Owls Learn OER

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Introduction To This Course

Welcome to *Owls Learn OER*! Your learning includes a series of self-paced online learning modules. The seven modules can serve as an introduction to open educational resources (OER) as well as an opportunity for further exploration and discovery of OER and open education practices. Throughout the modules there are opportunities for you to test your knowledge or further explore a concept. The modules allow you to learn at your own pace. While you can follow the modules in any order, it is recommended that you start with Module 1 and progress through in order.

By the end of this course, you should be able to:

- Define Open Educational Resources
- Explain the rationale for OER adoption and use
- Explain the differences between the six currently available Creative Commons licenses
- Identify repositories and other resources for finding relevant OER
- Use tools and criteria to evaluate OER
- Recognize steps and associated criteria for adapting and creating OER with proper attribution and licensing
- Create an open educational resource

If you have questions about, or suggestions for, these modules, please contact:

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Attribution

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Course Module Outline

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Module 1: Understanding OER

By the end of this module, you should be able to:

- Define Open Educational Resources (OER)
- Describe the 5Rs of OER
- Identify examples of OER types
- Recognize the role open licensing plays in OER
- Test your knowledge

Introductory Video: What is OER?

What are Open Educational Resources (OER)?

Open Educational Resources (OER) are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. --UNESCO

Types of OER include (but are not limited to) syllabi, lesson plans, learning modules, lab experiments, simulations, course videos, discussion prompts, assignments, assessments, library guides, and course design templates.

The key distinguishing factor of this type of educational resource is the copyright status of the material. If course content is under a traditional, all-rights-reserved copyright, then it's not an OER. If it resides in the public domain or has been licensed for adaptation and distribution, then it is an OER.

The 5 Rs of OER

You recently viewed the introductory video where the presenters discussed how the 5Rs are critical in defining and distinguishing open educational resources from other types of learning materials. These 5R permissions are what make OER different from material which is copyrighted under traditional, all-rights-reserved copyright. Another way to frame this is that *open* in open educational resources doesn't simply equate to being *free*; in fact, it more accurately can be described as:

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open = free + permissions (the 5Rs)

The 5Rs are a useful way to appreciate the value of OER. These permissions help you, the user of openly licensed content, understand what you are allowed to do with the work. These permissions are granted in advance and are legally established through Public Domain or Creative Commons license:

- **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)
- **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)

- **Retain** – the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)

- **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)

Open Licensing & OER

Going back to our definition of OER, we need to remember that these materials reside in the public domain or have been released under an intellectual property license permitting their free use and repurposing by others.

The most commonly used intellectual property licenses for OER that permits free use and re-purposing are called Creative Commons licenses. Creative Commons licenses work with legal definitions of copyright to automatically provide usage rights pertaining to that work.

As you progress along your learning journey, Module 3 and Module 6 will provide you with the opportunity to fully explore Creative Commons licensing and to learn how to apply the appropriate licenses to the OER you and your learners create and use.

A (Very) Brief History of Open Educational Resources

- 1994 - Wayne Hodgins coined the term “learning object”
- 1998 - David Wiley coined the phrase “open content”
- 2001- Larry Lessig, Hal Abelson, and Eric Eldred founded Creative Commons
- 2001 - MIT introduced their OpenCourseWare project (MOOCs)

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- 2002 - UNESCO coined the term "Open Educational Resources" (OER).
- 2012 - UNESCO adopted the 2012 OER Paris Declaration, an international commitment to OER
- 2019 - UNESCO updates their definition of OER, creating conversation within the open community about the impact of this change on the ability to reuse OER

This movement continues to gain momentum, and the community of open education practitioners continues to expand. Educators around the world are increasing their use and creation of these resources in their teaching and learning.

Explore Further

Want to learn more about the history of OER?

Bliss, T. J. and Smith, M. (2017). A Brief History of Open Educational Resources. In: Jhangiani, R S and Biswas-Diener, R. (eds.) *Open: The Philosophy and Practices that are Revolutionizing Education and Science. (*pp. 9–27). London: Ubiquity Press. DOI: https://doi.org/10.5334/bbc.b (Links to an external site.).

Wiley, D. (2020, January 16). Clarifying and Strengthening the 5Rs. *Iterating Towards Openness: Pragmatism Before Zeal.* https://opencontent.org/blog/archives/6271

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Module 2: Why OER?

By the end of this module, you should be able to:

- Articulate motivations for OER adoptions and use
- Describe the benefits of OER for students
- Describe the benefits of OER for faculty
- Explore further benefits OER supports, such as equity and inclusion

Understanding the *why* behind adopting OER

Before we discuss the benefits of OER in detail, please take a few minutes to watch the video below. It reviews the definition of OER and provides a broad overview of why OER is an effective solution in addressing student barriers to high-quality learning materials. The video also provides examples of how faculty can use OER to enhance their teaching and improve student learning.

An Introduction to Open Educational Resources

You'll notice that this module contains many external links to additional readings on the impact and benefits of OER. Take the time to read these resources to explore further the concepts and points presented in this module.

Why use OER?

OER supports a future where students and instructors have free access to a wide variety of high-quality educational resources that have been collaboratively developed, reviewed, revised, and shared across institutions. A future where educational resources can be easily adapted to fit within the context of specific courses, and to meet the needs of specific students. A future where the cost of creation, use, and maintenance is much lower than the current rising costs of textbooks and other classroom resources.

The Scholarly Publishing and Academic Resources (SPARC) summarizes the *why* behind using OER with these four points:

- Textbook costs should not be a barrier to education
- Students learn more when they have access to quality materials
- Technology holds boundless potential to improve teaching and learning
- Better education means a better future

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Benefits for Students

Using OER can both provide tremendous cost savings for students and impact student success and completion rates. The cost of textbooks can be a huge financial burden on students, which not only affects student success, but could also delay graduation for students who are taking fewer classes per term because of that cost, further increasing financial costs for students over time. OER provide students with day-one access to free course materials, and research reviewed by the Open Education Group shows that most students perform as well or better using OER course materials compared with students using traditional textbooks.

When faculty use OER, we aren't just saving students money on textbooks: we are directly impacting that students' ability to enroll in, persist through, and successfully complete a course. ~ Jhangiani & DeRosa

The Florida Virtual Campus' 2016 and 2018 Student Textbook and Course Materials Survey demonstrates that the cost of commercial textbooks continues to negatively impact student access, success, and completion.

Benefits for Faculty

Imagine being able to edit, modify, update, and improve your course materials so the learning outcomes are met and the course material's content is "exactly the way you want it." OER allows for this!

Faculty using OER enjoy great freedom in selecting course materials that they customize to fit the specific needs of their students and the goals of their classes. Since most OER permit adaptation, educators are free to edit, reorder, delete from, or remix OER materials. OER provide clearly defined rights to users, so educators are not faced with interpreting Fair Use and TEACH Act guidelines.

