



# The Freedom to Teach

Using open educational resources in  
your courses.

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Except where otherwise noted.

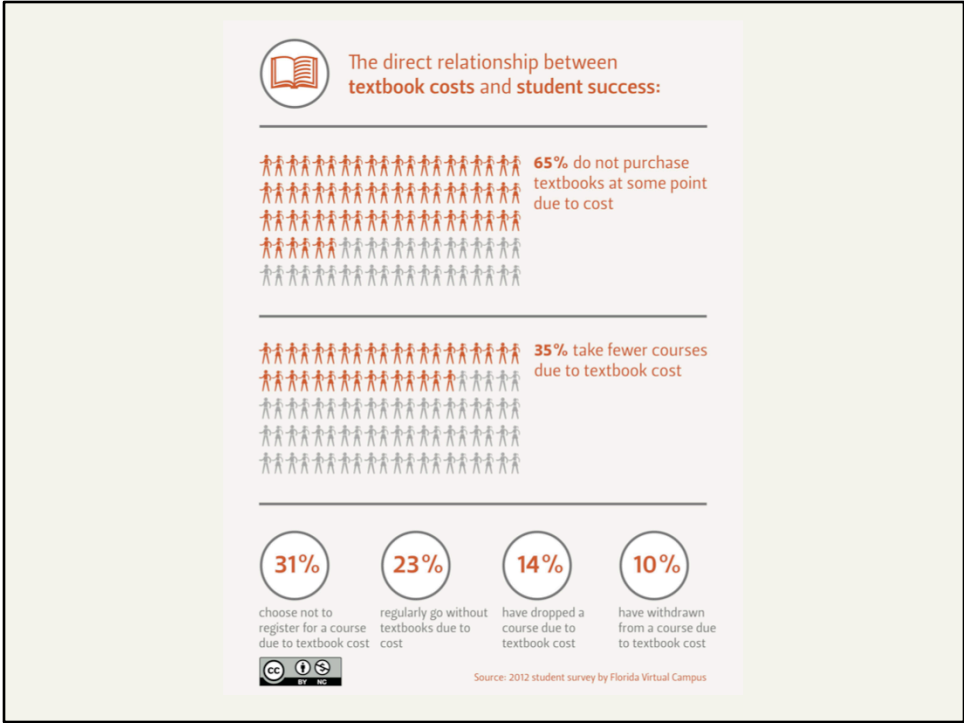
What does the term “Open Educational Resources” mean to you? What does it encompass?

Who here has already experimented with using open content in your courses? What did you do?

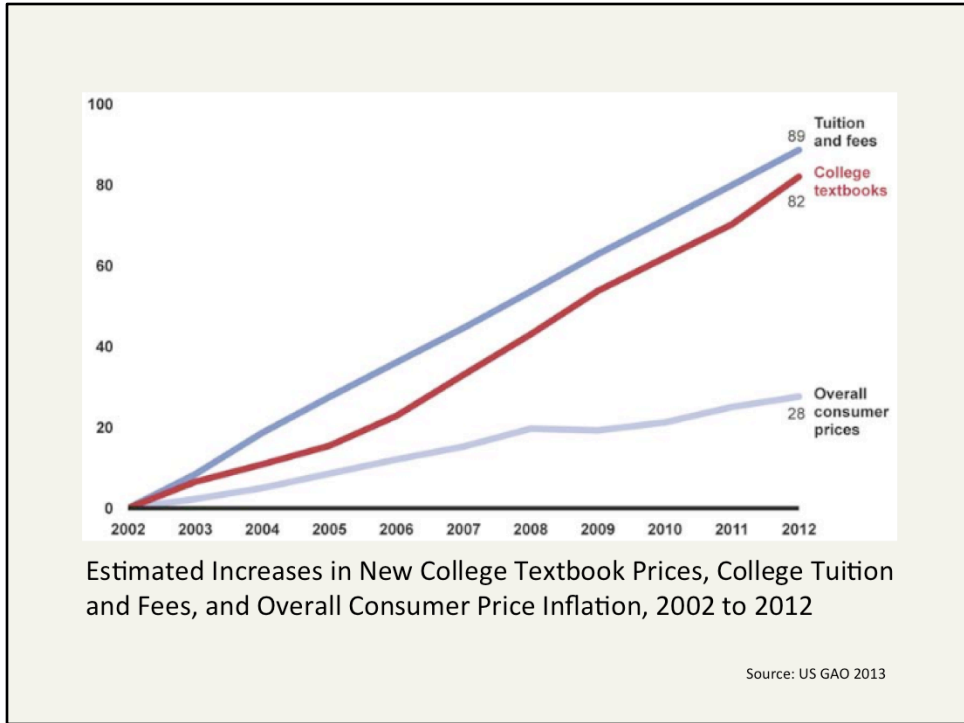
“...teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. OER include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.”

