

Foundations of Open Educational Resources

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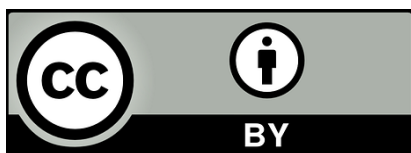
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Preface



This book has been designed to equip instructors with the skills they need to confidently find, use, and create open educational resources (OER). As such, the book is divided into six major sections covering important aspects of working with OER:

- What is OER: An Introduction
- Copyright/ Licensing
- Finding OER (Forthcoming October 2022)
- Using OER at SAIT (Forthcoming December 2022)
- Creating OER (Forthcoming March 2023)
- Teaching with OER (Forthcoming June 2023)

In each chapter, learning objectives are provided to explain what the reader will learn and, in many cases, interactive exercises and examples are available as well. While this book has been designed to be a stand-alone resource, it also serves as one component of SAIT's OER Certificate. If you are an employee at SAIT and would like to learn more about earning your certificate in OER implementation, contact the Reg Erhardt Library or search for OER courses on the PeopleNow system.

PART I
WHAT IS OER?

Introduction to Open Educational Resources

Learning Objectives

By the end of this chapter, you will be able to:

- Define “open” in the context of open educational resources (OER).
- Relate the concepts of “open” and OER to your personal instructional practice
- Explain the difference between OER and other free educational materials.
- Describe the potential benefits of OER for instructors, for students, and for SAIT

This chapter will introduce you to the concept of OER and the benefits and challenges of using them.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://openeducationalberta.ca/saitoer/?p=27#oembed-1>

Attribution: “Open Educational Resources: What and Why [Youtube]” by Jason Hardwick is available under a Creative Commons CC-BY-NC-SA 4.0 licence.

Background

The open education movement was originally inspired by the **open source software** community, with a focus on broadening access to information through the use of free, open content. OER has always been a grassroots initiative, with many individuals and organizations contributing to its development. One of the first major initiatives was MIT's OpenCourseWare Initiative, founded in 2001. As Bliss & Smith (2017) explain in their breakdown of the history of open education:

Much of our attention focused on OER's usefulness at providing knowledge in its original form to those who otherwise might not have access. The implicit goal was to equalize access to disadvantaged and advantaged peoples of the world – in MIT's language, to create ‘a shared intellectual Common.’¹

However, OER is not an exclusively North American movement, as can be seen from the timeline of OER events below. For example, significant growth occurred after the UNESCO Forum on the Impact of Open Courseware for Higher Education in Developing Countries

1. 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>.

convened in 2002. In part, the final declaration at the forum stated that participants “expressed their... wish to develop together a universal educational resource available for the whole of humanity, to be referred to henceforth as Open Educational Resources.”²



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://openeducationalberta.ca/saitoer/?p=27#h5p-2>

Dig Deeper To learn more about the history of OER, review: *A Brief History of Open Educational Resource and OER – A Historical Perspective*.

Following the rise of open education in the early 2000s, growing interest in open courseware (particularly open textbooks) catapulted the movement to new heights; however, the movement toward greater OER awareness among instructors is growing at a slow and steady rate. A survey done in the U.S. in 2018 indicated that 47% of instructors had never heard of OER, while the remaining

2. UNESCO. (2002). *Forum on the Impact of Open Courseware for Higher Education in Developing Countries: Final Report* (CI.2002/CONF.803/CLD.1). UNESCO, p.6. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf00000128515>

instructors had some degree of familiarity with the concept. There is still quite a large number of instructors who are unaware of OER, but the percentage has shrunk by 19% since 2014, showing that awareness is growing.³

What is an OER?

The most comprehensive definition of OER available today is provided by the Hewlett Foundation:

Open Educational Resources 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.⁴

So, **Open educational resources** (OER) are openly-licensed, freely and easily accessible educational materials that can be adapted and redistributed by users. While many think of OER as referring predominantly to open textbooks, OER includes a vast variety of resources, such as videos, images, lesson plans, coding and software, and even entire courses.



3. Seaman, J.E., & Seaman, J. (2019). *Inflection Point: Educational Resources in U.S. Higher Education*. (pp. 25-26)
4. William & Flore Hewlett Foundation. (n.d.). *OER defined*. Retrieved from <https://hewlett.org/strategy/open-educational-resources/>



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Attribution: “What is OER? [Youtube]” by The Council of Chief State School Officers is available under a Creative Commons CC-BY 4.0 licence.

In order for a resource to be considered open, it must fulfill the following criteria called the 5Rs:

- Reuse – take a resource and use it in any context that you want
- Remix – take multiple resources and mixing them together to create a new resource⁵
- Revise – take a copy of a resource and change it and adapt it to the local context⁶
- Retain – take a copy and have control of that copy forever
- Redistribute – the right to freely share what you have created⁷

With a definition so broad that it includes any educational material

5. The resource must explicitly state that it is available for remixing and redistribution by others. Some open licences may include restrictions on how others may use the resource. You can read about this more in the Copyright & Licensing chapter.
6. Although all OER are openly licensed, many are released in formats that do not easily allow for adaptation.
7. Council of Chief State School Officers, (2016). “What is OER?” Youtube. Retrieved from <https://www.youtube.com/watch?v=LDTCDMKIDQw&t>

so long as it is free to access and open, it might be easier to ask, “What isn’t an OER?”

What is Not an OER?

If a resource has a traditional copyright licence or requires a fee to be accessed, it is not considered an OER. For example, most materials accessed through the library’s subscriptions cannot be altered, remixed, or redistributed. These materials require special permission to use and are therefore not “open.” Similarly, YouTube’s standard license includes a traditional copyright statement that does not allow videos to be retained (saved), altered, or remixed. At SAIT, we refer to materials that can be accessed freely by students (via the general internet or a library subscription) but do not meet the 5Rs as **accessible resources**. Learn more about how you may use accessible resources in the Copyright & Licensing chapter.

Table 1 below explains the difference between OER and other resources often mislabeled as OER.⁸

8. Although both print and digital materials are free to access for a library's users, that does not mean that they are free to access for everyone. As well, some digital materials have a licence that permits distribution or reuse with a specific group (i.e., current students), but the licences will not allow modification.

Table 1: Comparisons of Learning Resources

Material Type	Openly Licensed	Freely Available	Modifiable
Open educational resources	Yes	Yes	Yes
Accessible online resources under all rights reserved copyright	No	Yes	No
Digital materials available through the Library	No	Maybe	No
Print materials available through the Library	No	Maybe	No

The definitions of “accessible resources” and “open educational resources” are a combination of permission (license) and cost. Click each quadrant below to see what you can do with different materials.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://openeducationalberta.ca/saitoer/?p=27#h5p-3>

Activity

Make a list of the free materials you currently use in your

classes. Next, categorize each resource as OER, accessible, or other. How many OER are your students using?

Benefits of Using OER

Benefits for Students

One of the first aspects of OER to be praised by the general public was the cost savings that they could bring to students. Along side tuition fees increases at Canadian institutions of about 3% every year, compulsory fees can set students back nearly \$1,000 a year and are often not covered by student loans. According to Statistics Canada, the average Canadian student paid approximately \$921 in compulsory fees during the 2018/2019 school year.⁹ This price was up 4.2% from the previous school year.

The cost of textbooks has a profound impact on college students, many of whom must wait to purchase their course materials until well into the semester or choose not to purchase them at all.¹⁰ A

9. The Daily. Statistics Canada. (2018). *Tuition Fees for Degree Programs, 2018/2019*. Retrieved from <https://www150.statcan.gc.ca/n1/daily-quotidien/180905/dq180905b-eng.htm>

10. Florida Virtual Campus. (2018). *2018 student textbook and course materials survey: Executive summary*. Retrieved from https://www.flbog.edu/documents_meetings/0290_1174_8926_6.3.2%2003a_FLVC_SurveyEXSUM.pdf

2018 survey of SAIT students found that over 90% of respondents were very concerned about textbook costs.¹¹ In 2019, 25% of SAIT students reported they never or rarely purchased any textbooks for their course, citing the cost.¹²



In 2019, one third of SAIT student respondents reported they either rarely or never purchased their required course textbooks.

Open Educational Resources Electronic Textbook Survey - Research Report (2019)

Many SAIT students report concerns about textbook costs.



The cost of textbooks might not be a major issue on its own, but it can be an insurmountable hurdle for students already struggling to get by. A recent study at the University of Manitoba indicated that 35.3% of students experienced some degree of food insecurity throughout their degree.¹³

The problem of food and housing insecurity among college and university students cannot be fixed by adjusting the price of

11. Southern Alberta Institute of Technology (2018, February). 2018 OER Student Panel Survey Report. Calgary: SAIT.
12. Southern Alberta Institute of Technology (2019, January). 2019 OER eTextbook Survey Report. Calgary: SAIT.
13. Entz, M. Slater, J. & Desmarais, A.A. (2017). *Student Food Insecurity at the University of Manitoba*. Retrieved from <https://canadianfoodstudies.uwaterloo.ca/index.php/cfs/article/download/204/181/>

textbooks alone. There are a wide variety of reasons why these problems are in place.¹⁴ However, many students cited the inaccuracy in cost-of-living estimates on student loan applications as a major reason for running out of money near the end of the semester.¹⁵ The unexpected additional cost of textbooks can make the difference between a student persisting at SAIT or dropping out.

Access to a Quality Education

When you choose to share course materials openly, you are providing students with the opportunity to engage with your content before, during, and after your course. Because OER are always free to access online, students who are interested in taking a course you teach can read up on the course ahead of time and ensure that they are ready and interested in the material. Moreover, students who have already taken your course can rely on the fact that their course materials will not evaporate at the end of the semester, and that they can continue to review the materials you provided to them for years to come. With an increase in **inclusive access** models from major publishers, temporary access of educational materials are becoming more common. This type of

14. Goldrick-Rab, S. & Cady, C. (2018). *Supporting community college completion with a culture of caring: A case study of Amarillo College*. Retrieved from <https://hope4college.com/supporting-community-college-completion-with-a-culture-of-caring-a-case-study-of-amarillo-college/>
15. Maynard, M. Meyer, S.B. Perlman, C.M. & Kirkpatrick, S.I. (2018). *Experiences of Food Insecurity Among Undergraduate Students: "You Can't Starve Yourself Through School"*. Retrieved from journals.sfu.ca/cjhe/index.php/cjhe/article/download/188121/pdf/

access may reduce the entry cost for students to access a textbook for one semester, but this access is typically limited and comes with other hidden costs.¹⁶

The students who benefit from access to OER are not just the ones in your classroom. OER are free for anyone in the world to access, whether they have a university affiliation or not.¹⁷ This encourages learners and students to explore educational content without having to commit the time and money they might not have to attend post-secondary.¹⁸

Benefits for Instructors

Although cost savings are a major talking point in favour of adopting open educational resources, instructors can begin to integrate OER into their courses without removing the paid resources they find useful.¹⁹ While creating an entire OER textbook can seem like a daunting task, the gradual integration of small OER as supplementary resources can be built up over time. Over a few

16. "Does Inclusive Access save students money?" (n.d.)
Inclusiveaccess.org. Retrieved from
<https://www.inclusiveaccess.org/facts/savings-or-spin>.
17. Although OER are free for anyone to access, this access is still limited by who has access to the Internet. Still, since OER can be freely redistributed, some individuals have printed OER for dissemination in areas that do not have Internet access.
18. Hodgkinson-Williams, C. & Arinto, P. B. (2017). *Adoption and impact of OER in the Global South*. Cape Town & Ottawa: African Minds, International Development Research Centre & Research on Open Educational Resources. DOI: 10.5281/zenodo.1005330
19. The Benefits for Instructors section of this chapter was adapted from the SUNY OER Community Course, licensed CC BY 4.0.

years, instructors may find that they have tailored so many small OER to their course content that these resources are more effective in supplementing the course than the paid resource they were previously using. In fact, the freedom to adapt OER to instructional needs is often the most attractive aspect of OER. Since OER are openly licensed, educators are free to edit, reorder, and remix OER materials in a variety of ways.

