ExplOERing the Possibilities of Open Educational Resources

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Today We Will ExplOER...

- The Problem
- OER as One Piece of a Solution
  - Definitions and Distinctions
  - Intersections with Social Justice
  - Research on Student Success
- Common Concerns
  - Group Exercise
- Benefits Beyond Cost
  - OER-Enabled Pedagogy
- Final Thoughts

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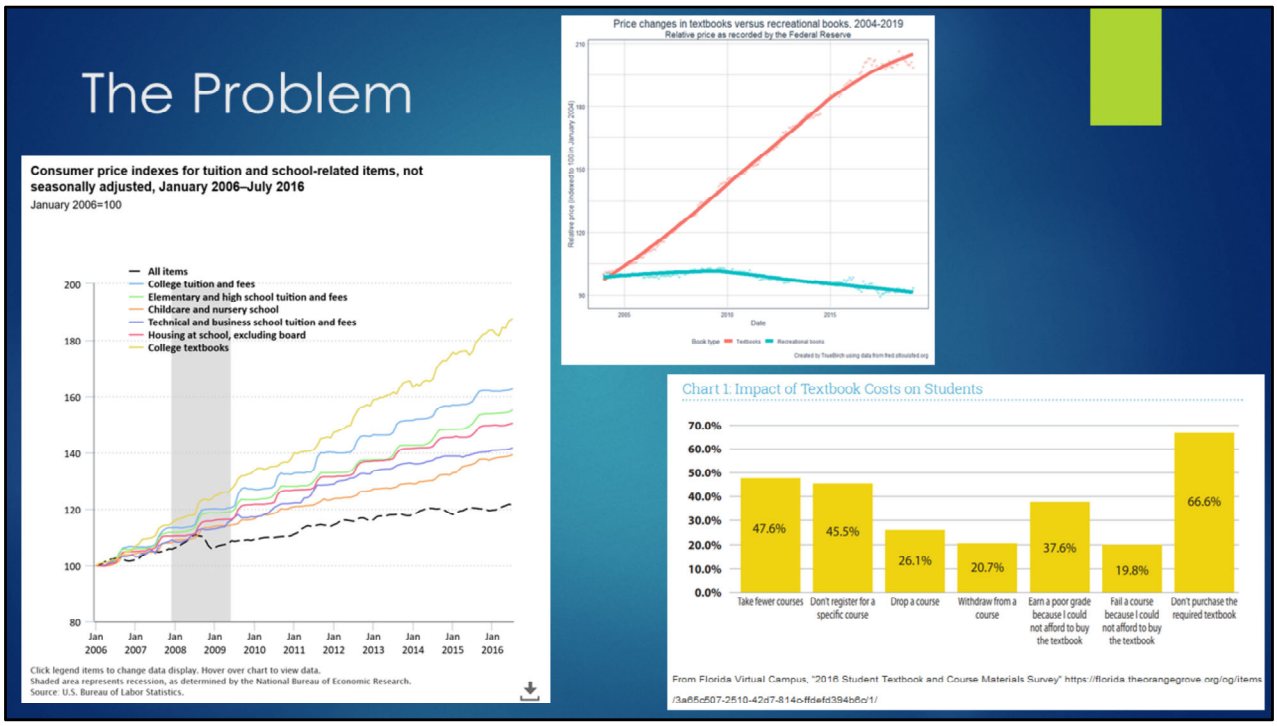


I want to address the problem in a nutshell, but without belaboring the point. College textbook costs have risen at a far greater rate than other educational costs in our society, faster than the rate of inflation. And it's not publishing in general, because the costs of recreational books have actually decreased slightly as textbooks have skyrocketed. These costs have a real impact on students, who choose to skip courses, drop courses, or earn poor grades due to textbook costs.

OER as One Piece of a Solution: Definitions and Distinctions

- Open Educational Resources (OER) – UNESCO definition:
  - "teaching, learning or research materials that are in the public domain or released with intellectual property licenses that facilitate the free use, adaptation and distribution of resources"
- "True" OER are zero-cost and also generally permit "the 5 R's"

OER as One Piece of a Solution: Definitions and Distinctions

- Broader idea of "zero-cost materials"
- Free as in *gratis*, vs. free as in *libre*

