

CSU-Pueblo Convocation 2018

Academic Session: Open Educational Resources

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These slides can be found at <https://poritz.net/j/share/OER4CW18>

Wait, What Are We Talking About? ¹

HB18-1331, Higher Education Open Educational Resources, passed by the Colorado General Assembly and signed by Governor Hickenlooper on 30 April 2018, defined OER here:

(6) "OPEN EDUCATIONAL RESOURCES" MEANS HIGH-QUALITY TEACHING, LEARNING, AND RESEARCH RESOURCES THAT RESIDE IN THE PUBLIC DOMAIN OR HAVE BEEN RELEASED UNDER AN INTELLECTUAL PROPERTY LICENSE THAT PERMITS FREE USE OR REPURPOSING BY OTHERS AND MAY INCLUDE OTHER RESOURCES THAT ARE LEGALLY AVAILABLE AND AVAILABLE TO STUDENTS FOR FREE OR VERY LOW COST. OPEN EDUCATIONAL RESOURCES MAY INCLUDE FULL COURSES, COURSE MATERIALS, MODULES, TEXTBOOKS, FACULTY-CREATED CONTENT, STREAMING VIDEOS, EXAMS, SOFTWARE, AND OTHER TOOLS, MATERIALS, OR TECHNIQUES USED TO SUPPORT ACCESS TO KNOWLEDGE.¹

¹Closed based on the [William and Flora Hewlett Foundation](https://www.williamflora.org/)'s definition: "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. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge."

Wait, What Are We Talking About? 2

A basic place to start with this is

(6) "OPEN EDUCATIONAL RESOURCES" MEANS HIGH-QUALITY TEACHING, LEARNING, AND RESEARCH RESOURCES THAT RESIDE IN THE PUBLIC DOMAIN OR HAVE BEEN RELEASED UNDER AN INTELLECTUAL PROPERTY LICENSE THAT PERMITS **FREE** USE OR REPURPOSING BY OTHERS AND MAY INCLUDE OTHER RESOURCES THAT ARE LEGALLY AVAILABLE AND AVAILABLE TO STUDENTS FOR FREE OR VERY LOW COST. OPEN EDUCATIONAL RESOURCES MAY INCLUDE FULL COURSES, COURSE MATERIALS, MODULES, **TEXTBOOKS**, FACULTY-CREATED CONTENT, STREAMING VIDEOS, EXAMS, SOFTWARE, AND OTHER TOOLS, MATERIALS, OR TECHNIQUES USED TO SUPPORT ACCESS TO KNOWLEDGE.

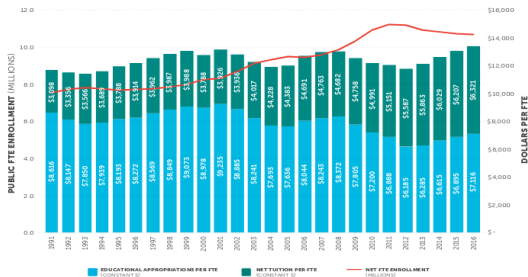
So the term "OER" include **free textbooks**.

[We'll come back to some other subtleties later.]

Economic Issues 1, Whole US

Why would it be good if textbooks were free? Nothing else in life is².
The thing is, public education in the US **is no longer really “public.”**

PUBLIC FTE ENROLLMENT AND EDUCATIONAL APPROPRIATIONS PER FTE,
U.S., FY 1991-2016

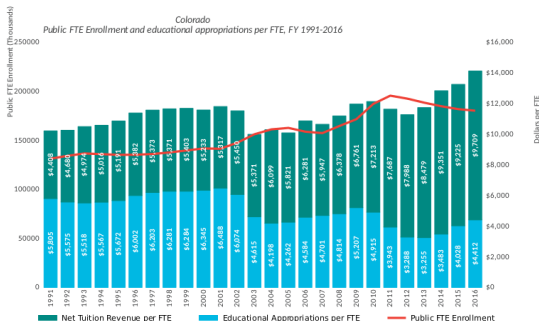


SOURCE: State Higher Education Executive Officers

²This view goes with the acronym “TANSTAAFL,” or “There ain’t no such thing as a free lunch,” in the words of Robert Heinlein (1966) and Milton Friedman [ugh] (1975).