Use, Improve, and Share

Many instructors report that they use their required course textbooks in different orders than suggested, or skip entire portions of the textbook altogether.²⁰ The use of OER allows instructors to adapt and revise existing versions of openly-licensed textbooks in order to better fit their course material. Supplementary resources may be added directly to the text, streamlining resource access for students, and giving a clear course outline that aligns with the syllabus. Instructors may also update an existing OER to provide modern and culturally relevant examples.

Network and Collaborate with Peers

A major worry with open resources is that they may be seen as less reliable than traditionally published materials that go through

20. Lieberman, M. Inside Higher Ed. (2019). *Slow Burn for OER Adoption, Awareness*. Retrieved from <https://www.insidehighered.com/digital-learning/article/2019/01/09/oer-adoptions-awareness-continue-grow-many-faculty-members-still>

rigorous editing processes. However, by opening up resources, it makes it easier for peers across institutions to review and edit each other's work. The ability for others to edit and re-share work also allows you to explore the reviews and gain a deeper understanding of the available resources. Not to mention, creating open resources is a great chance to build a team of peers to help build a new and valuable learning tool.

Lower Costs to Improve Access to Information

One of the most popular reasons for creating and reusing OER is that it allows every student to have easy access to course resources. This, in turn, benefits instructors, for all of their students will have all the tools needed to succeed in the course, regardless of financial or accessibility barriers. Open course resources may also lead to more passionate and engaged students, as students will have the chance to explore course material before enrolling in the course.

Benefits for the Institution

The benefits of using OER are more readily seen for students and instructors, but research has shown that institutions also see overall benefits. For example, it was found that OER use can increase student retention, progress, and completion by decreasing student costs²¹. Additionally, a recent report from Achieving the Dream,

21. Hilton III, J. L., Fischer, L., Wiley, D., & William, L. (2016). Maintaining momentum toward graduation: OER and the course throughput rate. *The International Review of Research in Open and*

OER at Scale: The Academic and Economic Outcomes of Achieving the Dream's OER Degree Initiative, reveals that when institutions strategically support and provide OER courses for students, there is opportunity for financial return on investment for the institution. Students who enrolled in OER courses tended to enrol in more course credits than students who enrolled in non-OER courses, thus generating additional tuition revenue.²²

Activity

Reflect on the courses in your program. List the benefits to the students, to you as the instructor, and to SAIT if some of these courses were using only OER materials.

Distributed Learning, 17(6). <https://doi.org/10.19173/irrodl.v17i6.2686>

22. "Open Educational Resources: Basics & Beyond" by Jamie Holmes, Pamela Louderback, Ed.D, & Ann Raia, Council for Online Learning Excellence (COLE) is licensed under CC BY 4.0

Challenges of Using OER

There are many benefits to using OER in the classroom; however, there are also some drawbacks. The biggest challenge that instructors face when adopting OER is best encapsulated by the phrase “availability may vary.”

Subject Availability

Many of the largest OER projects funded over the past fifteen years targeted high cost, high impact courses to save students money. Because of this, most of the OER available today are for general education courses such as Psychology, Biology, and Calculus.

This does not mean that there are no OER available for specialized subject areas or graduate level courses; however, there are more resources to choose from for instructors who teach *Introduction to Psychology* than for those who teach *Electronic Systems Integration for Agricultural Machinery & Production Systems*.

While this remains an issue, the increasing awareness surrounding open education has led to a greater production of materials across all subjects. See our Finding OER chapter for more resources.

Format & Material Type Availability

As with subject availability, the format and types of OER that have been developed over time have largely been targeted at high enrolment courses which could see substantial cost savings for students. There are many open textbooks available today, but fewer options for ancillary materials. You can find lecture slides, notes,

and lesson plans online, but ancillary content such as homework software and test banks are harder to find.²³

Time & Support Availability

Although the other challenges to OER use are inherent to the resources themselves, many instructors are also concerned about the impacts on their workload and current instructional activities. It takes time and effort to find OER that might work for your course, and creating and publishing new resources takes exponentially more time.

Time constraints are always going to be an issue for instructors who want to try something new in their course. Luckily, the Reg Erhardt Library at SAIT has a variety of resources that can help you find, adapt, and create OER. Contact your liaison librarian for help searching for OER, or reach out to the OER librarian to learn more about supports available when modifying or creating OER using the free Pressbooks publishing program. If you are interested in creating OER for a course or program, speak to your Academic Chair to see how OER may fit into larger curriculum projects. Finally, some faculty have found creative ways to incorporate OER into external grant opportunities from the federal government or nonprofit organizations – see if your associations or organizations have something similar.

23. As of Fall 2022, several large nonprofit organizations are in development of open homework platforms, including LibreText and BCcampus. Access to these math, science, and business platforms should be announced in 2023.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://openeducationalberta.ca/saitoer/?p=27#h5p-1>

This chapter has provided a brief overview of what OER are, why they are used, and the movement surrounding them. In the next chapter, we will review some items you should keep in mind when adopting or creating an OER for the first time.

Footnotes

Considerations for Using or Creating OER

Learning Objectives

By the end of this chapter, you will be able to:

- Assess your teaching materials for the potential to release as OER.
- Apply a backwards design approach when integrating OER into your course.
- List the key considerations to keep in mind before adopting an OER.

Transforming your course to include **open educational resources** can be as simple as switching one material for another or as radical as completely changing your teaching style. This chapter outlines some key considerations and questions you should ask yourself before adopting or creating OER.¹

1. This chapter was adapted from "Considerations before using or creating an OER" from The ABOER Starter Kit, by Technologies in Education at the Faculty of Education, the University of Alberta, available under a Creative Commons Attribution 4.0 International License.

How will using OER improve your course?

When integrating OER into your course, you have the opportunity to critically evaluate your teaching methods and alter them to better meet your needs. Open education is a movement that supports innovative teaching. By using OER in a course, you are opening up new possibilities for greater diversification, multidisciplinary learning, and student engagement.

One way to go about this is to use **backward design** for your project.

Backward design is a framework for planning your course around its intended outcomes.² Backwards design is a way to solidify more abstract course outcomes, such as critical and creative thinking, in order to ensure that students are actively engaged with the material they are being taught. There are three stages to the backward design process:

1. Identify desired results,
2. Determine acceptable evidence, and
3. Plan learning experiences and instruction.³

You might notice that this approach does not end with “create and/or curate educational content.” Instead, it ends with more planning. The purpose of backward design is not to be done with your course transformation in a quick 3-step process. Instead, it asks instructors to question the processes and materials they currently use and

2. AvenuesdotOrg. (2013). *Grant Wiggins - Understanding by Design, Part 1*. [Youtube video]. Retrieved from <https://www.youtube.com/watch?v=4isSHf3SBuQ>
3. Wiggins, G., & McTighe, J. (2005). *Understanding by design*. Alexandria: Association for Supervision and Curriculum Development.

to start over by plotting out what is needed to meet your course outcomes.

Considerations: Impact

Thinking critically about the purpose of your course and its learning outcomes helps to ensure an excellent learning experience for your students. Ask yourself:

- What do I want my students to learn?
- How will I communicate to students that the concepts I present are valuable?
- How will I assess my students' understanding of core concepts?

Who is your audience?

Once you've decided what you want students to learn, you are ready to think about what resources you can use. As you begin to look for OER for your course, it's important to consider your target audience(s).

Considerations: Audience

- Do you have a primary audience? For example, majors or non-majors.
- Does your audience belong to a specific cultural or geographic background?
- Are there national, provincial, or local contexts that you want to incorporate into an OER?

Although your OER may be used by educators around the world, you can create it with your local audience in mind. Often times, culturally relevant examples allow students to engage with work on a more personal level. Although perfectly 'open' resources would not include culturally specific examples, jargon, or humour, the ability to alter OER allows for adaptation to fit new audiences, without sacrificing engagement for the original target audience.⁴

Does the OER you need already exist?

It is generally a good idea to look around at what content is available for your course before creating something new. There are three reasons for this:

1. The OER you want to create/use may already exist in the

4. McNally, M.B. & Christiansen, E.G. (2019). *Open Enough? Eight Factors to Consider when Transitioning from Closed to Open Resources and Courses: A Conceptual Framework*. Retrieved from <https://firstmonday.org/ojs/index.php/fm/article/view/9180/7808#p3>

format you want, or you may be able to easily convert it to the appropriate format.

2. You may be able to remix an existing OER in order to meet your course needs.
3. Your own teaching materials could be adapted for use as OER. For example, lecture notes can be an invaluable teaching aid for courses with no excellent textbooks available. Consider asking students who have taken the course what they feel are the most useful resources for the course.

More information about locating OER is available in the *Finding OER* Chapter (Available December 2022).

Considerations: Availability

- What changes would you need to make to share your own content as an OER? (See the *Copyright* Chapter for more information)
- What types and formats of OER are you looking for?
- What concepts or topics are missing in your current learning materials? There may be OER that can supplement these areas.

How will students access your course OER?

Whether you are using an OER as-is or creating something from

scratch, one of the first considerations you should take into account is how you will share the resource(s) with students in your class.

Considerations: Access

- Will you host OER in the LMS (Brightspace) or a third party platform?
- How can you make it evident to your students that they are using an OER? How can you educate them about the benefits and use of an OER?
- During your class, how will students access the OER?

What training or information do you need to use OER?

Using an OER can feel daunting, especially if you've not considered locating, licensing, and hosting OER before. Integrating an existing OER into your curriculum doesn't need to be exclusively your job. Training, like the module you are reading now, can provide basic information on these topics. At SAIT, Educational Developers from CADI and Library Liaisons can provide guidance to help you incorporate open resources into your course. The OER Librarian can also answer specific questions or provide customized training to departments that are interested in incorporating OER into curriculum. You can also get support when creating OER from the the Reg Erhardt Library. More information about available supports

is provided in the *Creating OER* and *Teaching with OER* chapters (Available June 2023).

Activity

- What aspects of OER are you most and least comfortable with? List at least three activities you could do to increase your comfort level.

This chapter outlined some high level considerations to keep in mind when transforming your course to use OER. One aspect of OER not covered here, however, is how to make an OER “open” and what that means. To answer that question, in the next chapter we’ll discuss the role that copyright plays in an OER’s development and dissemination.

Footnotes

PART II

COPYRIGHT & LICENSING

Copyright and Open Licensing

Learning Objectives

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

- Define the concepts of copyright, fair dealing, open licensing, and public domain.
- Explain the purpose of copyright law in Canada.

An **open licence** is a vital component of an open educational resource. Because of this, it is important that you understand how open licences work within copyright law. This chapter will explain the relationship between Canadian copyright law, fair dealing, and the Creative Commons open licensing system.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://openeducationalberta.ca/saitoer/?p=30#oembed-1>

Attribution: “What is a copyright? [Youtube]” by Innovaction, Science, and Economic Development Canada is used here for educational purposes as outlined in the terms and conditions. The

original version is accessible at <https://www.youtube.com/watch?v=ljNS5p3cqls>.

Copyright Law

Canadian copyright law protects an author's rights over their original creative works (e.g., literary, artistic, dramatic or musical works (including computer programs) and other subject-matter known as performer's performances, sound recordings and communication signals)¹. As soon as something is in a "fixed form" (e.g., on paper, in a saved digital file, in a musical notation)² it is automatically protected by copyright. In other words, an idea for a book you want to write is not protected by copyright, but the first draft of your manuscript is. Copyright protection ensures that the creator of a work has complete control over how their work is reproduced, distributed, performed, displayed, and adapted. You do not need to register your resource with the Canadian Copyright Office for this to come into effect; it is automatic. At SAIT, faculty and staff are supported in their use of copyrighted materials by the Copyright Officer at the Reg Erhardt Library.

Licensing

The copyright status of a work determines what you can and cannot

1. https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/h_wr02281.html#copyrightDefined
2. <https://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr04784.html>

do with it.³ As you begin to explore OER for use in your classroom, it is important that you understand both who holds the rights over the works you wish to use and the works you wish to create.