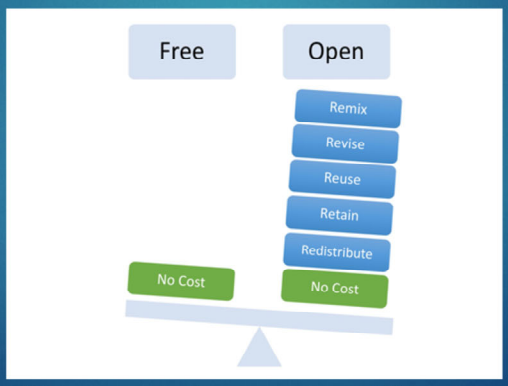
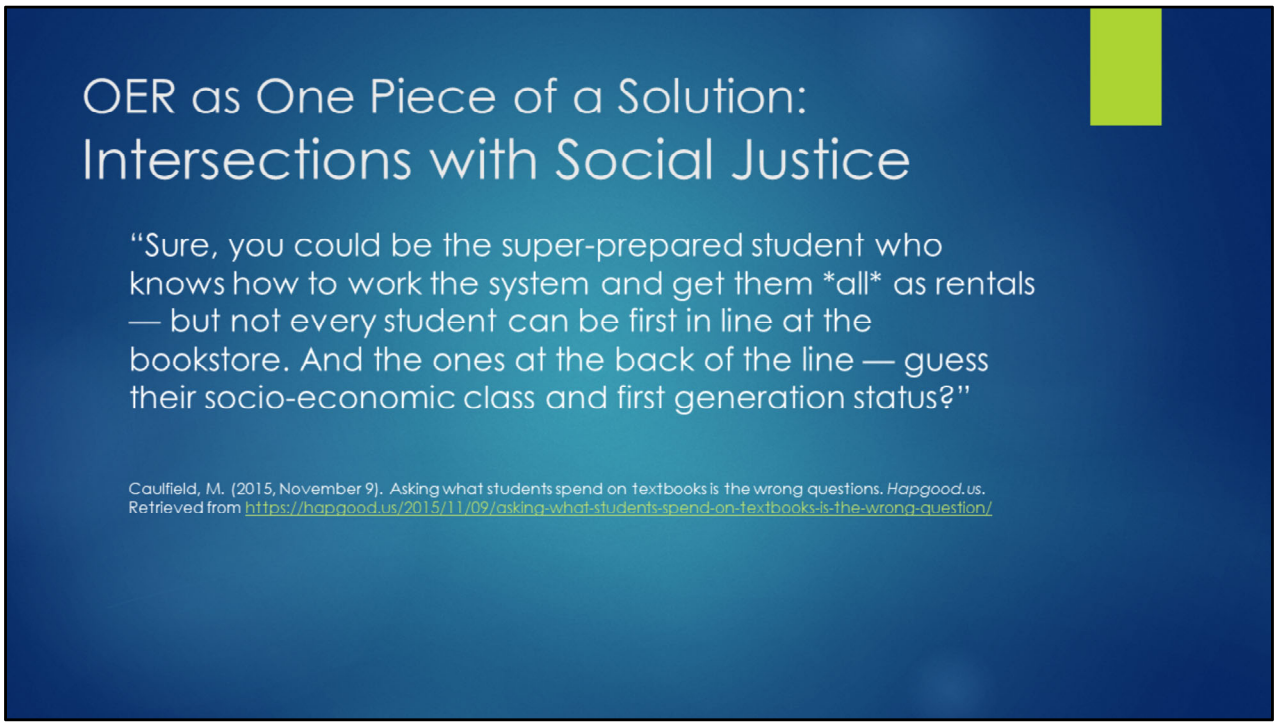


Image credit: Image from CN-2121 open course, https://learn.canvas.net/courses/1233/pages/open-educational-resources-oer, CC-BY 4.0



Essentially, textbook costs disproportionately impact marginalized student populations. This quote highlights one issue: students of lower socioeconomic status facing greater challenges in competing for used and rented books. Those same students are also less likely to have family members who are able to assist with purchasing costly books. They may not even arrive at school with appropriate expectations, if their parents did not attend college and could not tell them about the costs and the options. I'd like to highlight another issue specific to electronic commercial textbooks, which are generally very locked-down and provide few options for printing large quantities of material. So students who lack reliable computer and internet access at home will again be disproportionately impacted. With an open textbook, the content is still digital, but students face zero restrictions for printing the entire book to take home with them and use in an analog way.