Economic Issues 2, Colorado

Specifically, in Colorado:



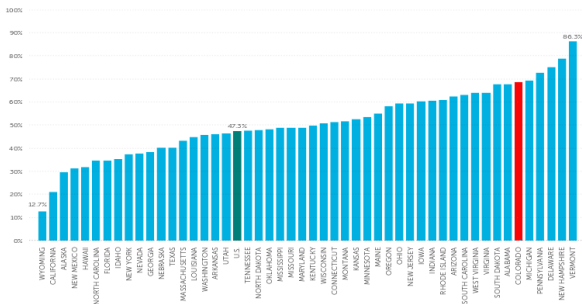
NOTES: Data adjusted for inflation using the Higher Education Cost Adjustment (HECA). Full-time equivalent (FTE) enrollment equates student credit hours to full-time, academic year students, but excludes medical students. Educational appropriations are a measure of state and local support available for public higher education operating expenses including AARA funds, and exclude appropriations for independent institutions, financial aid for students attending independent institutions, research, hospitals, and medical education. Net tuition revenue is calculated by taking the gross amount of tuition and fees, less state and institutional financial aid, tuition waivers or discounts, and medical student tuition and fees. Net tuition revenue used for capital debt service is included in the net tuition revenue figures above.

SOURCE: State Higher Education Executive Officers

Economic Issues 3, Public vs Private Funding, By State

Yes, it's worse in Colorado than the rest of the nation:

NET TUITION AS A PERCENT OF TOTAL EDUCATIONAL REVENUE, FY 2016



SOURCE: State Higher Education Executive Officers

Economic Issues 4, Student Debt

Because of the privatization of this public good, students now take on an enormous amount of debt:

total student debt in the U.S. is around \$1.45 trillion.

Some examples in Colorado:

Institution	Avg Debt, 2014 Grads
CSU-Pueblo	\$29,914
MSU, Denver	\$28,468
Colorado College	\$19,756
University of Denver	\$29,050
All private[non-profit] and public 4-years in CO	\$25,064

2014 is most recent complete data available

Source: <https://ticas.org/posd/state-state-data-2015#>

Economic Issues 4.5, Why Is Colorado College Different?



Source: *The New York Times*, built on data from *The Equality of Opportunity Project*

Interactive tool at <https://www.nytimes.com/interactive/projects/college-mobility>

In case you're curious, ★ is CSU-Pueblo, ★ is MSU, Denver, and ● is DU.

Economic Issues 5, Categories of Costs to Students

Costs students bear include

- tuition and fees
- room and board
- personal expenses
- transportation
- books, software, *etc.*

As the first of these has costs has increased rapidly, due to the shift in the cost burden from the state to the student, it has had the predictable consequence for the others.

In particular, how many, do you think, of our students are **food** or **housing insecure** [there are technical definitions of these terms used in social science, but they essentially mean *hungry, or at risk of hunger and unable to pay rent or utilities or needing to move frequently*]?

Economic Issues 6, #RealCollege

We do not know the answer to this question here at CSU-Pueblo!

For the combined student body from a sample of institutions of higher education around the US, this question has been investigated by Sara Goldrick-Rab [formerly of the Wisconsin HOPE lab and now at Temple University] and her team, as part of what they call the #RealCollege Survey.

CSU-Pueblo will participate in the #RealCollege Survey in the fall of 2018, so we will soon know the actual numbers for our campus.

[Please Watch Goldrick-Rab's video
[Campus Matters: Paying the Price.](#)]



Economic Issues 7, Food and Housing Insecurity in the US

The #RealCollege Survey found³ in 2017 that for university students

- 36% were food insecure in the 30 days before taking the survey,
- 36% were housing insecure in the last year, and
- 9% were homeless at some point in that year.