Open educational resources also provide increased opportunities for faculty to engage in open pedagogical practices with their students. As mentioned above, students play a vital role in OER. Student involvement also creates effective and successful open education programs at your institution. Open pedagogy focuses on instructional approaches which allow students to use, reuse, revise, remix, and redistribute open content. In other words, students move from knowledge consumers to knowledge creators. The ability for students to engage more actively with the OER is a key pedagogical benefit for faculty and students - one that commercially published copyrighted course materials do not provide. To explore the power of open pedagogy further, take a look at the recent publication Open Pedagogy Approaches: Faculty, Library, and Student Collaborations. This comprehensive collection is full of practical tips, ideas, and inspiring stories for faculty.

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Other key benefits to faculty include:

Use, Improve, and Share

- Save time and energy by adapting or revising resources that have already been created
- Tailor resources to fit specific context within your courses and research
- Expand interdisciplinary teaching by integrating resources from multiple disciplines

Network and Collaborate with Peers (professional development considerations)

- Access educational resources that have been peer-reviewed by other experts in your field
- Explore reviews and annotations that provide more in-depth knowledge of the resource
- Collaborate on creating new resources that can be used within or across disciplines

Lower Costs and Improve Access to Information

- Reduce the cost of course materials
- Enable all students to have equal access to course materials
- Provide students with the opportunity to explore course content fully before enrolling

OER: Equity & Openness

When discussing open educational resources and exploring their use and benefits, remember that access and equity are not the same.

This video explores how equity intersects with open education:

Equity in Open Education

The video above references challenges to OER, such as inequitable access to technology and resources among students and institutions. In addition to this barrier, there are other challenges related to equity in open educational resources. While open educational resources and open practices present opportunities to create and share diverse and inclusive resources, inequities in OER exist. For example, the open community is lacking in diverse voices who author OER. There also are known difficulties finding openly licensed content that is culturally relevant and inclusive. Representation matters and there is work to do in this area!

The Community College Consortium for Open Educational Resources (CCCOER) has collected resources and articles exploring OER through the lens of equity, diversity, and inclusion. These resources are included (and continue to expand) on their Equity & Openness blog.

As you learn more about OER, consider how open education practices and the use of OER can enhance your own teaching practices and learning materials to become more equitable, diverse,

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and inclusive. As an OER champion, work consciously to resolve the known inequities that exist in open educational resources. Make them truly culturally relevant, inclusive, and representative.

...OER provide a unique opportunity for educators to access learning materials, and then tailor them to the specific needs of their classroom. This is particularly important for teaching diverse groups of students. Where culturally-responsive curriculum redesign must include funding to print textbooks that often fail to reflect student diversity and quickly become outdated, OER could instead be used to give students access to high-quality learning materials that educators could then continue to adapt as understandings of student needs and identities change. ~ Prescott, S., Muñiz, J. & Ishmael, K.

Explore Further

Additional research and videos discussing the impact and benefits of OER for faculty and students are linked below.

Colvard, N., Watson, C. & Park, H. (2018) The Impact of Open Educational Resources on Student Success Metrics. International Journal of Teaching and Learning in Higher Education, 30 (2), 262-276.

Grimaldi PJ, Basu Mallick D, Waters AE, Baraniuk RG (2019) Do open educational resources improve student learning? Implications of the access hypothesis. PLoS ONE 14(3): e0212508.

Hilton, J. (2016) Open educational resources and college textbook choices: a review of research on efficacy and perceptions. Education Tech Research and Development, 64(4), 573 – 590.

Reynado, Kharl. (2018, October 11) OER Diversity Discourse: Bring in the Student Advocates

OpenStax Blog.Vézina, B. and Green, C. (2020, March 31) Education in Times of Crisis and Beyond: Maximizing Copyright Flexibilities. Creative Commons Blog.

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Module 3: Introduction to Open Licensing

By the end of this module, you should be able to:

- Define an open license
- Distinguish between materials that are all rights reserved, in the public domain, and openly licensed
- Identify the four factors of fair use

Did you realize these course modules are an OER? Do you want to reuse the content, modify it for your students or colleagues? Guess what … you can...with attribution of course!

You'll learn more about reusing open content and explicit open license permissions, such as attribution, in Module 6. However, understanding what makes it possible for you to reuse, modify, and reshare this work is the first step. These activities are legal because when it was created the author released it with an open license. When discussing open licensing it is also necessary to review definitions of important terms and legal requirements of laws and principles applied to a creator's work and how it can be used or reused. In addition to introducing and defining open licenses, this module will review and define copyright, fair use, and public domain.

What is Copyright?

Copyright is a legal right, grounded in the U.S. Constitution, that gives the owner of copyright the exclusive right to:

- Reproduce the work
- Prepare derivative works
- Distribute the work
- Publicly perform the work
- Publicly display the work
- Authorize others to exercise some or all of those rights

Copyright takes effect immediately once a work has been fixed in tangible form--registration is optional and not necessary.

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What is Fair Use?

Start with an overview of fair use by viewing this short video:

Fair Use in Seven Words

Fair use is a copyright principle based on the belief that the public is entitled to freely use portions of copyrighted materials for purposes of commentary and criticism. Whether or not a specific use falls under Fair Use is determined by four factors:

- the purpose and character of your use
- the nature of the copyrighted work
- the amount and substantiality of the portion taken, and
- the effect of the use upon the potential market

These factors are weighed in each case to determine whether a use qualifies as a fair use.

To learn more about Fair Use, please see Fondren Library's Copyright and Fair Use Guide.

Recognizing the differences between how copyrighted material and openly licensed or public domain material can be reused and shared legally, allows for a comprehensive understanding of Fair Use.

Understanding an open license

In Module 1 you learned that an open educational resource is either in the public domain or released with copyright permissions which allows for free use and repurposing by others. Specifically, an open license exists as a way for the original creator to clearly inform others how their work can be used by granting permissions to share and adapt their work. A Public Domain license and the variety of open license permissions known as Creative Commons (CC) are the predominant standards for open licenses. You will learn more about the six different CC license permissions in Module 6.

This video provides more information about the benefits of an open license and how this standard makes sharing and reusing resources easy:

Understanding an open license

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Why is an open license important?

It is the copyright status and license applied to a work which determines what you can and cannot do with the creative work of someone else. Knowing how to identify and differentiate between common types of copyright status will be useful when determining which content you may reuse, and how. One should assume that a work is all rights reserved, unless the creator explicitly states otherwise or the user of the work can prove it differently.

As you search for OER, you will become familiar with the markings of each license type.

What is the Public Domain?

A public domain work is a creative work that is not protected by copyright, which means it's free for you to use without permission. Works in the public domain are those for which intellectual property rights have expired, have been forfeited, or are inapplicable.

Here are some examples of works in the public domain:

- Material created by the US Government, such as pictures taken by NASA
- Materials for which Copyright Protection has lapsed, such as "New Hampshire" by Robert Frost
- Works released to the public domain when they were created, such as images on Pexels

Determining if a work is in the public domain can be difficult because the terms of copyright protection in the United States have changed over time. The Cornell University Library Copyright Information Center is a useful tool for understanding what works might fall into the public domain. Fondren Library staff are also available to help determine copyright status. Email Digital Scholarship Services at cds@rice.edu.