So, again I don't want to belabor the point, but I want to be clear: We might all encounter certain students who make us feel like adopting free textbooks just means they can upgrade their smart phones sooner or buy more $5-lattes at Starbucks. But we shouldn't overlook the other students, for whom a free textbook might make the difference in whether or not they have grocery money for the first month of classes. Carefully and thoughtfully choosing the right zero-cost materials may help to level some parts of the playing field for these students and improve their chances of completing college successfully.

OER as One Piece of a Solution: Research on Student Success

- 2015 study; compared outcomes of OER vs. non-OER students:
  - Lower course withdrawal rate (6% vs. 21%)
  - Significantly higher enrollment intensity
  - No statistical difference in course achievement/grade

- "This is by far the largest study of its kind conducted to date. ...Students whose faculty chose OER generally performed *as well or better* than students whose faculty assigned commercial textbooks."
  - Fischer, L., Hilton, J., Robinson, T. J., & Wiley, D. A. (2015). A multi institutional study of the impact of open textbook adoption on the learning outcomes of post-secondary students. *Journal of Computing in Higher Education*, 27 (3), 159-172. doi:10.1007/s12528-015-9101-x

OER as One Piece of a Solution: Research on Student Success

- 2016 study; in "Z courses" (zero materials cost), students were:
  - Significantly less likely to withdraw from a course
  - More likely to receive a C or higher in the course
- "These improved student success rates translate into more students moving forward toward graduation without repeating courses"
  - Hilton, J., Fischer, L., Wiley, D., & Williams, L. (2016). Maintaining momentum toward graduation: OER and the course throughput rate. *International Review of Research in Open and Distributed Learning*, 17(6). http://www.irrodl.org/index.php/irrodl/article/view/2686/3967

OER as One Piece of a Solution: Research on Student Success

- 2018 study; students:
  - Reported overall quality of their learning experience in OER course was higher
  - Found OER materials more relevant, easier to navigate, and better aligned with learning objectives
  - Saved $66-121 per course ($6.5 million net saving across 32 institutions in 2 yrs)
  - Low-income students reported using these savings to cover tuition, rent, child care, learning materials, and courses that can help them stay in school.

- "OER can be an important tool in helping more students—and particularly low-income and underrepresented students---afford college, engage actively in their learning, persist in their studies, and ultimately complete."
  - Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislevy, J., Wang, S., Desrochers, D., Staisloff, R. (2018). *Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream's OER Degree Initiative*. Menlo Park, CA: SRI International.

OER as One Piece of a Solution: Research on Student Success

- 2018 study; compared outcomes of OER vs. non-OER students:
  - Decrease in Drop/Fail/Withdrawal (DFW) through B grades
  - Increase in B+ through A grades
  - Greater positive effects in under-served or higher-risk populations: Pell-eligible students, non-white students, part-time students
- "This research suggests OER is an equity strategy for higher education: providing all students with access to course materials on the first day of class serves to level the academic playing field in course settings."
  - Colvard, N. B., Watson, C. E., & Park, H. (2018). The impact of open educational resources on various student success metrics. *International Journal of Teaching and Learning in Higher Education*, 30(2): 262-276.

Benefits Beyond Cost

- Happy students (seriously)
- Enhanced performance & retention
- Institutional recruitment tool
- Customization
- Speed of updates
- OER-Enabled Pedagogy

Customization: Reorganize content to better fit your approach; Delete specific sections or chapters; Edit or create new sections; Rajiv Jhangiani (Psychology Professor, and Associate Vice Provost, Open Education at Kwantlen Polytechnic University in British Columbia) points out that this can actually be seen as "an *increase* in academic freedom!" http://thatpsychprof.com/a-faculty-perspective-on-open-textbooks/

OER-Enabled Pedagogy

- Term proposed by David Wiley, Lumen Learning, and John Levi Hilton III, Associate Professor of Religious Education at Brigham Young University
- Defined as "the set of teaching and learning practices that are only possible or practical in the context of the 5R permissions that are characteristic of OER"

