



[A Guide to Making Open Textbooks with Students](#) by Rebus Community is licensed under a [CC BY 4.0 license](#), except where otherwise noted.

Questions?

- McMaster OER Guide <https://libguides.mcmaster.ca/oer>
- Questions about OER at McMaster? oer@mcmaster.ca
- Other questions? kharding@mcmaster.ca

Acknowledgements

- Thanks to Nancy A Henke, University of Northern Colorado, for the “Small and ugly OER” idea.
 - [Presentation at Open Ed Talks 2026](#)
 - [Small and Ugly OER guide](#)
- Thanks to Isaac Pratt, McMaster University, for suggesting that these slides should also be small and ugly.
- Thanks to anyone who takes these slides and improves them.