The results for community college students were 20%, 15%, and 3% higher, respectively.

Now ask yourself: if you were a student in debt, [sometimes or often] hungry, and concerned about keeping a roof over your head ... where would your economic priorities be?

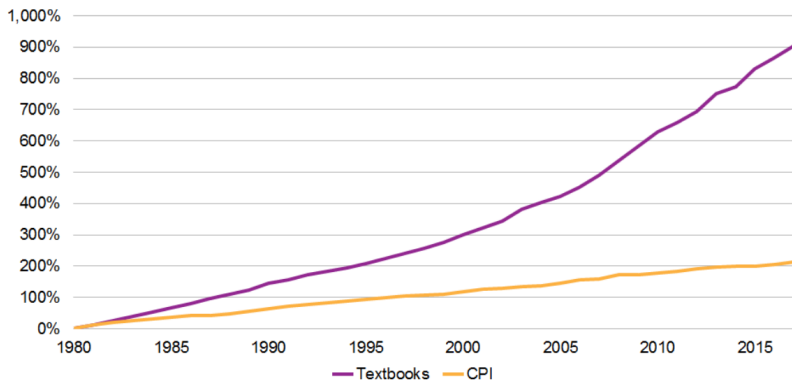
This is all very grim, but maybe mass production has reduced costs, so shouldn't textbooks be nearly free – maybe that's why we talked about *free textbooks* above.

³ *Still Hungry and Homeless in College*, Goldrick-Rab, Richardson, Schneider, Hernandez, and Cady, 2018, on the web [here](#).

Economic Issues 8, Textbook Costs 1

Unfortunately, exactly the opposite is true:

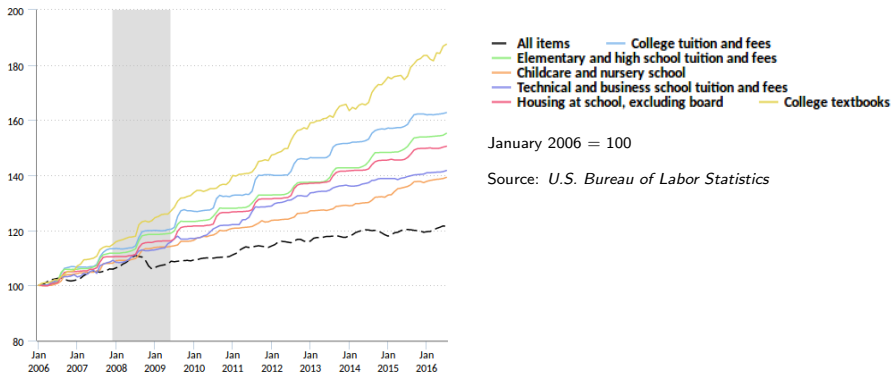
Increase in textbook costs since 1980



Source: U.S. Bureau of Labor Statistics

Economic Issues 9, Textbook Costs 2

Consumer price indices for tuition and school-related items, not seasonally adjusted, January 2006-July 2016



January 2006 = 100

Source: U.S. Bureau of Labor Statistics

<https://www.bls.gov/opub/ted/2016/college-tuition-and-fees-increase-63-percent-since-january-2006.htm>

Economic Issues 9.5, Why Are Textbook Costs Different?

Textbooks are a perfect example of a **market failure** in that the consumer who pays the price for the product is not the person who chooses which product to purchase!

Textbook choice is in the hands of the individual professor (or, sometimes, a group of professors when a course will be taught in several sections) – this is actually an important part of the faculty's academic freedom in the classroom and we should be very cautious about stepping on those toes.

Commercial publishers have an incentive to attract professors to their textbooks, with free instructor's editions, test banks, homework answer books, *etc.*, but little incentive to make prices increase in a reasonable way.

E.g., while there have probably been a number of improvements in the understanding of calculus and how to teach it since the first textbook [by Maria Gaetana Agnesi] was published in 1748, it is hard to believe the improvements in exposition since 1980 truly warrant a 900% increase in price.