Most copyrighted works are under full, “all rights reserved” copyright. This means that they cannot be reused in any way without permission from the work’s rights-holder. One way you can get permission to use someone else’s work is through a **licence**, a statement or contract that allows you to perform, display, reproduce, or adapt a copyrighted work in the circumstances specified within the licence. For example, the copyright holder for an article might sign a licence to provide an institution the one-time rights to reproduce their article for classroom use.

You will also need to consider copyright and licensing if you wish to create OER. If work is created within the course of employment, the organization who employed the author may be the owner of the copyright and therefore specify the licensing requirements. Additional information about assigning an open licence to a work produced at SAIT will be discussed in the *Creating OER* chapter.

Accessible Content

In the Introduction to OER Chapter, we reviewed the difference between OER and **accessible resources**. When working in a digital platform, don’t forget that linking to an online resource, whether from a general internet site or from a library database, will meet the copyright and licensing requirements. While you will not be able to retain, revise, or redistribute copies of the work, students will be able to access the content in the original location.

3. Attribution: "Licensing" and "Public Domain" were adapted in part from UH OER Training by Billy Meinke, licensed CC BY 4.0.

Fair Dealing

If an “all rights reserved” copyright resource is available, you can make a **fair dealing** assessment for reproducing or adapting that work. However, having explicit permission is preferable. The SAIT Copyright Officer and Librarians do not recommend using fully copyrighted works in OER projects without written permission from the work’s rights-holder. Review SAIT’s Fair Dealing Policy (AC.2.12.1, Schedule A) or contact the SAIT Copyright Officer to learn more about how to apply fair dealing.

Public Domain

Works that are no longer protected by copyright are considered part of the public domain. Items in the public domain can be reused and freely modified for any purpose by anyone, without giving attribution to the author or creator.⁴

Works in Canada typically enter the public domain 50 years after the death of the creator at the end of that calendar year, or when dedicated to the public domain by their rights-holder. The Creative Commons organization created a legal tool called CC 0 to help creators dedicate their work to the public domain by releasing all rights to it.

4. Of course, standard citation procedures still apply for creative works in the public domain. You cannot claim another's work as your own.



“Canada, eh?” by Alan Levine, is dedicated to the Public Domain. You can view this image in the Flickr image repository to see the CC0 licence that was assigned when it was posted in 2008.

Dig Deeper

Review the *Copyright – Learn the Basics* online module from the Canadian Intellectual Property Office

Open Licences

All OER are made available under some type of **open licence**, a set of authorized permissions from the rights-holder of a work for any and all users. The most popular of these licences are **Creative Commons** (CC) licences, customizable copyright licences that allow others to reuse, adapt, and re-publish content with few or no restrictions. CC licences allow creators to explain in plain language how their works can be used by others. If you locate a work with a CC licence, you can easily determine how you can incorporate the work into your course. If you assign an open licence to your work, you allow any user to exercise the rights allowed under the licence, and cannot restrict reuse by certain individuals or parties without changing the licence itself.

Creative Commons licences will be explored in more detail in the next chapter. However, there are other open licences that can be applied to educational materials. A few of these licences are described below:

- **GNU Free Documentation Licence:** a **copyleft** licence that grants the right to copy, redistribute, and modify a resource. It requires all copies and derivatives to be available under the same licence. Copies may be sold commercially, but the original document or source code must be made available to the user as well.⁵
- **Free Art Licence:** The FAL “grants the right to freely copy, distribute, and transform creative works without infringing the author’s rights.” It is meant to be applied to artistic works, not documents.⁶

5. Free Software Foundation. "GNU Free Documentation License." 2008. <https://www.gnu.org/licenses/fdl.html>

6. Copyleft Attitude. "Free Art License 1.3." 2007. <http://artlibre.org/>

Dig Deeper

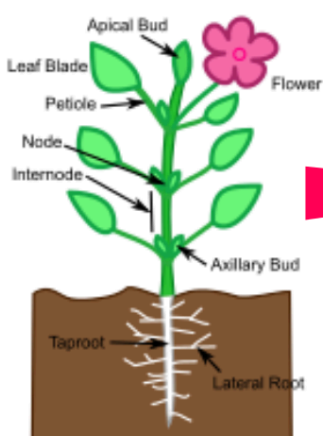
If you're interested in learning more about open licences, feel free to explore the Free Software Foundation's information on copyleft licences, some of the first licences used for open content.⁷

Why Open Licences?

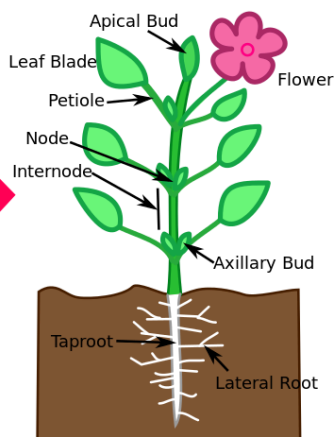
Open licences are an integral part of what makes an educational resource an OER. The adaptability and reusability of OER make it so that they are not just free to access, but also free for instructors who want to alter the materials for use in their course. For example, in the figure below an openly licensed image has been traced to make it more readable for users.

licence/lal/en/

7. Free Software Foundation. "What is Copyleft?." Accessed June 29, 2019. <https://www.gnu.org/copyleft/copyleft.html>



CC 0 Universal Public Domain License
Kelvinsong



CC 0 Universal Public Domain License
Kelvinsong
(adaptation for readability)

“Adaptation in action” by Abbey Elder, licensed CC 0 1.0, was adapted from “Copyrighted source to tracing” by Kelvinsong, also licensed CC 0 1.0. This image was originally used to represent an improper recreation of a copyrighted work via tracing. In this example, it shows how an already open work can be *legally* recreated via tracing for readability.

Early in the open education movement, David Wiley introduced what became one of the foundational tenets of the field: the 5Rs⁸. These five attributes lay out what it means for something to be truly “open”.

The 5 Rs include:

8. Wiley, David. "Defining the 'Open' in Open Content and Open Educational Resources." Open Content blog, 2014.
<http://opencontent.org/definition/>

- **Retain** = the right to make, own, and control copies of the content.
- **Reuse** = the right to use the content in a wide range of ways
- **Revise** = the right to adapt, adjust, modify, or alter the content itself
- **Remix** = the right to combine the original or revised content with other open content to create something new
- **Redistribute** = the right to share copies of the original content, your revisions, or your remixes with others

While the “redistribute” and “revise” rights are the most commonly exercised rights in open education, each of the five plays an important role in the utility of an open educational resource. For example, without the right to “remix” materials, an instructor who teaches an interdisciplinary course would not be able to combine two disparate OER into a new resource that more closely fits their needs.

In the next chapter, we’ll look at Creative Commons licences and how they facilitate the expression of the 5 Rs in unique ways.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://openeducationalberta.ca/saitoer/?p=30#h5p-5>

Footnotes

Creative Commons Licences

Learning Objectives

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

- Describe the four different Creative Commons Licence components.
- Explain why some CC-licensed content might not be considered OER.



CC Logo by Creative Commons, used under the CC Trademark Policy

As we mentioned in the previous chapter, **Creative Commons** (CC) licences allow you to explain, in plain language, how your works can be reused. These licences act as explicit, standing permissions for all users.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://openeducationalberta.ca/saitoer/?p=40#oembed-1>

Attribution: “Cable Green explaining Creative Commons and OER in 2 minutes [Youtube]” by Global Digital Library is available under a Creative Commons CC-BY 4.0 licence.

The Four Components of Creative Commons Licences



Attribution (BY) Proper attribution must be given to the original creator of the work whenever a portion of their work is reused or adapted. This includes a link to the original work, information about the author, and information about the original work's licence.



Share-Alike (SA) Iterations of the original work must be made available under the same licence terms.



Non-Commercial (NC) The work cannot be sold at a profit or used for commercial means such as for-profit advertising. Copies of the work can be purchased in print and given away or sold at cost.



No Derivatives (ND) The work cannot be altered or “remixed.” Only identical copies of the work can be redistributed without additional permission from the creator.

The four components, or elements, of Creative Commons Licences are expressed using the icons above. These elements can be mixed and matched to create a total of **six Creative Commons licences**.

¹ These licenses are often expressed in graphic form using CC buttons.²

The Four “Open” CC Licences

There are strengths and weaknesses to each Creative Commons licence you might apply to your OER. To help you make an informed decision, a short description of each licence that can be applied to OER is provided below.



CC BY (Attribution)

Strengths

- The CC BY licence is the most popular and open licence provided by Creative Commons.
- By requiring attribution and nothing else, your CC BY work will be easy for others to adapt and build upon.
- CC BY is often the default choice for open publications. Youtube uses the CC BY 3.0 licence as their single “Creative Commons” option.

1. The No Derivatives and Share Alike components are incompatible and cannot be combined under one licence.
2. All icons and buttons found within this and subsequent chapters are created by Creative Commons under a CC-BY 4.0 Licence.

Weaknesses

- Because CC BY allows for easier sharing and adaptation, it also leaves the creator with less power over their work. When you use a CC BY licence, you cannot be certain that your work will remain open or that your work will be reused for projects you support.



CC BY SA (Attribution, Share-Alike)

Strengths

- The CC BY SA combines the openness of CC BY licence with the caveat that an item remains open under the same licence when adapted.
- The CC BY SA licence is the second most popular licence, and the licence used by Wikipedia for their articles.

Weaknesses

- Because the CC BY SA licence requires that adapted content be shared under the same licence, it can be difficult to adapt or to remix works licensed CC BY SA.³

3. TheOGRepository. (2012, Sept 5). *Creating OER and combining*



CC BY NC (Attribution, Non-Commercial)

Strengths

- The CC BY NC licence gives the creator of a work complete control over any commercial reuse of their work.
- As a user, you can adapt and remix CC BY NC works so long as your new works provide attribution to the original author and do not turn a profit.

Weaknesses

- Some users may be concerned about what they are allowed to do with your CC BY NC work and where the commercial “line” is drawn. This topic is addressed in more depth in our OER *in Print* chapter (available March 2023).

licenses [YouTube video]. Retrieved from
<https://www.youtube.com/watch?v=Hkz4q2yuQU8>



CC BY NC SA (Attribution, Non-Commercial, Share-Alike)

Strengths

- CC BY NC SA is the most restrictive licence that can be used for OER and gives you the most control over its adaptations.
- Some creators apply this licence out of concern for their works being “scooped” by commercial publishers.

Weaknesses

- Because of its requirements, the CC BY NC SA licence is the hardest to adapt, remix, or build upon.
- If you hope to leverage the open community to promote and share your content, this licence may be a deterrent for potential partners as there is often confusion about what constitutes commercial use.

You can learn more about the individual CC licences on the Creative Commons website.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://openeducationalberta.ca/saitoer/?p=40#h5p-6>

Choosing a Licence for Your Work

Choosing a CC licence can be confusing at first, but the online *Choose a License* tool from Creative Commons can help. This tool generates a licence based on which rights you want to retain and which you would like to give to users. For example, if you want to share your work and allow others to adapt it, but you do not want others to be able to sell your work, you might consider using the CC-BY-NC licence.

Before you choose a licence, keep in mind that an OER should be able to exercise all the 5 Rs of open content we discussed in the previous chapter. Not all of the CC licences meet this definition. Specifically, the CC-BY-ND and CC-BY-NC-ND licences do not allow revising or remixing content, two of the most significant freedoms of OER for many instructors.