What is the difference between public domain and open license?

They both grant free access to the materials, but the scope and nature are completely different.

Open licensing does recognize clear ownership of intellectual property and the work is still protected under copyright law, whereas works in the public domain are not protected by copyright law. Therefore, users are required to follow the license requirements when using openly licensed materials.

The infographic below illustrates the differences between public domain, open license, and all rights reserved copyright. Public domain is "most open" because the work is out of copyright or copyright has been waived. The copyright owners retain copyright for open licenses and "All

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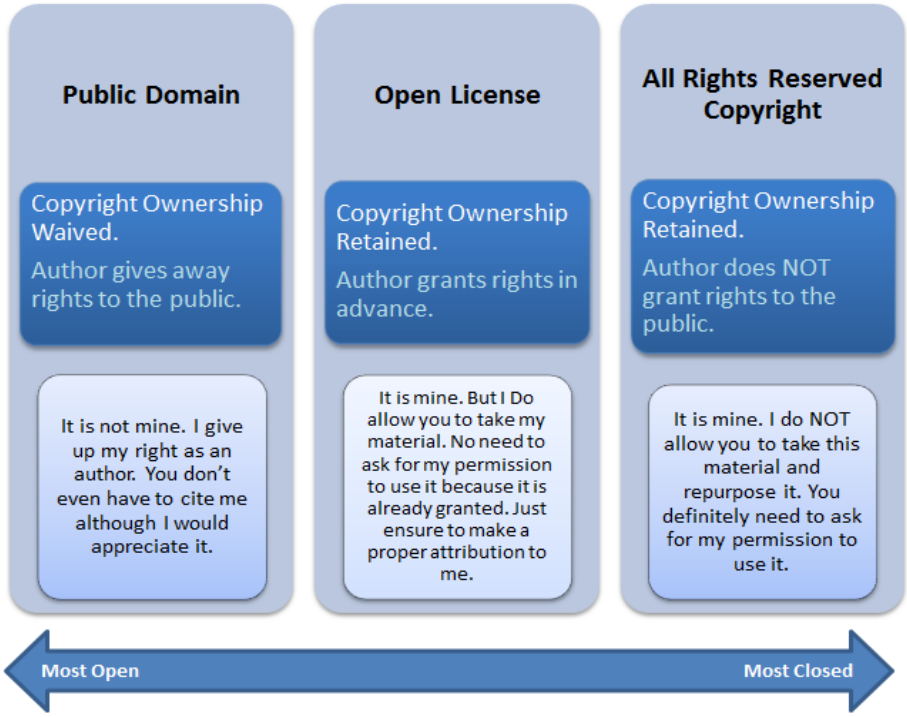
Rights Reserved" copyright. However, open licenses grant specific uses to the user in advance. "All Rights Reserved" requires users to either request permission for each use or ensure that their use is considered Fair Use or other copyright exception.



"Difference between open license, public domain and all rights reserved copyright" by Boyoung Chae is licensed under CC BY 4.0

Why Open Licensing Matters

The power of open licensing lies in its ability to clearly communicate how the creator intends the work to be used. A creator can explicitly share the work and control the licensing provisions while retaining ownership. Remember, for a work without a copyright notice, all rights reserved is assumed. So if you want to openly share your OER with your students and faculty peers, or publish it online for the world to access, displaying an open license statement with the work ensures it will be easily and clearly adopted in the way you intend.

In Module 6 you will spend more time learning about Creative Commons licenses.

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Module 4: Finding & Evaluating OER

By the end of this module, you should be able to:

- Recognize the different types of OER
- Apply effective search strategies when looking for OER
- Identify several online repositories for OER
- Utilize other OER search tools available
- Investigate the available reuse options for OER - adopt, adapt, combine and create
- Identify perspectives on evaluating and defining ‘quality’ as it relates to course materials
- Utilize relevant rubrics for evaluating OER

Modules 1-3 provided you with a solid introduction to various aspects of open educational resources such as the benefits to using OER, the 5R Framework, and open licensing. In this module, you will apply what you now know about OER and start finding the variety of open resources available to you. Through this module, you will be exposed to a variety of search strategies used in locating and finding relevant OER, and you will explore some of the more useful online repositories and sites which host OER.

Finding OER

By the end of this module section, you should be able to:

- Recognize the different types of OER
- Apply effective search strategies when looking for OER
- Identify several online repositories for OER
- Utilize other OER search tools available

Recognizing different types of OER

Remember, OER refers to educational materials that include permission for anyone to use, modify and share. In its simplest form, the term open educational resource describes any educational resource (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that have been designed for use in teaching and learning) that is openly available for use by educators and students, without an accompanying need to pay royalties or license fees.

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Materials that are not in the public domain or are not released under a license that allows anyone to copy, adapt and share them, are not open educational resources. An example of this would be resources only available through institutional library subscriptions such as ebooks, online articles, and streaming media. You can use these materials only within fair use provisions or copyright exceptions.

What are you looking for?

Perhaps the most useful first step when searching for OER is knowing what you are looking for. Are you seeking OER video lectures that discuss Microeconomics? Alternatively, are you looking for a full OER course on Psychology? If you can narrow your search to a particular topic and have an idea of the types of OER content you are seeking, your search will be much easier.

As you begin your search for relevant open educational resources, take a few pre-planning steps before diving into the various search tools available. For a moment, put yourself in the shoes of your students when they are asked to research a topic for a paper. They **identify** a topic, outline keywords, plan their search strategy, **compile** relevant resources, and **evaluate** their results. Your search for OER won't be very different from this approach. Below is a great list of questions to ask yourself BEFORE you begin your search.

- What sparked your interest in OER?
- What type of OER are you looking for? A textbook? A video? A set of lesson plans?
- Identify Course Objectives, Topics, & Outcomes the OER will need to cover.
- List what you like (or love) about your current course materials.
- List what you don't like about your current course material.
- Think about the effectiveness of the textbooks and course materials.
    - Rank your top 5 elements (Are they current? Accurate? Cover course outcomes? Professionalism?)
- Have you used any open educational resources before? If yes, make a list.

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Once you've answered the above questions, you'll have a better sense of where to start your search for OER.

Where do you look for OER?

There are billions of openly licensed resources out there; it is easy to feel overwhelmed when trying to find relevant resources. This video provides a nice overview of some of the more common search repositories and tools for finding OER:

How to Find and Evaluate OER

Searching OER Repositories

Searching an OER Repository can result in a faster and more productive search experience since the resources have been curated and organized into various categories including discipline, format, and open license. Many repositories have either peer reviews or a rating scale where users have shared their perception or experience with the resource. Start by trying OER Commons:

- OER Commons - the go-to repository if you are looking for supplementary resources from lesson plans to full courses. Due to the amount of material in OER Commons, they provide many options for limiting and filtering your searches such as discipline, material type of OER, format, education level and more. Use their Advanced Search features to your advantage to fine-tune your results.

A list of additional OER repositories can be found on Fondren Library's OER Research Guide.