Economic Issues 10, Consequences for Students

Studies⁴ have shown that, as a result of these economic realities, students

- make decisions about which courses to take based on the costs of the textbooks;
- take fewer courses because of expensive textbooks;
- do not buy even required textbooks, because of cost, and therefore learn less, do more poorly, and drop out more frequently; and
- take longer to complete degrees because of the obstacle of textbook cost.

A particularly exciting recent study⁵ found that **DFW rates went down by one-third among minority and Pell-eligible students in gateway courses which switched from commercial textbooks to OER.**

⁴ See references in *Report to the Joint Budget Committee and The Education Committees of the General Assembly – Open Educational Resources in Colorado*, Brown-Sica et al., 2017, on the web [here](#).

⁵ *The Impact of Open Educational Resources on Various Student Success Metrics*, Colvard, Watson, and Park, *International Journal of Teaching and Learning in Higher Education* (2018), on the web [here](#).

Economic Issues 11, Conclusion

In summary:

- Grim, soulless neoliberalism has turned higher education from a public to a private good, resulting in a sky-rocketing cost to students.
- Students are in debt, and many are hungry and not confident in their housing situation.
- Textbooks costs are rising **much faster** than essentially all other consumer goods, because of a broken feedback loop in this market.
- As a result, students are learning less, doing less well, dropping out more, and taking longer to finish degrees.
- Switching to OER has large, immediate gains for student success, particular among underrepresented groups.

From the Utilitarian to the Deontological

Perhaps you are put off by all these crass discussions of costs and market mechanisms. You might be reminded that economics is sometimes called *the dismal science*.

You might also turn your eyes away from the social justice issues we've seen are pretty much intertwined with textbook choices. Maybe you prefer to consider the austere beauty of prime numbers, of Dante's Italian, of the history of industrialization in America, or of the music theory of the common practice period.

Let us then give another motivation for the serious consideration of OER which is based on an appeal to more abstract virtues.

The virtue we will now consider is **freedom**, as in **free textbooks**. But here we intend the other meaning⁶ of the word **free** as *unfettered by the control of others* – think of **academic freedom**.

⁶English is sadly impoverished in that it uses one word, *free*, for these quite different meanings.

Scholarly Production Wants to Be Free

Faculty are not used to thinking of their work as being in a marketplace⁷.

We are used to signing over our copyrights on research papers to the journal publishers, who in turn make large profits on subscriptions which they in no way pass on to the article authors.

Scholars do tend to keep the copyrights on their monographs and textbooks, although usually tied up in restrictive contracts.

It is as rare as winning the lottery (or getting struck by lightning) that a book will sell enough to make some serious money for the author.

Scholars mostly seek **impact**, which comes when others use a work in new ways – clearly without first asking permission. We **hope** someone else will take our ideas, with attribution!, and do something amazing.

In this sense, scholarly production wants to be **free, as in speech**, which probably also makes it **free, as in beer**⁸.

⁷ other than “the marketplace of ideas”

⁸ witticism due to Richard M. Stallman

Freedom Includes the Right to Be an Ass, or a Saint

If a professor wants to assign an expensive textbook in a class (and has a good reason to do so) or wants to publish a textbook commercially with the hope of writing the runaway bestseller on economic history, then by academic freedom and scholarly tradition, we should not stand in the way.

But usually, many faculty will be happy to contribute their textbooks, problem banks, software, and other writings to a global intellectual commons, a *Creative Commons*.

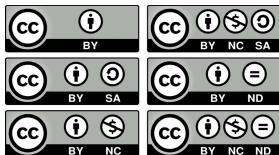
If there were a way to dedicate a creative work to this commons, rather than having it automatically fall into the domain of *all rights reserved* copyrights⁹ – as any work of original expression does as soon as it is fixed in a tangible medium¹⁰ many scholars [and, more widely, artists] would likely do so.

⁹Which I like to think of as *the Land of Mordor, where the Shadows lie*.