Wiley's 5Rs and Creative Commons Licensing

	Retain	Reuse	Revise	Remix	Redistribute
	Make and own a copy	Use in a wide range of ways	Adapt, modify, and improve	Combine two or more	Share with others
Public Domain	✓	✓	✓	✓	✓
CC-BY	✓	✓	✓	✓	✓
CC-BY-SA	✓	✓	same license	same license	✓
CC-BY-NC	✓	✓	✓	✓	non-commercial
CC-BY-NC-SA	✓	✓	same license	same license	non-commercial
CC-BY-ND	✓	✓	personal use only	personal use only	✓
CC-BY-NC-ND	✓	✓	personal use only	personal use only	non-commercial

OER

Not OER

Attribution: “Wileys 5Rs and Creative Commons Licensing” is by Krysta McNutt, CC-BY 4.0. To view the full version, visit the [Google Drawing](#).

Implementing a CC Licence

Creative Commons has an online Marking Guide that demonstrates

how to add your chosen CC licence on different types of media. Making your licence obvious on whatever item you are sharing is an important part of the dissemination process for OER: otherwise, users won't know what licence you've chosen! No matter the format, there are some standards you can follow:

- Make it clear
- Make it visible
- Provide links (to the licence and the work)

Dig Deeper: How comfortable are you making your work “open”? After reviewing this section and the *Choosing and Applying a CC License* chapter in the Creative Commons Certificate Course, reflect on the following questions⁴:

- **Am I OK with someone using my work without attribution or is it important I get credit?**
- **Am I OK with other people copying and distributing my content without asking my permission?**
- **What is the definition of “noncommercial” and “commercial” when used in the context of a CC licence? Am I OK with “commercial use” of my content?**

4. Adapted from the *Which Creative Commons Licence is Right for Me?* fact sheet by Creative Commons Australia, used under a CC BY 2.5 Licence.

How might this limit the sharing of the work?

- **What is the definition of “non derivative” when used in the context of a CC licence? Am I OK with other people changing and adapting the content? How might this limit the sharing of the work?**

Attribution vs Citation when Using Other’s Work

Although there are different rules for each licence, every CC licence includes the Attribution component which requires that users provide proper attribution for an original work being shared or adapted. Attribution is a similar process to citing academic works in a paper, but there are some key differences. The following table outlines some of the ways in which citations and attribution are similar and different:

Attribution: This table was adapted by Abbey Elder from “Citation vs. Attribution” by Lauri Aesoph, licensed CC BY 4.0.

Citation	Attribution
Purpose is academic (e.g. avoiding plagiarism)	Purpose is legal (e.g. following licensing regulations)
Does NOT typically include licensing information for the work	Typically includes licensing information for the work
Used to quote or paraphrase a limited portion of a work	Used to quote or paraphrase all or a portion of a work
Can paraphrase, but cannot typically change the work's meaning	Can change the work under Fair Dealing or with advance permission (e.g., under most CC licences)
Many citation styles are available (e.g., APA, Chicago, and MLA)	Attribution statement styles are still emerging, but there are some defined best practices
Cited resources are typically placed in a reference list	Attribution statements are typically found near the work used (e.g., below an image)

One easy way to remember the requirements for attribution is the acronym T.A.S.L.:

- T = Title of work
- A = Author or creator. Link to a page with their contact information, when possible.
- S = Source. Where can you find the original work?
- L = Licence. This can be expressed using the abbreviated form (e.g., CC-BY 4.0) and then linked to the full statement.

If the final work is digital, each of these elements can be linked to the original source to provide additional information. If the final work is in print or is an audio/visual file, consider posting the attribution information in a separate online page or mentioning the attribution as part of the credits within the media itself.

In this chapter, we have discussed how Creative Commons licences work and how you can use these licences for publishing or

sharing open content. In the next chapter, we'll explore how you can find existing OER to use in your course.



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<https://openeducationalberta.ca/saitoer/?p=40#h5p-4>

Footnotes

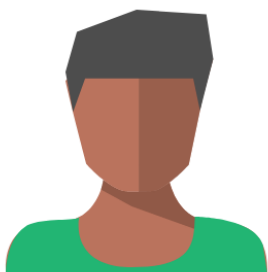
PART III
FINDING OER

Repositories and Search Tools

Learning Objectives

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

- Identify search tools for finding open educational resources.
- Identify search tools for finding openly licensed media.
- Find assistance for locating OER at SAIT.



Scenario – Locating a

Textbook

Dr. Fermin is updating her Abnormal Psychology course curriculum and would like to use an OER as the primary

text. She decides to search “Canadian psychology OER” on Google to locate possible resources and finds commercial textbooks, lists of websites from libraries, links to discussion forums, and possible OER texts. Dr. Fermin isn’t sure how to sort through all of these results, and wonders if there is a better way to search.¹

A set of available repositories, search tools, and resources are listed below to help you find the right OER for you. The following chapter will then review some strategies to use these collections effectively. Reg Erhardt Library staff can also help you identify suitable OER textbooks for your courses – you can contact your Library Liaison for more information.

Best Bets

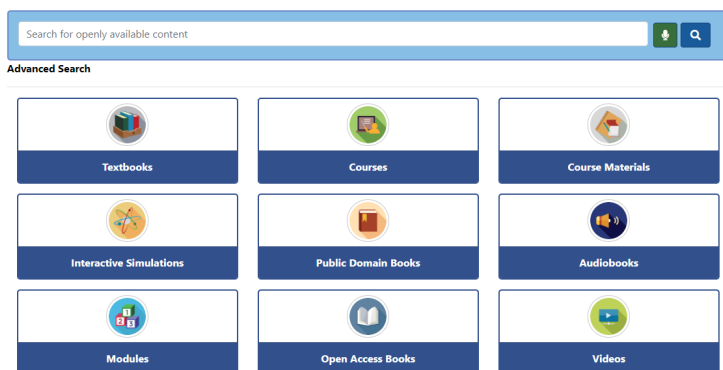
As you’ve read previously, OER is a grassroots movement which means information and resources are dispersed across a wide range of sites. This benefits the movement, as many voices can contribute, but it also means there is no centralized repository for the works. Instead, you must first know where to find the special collections, repositories, and lists, and then search within those collections.

1. This scenario is used under at CC BY 4.0 licence from University of British Columbia. <https://pose.open.ubc.ca/open-education/oer/adapting-an-existing-resource/>

When starting your search for OER, it's best to begin in a site with a wide variety of options. The websites listed below each have a different focus, but they are good places to start if you aren't sure what to look for. A more comprehensive list of OER collections is available on the Reg Erhardt Library's OER guide.

- The Open Textbook Library collection is a great resource for finding open textbooks. If you want a textbook and nothing more, this is the place to start.
- BCcampus Open Textbooks collects resources created, reviewed, or adopted by instructors at British Columbia universities. Materials can be filtered by Accessibility as well as whether they have been adopted by BCcampus courses, include ancillary materials, or have been reviewed by faculty.
- MERLOT provides access to a curated collection of open and accessible learning materials in a wide range of formats.
- BCcampus also has a list of the most popular OER repositories in Canada and the United States.

Federated Search Tools



SUNY OASIS search screen

SUNY's Openly Available Sources Integrated Search (OASIS)

OASIS is a search tool that aims to make discovery easier by searching multiple sources for OER and other open content at once. It currently searches 79 different sources and contains approximately 330,000 records.

George Mason OER Metafinder (MOM)

MOM links to a wide array of open content, including open access books and articles, documents in the public domain, and OER. Because of its large breadth of resources, we recommend that you start your MOM search with only a selection of the “OER-specific sites” checked, rather than all the materials it can include.

Institutional Collections

Institutional repositories (IRs) aren't just for sharing copies of research articles and student theses. They can also be used to store and share OER. Although not every college shares OER through their institutional repository, the colleges below do share collections of OER specific to their institution:

- University of Saskatchewan Open Textbook Catalogue
- OpenMichigan (University of Michigan)
- MIT OpenCourseWare (Massachusetts Institute of Technology)

Subject-specific Repositories

Some OER are shared through subject-specific repositories. A few notable examples of this type, including open publishers that specialize in one discipline, are listed below:

- Chem Collective: *Chemistry*

- Learn Chem E: *Chemical Engineering*
- Noba Project Psychology Modules: *Psychology*
- Center for Open Educational Resources and Language Learning (COERLL): *Languages*
- Open Geography Education: *Geography*
- Engineering Technology Simulations: *Engineering, Physics*
- PhET Simulations: *Physics, Physical science, Geology, Chemistry*
- SkillsCommons: *Career & Technical Education (CTE)*
- Green Tea Press Textbooks: *Computer Science, Programming* (Bayes, Python, MATLAB, Java, DSP)

OER by Course

Some colleges choose to share information about which OER their instructors assign in courses. These lists can give you a good idea of what other instructors in your discipline have adopted and (if they have provided a review), what they think of their adopted resource.

- COOL4ED Faculty Showcase (California universities and colleges)
- Open Oregon Educational Resources (Oregon universities and colleges)

Open Content (not explicitly OER)

Not all open content is made to be used in the classroom, but that doesn't mean you can't integrate them into your course. **Open access** book chapters and **openly-licensed** media can be great additions to your course.

Open Access Publishers and Repositories

- Directory of Open Access Journals (DOAJ) Open Access journal articles
- Directory of Open Access Books (DOAB) Open Access books
- Project Gutenberg Public domain books and documents
- PubMed Open access journal articles
- Public Library of Science (PLOS) Open access journal publisher
- Open Book Publishers Open access book publisher

CC-licensed Media

The Reg Erhardt Library's Finding and Using Images guide has an extensive list of open licensed and public domain image collections. Resources for other forms of media include:

- CC Search A federated search tool for finding content available under a CC license
- Digital Public Library of America (DPLA) Public domain images, videos, recordings, and texts
- The Metropolitan Museum of Art High-quality open images from the Met
- Youtube Videos. Use the Filters option on the results screen to select Creative Commons
- Free Music Archive Public domain and CC-licensed music and sound bytes

Finding Open Content

Learning Objectives

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

- Demonstrate how to conduct a preliminary search for open educational resources.
- Use advanced searching strategies to locate relevant OER.
- Find support for locating OER at SAIT.

Search Tips

Start Broad

The previous section reviewed available repositories, search tools, and resources to help you find the right OER for you. But how can you use all of these sites effectively? For the most results, start with a broad search focused on your discipline. Once you've brought together a large collection of resources, then you can begin to evaluate and refine your results list.

One way to effectively refine your results is to identify the significant keywords for your concepts. You can use this worksheet to generate keywords from your course outcomes:



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<https://openeducationalberta.ca/saitoer/?p=45#h5p-7>



Scenario – Locating a

Textbook

Remember Dr. Fermin? She teaches a course on abnormal psychology and wants to find videos, readings, and case studies related to this topic for her course. Here is an example of a search strategy she can follow by starting broad:

1. Search the **Open Textbook Library** or other textbook repositories for “Psychology.” Peruse the Tables of Contents of listed textbooks to find chapters or sections focusing on topics covered in the course.
2. Search **OASIS** or other Federated Search Tool

for “abnormal psychology.” Since OASIS searches content on multiple repositories, limiting your search a little more can be useful. These can then be sorted by format, type, or date.

3. Search **YouTube** for videos on specific topics related to Abnormal Psych. Since YouTube contains so many different types of content, being specific is more important on this platform.
4. As a last-ditch effort, do an **Advanced Search in Google** for “Abnormal Psychology” (we will discuss this more below).

By the end of these searches, Dr. Fermin has compiled the following list: Abnormal Psychology OER List
[Google Docs]

Check Your Understanding

- Try out your own search in a textbook repository or federated search tool using the simple keywords you identified in the earlier exercise. What did you find from your initial search? Did you have to broaden or narrow your search terms to find suitable results? Upon initial review, do you see any relevant resources in your results list?

Filter by Usage Rights in Google

Google is a familiar resource for many of us, and it is also useful for finding openly licensed content. The Advanced Search feature in Google allows you to filter results by **Usage rights**. Filtering by usage rights will limit your results to works with certain licenses listed on the webpage, usually Creative Commons licenses. There are a few options to choose from in the Usage Rights list, but we recommend starting with “free to use or share” to retrieve the broadest set of results. Adding “OER” to your search terms can help you locate materials created for sharing if your Google search is retrieving too many results.