Searching for Open Textbooks

If you are looking for an open textbook to replace your current, commercial textbook, start by visiting the two resources listed below:

- Open Textbook Library - supported by the Open Textbook Network at the University of Minnesota, available resources include mainly college-level open textbooks. The repository includes faculty peer reviews, licensing information, a summary of content, format availability, and direct links to resources. It can be searched by keyword or by browsing discipline areas.

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- OpenStax - A nonprofit educational initiative based at Rice University, publishes high-quality, peer-reviewed , openly licensed college textbooks that are freely available online and low cost in print.

Using Search Tools to Find OER

Google Advanced Search

https://www.google.com/advanced_search

Google is a popular and common search tool we all use daily, but you may not be aware of its advanced search features. The **Google Advanced Search** allows you to filter results by usage rights, but it does not offer a list of licenses to search by (e.g., Creative Commons).

Mason OER Metafinder (MOM)

https://mom.gmu.edu

This utility from George Mason University Libraries searches 16 OER repositories at once. You can add or remove sources to modify your search targets.

OASIS Search

https://oasis.geneseo.edu/

Openly Available Sources Integrated Search (OASIS) is a search tool developed at SUNY Geneseo that aims to make the discovery of open content easier. This tool will simultaneously search 44 different open content sources.

Be aware that these search tools rely on license metadata being detected on the source webpage(s), but it is wise to confirm the CC license on the content you want to reuse before doing so.

Finding More...images, videos, audio

- Images
  - Creative Commons Search
  - Pexels
  - Pixabay

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    - Noun Project (great for icons)
- Video (be sure videos include accurate captions or a transcript to allow for full accessibility)
    - YouTube (use the Creative Commons Filter)
    - Vimeo (use the Creative Commons Filter)
- Audio (be sure audio files include a transcript to allow for full accessibility)
    - Bandcamp
    - Library Of Congress Audio Files

If you still haven't found what you're looking for, contact Fondren Library's Digital Scholarship Services for help locating relevant OER or other zero cost course materials: cds@rice.edu.

Evaluating OER

By the end of this module section, you should be able to:

- Investigate the available reuse options for OER - adopt, adapt, combine and create
- Identify perspectives on evaluating and defining 'quality' as it relates to course materials
- Utilize relevant rubrics for evaluating OER

In the previous section, Finding OER, you focused on organizing your search and finding relevant OER. This section will focus on elements of evaluating OER.

First things first: what do you want to do with the OER you found?

The first part of evaluating an OER is asking yourself what you want to do with that OER. Do you want to adopt and use as is? Or, do you want to adapt and modify the content to meet your needs? If you found an OER that matched your learning outcomes perfectly, but some modification was required, does the license on that resource allow you to modify? Or, is it licensed in a way that does not allow for modifications or derivatives? If modifications are not allowed, you may want to consider another resource. Before diving into rubrics, consider the license for the OER and what the permissions allow.

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Evaluation Questions

The following questions can help guide you when selecting and evaluating OER. The list below is also available in PDF format from Affordable Learning Georgia.

Clarity, Comprehensibility, and Readability

- Is the content, including any instructions, exercises, or supplemental material, clear and comprehensible to students?
- Is the content well-categorized in terms of logic, sequencing, and flow?
- Is the content consistent with its language and key terms?

Content Accuracy and Technical Accuracy

- Is the content accurate based on both your expert knowledge and through external sources?
- Are there any factual, grammatical, or typographical errors?
- Is the interface easy to navigate? Are there broken links or obsolete formats?

Adaptability and Modularity

- Is the resource in a file format which allows for adaptations, modifications, rearrangements, and updates?
- Is the resource easily divided into modules, or sections, which can then be used or rearranged out of their original order?
- Is the content licensed in a way which allows for adaptations and modifications?

Appropriateness

- Is the content presented at a reading level appropriate for higher education students?
- How is the content useful for instructors or students?
- Is the content itself appropriate for higher education?

Accessibility

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- Is the content accessible to students with disabilities?
- If you are using Web resources, does each image have alternate text that can be read?
- Do videos have accurate closed-captioning?
- Are students able to access the materials in a quick, non-restrictive manner?
- More on evaluating accessibility can be found at:

    - Open Washington - Evaluation Module - Accessibility
    - BC Campus Accessibility Toolkit

Supplementary Resources

- Does the OER contain any supplementary materials, such as homework resources, study guides, tutorials, or assessments?
- Have you reviewed these supplementary resources in the same manner as the original OER?

Evaluation Rubrics & Checklists

There are plenty of rubrics and evaluation tools available. Your department already may use one for evaluating other course material or textbooks for adoption. If they do, use that! Outside of considering if you want to exercise the 5Rs and whether the licensing on the resources allows for it, evaluating OER should not be any different than evaluating other course material under consideration for adoption.

- Additional evaluation tools can be found on Fondren Library's OER Research Guide.

Curriculum Mapping

Another successful approach to evaluate an OER is to use a course map template to track course outcomes, activities, and teaching resources. A course map, also known as a curriculum map, is a record of teaching and learning that can provide faculty an opportunity to align OER with course learning outcomes. An added advantage to course mapping is unearthing unintentional gaps or redundancies in your learning outcomes. Additionally, you can use a course map to document the license for the resource, keep track of where the resource lives online, and organize comments as you compile more resources.

As you gather your resources and plan for aspects of course redesign when incorporating your OER, know there are tools available to help you. For example, a Blank Course Map Template was created for the Texas Learn OER project (from which this course is adapted).

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A Comment On Quality

Often, in conversations surrounding the evaluation of OER, common questions emerge related to quality. A typical question might be: Is the *quality* of the OER as good as commercially produced copyrighted course material? As you find and evaluate OER, challenge yourself to consider *HOW* quality is defined and measured.

Take a minute to read this 2013 blog post from David Wiley, On Quality and OER. After reading and reflecting, do you agree or disagree with this statement?

"For educational materials, the degree to which they support learning is the only meaning of quality we should care about."

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Module 5: Accessibility

By the end of this module, you should be able to:

- Explain universal design and how it improves accessibility for all learners
- Identify steps for choosing and using accessible OER
- List three ways accessibility must be considered when adopting OER
- Reflect on accessibility of current teaching resources and how they can be improved

Accessibility and Universal Design

Instructors should ensure that the teaching materials they use are accessible to all students. Applying a universal design approach to your curriculum allows you to improve accessibility for *all* learners.

Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

Ron Mace and colleagues at North Carolina State University coined the term Universal Design (UD), with the understanding that designing to meet the needs of disabled people benefits everyone. For example, a curb cutout, designed to accommodate wheelchairs transitioning from sidewalks to streets, also benefits people with strollers, bike riders, and people who may have depth issues.

What does UD mean for learning and curriculum design?

Universal design means that we design courses that are the most useful to the most different types of people. A proactive approach improves accessibility for all students. For example, although closed captions are added for deaf students, many students may use them when watching online videos in the library or if they are learning English. Using a UD framework makes our courses more user-friendly for all learners.