Source: Hewlett 2013

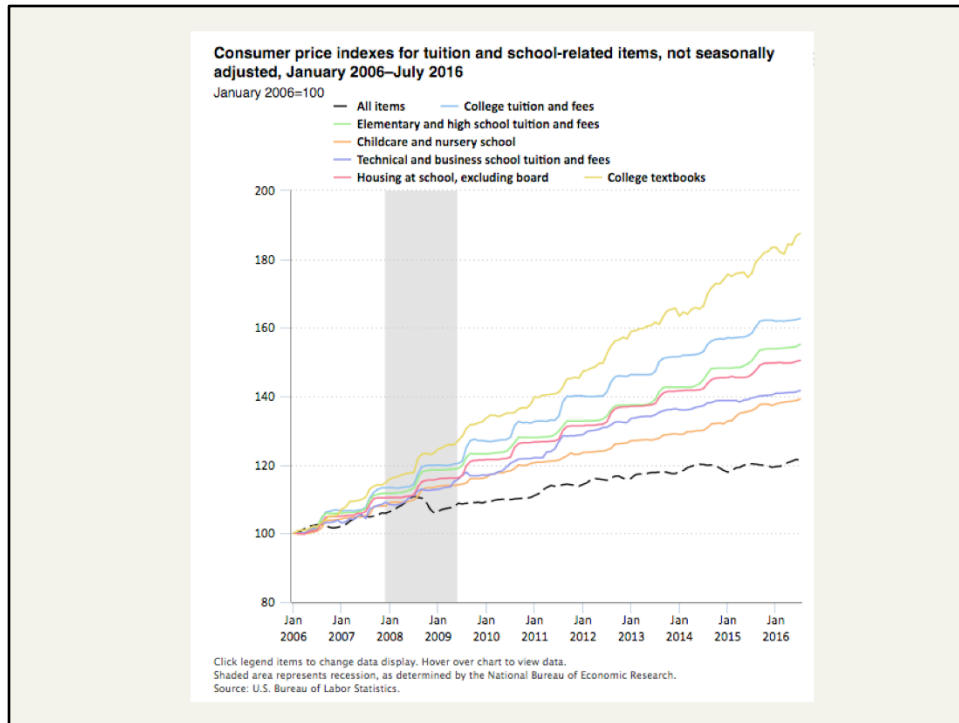
William & Flora Hewlett Foundation (2013) quotation.



Data from 2012 Florida Virtual Campus survey. Sample size 22,129 post-secondary students.



“...new textbook prices increased by a total of 82 percent over this time period, while tuition and fees increased by 89 percent and overall consumer prices grew by 28 percent.” from <http://www.gao.gov/assets/660/655066.pdf>



Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, College tuition and fees increase 63 percent since January 2006 on the Internet at <http://www.bls.gov/opub/ted/2016/college-tuition-and-fees-increase-63-percent-since-january-2006.htm>.

The Consumer Price Index (CPI) is a measure of the average change in prices over time of goods and services purchased by households

## Preliminary OER research indicates. . .

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- Gen ed textbook costs average \$90.00/bk
- Total cost of textbooks may exceed total tuition cost
- Students may be forced to choose between buying textbooks and taking fewer classes
- The use of OER has not negatively impacted student learning
- Free textbooks reduce barriers to academic success

Sources: Fischer et al. 2015  
Hilton 2016

Average textbook costs range from \$90 to as high as \$140.00 depending on the program or major. New editions of textbooks are generally issued every 3-4 years.. Studies to date report that students find OT to be as good as, if not better than, traditional textbooks, with student learning outcomes reported as the same or better. But more research needs to be conducted before the efficacy of OER can be accurately assessed.