Then narrow your results by...

language:	any language
region:	any region
last update:	anytime
site or domain:	
terms appearing:	anywhere in the page
SafeSearch:	Show most relevant results
file type:	any format
usage rights:	not filtered by license

Advanced Search

Google Advanced Search Screen

Remember when using this method that Google trusts what users tell it about an item’s copyright status. Although a resource may be labeled CC BY or even CC 0, you should trust your instincts if you aren’t sure whether the item you are reviewing is actually under copyright. Contact SAIT’s Copyright Officer or OER Librarian if you have questions.

Check Your Understanding

- Search Google using your keywords and the Usage Rights filter discussed above. What did you find from your initial search? Click through two or three of the results. Does the copyright status reported by Google match the information found within the resource or website?
- Search YouTube using your keywords and filter the results for the Creative Commons feature. What did you find from your initial search? How did the results change when you applied the CC filter?

Keep an Open Mind

You don't have to jump into a fully open course right away. Start small by adding OER lesson plans to your coursework, or wait and see what OER are published next semester. The number and breadth of OER available are changing every day. Although there might not be resources available for your course right now, that may not be the case next year or even next month. Including OER in your regular assessment of materials for use in your course is a great first step for finding resources you can adopt in the future.

Getting Help

Reg Erhardt Library staff can also help you identify suitable OER

textbooks for your courses – contact your Library Liaison for more information about this process. If you have specific questions about search techniques for open licensed materials, contact the OER Librarian.

In the next section, we'll look at how to evaluate the resources that you've located for their quality and fit to your course. Don't forget that OER can also be adapted to fit your course; information about that process will be discussed in future chapters.

Evaluating OER

Learning Objectives

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

- Describe the aspects of an OER that should be assessed before use.
- Explain why it is necessary to assess an OER's adaptability.
- Apply SAIT's OER evaluation rubric to located materials.

Although some repositories, like the BCCampus Open Textbook Collection, provide faculty reviews of the OER that they collect, you can't assume that there will be a review available for the exact textbook you want to use. Because of this, understanding how to evaluate OER yourself is really important. There are many organizations that have produced vetted rubrics for evaluating OER. Review the following list and select one that makes sense for your project:

- SAIT OER Evaluation Rubric
- Faculty Guide for Evaluating OER – A general checklist developed by BCCampus OpenEd Resources
- Open Textbook Network Review Rubric – A review chart used by University of Minnesota's Open Textbook Network Library
- Achieve's Rubric for Evaluating OER Objects – This rubric includes 8 core principles found in high quality OER

- iRubric: Evaluating OER Rubric – A general rubric that is well suited for individuals just starting their review process
- OER Accessibility Toolkit – A collection of accessible design best practices developed by BCcampus

All of these rubrics ask questions like, “Who created this resource?”, “Does the information presented in the resource align with my course learning objectives?”, “Does the resource meet minimum technology and accessibility standards?”, and “When was the last time the resource was updated?” Considering these issues can help you decide if a resource is right for your class, or if it needs to be updated or adapted.¹ Most of the criteria in these rubrics is universal to any learning material, while a few are specific to OER. Let’s look at some of the more important criteria in detail.²

Clarity, Comprehensibility, and Readability

The most ubiquitous standard in rubrics is: can the material you are considering be read and understood by your students? Although it might seem like a simple question, it is a necessary obstacle to confront when adopting a new resource for your course.

1. Statement about OER evaluation rubrics is adapted from Elder, A. (2017). Open Educational Resources: How to Find & Evaluate Resources Online. [YouTube]. Iowa State University.
<https://www.youtube.com/watch?v=FbwuMQM-NG8> CC BY 4.0
2. Criteria are adapted from Affordable Learning Georgia (n.d.) "Selecting Textbooks". University System of Georgia.
https://www.affordablelearninggeorgia.org/find_textbooks/selecting_textbooks/ under a CC BY 4.0

Considerations

- Is the content, including any instructions and exercises, clear and comprehensible to students?
- Is the content consistent with its language and formatting? (e.g. key terms are bold)
- Is the content well-organized in terms of sequencing and flow?

Content and Technical Accuracy

The accuracy of the content is also a major component of its usability in the classroom. Be sure to check for technical errors such as broken links or typos. In most cases, content accuracy will not be an issue, but some older resources may require updates.

Considerations

- Is the content accurate based on your expertise?
- Are there any factual, grammatical, or typographical errors?
- Is the interface navigable for students?

Adaptability and Modularity

Because of their open licenses, OER permit a wider range of (re)use than most traditional educational content; therefore, it is important to keep in mind how your chosen OER can be adapted. Modularity, or the ability for a work to easily be broken up into smaller pieces, is a preferred feature that improves reuse of content. If an OER has clear chapter and unit breaks, it can help other instructors more easily adopt or adapt resource for their own courses.

Considerations

- 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 be used or rearranged out of their original order?
- Is the content available under a license which allows for modifications?

Appropriateness and Fit

Although there may be many OER available in your field, some resources may require minor edits or additions. Keep in mind that the open licenses of OER mean that they can be edited or even combined with other resources. This can be particularly useful if

you would like to adopt a chapter from one OER for the first unit of your course but prefer alternate resources for other units.

Considerations

- Is the content presented at a reading level appropriate for your students?
- How does the content align with your course learning objectives?
- Is the content level appropriate for use in your course?

Accessibility

No matter what resources you plan to adopt, accessibility should always be a part of your assessment process. Many publisher-provided homework platforms are not accessible to students and can cause unexpected issues. Similarly, some OER may not be optimized for students with visual or auditory impairments. See our Accessibility & Usability chapter for more details.

Considerations

- Is the content accessible to students with disabilities through the compatibility of third-party reading applications?
- If you are using Web resources, does each image have alt text that can be read? Do videos have accurate closed-captioning?
- Are students able to access the materials in a quick, non-restrictive manner?

Dig Deeper: Locate an open educational resource in the BCcampus Open Collection and review the content, licence, and file format for adaption.

- Use the Faculty Guide for Evaluating OER to review the OER for reuse.
- Review the licence and file format. Is the file type easy to edit? Are there any accessibility issues with the file type?
- Does the OER have any faculty reviews currently posted? Do you agree or disagree with their findings?

Faculty from British Columbia, Alberta, Yukon, and Saskatchewan can apply to review BCcampus Open Textbooks. For more information, visit their website.

In Summary

This chapter provides you the tools you need, to know how to locate and then evaluate OER for quality and fit in your class. If you have additional questions, your SAIT Library Liaison or the OER Librarian can help.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://openeducationalberta.ca/saitoer/?p=46#oembed-1>

Attribution: “Open Educational Resources: How to Find & Evaluate Resources Online [Youtube]” by Abbey Elder is used under a CC BY 4.0 International License.

Footnotes

PART IV

USING OER AT SAIT

I. OER Activities at SAIT

History of OER at SAIT

SAIT has made great strides in incorporating OER into courses since the work first began in 2016.

From 2016-2018, OER activities at SAIT were focused on AlbertaOER (ABOER) grants. These grants supported SAIT faculty in developing OER materials in math and science courses. These successful projects showed the value of OER in student learning. At the same time, research was done at SAIT to highlight student struggles with textbook costs (see Saitsa produced video that follows).



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://openeducationalberta.ca/saitoer/?p=346#oembed-1>

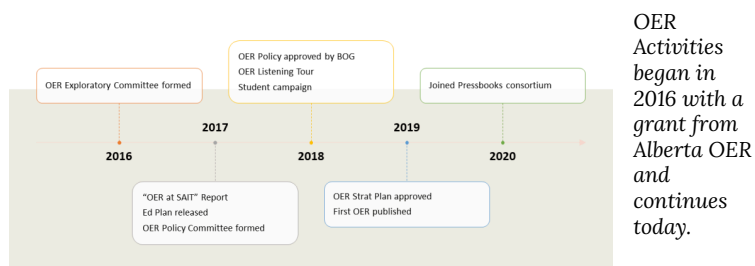
Attribution: “Open Education Week: OER Success Stories [Youtube]” is posted with permission by the creator, the SAIT Students’ Association.

In May 2018, Southern Alberta Institute of Technology (SAIT) announced that it had officially adopted one of the first institutional Open Educational Resources (OER) policies in Canada. This policy is part of SAIT’s initiative, outlined in the 2017-2020 Applied Education Plan, to “support faculty in adopting, adapting and creating open

education resources that increase access to relevant, flexible learning content.”

The impact of the new policy, procedures, and activities could be seen in the dramatic rise in OER use at SAIT. In the 2018-19 academic year, five Communications courses (90+ sections) began using OER for the first time. These new projects joined ongoing OER use in math and statistics courses. A long-term vision for OER activities at SAIT was also introduced in 2019 in the form of a 5 year strategic plan.

In February 2020, the Reg Erhardt Library joined with University of Alberta, University of Lethbridge, University of Calgary, and MacEwan University to form the Open Education Alberta working group, resulting in the launch of a free-access provincial OER publishing platform that greatly improves faculty access to OER technology and increases distribution of SAIT’s OER material to the public. The launch of this service led to the development of the SAIT OER publishing program.



In the 2021-22 Academic Year, the Reg Erhardt Library supported SAIT faculty to complete six OER projects in the areas of business, liberal arts, and mathematics. Outside of publishing, the SAIT OER program activities include educational workshops to support staff and faculty implementation of OER in curriculum as well as consulting on open licensing projects across the institution.

In the last six years, SAIT faculty’s adoption of OER textbooks has impacted more than 20,000 students in 24 courses, saving them

almost 2.1 million dollars while improving their access to learning materials.

OER Impact at SAIT



\$2,079,082

saved by students since the first OER in 2017.

6

OER projects completed by SAIT Faculty in 2021



2

Faculty members have been given SAITSA's Athena Award since 2019 for their dedication to implementing OERs at SAIT.

2. Applying the SAIT OER Policy

Why adopt an institutional policy? As Green et. al., (2018) says, “Well-crafted policies that reflect institutional priorities while providing support for faculty will increase the acceptance and use of OER and will help scale **OEP**.”¹. We have found this to be true at SAIT.

The SAIT Policy

As was mentioned in the previous section, SAIT adopted one of the first institutional OER policies in 2018. The creation of the policy was seen as essential to the wide-spread use of OER at the institution. At SAIT, the institution has ownership of and rights to most works created by its employees within the scope of their work. Therefore, it was necessary for the SAIT Board of Governors to adopt a policy that allowed assignment of an alternative open license, as well as provided guidance for OER creation.

The current SAIT OER policy addresses:

- Licensing
- Intellectual property
- Responsible parties

1. Green, C., Illowsky, B., Wiley, B., Ernst, D., Young, L., DeRosa, R., & Jhangiani, R. (2018, August 18). 7 things you should know about open education: policies. Retrieved from <https://library.educause.edu/-/media/files/library/2018/8/eli7159.pdf>

- Selection and evaluation
- Technology such as hosting and authoring tools

The policy, procedure, and evaluation rubric can be found on SAIT's public website. Some highlights from the current policy include:

- OER use is not mandatory but is preferred whenever possible.
- OER use is appropriate where materials are of equal quality to commercial products. Evaluation of OER can be completed using the rubric included in the policy.
- OER can be adopted verbatim, adapted and modified, or created from scratch.
- The SAIT Intellectual Property policy (AC.2.11) still applies, so OER creation is determined by the Academic Chair and/or Dean in consultation with the author.
- The author/subject matter expert is responsible for applying the correct Creative Commons licence to OER based on the previous licences.
- The CC-BY licence is the preferred licence for OER at SAIT, unless exceptional circumstances are identified.
- OER may need to be posted back to repositories, based on the open licence assigned.
- OER best practices should include accessibility & technology considerations.
- CADI, the Library, and the Copyright Officer can provide training and support for authors and Academic Chairs who are working with OER content.

3. Challenges and Success Stories

Success Stories at SAIT

Watch this Saitsa produced video in which SAIT instructors share why OER is important to them and their students. Think about the extent that these examples might be applicable to your practices.