Source:
http://www.irrodl.org/index.php/irrodl/article/view/3601

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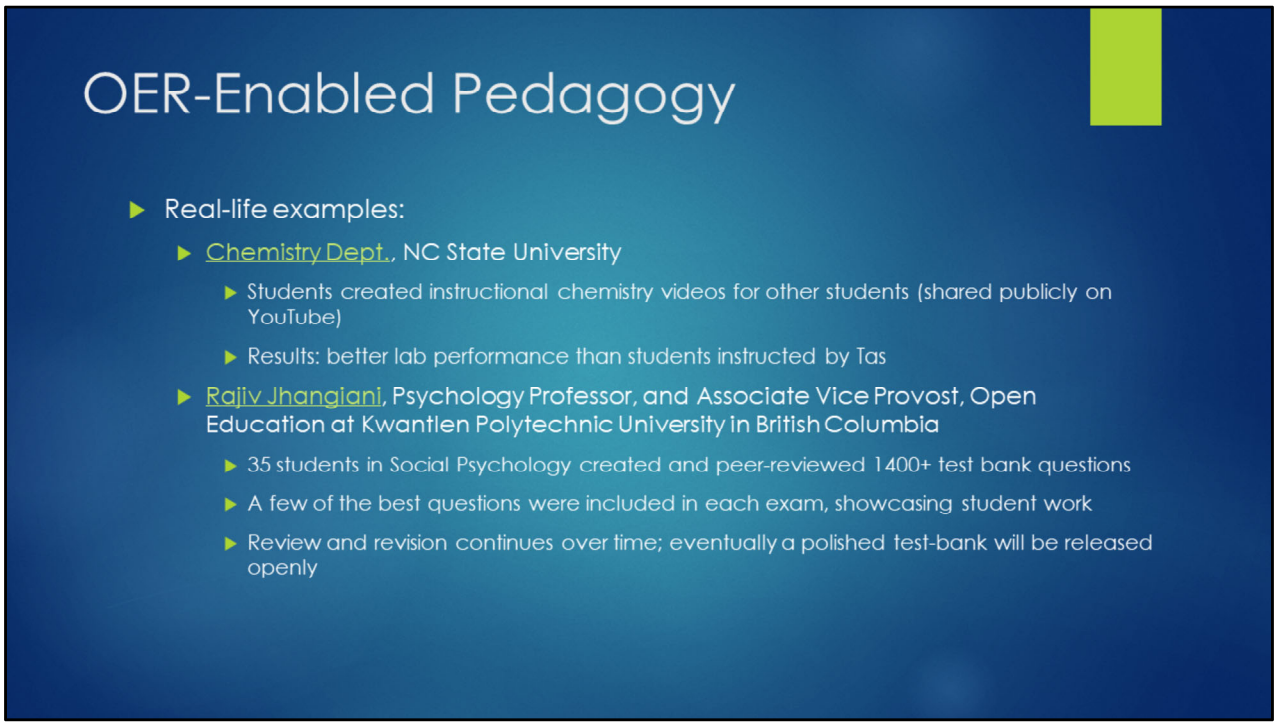
Brief definition / explanation

OER-Enabled Pedagogy

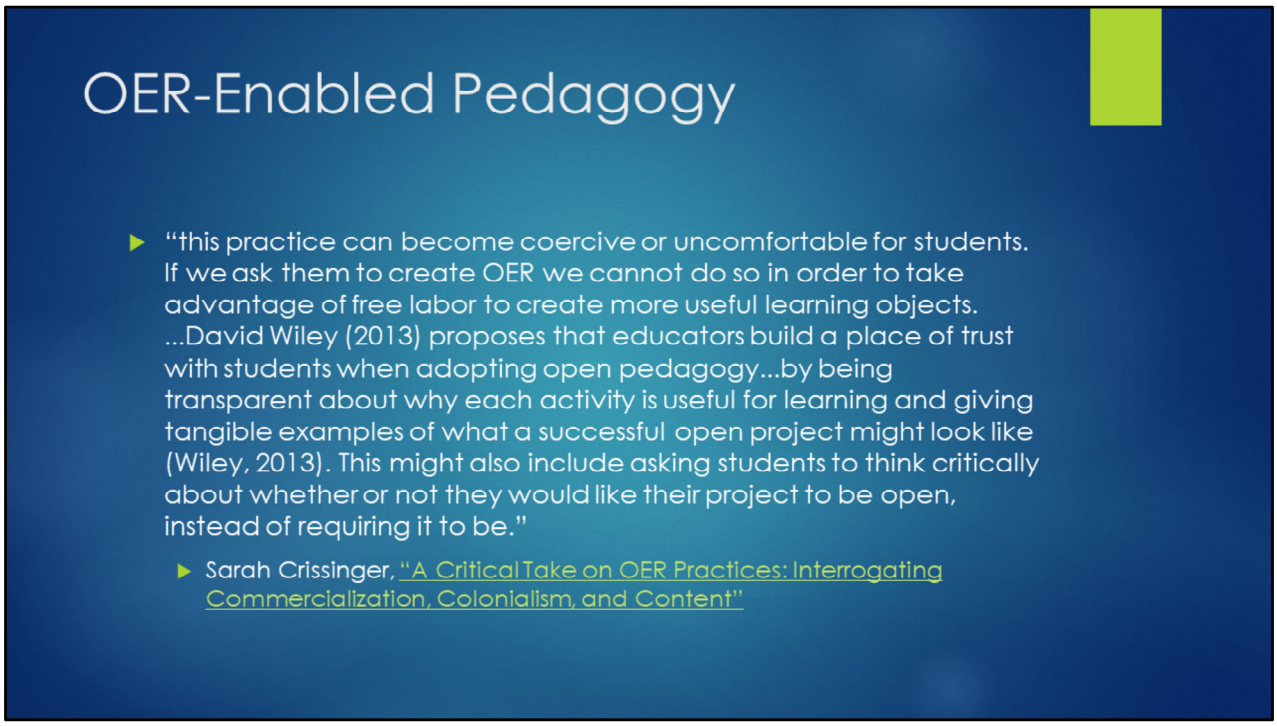
- Real-life examples:
  - Jennifer Kidd, Dept. of Teaching & Learning, Old Dominion U.
    - Students create their own text for the course
    - 2006-07 through Spring 2018 texts shared online
  - JB Murray, Spanish, University of British Columbia
    - Students improved and/or created Wikipedia articles on course topics (Lat Am Lit in Trans)
    - Result: 3 Featured Articles and 8 Good Articles *(Wikipedia scale is Stub, Start, B-class, Good, A-class, Featured)*; reached an audience in the hundreds of thousands
    - Students practiced "Information gathering, presentation, meticulousness, teamwork, and the ability to negotiate with the public sphere"