¹⁰I assume all academics know a little about copyright law, since it is the main legal domain applicable to our work!

Creative Commons Licenses

The way to bend copyright law to the purposes of the scholarly [and artistic] life is to release works with a **Creative Commons Licenses**:¹¹



Educational resources release with a CC license – well, **not** those two licenses with “ND” – are open to REPURPOSING BY OTHERS, in the words of [HB18-1331](#), and therefore are **Open Educational Resources [OER]**.

OER can be customized, localized, adapted to a faculty member’s own way of teaching, unlike [commercial] textbooks under traditional copyright.

Only OER truly respect an instructor’s academic freedom!

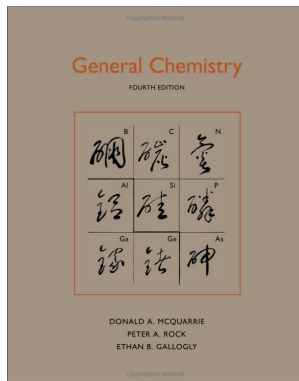
¹¹ see <https://creativecommons.org>

Where Are OER? Some Are In Repositories

Scholars around the world are constantly producing a large variety of OER, which can be found (or lost) in places like:

- web pages
 - for some individual's personal work, e.g.,
<http://www.poritz.net/jonathan/share/>
 - for a particular OER e.g., <http://www.introtoie.com/>
- repositories, including those run by
 - ⇒ universities, e.g., <https://www.csupueblo.edu/library/services/faculty-support/scholarship.html>
 - ⇒ disciplinary organizations, e.g., <https://aimath.org/textbooks/>
 - ⇒ OER-promoting NGOs, e.g., <https://openstax.org/>,
<https://rebus.community/>,
<https://open.umn.edu/opentextbooks/>, etc.
 - ⇒ OER-promoting state offices, e.g.,
<https://www.floridashines.org/orange-grove>

Where Are OER? What If They Were in Classrooms? 1



F2016 at CSUP:

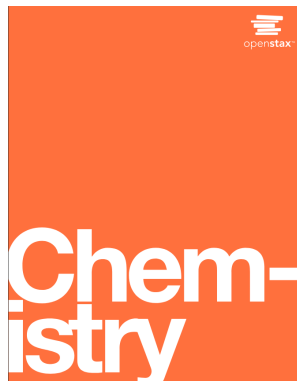
Chem 121

[required text]

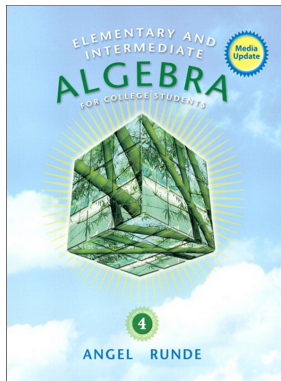
$$\leftarrow \$108 \times 160 \text{ students} \\ = \$17,280$$

[OpenStax alternative]

\$0 →



Where Are OER? What If They Were in Classrooms? 2



F2016 at CSUP:

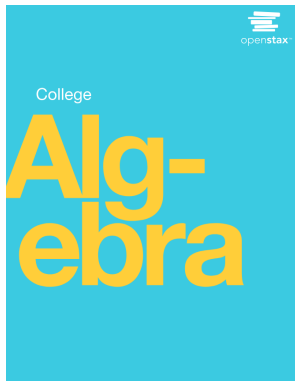
Math 121

[required text]

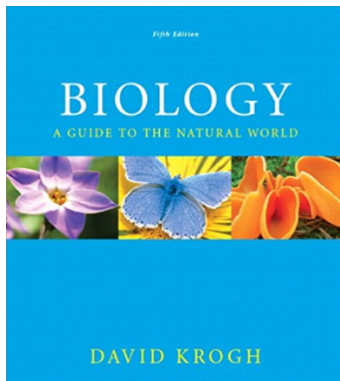
$$\leftarrow \$260 \times 149 \text{ students} \\ = \$38,777$$

[OpenStax alternative]