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://openeducationalberta.ca/saitoer/?p=363#oembed-1>

Attribution: “Textbook Broke” [YouTube] is posted with permission from the creator, the SAIT Students’ Association.

SAIT instructors have found many new and creative ways to incorporate OER use into their practices. Open licenses have been applied to a range of materials, from textbooks to learning simulations. Open projects have been used in the classroom, and for materials to support community and nonprofit activities. Overall, more than 52 SAIT faculty have engaged in open educational practices, improving the learning conditions of more than 20,000 students.

Dealing with Challenges

As we previously discussed in the Introduction section, faculty can face challenges when adopting OER for use in a classroom. Research¹²³ has shown that instructors consistently report the following issues or concerns. Similar results were seen in a 2017 survey of SAIT faculty. However, SAIT faculty feedback has indicated that some of these barriers have been reduced through changes to institutional culture, procedures, and practices.

1. Marín, V. I., Zawacki-Richter, O., Aydin, C. H., Bedenlier, S., Bond, M., Bozkurt, A., Conrad, D., Jung, I., Kondakci, Y., Prinsloo, P., Roberts, J., Veletsianos, G., Xiao, J., & Zhang, J. (2022). Faculty perceptions, awareness, and use of open educational resources for teaching and learning in higher education: A cross-comparative analysis. *Research and Practice in Technology Enhanced Learning*, 17(1), 11. <https://doi.org/10.1186/s41039-022-00185-z>
2. Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislevy, J., & Wang, S. (2018). Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream's OER Degree Initiative | Achieving the Dream. SRI International. <https://www.sri.com/publication/education-learning-pubs/digital-learning-pubs/participant-experiences-and-financial-impacts-findings-from-year-2-of-achieving-the-dreams-oer-degree-initiative/>
3. Taylor, C., & Taylor, M. W. (Summer 2018). I'm Never Doing This Again!: Identifying and Solving Faculty Challenges in Adoption of Open Educational Resources. *Online Journal of Distance Learning Administration*, 21(2), 2. https://ojdla.com/archive/summer212/taylor_taylor_212.pdf

Lack of Time

While faculty are often concerned with the time needed to locate and modify OER, there can be supports available. At SAIT, we suggest that OER development work be incorporated into any ongoing curriculum maintenance or development projects, rather than as an external project. Additionally, faculty can contact their liaison librarian for help locating OER, or reach out to the OER librarian to identify supports for larger projects.

Lack of Expertise

Some faculty refrain from using OER due to fears of copyright infringement. Others may not feel qualified to interpret the open licensing used with OER and therefore choose to avoid them all together. However, these concerns tend to disappear when an individual or program has access to training and education. Activities such as OER workshops reduce these barrier and can make faculty more comfortable in considering OER use. Faculty can also contact the OER Librarian or Copyright Officer for assistance with these activities.

Lack of Compensation

It's important to acknowledge that instructor time has value, and OER work should not be done for free. Adjunct faculty are especially at a disadvantage as they are usually paid by the course and have no additional compensation for time it would take to locate or create OER. Institutions should develop processes to include compensation in OER work, either in the form of time (release time for faculty or support staff time) or money (grants or contracts).

At SAIT, we suggest that interested faculty speak to their Academic Chair or Manager about incorporating OER work into their annual professional duties. The OER Librarian can also help identify any external grants or funding opportunities that might be available. SAIT also recognizes the time and effort that faculty exert on these projects through awards such as the Athena Award from the student association.

Concerns related to Course Design or Content

OER availability can vary widely by topic. Instructors in high enrollment programs and introductory core courses are more likely to find applicable OER resources than faculty that teach highly advanced technical concepts. Additional challenges include committee-level adoption decisions, use of master course templates, a reliance on commercial online platforms (e.g., for homework) tied to new commercial textbooks, and the unavailability of ancillary resources such as question banks. The solution to some of these issues may be time; one of the benefits of the grass-roots nature of OER development is that multiple organizations can work on filling gaps once they are identified. For example, the development for open licensed homework platforms has been identified by multiple OER organizations as a high priority, with several new systems launching in 2024⁴⁵. For other issues

4. Virginia's Academic Library Consortium. (n.d.) VIVA Receives IMLS National Leadership Grant. VIVA. <https://vivalib.org/va/open/IMLS-homework>
5. Rogers, J. (2023, Feb 27). LibreTexts Announces New Grant to Expand ADAPT Homework System. LibreTexts. <https://blog.libretexts.org/2023/02/27/libretexts-announces-new-grant-to-expand-adapt/>

related to institutional practices, such as centralized decision making for adoption decisions and course design, the solution is incorporation of OER into these practices.

Solving the challenges associated with OER is not a one size fits all approach. Not all solutions will work for every program or course. While many of the issues presented here directly impact faculty, administrators must be fully engaged in implementing solutions in order for the institution to reap the benefits of OER use. Faculty, Academic Chairs, and administrators will need to work together to understand the unique challenges for their area and develop potential solutions.

PART V

TEACHING WITH OER

Open Pedagogy

Learning Objectives

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

- Provide a definition for open pedagogy.
- Describe the major components of a renewable assignment.
- List three tools commonly used for the creation of renewable assignments.

Free access to materials is not the only benefit provided by using OER. Another aspect of OER that is commonly commended by instructors is the academic freedom that using openly-licensed content affords them in taking control of their classroom and engaging students in learning.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://openeducationalberta.ca/saitoer/?p=49#oembed-1>

Attribution: “Open Dialogues: How to engage and support students in open pedagogies” by Centre for Teaching, Learning and Technology, University of British Columbia is licensed CC BY 3.0.

Innovation in the Classroom

The **open licenses** on OER allow instructors to adapt and integrate materials into their classes in new ways, incorporating topics of local interest or translating content into another language. Instructors who teach graduate level courses or courses in niche subject areas are often drawn to OER for two reasons:

1. They can adapt existing materials to meet the specific needs of their class.
2. They can share created materials with other instructors in their subject area around the world.

Developing new open educational resources can be incredibly impactful, especially for instructors who feel they are underserved by the traditional textbook model and market.

Open Pedagogy

Using open educational resources in the classroom can make it easier for students to access and interact with course materials. However, another major aspect of Open Education asks not “what you teach with” but “how you teach.” The set of pedagogical practices that include engaging students in content creation and making learning accessible is known as **open pedagogy**.

As DeRosa & Jhangiani (2017) explain, “one key component of open pedagogy might be that it sees access, broadly writ, as fundamental to learning and to teaching, and agency as an important way of

broadening that access.”¹ DeRosa & Robison (2017) expand on this topic further, explaining that:

“students asked to interact with OER become part of a wider public of developers, much like an open-source community. We can capitalize on this relationship between enrolled students and a broader public by drawing in wider communities of learners and expertise to help our students find relevance in their work, situate their ideas into key contexts, and contribute to the public good.”²

Depending on the source you consult, open pedagogy might be a series of practices, a learning style, or a state of mind. For the sake of this chapter, open pedagogy is defined as a series of practices which involve engaging students in a course through the development, adaptation, or use of open educational resources.

Dig Deeper To learn more about about how different scholars are defining open pedagogy, please read:

1. DeRosa, R. & Jhangiani, R. (2017, June). Open pedagogy and social justice. *Digital Pedagogy Lab*. Retrieved from <http://www.digitalpedagogylib.com/open-pedagogy-social-justice/>
2. DeRosa, R. & Robison, S. (2017). From OER to Open Pedagogy: Harnessing the Power of Open. In Jhangiani, R.S. & Biswas-Diener, R. (Eds.), *Open: The Philosophy and Practices that are Revolutionizing Education and Science*, pp 115–124. London: Ubiquity Press. DOI: <https://doi.org/10.5334/bbc.i>. License: CC-BY 4.0

- DeRosa, R. & Jhangiani, R. (2017). *Open pedagogy*. Open Pedagogy Notebook.
- Schuwer, R. (2017). *April open perspective: what is open pedagogy?*. Year of Open.
- Sinkinson, C. (2018). *The values of open pedagogy*. Educause.

Features and Attributes of Open Pedagogy³

Tom Woodward highlights three features of open pedagogy in the article, *Open Pedagogy: Connection, Community, and Transparency*⁴:

- **open planning:** *Prior to the start of a course built on open pedagogy there is a focus on collaboration regarding what the course might be – the content, the lessons, the tools of construction, and the teaching strategies...You can see what other instructors have done – their resources, their lessons, or their reflections on what happened during their course. As Tom points out, these processes are often hidden from public view. Making them open and accessible means that others can learn*

3. This section is adapted from The University of British Columbia's Program for Open Scholarship and Education (POSE) under a CC BY 4.0 licence.

4. Grush, M. (2014). Open pedagogy: Connection, community, and transparency. *Campus Technology*.
<https://campustechnology.com/articles/2014/11/12/open-pedagogy-connection-community-and-transparency.aspx>

from them.

- **open products:** *Students are publishing for an audience greater than their instructor. That matters. Their work, being open, has the potential to be used for something larger than the course itself and to be part of a larger global conversation. This changes the experience of doing the work, but just as importantly it changes the kind of work you ask students to do.*
- **open reflection:** *After the course, reflecting and documenting how the course went is valuable both to the instructor and to those who might be considering similar courses or pedagogical strategies. People are happy enough to present and document success but it's still not common practice to reflect on elements that don't work well. Documenting reflections on what worked and what didn't and making that public can lead to connections between people working to address the same challenges.*

One could also consider a fourth feature:

- **open process (of creating OER):** *If you or your students create open educational resources for a course, it's useful to share not just the finished resources but also the processes of creating them. Sharing the process can mean many things, e.g., talking about how you made a teaching resource such as a video or podcast (what tools, software, what steps you took, pitfalls you ran into), describing why you created the resource in the way you did (what goals you had, what research underlies the creation of this resource), explaining how you have used the resource in a class and whether it was successful.*



Scenario – Engaging

Students Through Open Work

Let's consider this scenario: In Dr. Smith's course on forest conservation, they have been asking students to research forest conservation policies in a specific region, critically evaluate the policies, and then write a seven to ten-page essay on the topic. Students seem to have a hard time engaging with the assignment and, in feedback, students have noted that the assignment is both hard but also that it feels like it is busy work. Dr. Smith feels like the assignment is valuable as it gets students to think critically about the topic of the class. More so, they feel like the work the students do has potential as scholarly work and are thinking about having students post their essays on a course website or blog.

- How would posting the work on the Internet change the nature of the assignment?
- What strategies or scaffolding could Dr. Smith incorporate into the assignment to ensure that the students are successful?
- What might be the benefits or drawbacks of

asking students to assign an open licence to this work?

Creating OER with Students

One method of engaging in open pedagogy is the development of renewable assignments, assignments which students create for the purpose of sharing and releasing as OER. These can range in content from individual writing assignments in Wikipedia to collaboratively-written textbooks. David Wiley has argued⁵ that much of student work can be considered disposable:

“These are assignments that students complain about doing and faculty complain about grading. They’re assignments that add no value to the world – after a student spends three hours creating it, a teacher spends 30 minutes grading it, and then the student throws it away. Not only do these assignments add no value to the world, they actually suck value out of the world.”

Christina Hendricks, on the other hand, states⁶ that it’s not that

5. Wiley, D. (2013). What is open pedagogy? *Open Content Blog*.
<https://opencontent.org/blog/archives/2975>
6. Hendricks, C. (2015). Renewable assignments: Student work adding value to the world. *University of British Columbia*.
<https://flexible.learning.ubc.ca/news-events/renewable-assignments-student-work-adding-value-to-the-world/>

such assignments have no value at all. They can often serve very well to encourage students to learn and apply information, gain research and other skills, engage in problem-solving, and more. If done well, they can show instructors the level of mastery students have achieved. But what is important to consider, is that “disposable assignments” don’t provide any further value to the world after they’re completed.