An Overview of Accessibility

As instructors, we have legal and ethical obligations to ensure that our courses are fully accessible to all learners, including those with disabilities. We use digital resources in our courses because we believe they enhance learning. However, unless carefully chosen with accessibility in mind, these resources can have the opposite effect for students with disabilities, erecting daunting barriers that make learning difficult or impossible. For example, consider the accessibility challenges students described below might face:

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- Students who are deaf or hard of hearing are unable to access the contents of a video presentation unless it's captioned.
- Students who are blind or visually impaired use assistive technologies such as audible screen reader software or Braille devices to access the content of websites, online documents, and other digital resources. They depend on authors providing alternate text that describes the content of images as well as headings, subheadings, lists, and other markup that helps them understand the structure and outline of the resource.
- Some students who have learning disabilities such as dyslexia use assistive technologies that visibly highlight digital text as it's read aloud, and are therefore dependent on text being readable (as opposed to a scanned image).
- Students who are physically unable to use a mouse are unable to use interactive web and software applications unless these applications can be operated with a keyboard.
- Students who are color blind may be unable to understand content that communicates information solely using color (for example, a bar chart with color as the sole means of differentiating between the bars).

The Web Content Accessibility Guidelines (WCAG) 2.0, developed by the World Wide Web Consortium, provide an international standard that defines accessibility of web-based resources. The principles of WCAG 2.0 are applicable to other digital assets as well, including software, video, and digital documents. The DO-IT (Disabilities, Opportunities, Internetworking, and Technology) at the University of Washington has a wealth of resources available to instructors on universal design in the classroom and in digital resources. Their Accessibility Checklist can help anyone creating or choosing digital resources to understand the accessibility requirements related to the features and functions of those resources.

The rest of this module provides tips for ensuring that the resources you're choosing for your course are accessible to all learners.

Choosing and Using Accessible Video

When selecting video, be sure to choose videos that include accurate closed captioning. Closed captions provide a text version of the spoken audio and other critical sounds, displayed in sync with the video.

Closed captions make video accessible to students who are deaf or hard of hearing but also benefit many others: they help second-language students understand the spoken audio; they help all students learn the spelling of the words that are being spoken; they make it possible to search the video for specific content; and they can be repurposed as an interactive transcript, which is a great feature for everyone!

Captions are supported by all major video hosting services including YouTube and Vimeo. If a video is captioned, it will have a CC button on the video player.

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Additionally, when selecting audio files (like a Podcast) be sure the file also has a full written transcript available.

Video Resources

YouTube automatically captions most videos that are uploaded to its website. However, automatic captions, which are created by a computer, are not accurate enough to be relied upon (consider the effect of one missed “not” on the meaning of the video). To check whether a video has reasonably accurate captions created by humans, click the CC button on the video player to turn captions on, and watch a few short segments of the video.

Consult the following resources for additional information on finding videos that have captions:

- Searching YouTube for videos with captions
- Turning YouTube captions on and off

If you find an open-licensed video that is perfect for your course but does not currently have captions, caption it! Here’s how:

- YouTube: How to contribute subtitles and closed captions
- TED Open Translation Project
- Khan Academy: Volunteer
- Amara – a free tool for captioning and subtitling any public video
- Dotsub – another free tool for captioning and subtitling any public video

Choosing and Using Accessible Images

If images are used to communicate information, they should include short text descriptions for individuals who are unable to see the images. These short descriptions are typically referred to as “alternate text” or “alt text.”

Most authoring tools that support adding images to content also support adding alt text to an image. When you’re adding an image to a web page or document, simply look for an “alt text” field in the Image Properties dialog and enter a short description into the space provided. If the authoring tools do not support "alt text", include a description of the image after the figure title.

Note, any images with words, such as screen capture of a quote or "tweet", should include a transcript of the words displayed in the images. This is also good practice when you're sharing these images on social media!

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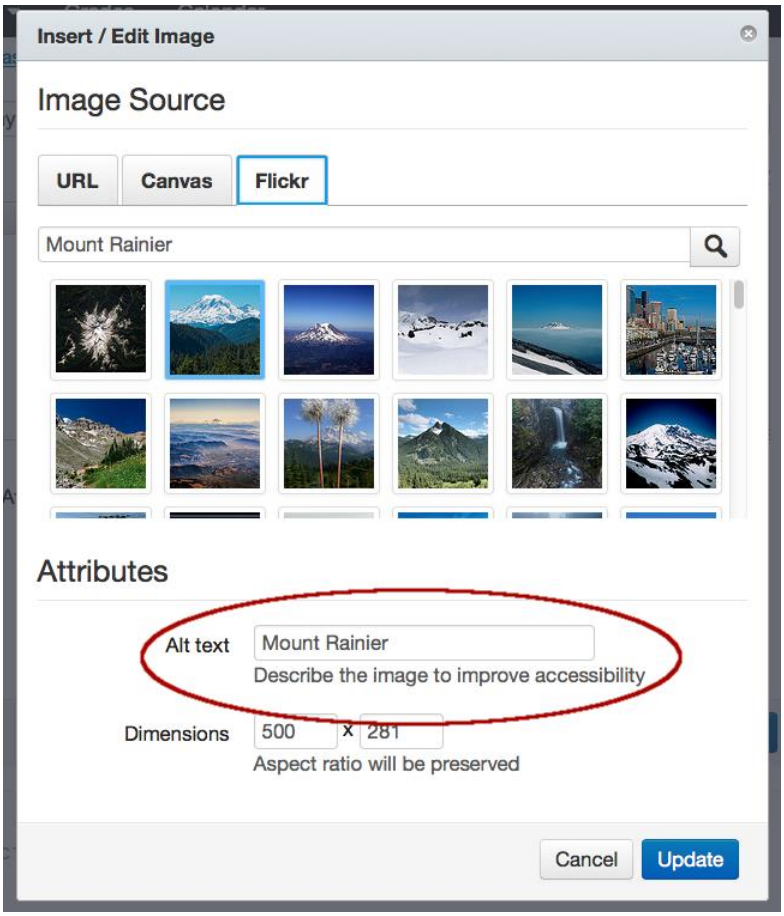

The alt text that you enter for a particular image depends on the context. Think about what you're wanting to communicate by adding the image. Then, add alt text that will communicate the same idea to someone who is unable to see the image.

The following resources provide additional guidance for writing good alt text.

- WebAIM: Alternate Text
- Guidelines for Describing STEM Images – National Center for Accessible Media

If the image contains important detail that is too complex to be described in one or two brief sentences (for example, a chart or graph), then the text description will need to be provided separately from the image, either within surrounding text on the same page, or on a separate page that is accessible via a link on the main page. Remember, if it is an image of text, you must provide a transcript.

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Choosing and Using Accessible Course Material

When choosing among the wide variety of course materials that are available be sure to consider whether these materials might present challenges or barriers for students with disabilities. Ask specific questions, such as:

- Is all written content presented as text, so students using assistive technologies can read it?
- If the materials include images, is the important information from the images adequately communicated with accompanying alt text?
- If the materials include audio or video content, is it captioned or transcribed?
- If the materials have a clear visual structure including headings, sub-headings, lists, and tables, is this structure properly coded so it's accessible to blind students using screen readers?
- If the materials include buttons, controls, drag-and-drop, or other interactive features that are operable with a mouse, can they also be operated with a keyboard alone for students who are physically unable to use a mouse?
- Do the materials avoid communicating information using color alone (e.g., the red line means X, the green line means Y)?