Fischer, L., Hilton, J., Robinson, T.J. et al. J Computing in Higher Educ (2015) 27: 159. doi:10.1007/s12528-015-9101-x  
Hilton, J. Education Tech Research Dev (2016) 64: 573. doi:10.1007/s11423-016-9434-9

**Why are you interested in exploring  
open educational resources?**

Saving students money, frustration with limitations of traditional texts, curiosity, collaborative teaching, university goals?

## Free textbook impact on Mason students

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One free textbook for each 22,304  
degree-seeking undergraduate  
(Fall 2015)

Savings = ~**\$2,007,360**

Using fall 2015 enrollment figures, if each degree-seeking undergraduate student at Mason were to be assigned one free textbook, the result would be a potential savings of \$2,007,360 (using the \$90/txtbk figure). However, this does not take into account costs associated with finding open content, course design or redesign, or regularly updating the content, etc., but even with acknowledgement of that investment the savings are powerful.



## Creative Commons Licenses

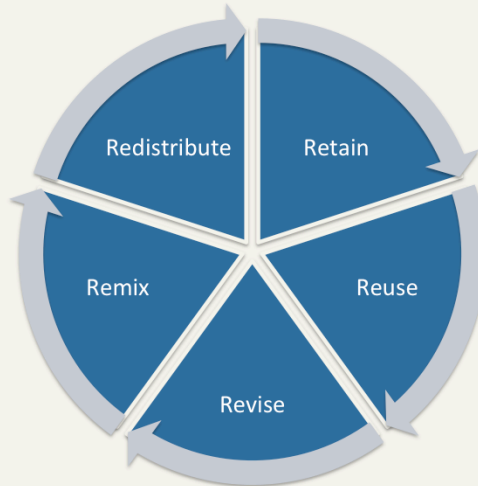
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## The 5Rs

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Source: Wiley, <http://opencontent.org/definition/>

What do you want to be able to do with this content and what does the CC license allow? David Wiley (OER guru) states that these features are desired, if not critical: Retain - the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)

Reuse - the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)

Revise - the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)

Remix - the right to combine the original or revised content with other material to create something new (e.g., incorporate the content into a mashup)

Redistribute - the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend)

## Technical Framework for Open Content

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- Access to editing tools
- Level of expertise required
- Meaningfully editable
- Self-sourced

Source: Wiley, <http://opencontent.org/definition/>

[ALMS] are based on the format of the open material in terms of reusing existing OER and creating new OER: Access to Editing Tools: Is the open content published in a format that can only be revised or remixed using tools that are extremely expensive (e.g., 3DS MAX)? Is the open content published in an exotic format that can only be revised or remixed using tools that run on an obscure or discontinued platform (e.g., OS/2)? Is the open content published in a format that can be revised or remixed using tools that are freely available and run on all major platforms (e.g., OpenOffice)? Level of Expertise Required: Is the open content published in a format that requires a significant amount technical expertise to revise or remix (e.g., Blender)? Is the open content published in a format that requires a minimum level of technical expertise to revise or remix (e.g., Word)? Meaningfully Editable: Is the open content published in a manner that makes its content essentially impossible to revise or remix (e.g., a scanned image of a handwritten document)? Is the open content published in a manner making its content easy to revise or remix (e.g., a text file)? Self-Sourced: Is the format preferred for consuming the open content the same format preferred for revising or remixing the open content (e.g., HTML)? Is the format preferred for consuming the open content different from the format preferred for revising or remixing the open content (e.g. Flash FLA vs SWF)?

## Current barriers to OER adoption

- Limited (but growing) pool of high-quality materials
- Little knowledge about what's available
- Few resources at the campus level for faculty who want to adopt/adapt open materials
- Limited or no state and national legislative investment to spur innovation

Source: CPIR 2014

Greater start-up investment, at the institutional, state and federal levels, is needed to create, develop, & sustain OT.