What makes an assignment renewable or disposable? A disposable assignment, Wiley suggests⁷, is any assignment about which students and faculty understand the following:

- Students will do the work
- Faculty will grade the work
- Students will throw away the work

However, a renewable assignment is any assignment where:

- Students will do the work
- Faculty will grade the work
- The work is inherently valuable to someone beyond the class
- The work is openly published so those other people can find and use it

Wiley later expanded his definition of assignments to include disposable, authentic, constructionist, and renewable assignments. Wiley & Hilton (2018) compiled the criteria in **Table 2** to distinguish between these different kinds of assignments, from least to most open.⁸

7. Wiley, D. (2016). Notes on open pedagogy. *Open Content Blog*.
<https://opencontent.org/blog/archives/4483>

8. Wiley, D. & Hilton III, J. (2018). Defining OER-Enabled Pedagogy. *The International Review of Research in Open and Distributed Learning*,

Table 2: Wiley & Hilton's (2018) Criteria Distinguishing Different Kinds of Assignments

	Student creates an artifact	The artifact has value beyond supporting its creator's learning	The artifact is made public	The artifact is openly licensed
Disposable assignments	Yes	No	No	No
Authentic assignments	Yes	Yes	No	No
Constructionist assignments	Yes	Yes	Yes	No
Renewable assignments	Yes	Yes	Yes	Yes



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://openeducationalberta.ca/saitoer/?p=49#h5p-8>

There are many ways to get students involved in the creation and adaptation of OER. Assigning students to draft exam questions could bring immense value to your course, especially if those questions are built upon and improved by future students. Other work your students can collaborate on creating include literature reviews, course readers, and even full textbooks.⁹

19(4). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/3601/4724>

9. Mays, E. (Ed.). (2017). A guide to making open textbooks with students. Rebus Community. Retrieved from

Although your students may be new to some of the content covered in your course, if they can be engaged in creating something useful for future students, they may be able to better understand the material through this process; furthermore, students may find it easier to convey your course material in a way that other students will be able to understand. How and if you choose to include your students in content creation is up to you as the instructor, but there are many options available. You can explore more examples of open pedagogy in action in the Open Pedagogy Notebook.

Tools for implementing renewable assignments

- **Hypothes.is:** One of the tools commonly used for open pedagogy projects is Hypothes.is. Hypothes.is allows users to annotate websites and online readings easily. Using hypothes.is can let students engage with your course readings and each other in a more interactive way than discussion boards might allow.
- **Wikibooks:** Wikibooks and WikiEdu are both excellent tools for working with students to create a text. Alternatively, short student projects, such as annotated bibliographies, can be done via Wikipedia by adding context and citations to short or underdeveloped articles. This not only gives students the opportunity to get experience explaining concepts for a public audience, it also increases the available public knowledge on your course's topic!
- **Google Drive:** Google Drive provides a variety of tools that can be used for collaboration on text-based projects as well as

<https://press.rebus.community/makingopentextbookswithstudents/>

slideshows and spreadsheets.

- **Youtube:** Student-made instructional videos or class projects can be incredibly useful to showcase for future students in the class or to use as supplemental materials for explaining difficult concepts.

Check Your Understanding

Brainstorm some renewable assignments. Do you already assign work that could be defined as renewable?

Considerations for Using Open Pedagogy

Learning Objectives

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

- List three considerations to keep in mind before changing your teaching style.
- Explain why it is important to scaffold learning in open pedagogy courses.

Before jumping in with open pedagogy, you should keep in mind how you will support students through the changes you plan to make. Ward (2017) discussed some of these considerations in an interview with Rajiv Jhangiani, a leader in the field of open pedagogy:

“When taking that approach, [Rajiv] said, it is important to give students control over their work. Let them choose Creative Commons licenses they are comfortable with. Allow them to later remove online work they decide is inferior. At the same time, scaffold assignments so that students gradually build skills and improve their ability to produce high-quality work.”¹

1. Ward, D. (2017, April). Turning open education into a social

If you are interested in utilizing open pedagogy in your courses, first consider how this will affect your students.²

Acknowledge the Risk

Working in the open and opening up our work to the public can be scary for almost all of us but doing so usually means it pushes us to a higher standard of work. Learning involves risk taking. When students share their work openly, they are contributing to the building and sharing of knowledge and they are opening up their work for public review. When you are accustomed to learning and creating behind classroom walls and for the eyes of only your instructor, working in the open can be both daunting and extremely rewarding. Students will want to understand:

- How their work may be evaluated by others?
- What their obligations are regarding copyright and appropriate citation of others' work?
- How they can license their own work (with an open license) to allow others to re-use and build on their work – while attributing them as the original author?

When sharing content outside of traditional classrooms, different people have different levels of comfort and risk and doing so may

movement. *Center for Teaching & Excellence blog*, University of Kansas. Retrieved from <http://cteblog.ku.edu/turning-open-education-into-a-social-movement/>

2. This section has been adapted from University of British Columbia's Program for Open Scholarship and Education (POSE). under a CC BY 4.0 Licence. <https://pose.open.ubc.ca/open-education/open-pedagogy/student-considerations/>

require grappling with issues of trust, privacy and ownership. Addressing such questions directly, even building them into course discussions, can help students understand why they are being asked to work openly as well as help to build their buy-in and support for doing so.

Understand your tools

You don't have to use a snazzy tool or technology to make open pedagogy work. Make sure that you are choosing a tool or technology that your students can easily learn and– if it is not already familiar to them– that you have included time in your course for teaching students how to use your chosen tool.

Scaffold learning

Not all students will be familiar with technology or able to engage with OER quickly. It's important that you scaffold technology support into your teaching so all students can be on the same



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page when it comes to using the tools you've created or adopted.³
Some methods for scaffolding learning are provided below:

- Integrate interactive exercises into your class to help students work through new concepts.
- Create tutorials on how to use any technology or tool unique to your class.
- Use blogs and discussion posts to introduce the concept of writing for a public audience.
- Give students the choice between set assignment types to accommodate learners with different technical competencies.

Educate students about ownership rights and copyright

It's important that students who are creating items that might be published and shared openly can understand what that means. At SAIT, student produced work is governed by policy that clearly defines students' rights. If you're uncomfortable about discussing copyright and ownership rights with your students, librarians or the copyright officer can support you in developing learning materials or discussions on the topic.

Considerations

3. Kim, M.C. & Hannfin, M.J. (2011). Scaffolding problem solving in technology-enhanced learning environments (TELEs): Bridging research and theory with practice. *Computers & Education*, 56(2): 403-417. <https://doi.org/10.1016/j.compedu.2010.08.024>

- Teach students their rights as content creators and allow them to opt out of sharing their assignments.
- Your students don't need to be copyright lawyers to feel safe using OER. Focus on building a comfortable foundation of knowledge about CC licenses: the rest, if necessary, can come later.
- If you'd like your students to learn more about this topic but don't know where to start, consider reaching out to your library liaison or the copyright officer on campus.
- Alternatively, you can adopt an OER to teach your students about copyright, such as Larysa Nadolny's Copyright & Fair Use for K-12 Educators.

Be considerate of student privacy

Some students will be energized by the idea that their homework can be seen, used, or even improved upon by future students in the class. Others may feel uncomfortable with this step. Allow students to opt out of making their materials public if they are uncertain about doing so and give them the option to remove their name from public documents if they are uncertain about this for any reason.

Considerations

- Explain clearly how and where student-created course content will be shared in the course information.
- Allow students to share their work without attaching their personal information to it, if they are concerned about this.
- Reaffirm students' interest in publicly sharing their materials with each assignment that will be posted.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://openeducationalberta.ca/saitoer/?p=51#h5p-9>

Assessment for OER

Assessment for courses utilizing OER does not have to be any different than for courses utilizing traditional materials. Nonetheless, some individuals have developed assessment techniques for the open classroom in particular. One of these is the RISE Framework.

The RISE Framework (Resource Inspection, Selection, and Enhancement) utilizes a 2 x 2 matrix of High Grade/Low Grade and High Use/Low Use to determine how much the use of OER

has affected a student's learning outcomes.⁴ The RISE Framework is used to determine how well a student performed in a course and to contrast that outcome with how much they used their provided course materials. This method can help delineate between students who excel in a subject by default and those who have done well in a course thanks to the use of the provided course content. A package in R has been developed for running a RISE analysis quickly and easily. The RISE package for R (external link) is openly available in Zenodo.

In the end, what assessment techniques you employ in your course will be determined by a variety of factors, some of which will be out of your control. Nonetheless, it's important to understand why you're assessing your course and the impact that assessment can have, particularly for courses changing their materials.

These are only a few concepts to keep in mind when exploring open pedagogy in your course. You can learn more about this topic in the Open Pedagogy Notebook.

4. Bodily, R., Nyland, R., & Wiley, D. (2017). The RISE framework: Using learning analytics to automatically identify open educational resources for continuous improvement. *International Review of Research in Open and Distributed Learning*, 18(2). <https://doi.org/10.19173/irrodl.v18i2.2952>

PART VI

CREATING OER

4. Planning and Completing an OER Project

Learning Objectives

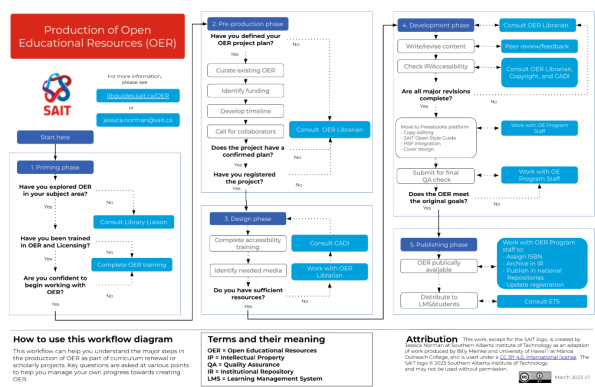
By the end of this chapter, you will be able to:

- Describe the services and departments that support publishing an OER.
- Summarize the benefits of publishing within this program.
- Create a customized publishing workflow for a potential project.

Each OER project is different and rarely is an OER adoption a turn-key process. While OER textbooks exist for many high-enrollment courses, the need for alignment with pedagogical design (or teaching style) and student population will typically require a work to be adapted. Other technical and specialized topics may require creation of a new OER, as there is limited resources currently available.

OER PRODUCTION WORKFLOW

The following OER production workflow¹, based on an instructional design framework, depicts the major steps that OER adaptations or creations typically go through:



The OER Production Workflow diagram outlines the steps to adapt or create OER for courses at SAIT. A larger version of the workflow is available online.

Priming phase

This step is all about gauging your knowledge and experience with OER. Consider whether or not you have explored OER in your subject area before. Prior to planning the creation of new OER, ensure that you have looked into other subject-specific OER to see if there are any that may be adapted to fit your needs– this may save you a lot of time in the future. If this is your first experience with

1. Production of Open Educational Resources was adapted from Scoping an OER Project by Billy Meinke, licensed CC BY 4.0.

OER, look into any workshops, training, or contact the Reg Erhardt Library for information on basic OER training.

Pre-production phase

Planning is a vital part of creating a successful OER. Making a general timeline and design for the workflow of the project is important to ensure that you stay on track and have a realistic idea of how long OER creation and adoption may take. At this phase, ensure that you are simply planning. No new content should be created. This is also a great time to schedule a consultation with the OER Librarian to learn more about available supports.

Design phase

This step follows very closely to the pre-production phase. It focuses on adapting existing OER to fit your project, and expanding out project outlines or lists of any additional documents that may be created. The identification of needed visuals and graphics should also be included in this phase of production.

Development phase

If you are creating new OER, this phase will likely be the most time-intensive, as it is in this phase that you will begin building new materials. If you are simply adapting existing OER, this phase may just involve the creation of instructional documents to accompany your adapted resource. As well as building new materials, this phase also involves the editing and revision of new and existing resources.

Ensure you are also checking you have appropriately attributed all outside resources that have been used, and that you have made content as accessible as possible.

New content may be drafted in platforms such as Google Docs or Word, before being exported onto open platforms for dissemination, such as Pressbooks.