If you find open course materials that are perfect for your course but you are unable to answer "Yes" to each of the above questions, contact the author and talk to them about accessibility. Your feedback may inspire them to improve the accessibility of their materials, which will benefit everyone!

Choosing and Using Accessible Textbooks

Many of the downloadable textbooks available through the sites like OpenStax or Open Textbook Library provide textbooks in PDF format. PDF, like most other document formats, includes support for accessibility features such as headings, subheadings, lists, and alt text on images, but the author and/or publisher must make a conscious effort to include these features.

In order to support accessibility features, a PDF file must be tagged. A tagged PDF is a type of PDF that includes an underlying tagged structure that enables headings to be identified as headings, lists as lists, images as images with alt text, etc. Tags provide the foundation on which accessibility can be built. To determine whether a particular PDF is tagged, open it in Adobe Acrobat or Adobe Reader and go to Document Properties (Ctrl + D in Windows; Command + D in Mac OS X). In the lower left corner of the Document Properties dialog, "Tagged" is either "Yes" or "No."

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Resources

The following resources provide additional guidance for creating accessible documents, particularly in PDF, and on evaluating whether PDFs are accessible and if not, fixing their accessibility problems. Additionally, reach out to staff at your institution, such as Instructional Designers or an accessibility support specialist, for help and guidance.

- Adobe: PDF Accessibility Overview
- WebAIM: PDF Accessibility
- BC Campus Open Education Accessibility Toolkit

If you find an open textbook that is perfect for your course but is not accessible, contact the author and talk to them about accessibility.

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Module 6: Creative Commons Licensing In-Depth

By the end of this module, you should be able to:

- Identify the differences between the six currently available Creative Commons licenses
- Identify the conditions including attributions when using open licensed material
- Recognize how different license permissions impact remixing compatibility
- Use tools to guide you in choosing the appropriate license for your own work
- Use tools for creating attribution statements in your work

CC-BY CC-BY-SA CC-BY-NC CC-BY-NC-SA CC-BY-NC-ND

No, that wasn't a typo! The acronyms above are representative of the six different Creative Commons (CC) licenses. In Module 3 you were introduced to open licenses and how they differ from all rights reserved copyright. In this module, you will learn about the different conditions and permissions of these licenses.

This short slide show presentation provides the nuts and bolts of Creative Commons licenses and their conditions:

Creative Commons Licensing, The 5Rs, and OER: The Shortest Possible Introduction

Six Licenses

All Creative Commons (CC) licenses are structured to give the user permission to make a wide range of uses as long as the user complies with the conditions in the license. The basic condition in all of the licenses is that the user provides credit to the licensor and certain other information, such as where the original work may be found.

Understanding the meaning of each condition can be useful when deciding which CC license to use on your own work. As discussed in Module 4, understanding the meaning of the conditions can also be useful in evaluating an open resource.

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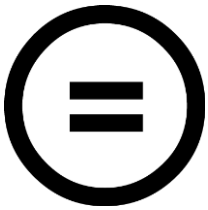
	This symbol means **Attribution** or “BY.” All of the licenses include this condition.
	This symbol means **ShareAlike** or “SA,” which means that adaptations based on this work must be licensed under the same license.
	This symbol means **NonCommercial** or “NC,” which means the work is only available to be used for noncommercial purposes.
	This symbol means **NoDerivatives** or “ND,” which means reusers cannot share adaptations of the work.

All of the licenses include the BY condition: all of the licenses require that the creator be attributed in connection with their work. Beyond that commonality, the licenses vary whether (1) commercial use of the work is permitted; and (2) whether the work can be adapted, and if so, on what terms.

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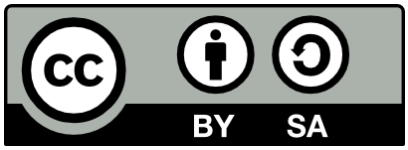
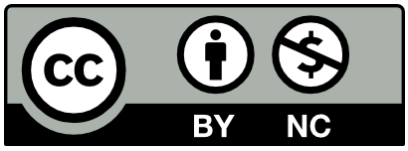
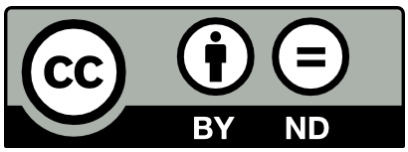
The six licenses, from least to most restrictive in terms of the freedoms granted reusers, are:

	The **Attribution license or "CC BY"** allows people to use the work for any purpose (even commercially and even in modified form) as long as they give attribution to the creator.
	The **Attribution-ShareAlike license or "BY-SA"** allows people to use the work for any purpose (even commercially or in modified form), as long as they give attribution to the creator and make any adaptations they share with others available under the same or a compatible license.
	The **Attribution-NonCommercial license or "BY-NC"** allows people to use the work for noncommercial purposes only, and only as long as they give attribution to the creator.
	The **Attribution-NonCommercial-ShareAlike license or "BY-NC-SA"** allows people to use the work for noncommercial purposes only, and only as long as they give attribution to the creator and make any adaptations they share with others available under the same or a compatible license.
	The **Attribution-NoDerivatives license or "BY-ND"** allows people to use the unadapted work for any purpose (even commercially), as long as they give attribution to the creator.

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	The **Attribution-NonCommercial-NoDerivatives license or "BY-NC-ND"** is the most restrictive license offered by CC. It allows people to use the unadapted work for noncommercial purposes only, and only as long as they give attribution to the creator.

Note: The No-Derivatives condition allows sharing and reuse but only if the content is left unchanged. This presents an issue when searching for OER, as no customization or adaptation is allowed by the license. For this reason, **ND content is not considered OER and should be considered for reuse only in situations where no adaptations are needed.**

Attribution

All six of the Creative Commons licenses include the BY or attribution condition. This is a requirement of reuse. The original creator has explicitly informed the user of this requirement through the use of the BY condition. As you learned in the slide show presentation earlier in this module, citations and attributions are similar but different. Providing attribution is the legal requirement of the open license. While some tools, like CC Search, include the attribution in the resource, there are other tools available to help users easily create attribution statements for work they reuse, remix, or modify.

- Attribution Builder - similar to a citation generator, this tool builds attribution statements that can be copied and pasted into documents and websites. Note: all the attribution statements for these modules were created using this tool.

When creating attribution statements a good rule of thumb is to remember the acronym **TASL**:

- **T**itle of the work
- **A**uthor of the work
- **S**ource or where the work can be found
- **L**icense of the work

Include URLs, when available.

Example: "Creative Commons 10th Birthday Celebration San Francisco" by tvol is licensed under CC BY 2.0

Note: You may not always have all the information above; include as much as you can.