Center for Public Interest Research, Inc., Student PIRGs (2014). Fixing the broken textbook market: how students respond to high textbook costs and demand alternatives. Retrieved from <http://uspirg.org/sites/pirg/files/reports/NATIONAL%20Fixing%20Broken%20Textbooks%20Report1.pdf>.



Prof. Jane Rosecrans from Reynolds CC speaks (Blackboard templates are password protected and inaccessible to view).

## Looking for content

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- See the resources at  
<http://publishing.gmu.edu/communication/open-educational-resources/>
- Find materials in the public domain via  
<http://openculture.com>  
<http://gutenberg.org>  
<https://archive.org/details/texts>  
<http://search.creativecommons.org>

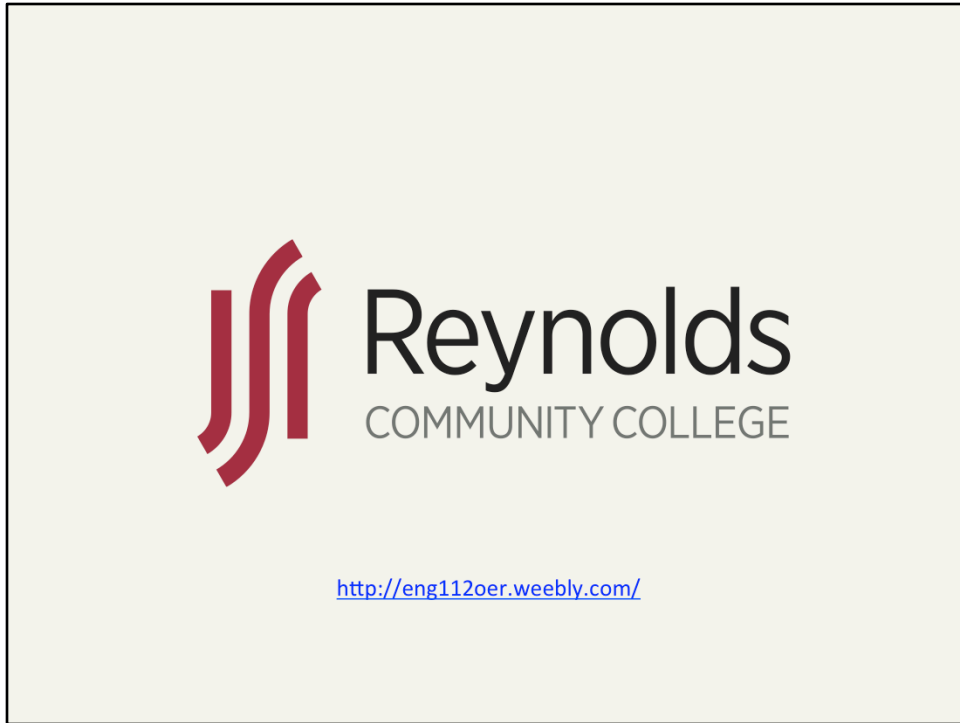
These are all open resources. Cut and paste URL, if necessary.

## Licensed content via George Mason University Libraries

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- Databases by subject or title  
<http://infowiz.gmu.edu/dbs/subjects/index.php>
- eBooks  
<http://infoguides.gmu.edu/ebooks>
- Videos  
<http://infoguides.gmu.edu/mediaservices>

How does proprietary content fit into an OER initiative? Material available through library subscriptions is already paid for and, therefore, “free” to students. The downside is, this content is not accessible outside the Mason community unless it’s purchased by a user. Infoguides or libguides compiled by academic librarians are typically open to anyone who has Internet connectivity.



Prof. Karyn Pally from Reynolds CC speaks (link provided to open website).





Prof. Ioulia Rytikova from George Mason speaks about slides 18-22.