\$0 →



Where Are OER? What If They Were in Classrooms? 3



F2016 at CSUP:

Bio 100

[required text]

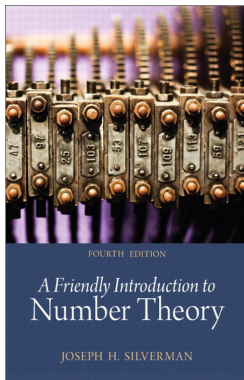
$$\begin{aligned} \leftarrow \$222 \times 142 \text{ students} \\ = \$31,594 \end{aligned}$$

[OpenStax alternative]

\$0 →



Where Are OER? What If They Were in Classrooms? 4



S2015 at CSUP:

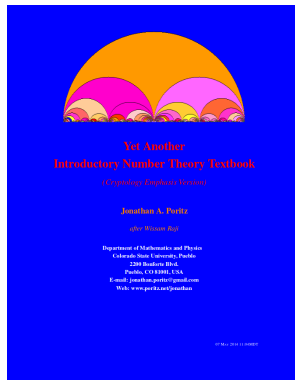
Math 319

[required text]

← $\$109 \times 10 \text{ students}$
 $= \$1,090$

[local alternative]

$\$0 \rightarrow$



How Good Are OER? Perception, Reviews, and the ADA

The short answer is: **as good as commercial textbooks, if not better.**
Some details:

- Studies show no decrease in student performance with OER.
- Studies show students enroll in more credits and complete more quickly when they have access to courses that use OER.
- Faculty perceptions of OER are influenced by a culture of “Free? Don’t you get what you pay for?”
- Some repositories [notably, the [Open Textbook Network’s Open Textbook Library](#)] have peer reviews of their texts, which are very useful.
- There is a lag in disability accommodation in some [many?] OER, it must be admitted.

OER, Internationally

A strong argument can be made that OER are well-situated to address several of the [UN's Sustainable Development Goals](#).

[UNESCO](#) [to which, however, the US no longer belongs] is involved in promoting, and encouraging member countries [alas, not the US] to make more use of, OER. See [this site](#). A formal declaration is in the works....

The [European Commission](#) has some [Policy Recommendations for Opening Up Education](#) in which OER play a central role.

Some transnational NGOs, such as the [Creative Commons](#) [CC] organization, have major efforts in the area of OER, such as CC's *Open Education Platform*, and the training program [Creative Commons Certificate Program](#).

Many countries, such as Canada, the UK, Holland, Uruguay, Bangladesh, Ghana, etc., have strong OER programs. Use your *google-fu* to find out specifics.

OER, Across the US

Some programs at the federal level have started to acknowledge the use of OER.

For example, it seems that support for the creation of educational materials in the future may be aware of OER, in the sense that they encourage building upon existing OER and releasing any new work as OER.

There is also a [quite modest, considering the size of the whole US] grant program specifically to support OER projects in institutions of higher education. Probably this will be insanely hard to get, as there will likely be between one and three awards made, out of \$5million dollars.

See [this site](#) if you want detailed application information.

Many states, such as NY, GA, FL, OR, CA, *etc.*, have quite advanced [and well-funded] OER programs. Again, your *google-fu* is strong, use it, Grasshopper.

OER, In Colorado

The Colorado General Assembly passed SB17-258 in 2017 and it was signed by Governor Hickenlooper on 3 May 2017. That bill created an Open Educational Resources Council to study the use of OER in Colorado's public institutions of higher education and then to make a proposal for a state program to support OER. [I was on that Council.]

The 2017 Council wrote a long report (available [here](#)) which included a detailed proposal that became, with surprisingly few changes, [HB18-1331](#).

Beyond giving the definition of OER with which this presentation started, HB18-1331 creates a new OER Council empowered to promote the use of OER at public institutions of higher education in Colorado. [I'm on this new Council; in fact, I'm its chair.]

The Council will run conferences, build a useful website, and administer a grant program which will have around half a million dollars to disburse in the first year. The CfP will be out in a couple of weeks and applications will be due quite soon thereafter.