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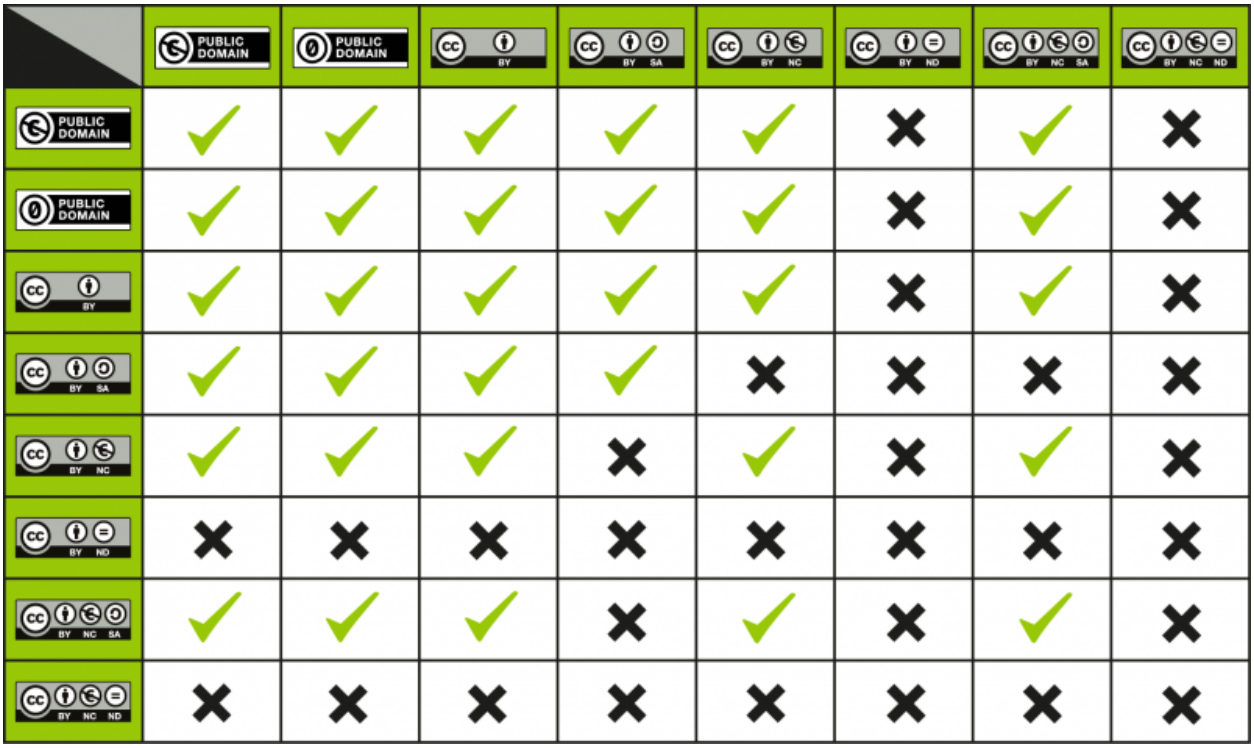
Combining CC Licenses

The BY (attribution) condition is a part of all the licenses, but not all of them work together. For example, the SA and ND conditions do not appear in the same license because there is no reason to include the share-alike condition when no derivatives are being allowed. Together, the conditions form the six CC licenses:

As you find different types of OER to use in your courses, you may find the need to remix and modify the content. Understanding how the different licenses can or cannot be combined is a critical step in reusing openly licensed material. The license compatibility chart below illustrates how licenses work, or don't work, together:



"License Compatibility Chart" by Creative Commons is licensed under CC BY 4.0

Choosing A License For Your Work

Remember, when sharing your work, selecting and displaying a license with it ensures the work can be adopted and adapted how you want! If you don't select a license, all published material may be assumed to be all rights reserved even if you intended it to be openly licensed.

When creating work to share, carefully consider how you want your work to be used when choosing which open license to apply. As the original creator of your work, you have choices.

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- Do you want to allow derivatives?
- Do you want to allow for commercial purposes?
- Do you want the same license to be applied on derivatives?
- If this work was made using openly licensed material, is there a copyright provision you must abide?

Creative Commons designed the licenses to provide more options to the creator than all-rights reserved copyright. The CC License chooser is a simple tool designed to help creators decide which license is best for their work. With two questions the tool will prompt you to select conditions for sharing your work. A license icon, statement, and code -- similar to the ones below -- to embed is generated for you to easily copy and paste into your work.

Remember: When remixing content to create something new, if any of your adapted content includes the SA (share alike) condition - you *must* apply the SA condition to your newly remixed finished work.

Fondren Library staff are available to help you navigate Creative Commons licenses. Please contact Digital Scholarship Services at cds@rice.edu.

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Module 7: Adapting, Creating & Sharing OER

By the end of this module, you should be able to:

- Determine reasons for adapting & creating
- Apply needed steps for adapting & creating OER with proper attribution and licensing
- Recognize the considerations in choosing a license for your work
- Recognize the variety of creation and authoring tools available
- Create your own OER

In the previous six modules, you've learned a great deal about open educational resources and how they can be used as effective teaching and learning material in your courses. In this module, you will gain experience in applying what you've learned to successfully adopt, adapt, and create an OER.

Adapting an Existing Open Educational Resource

The term *adaptation* is commonly used to describe the process of making changes to an existing work. We also can replace "adapt" with revise, modify, alter, customize, or other synonyms that describe the act of making a change.

One advantage of choosing an open educational resource is that it gives faculty the legal right to add to, adapt, or delete content from the open work to fit their specific course without obtaining permission from the copyright holder. As you learned in Module 6, this is possible because the copyright holder already has granted permission by releasing their work using an open — or Creative Commons — license.

If you are considering making changes to an open resource, such as an open textbook, ask yourself the following questions:

- How much content do I wish to change? Do I want to remove chapters or rewrite entire chapters?
- What technical format is the original textbook - an MS Word doc, Google Doc, or PDF? A Word document is much easier to modify than a PDF document.
- What type of license is the content released under? Does it have a Creative Commons license that allows for modification or adaptation of the content?
- How comfortable are you with using technology and creating content?

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If you decide to adapt an existing open resource, here are six recommended steps to follow:

1. Check the license of the work - does it allow for modifications or derivatives?
2. Check the format of the work - common formats are HTML files (webpages), Word or open documents (Google Docs), Text files, ePub, LaTex files (if the original book includes math or science formulas and equations).
3. Choose tools for editing an open textbook (or other open resource) - there are many available. Your choice of editing tool may vary depending on the original format of the resource.
4. Choose the output for the work - students like having material in multiple formats. This allows them to choose what works best for them. Some may prefer printed versions of the textbook; others will prefer using a website. Still others will like to use an e-reader or e-reading software. By offering multiple formats you are making your content more accessible.
5. Determine access for the work - how will your students access the content? Will it be available in an LMS, Google Classroom, OER Commons, or another online hosting service?
6. Choose a license - the open license you choose will depend on how the textbook you adapted was licensed. For example, if the original textbook was licensed with a Creative Commons Attribution-ShareAlike (CC BY-SA) license, then you must release your book with the same license to ensure it is compliant with the terms of use.