This ongoing revision actually ties into the related concept of "renewable assignments." In many cases, student assignments are disposable, in the sense that they are essentially thrown away after they are graded. Renewable assignments, in contrast, have a continuing life and engage students in more meaningful work as they add some value to the world and/or provide a foundation for future students to learn from (https://openedgroup.org/doer-fellows-renewable-assignments)

OER-Enabled Pedagogy

- Possible approaches:
  - Students edit existing open textbook, improve, tailor to course
  - Students create open textbook for a subject where none yet exist
  - Students create open video presentations to summarize concepts, demonstrate a skill, solve worked problems, etc.
  - Students use an open wiki platform to create a class anthology.
  - Students edit or create Wikipedia articles on course topics.
  - Students create study materials, such as review games, study guides, test question banks, learning modules, etc. and make them available online with Creative Commons licenses.
- I have compiled more resources in this Google document.



I will add one critical note on OER-enabled pedagogy that I think it is important to represent.

Common Concerns

"Although students may welcome free content, cost is just one factor faculty consider when selecting materials for a course. A variety of factors...help them to determine which materials are the best option for achieving the best learning outcomes."

SIIA, *Selecting Quality Course Materials for Higher Education*

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Authorship? Professional vetting and peer review of content? Availability of supplemental materials? Overall quality?

Discuss who creates open resources and why.
Key sources for professionally vetted open material: OpenStax, Open SUNY, other university-affiliated OER repositories
Key source for instructor reviews of open material: Open Textbook Library

Obviously there are poor quality OER out there, but there are poor quality commercial materials out there, too. Educators should have a system for evaluating any new instructional materials before adoption.

Group Exercise

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Final Thoughts

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I hope this exercise has illustrated that open textbooks and quality textbooks are not mutually exclusive. It's also worth remembering that there is no "ideal" textbook; we always make trade-offs when we select one book, and we should focus on whether the content is "good enough," presuming the students do have access to other tools – like our teaching! (Rajiv Jhangiani, http://thatpsychprof.com/a-faculty-perspective-on-open-textbooks/)

Wrapping up with some final thoughts...
We do need to be sensitive to accessibility, to the digital divide, and to the deep inequity that exists in our population. "Digital" is not a silver bullet; "zero-cost" is not a panacea. But when selected carefully and used thoughtfully, OER can be one piece of the puzzle to addressing the monetary problems that plague our students, while also introducing some additional benefits and opportunities for education.

Thank You! Questions?

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- Online Guide: OER and Open-Access Resources for Teaching
  https://shsulibraryguides.org/OER
  - These slides will be available at this address after today's conference!

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