OER, At CSU-Pueblo

CSU-Pueblo seeks to have an active program promoting OER. At the moment, this is being organized by a [somewhat informal] committee consisting of

- Elizabeth Christian
- Rhonda Gonzales
- Margie Massey
- Jonathan Poritz
- Leticia Steffen

We intend to have regular events educating our campus community about what are OER, how to use, adapt, and create them, how they may inform new pedagogical methods [there is a very exciting discussion going on in the OER world at the moment about *Open Educational Practices* which build on the affordances of OER], apply for a state grant, and [if we get the grant] disburse its funds to faculty and staff.

Aside on the Need for OER Grants

But why does money need to be spent on OER, if they are, after all, **free**? The answer is that while the individual OER are free, it can take a lot of time to re-construct a course around an OER in place of a commercial textbook you used to use¹², and more time to adapt the OER itself to your course, and even more time to create an entire OER from scratch. Since the OER world is competing with all the gee-gaws and doo-dads that commercial publishers provide with their texts (as they, with their other hand, steal your academic freedom), stipends for faculty and staff, or other forms of support which may have a price-tag, can be useful.

One thing to note, however, is that experience in other states has shown that for every dollar spent on a state-level OER program, the aggregate student body in that state saves \$4 – quite an impressive ROI!

¹²But maybe no more than it would take to switch to a different commercial text, which you might choose to do or be forced to do by a change of edition.

Let Us Be Bold

Whether you are passionate about social justice, student success and persistence, or the abstract joys of academic freedom – or all of those things – OER can be a powerful tool to help achieve your desires.

Therefore, I propose the following as a goal for our campus:

CSU-Pueblo should be, eventually, a default-OER campus, in the sense that students should expect not ever to pay for the educational resources which are required in their classes here, and instead they should expect customized OER to be used in most classes, with many classes also using OER-based Open Educational Practices. Of course, no one wants to trample on academic freedom, so faculty who wanted to use a commercial text or other non-OER could do so, although we should expect that to be rare and only to happen for clearly articulable reasons.

Steps Towards the Bold Goal 1

A number of universities around the world are building to a more OER world by trying to achieve “z-degrees” [or, in the British Commonwealth, “z-creds”]. These are entire degree programs which use only OER. Of course, to allow students to get these degrees, there must also be sufficient gen ed courses which use OER, as well as the disciplinary courses.

We in Pueblo might try to attack both of these categories: some enterprising discipline, which is willing to put in the work to find, adapt, and create OER for all of its required courses, as well as a complete suite of gen ed courses which use OER.

Actually, just to get this started, I’m looking for a few **z-profs**: faculty who will commit to using OER in all of the courses they teach. This requires some education in how to use and adapt existing OER, and perhaps even support if one has to be written largely from scratch.

Steps Towards the Bold Goal 2

One nice thing about deciding to be a **z-prof** is that, if you have tenure, no one – not your chair, your dean, or the provost – can stop you.¹³

If you do not have tenure, the situation is a little more difficult, but with some solidarity it can be done, as well.

For me, personally, this freedom to do the right thing, both for my students and for the abstract principles of academic freedom I so adore, no matter the obstacles that may stand in my way, is one of the chief attractions of OER. I cannot do anything about the neoliberal defunding of public higher ed, but I **can** make a not insignificant reduction in the total cost of being a student, for those students in my class – all why enabling me to improve my pedagogy in that class.

In short, I assert that I am a **z-prof** and that it is good.

¹³At least, that's how I understand academic freedom to apply to the choice of textbooks.

Questions, Comments, and Contact Info

Questions? Comments?

If any occur to you later, feel free to contact me

jonathan.poritz@csupueblo.edu [or jonathan@poritz.net]

or anyone else on the CSUP Ad-hoc OER Committee.

These slides are available¹⁴ at <http://poritz.net/j/share/OER4CW18>

¹⁴for reuse under a Creative Commons license, of course!