Creating Open Educational Resources

The ALMS Framework

For work to be truly “open” and allow the 5R permissions, the work should be meaningfully accessible and editable. How can you ensure adopters can easily reuse, revise, remix, redistribute, and retain the work? The ALMS framework, established by Hilton, Wiley, Stein, and Johnson (2010), highlights the vital importance of offering source files and creating work in ***easily adoptable formats***.

- ACCESS: Offer in a format that can be easily edited with freely accessible tools
- LEVEL: Format should not require advanced technical expertise to revise content
- MEANINGFUL: Offer in an editable format
- SOURCE: Source file that is accessible and editable

Using the ALMS framework offers OER creators a structure guiding the openness of the content while ensuring access to adopters in a meaningful way. When creating work, consider sharing it in several formats that permits accessible classroom adoption: MS Word, PDF, and Google doc.

Which source file do you prefer to use?

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Review the video below to get a brief introduction to creating OER:

Creating Open Educational Resources: Tips for New Creators

The video outlines 5 tips for creators:

- Determine how your OER will meet your course needs
- Check if you've already created something you can use as a base for your OER
- Evaluate tools and determine where you will build your OER
- Consider what license you will apply to your OER
- Decide where and how you want to share your OER

There are low tech, medium tech, and high tech tools and authoring platforms available to create your OER. Consider the tips previously mentioned and determine which tool best meets your needs. Here are some widely used tools:

- Google Docs
- Google Sites
- Google Slides
- Adobe Spark
- Pressbooks
- OER Commons Open Author

Whichever creation tool or authoring platform you choose, be aware of any restrictions this tool may have on how the final work may be published or shared. Before creating your work, look closely at the terms of use for that product. Additional information about publishing your OER can be found in Sharing Your Work.

Examples of faculty and student-created OER:

- University of Texas at Arlington
    - Mavs Open Press- collection of open textbooks
    - Collection of OER- created by UTA faculty, staff, and students
- University of Houston Open Textbooks Catalog
- Mathematical Reasoning: Writing and Proof - this open textbook's author won an award (2017) from the Mathematical Association of America for its impact on undergraduate students.
- George Mason English 302 Open Educational Resources - a peer reviewed repository of open educational resources for use in Mason's English 302 classes. The site allows faculty to easily search, reuse, and adapt the teaching materials developed by their colleagues.

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- The Open Logic Project- an international collaboration of people contributing to an open textbook in logic.

Sharing Your Work

Are you interested in sharing your material? Do you have an engaging course activity, image, assessment item, video, or a whole course that might be beneficial to other faculty in your discipline? Sharing your work is a personal choice and can be daunting, but it also can be rewarding. Sharing your work with others allows for increased use as well as opportunities for collaboration, enhancement, and improvement of your work. You can start small by sharing your work with others in your department or just at your institution. Or, if you are ready, you can share it globally with other educators and students, thus contributing to the open education community at large.

Whether you share it locally or globally as an OER, consider the following steps as your guide to sharing your work:

Step 1: Terms of Use

Decide on the terms of use. Do you wish to release your work under Creative Commons license or in the public domain? Please make sure to review the difference between these two copyright terms:

- By releasing your work under a Creative Commons license, you **retain ownership** while allowing others to use your work (as long as they attribute it to you) without needing to ask permission of you directly.
- By releasing your work in the public domain, your **copyright ownership is waived**. It is as if you are GIVING your work to the public as a gift. Users may still cite you when adopting your work, but they are not required to do so.

Please see “What is the difference between public domain and open license?” in Module 3 for details.

Step 2: Seeking Copyright Clearance

Be sure that the work is eligible to be shared. To release your work with a CC license or in the public domain, your work should be cleared from all copyright issues. To do so, your work should be one or a combination of the following types:

1. your original work,
2. built from open resources,
3. built from the public domain,

This work is licensed under a Creative Commons Attribution 4.0 International License.

4. built from copyrighted work that you obtained permission to use and distribute for the life of your openly licensed work, or
5. combination of above works

Note: For any third-party materials, whether openly licensed or copyrighted, those materials need to be attributed as not governed by the CC license you chose for your work, but under different terms and by different authors.

Getting Permission to Use Copyrighted Materials

If you must use any items that are copyrighted with all-rights reserved, be sure to obtain the permission letter(s) from the author(s).

Sample email to ask for permission to use the work:

Hello Dr. R.B Lone Star,

I am a faculty member with the ____ project. The purpose of this project is to design openly licensed Science and Technology courses that can be taught face-to-face, hybrid, and/or online. These courses will be freely available on the internet for anyone to copy, modify, and use. One of the purposes of this project is to offer educational resources to regions where formal educational opportunities are scarce or expensive.

I am creating a course titled "Horticulture History of the Texas Bluebonnet" and I would like to use a post from your blog titled "Environment and Climate: Impacts On the Texas Bluebonnet" from February 2020.

I am seeking your permission to distribute this material as part of our course. You will maintain your copyright but will be giving us permission to distribute this material for reuse as part of the teaching of this course. We will most likely copy the text of your post into a Google document and attribute you. A full citation for the work will accompany it, as will a statement of copyright ownership.

Please contact me at xxxx@bluebonnetu.edu or by telephone at 512-xxx-xxxx with information about this request. Thank you for your time and attention.

Regards,

Your name

Step 3: Selecting a Repository

Images

 This work is licensed under a Creative Commons Attribution 4.0 International License.

Consider Flickr or Wikimedia Commons. As you upload your image to these repositories, you will see the option to select the terms of use. Open Washington has created simple instructions if you need help in uploading an image to your Flickr account and marking it with a CC license.

Videos

Consider YouTube or Vimeo. For help, consult these instructions created by Open Washington for uploading videos in Youtube. Always provide captions to your videos. YouTube automatically creates captions; always verify that the captions are correct. They can be edited easily by following these simple instructions.

Course Materials

Consider OER Commons. Additionally, if your institution has an institutional repository, work with your librarians to add your work to your institutional collection. Alternatively, web storage space like Google Drive allows for easy and free access. If you choose a web storage space, make sure to (1) manually mark your work as CC-licensed or in the public domain by placing the copyright notice somewhere visible and (2) make the link accessible by the public.

Rice Digital Scholarship Archive

https://scholarship.rice.edu/

The Rice Digital Scholarship Archive (RDSA) provides global access to research and scholarship produced at Rice University. Managed by Fondren Library, we welcome the addition of Rice-created OER.

Benefits of using the RDSA include:

- Visibility: When you deposit your work in the RDSA, it becomes available to search engines as part of a worldwide network of research collections--your peers worldwide will be able to find it quickly. Items can also be assigned DOIs, which further helps with citation and discovery.
- Stability: Each item deposited in the RDSA gets a permanent, citable, linkable URL that will not change or break over time.
- Longevity: The RDSA provides long-term storage for your materials by managing backups, and ensuring that your work remains accessible at a stable location on the Web and available to search engines. RDSA will help keep works in common file formats up to date, ensuring that as technology and formats evolve, your work will remain accessible and usable.

If you would like to learn more, please contact Fondren's Digital Scholarship Services at cds@rice.edu.

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