# Department of IST

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Information Sciences and Technology (IST)  
department in Volgenau School of Engineering:

- Undergraduate, Graduate, PhD programs
- Over 1,500 students
- About 70% of students transfer from community colleges
- Most IST students pay for their education themselves



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## Personalized Learning

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Personalized learning and mentoring is often viewed as one the most effective methods in student learning, helping not only a less proficient student significantly improve and cover his/her gaps, but also a talented student further immerse in advanced academic topics.

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## OER at IST: Pros

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Two graduate courses on Big Data Analytics (2014 – 2016):

- Perfect fit due to the nature of the courses
- Improved knowledge synthesis skills
- Higher level of personalization
- Customized course completion
- Increased course adaptability

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## OER at IST: Cons (cont.)

Two graduate courses on Big Data Analytics (2014 – 2016):

- Increased course development time
- Temporary nature of some resources
- Inconsistency in OER learning resources
- Sense of an overwhelming amount of materials to study

## Next Challenge

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Incorporating OER to support undergraduate research

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## Mason's 4-VA OER pilot

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- 11 projects
  - ~37 faculty involved
  - Awards \$2,000 to \$8,000
  - 11 individual courses
  - 3 programs or large enrollment courses
- ✧ Initial investment –  
~\$45,000
- ✧ Potential student savings –  
~\$1,370,000

In February 2016, Mason's Associate Provost of Undergraduate Education earmarked \$50,000 of 4-VA funds (an allocation from the State of Virginia to George Mason & other public universities) for a mini-grants program entitled "Course Redesign Using Open Educational Resources." Projects funded encompass courses in the humanities, sciences, and orienting international students to American graduate studies.



## A strategy for getting started. . .

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- 1) Decide whether you want to look for open content used by others in your discipline? Use an existing open textbook? Or create your own materials?
- 2) Contact your subject librarian for assistance with finding open content that meets the 5Rs. Don't forget, subscription material is "free" to your instructors and students.
- 3) Find content that supports your pedagogy & student learning outcomes. Work with an Instructional Designer, if needed, to align them.
- 4) Identify a rubric to use when reviewing quality (e.g., <http://open.umn.edu/opentextbooks/ReviewRubric.aspx>).

## Strategy (cont'd)

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- 5) Edit materials, as needed. Seek technical help when there are obstacles.
- 6) Address student accessibility at the outset. Your institution's Accessibility office will assist, if needed.
- 7) Deliver your content via any LMS platform (Mason uses Blackboard) or website.
- 8) Create open content assessment forms for your students to complete at the conclusion of a course.
- 9) Build in time to update or tweak content annually.
- 10) SHARE!! Use the OER Commons and your institutional repository (e.g., MARS) to preserve your content and make it available to others.

## Sources

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Slide 2: William and Flora Hewlett Foundation. (2013). *Open educational resources*.

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

Slide 3: Florida Virtual Campus. (2012). *2012 Florida Student Textbook Survey*. Tallahassee, FL.

[http://www.openaccess textbooks.org/%5Cpdf%5C2012\\_Florida\\_Student\\_Textbook\\_Survey.pdf](http://www.openaccess textbooks.org/%5Cpdf%5C2012_Florida_Student_Textbook_Survey.pdf)

Slide 4: U. S. Government Accountability Office, Report to Congressional Committees (2013, June).

*College Textbooks: Students have greater access to textbook information*. Report No. GAO-13-368.

<http://www.gao.gov/assets/660/655066.pdf>

Slide 5: Bureau of Labor Statistics, U.S. Department of Labor, *The Economics Daily*, College tuition and fees increase 63 percent since January 2006 on the Internet at

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

Slide 6: Fischer, L., Hilton, J., Robinson, T.J. et al. A multi-institutional study of the impact of open textbook adoption on the learning outcomes of post-secondary students. *J Comput High Educ* (2015) 27: 159. doi:10.1007/s12528-015-9101-x.

Hilton, J. Open educational resources and college textbook choices: a review of research on efficacy and perceptions. *Education Tech Research Dev* (2016) 64: 573. doi:10.1007/s11423-016-9434-9.

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<http://uspirg.org/sites/pirg/files/reports/NATIONAL%20Fixing%20Broken%20Textbooks%20Report1.pdf>.