Publishing phase

The final phase involves publishing and sharing the content that has been created. This includes working with OER program staff to develop metadata for the work, creating export versions, and publishing editable files for instructors who might wish to edit your work (.doc, .xml, etc). The OER content is then disseminated to learners and shared with the open community.

Tools and Techniques for Creating OER

Learning Objectives

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

- Provide two examples each of low-tech, medium-tech, and high-tech tools for creating OER.
- Explain why an instructor might choose to develop OER using low-tech tools.
- Describe one medium- or high-tech tool you could use to develop an OER.

As we covered in our Considerations for Using or Creating OER section, it's important to keep in mind some key factors before deciding to create a new OER. Some more in-depth tips for creating OER are outlined in this chapter.

Consider your Tools

In most cases, the best option for creating OER is to use a digital platform. This makes resources easily shareable and accessible to anyone who has access to a device. However, it can be a challenge to decide what platform will best support your OER. This chapter

organizes options based on digital literacy skills. Both the skills of the creator and the user should be considered when choosing the best tools for creating an open resource.¹

Low Tech

The easiest and most popular way to create educational resources is by using a word processor such as Microsoft Word or Google Docs. These platforms make it easy to print or export content to PDF, and contain features required for basic content creation. Other low-tech options include:

- LibreOffice Draw: Draw lets you produce anything from a quick sketch to a complex plan, and gives you the means to communicate with graphics and diagrams. Draw is an excellent package for producing technical drawings and other visual examples.
- InkScape: An open source application that creates and edits PDFs and also works as a vector drawing and graphics tool. A better option for PDF editing if your document is image-heavy.

These platforms have limitations, however, as they are not designed for digital content such as videos or interactive elements.

1. This chapter was adapted in part from the SPARC Open Education Primer by the SPARC Open Education Leadership Program, licensed CC BY 4.0.

Medium Tech

The next step up from creating a document is to create a website or hosted resource. These may include blogs, websites, or wikis, and allow you to have a central hub to post multiple forms of content. Many of these sites will support integration of audio-visual components, annotation tools, and, and interactive elements.

Check Your Understanding

Think about ways you could use Low- or Medium-Tech resources in your class. Is there a Low-tech resource you're already using in your classes? Could you create and disseminate OER easily using that software, or do you need additional training to feel confident?

Look around your campus and see if there are workshops available on the software you want to learn.

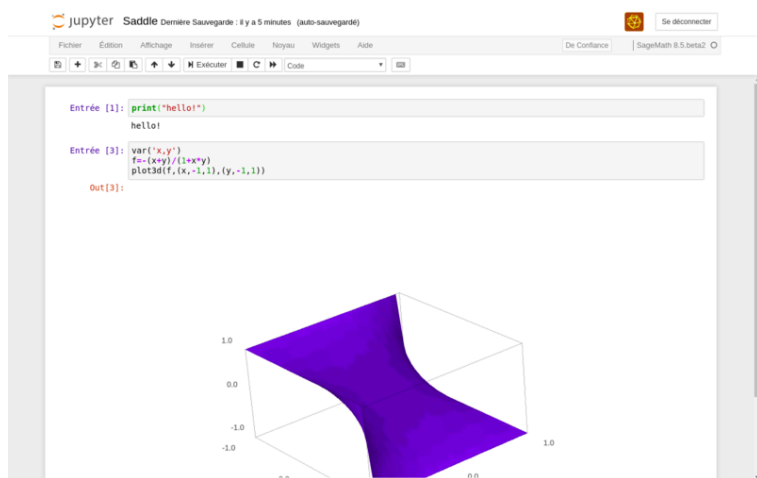
Medium-tech options include:

- **Pressbooks:** Pressbooks is a simple book formatting software. The Reg Erhardt Library provides access and author support for publishing in Pressbooks. To learn more, visit the library's Pressbooks webpage.
- **Gnu Image Manipulation Program (GIMP):** GIMP is an open source, cross-platform image editor available for GNU/Linux, OS X, Windows, and other operating systems.
- **OER Commons Open Author:** Open Author helps you build Open Educational Resources, lesson plans, and courses to

share openly on the OER Commons platform.

High Tech

High Tech options provide professional tools for creating content. Just because they are high tech, doesn't necessarily mean they are hard to use. However, some high tech options, like Jupyter Notebook, require time and advanced digital skills to master.



Attribution: *Sagemath Jupyter Screenshot on Wikimedia Commons by Kilom691 is licensed CC BY SA 4.0.*

Additional high-tech options include:

- GitBook: Created by GitHub, this open source tool allows you to create a book hosted on the GitHub platform. You can create your book in Markdown, add images and embed content from the Internet.
- Bookdown: The bookdown package is an open-source R

package that facilitates writing books and long-form articles/reports with R Markdown.

- Jupyter Notebook: The Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text.

Ensure that you are checking the restrictions given by software on how you may share the final version of your project. Your choice of platform may be influenced by the terms of use.

Accessibility and Usability

Learning Objectives

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

- Provide three examples of ways an OER can be checked for accessibility.
- Explain how Universal Design for Learning is a good practice for both pedagogy and accessibility.

Accessibility is a major factor that should be considered when creating OER. If a resource is truly open, anyone should be able to use it. Exemplary OER will align with the following definition of Web Accessibility from W3 Schools:

Web accessibility means that people with disabilities can use the Web. More specifically, Web accessibility means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web. Web accessibility also benefits others, including older people with changing abilities due to aging.



One or more interactive elements has been excluded from this version of the text. You can view them online here: <https://openeducationalberta.ca/saitoer/?p=60#oembed-1>

Attribution: “Open Dialogues: Open education and accessibility” by CTLT, University of British Columbia [Youtube] is licensed CC BY 4.0.

Universal Design for Learning

Alongside some more traditional parts of accessibility, also consider how the presentation of your course content can improve learning for all students. A great method for improving learning is **Universal Design for Learning** (UDL), “a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn.”¹

UDL is founded on the idea that all learner’s education may be enhanced through multiple means of engagement. Implementing UDL in teaching may include:

1. Using diverse media to represent course ideas.
2. Creating an infrastructure to support student’s expressions of understanding in many different ways.
3. Allowing students to engage in different ways by providing a variety of assignment types.²

As the BC Campus OER Accessibility Toolkit (2015) argues, UDL principles can be applied both accessibility and learning. The toolkit provides the following examples for instructors:³

1. CAST. (n.d.). *About Universal Design for Learning*. Retrieved from <http://www.cast.org/our-work/about-udl.html>
2. CAST. (2018). *Universal Design for Learning guidelines version 2.2*. Retrieved from <http://udlguidelines.cast.org/>
3. Coolidge, A., Doner, S., Robertson, T., Gray, J. (2015). *Accessibility*

- Design resources that can be accessed by learners in a variety of ways. If there is a text component, provide the ability to enlarge the font size or change the text color.
- Provide multiple ways for learners to engage with information and demonstrate their knowledge.
- Identify activities that require specific sensory or physical capability and for which it might be difficult to accommodate the accessibility needs of learners (e.g., color matching activities).

Universal Design for Learning and **Universal Design** are two separate but interrelated concepts. While UDL is intended to improve both the accessibility and pedagogy of a learning environment, UD is primarily intended as an approach to making content accessible to as many people as possible.⁴ We focus on UDL in this chapter because the design of open educational resources is inextricably connected to how they will be implemented as learning objects. As an educator, thinking about UDL as a process tied to the creation, sharing, and use of course content is essential.

Software & File Format Choice

The usability of an OER is heavily impacted by how easily users can access it.⁵ Two aspects of content design that are inherently tied to

toolkit – 2nd Edition. Victoria, BC: BCcampus. Retrieved from <https://opentextbc.ca/accessibilitytoo>

4. Edyburn, D. L. (2015). *Accessible Instructional Design*. Bingley: Emerald Group Publishing Limited.

5. This section was adapted from "Accessibility webpage" by Affordable Learning Georgia and UH OER Training by Billy Meinke, licensed CC BY 4.0.

accessibility are a resource's file format and the software used to access it.

Choose open file formats

If someone wants to read your work, they need to be able to open the file on their computer; however, some file formats require specific proprietary software to open. Saving your work in open file formats can give your students more options for accessing their course content on whatever platform best meets their needs. You should also consider disseminating your content onto a platform that may be easily edited, to ensure that students can change any aspect of the resource to make it optimal for their use.

Examples

- Open formats: HTML, ePub, RTF, Mobi, PNG, XML, Markdown
- Proprietary formats: MS Word, Pages, PowerPoint, PDF, Keynote



Scenario – What is the consequence of not using an accessible format?

Let's consider this scenario: Erina found a CC-BY licensed infographic that provides information about the food supply chain in the US. They want to modify the infographic so that the infographic fits in a Canadian context. However, the infographic is only available in PDF format so Erina cannot edit the image. In the end, they decide to not remix the infographic and create a new infographic from scratch.

In this situation, the creator wanted someone like Erina to be able to revise the work, but they didn't share it in a

way that makes revising easy to do. What would make it easier for Erina to reuse to work?⁶

Use accessible software

Some software used to create or display content disables accessibility features built into your computer's operating system, such as zoom, text-to-speech, and speech-to-text. It is important to check whether the software students will use to view your course content disables the accessibility features of their computer's operating system. This can be an issue both for OER and for traditional, publisher-provided course content.

Considerations

- Is the software used to view the OER compatible with most assistive devices?
- Does the software require point-and-click interaction to work properly?
- Can the software menus be “seen” and properly

6. This scenario is used under at CC BY 4.0 licence from University of British Columbia. <https://pose.open.ubc.ca/open-education/oer/what-makes-an-educational-resource-open/>

interpreted by screen readers?

How to check software accessibility

- Check common assistive keyboard shortcuts while using the software.
- Ensure that users can navigate content using only the keyboard if necessary.
- Enable OS accessibility features and check their effectiveness with the required software.

How to access common accessibility features

- Windows accessibility features (<https://www.microsoft.com/en-us/accessibility/>)
- Mac OS X accessibility features (<https://www.apple.com/accessibility/>)

Image & Text Readability

Whenever you are presenting content to students, it's important to check whether the text in your course content is recognizable to a computer **as text**. For PDFs, accurate optical character recognition (OCR) is often required to make the text understandable. Screen-readers require this information to accurately relay text back to

students. Other best practices for making course materials readable are listed in the sections below.

Use heading levels (h1, h2, h3)

Text-based OER should always have a clear and logical structure. Using headings and other structural elements to organize your resource can make it easier for all learners to access and understand the material. Many editing tools support table of contents (TOC) generation based on where these section markers are placed. This can help students navigate to a specific chapter or section of a text, especially if the digital version of the resource has its TOC hyperlinked to each section within the text.

Individuals using screen readers can also more easily navigate the sections of your content when headings levels have been applied consistently.

Use true lists

While they may “look” similar to bulleted lists, using asterisks or icons to create a visual list of items can confuse a screen reader that is expecting to encounter structured content. Whenever listing items, use the true list features of your content editor, such as bullet points or numbered lists.

Examples

Good example:

- First list item
- Second one

Bad example:

- * First list item
- * Second item

Provide alt text & captions

No matter the subject of an image used in your content, you need to offer descriptive text. A screen reader will look for a contextual description of an image to share with readers, which should live in the text surrounding the image (title or caption) or as **alternative (“alt”) text**. This is one of the most commonly overlooked aspects of accessibility for instructional content, but most text editors include tools for adding alt text to images.

When adding alt text to an image, be sure to clearly and succinctly describe the most important elements for the student to know. Do not include extraneous detail. In some cases, you do not need to add alt text at all, as in the case of purely decorative images.

Examples

- Necessary descriptive alt text: “Part A of the figure shows a container which has a gas of volume V_1 on the left side and nothing on the right side. Part b shows a container which is completely filled with a gas of volume V_2 .”
- Too much descriptive alt text: “There is a figure with a white background and two squares labeled a and b. Part a has a rectangle (representing a container) with a shaded grey section on the left half of the container with dots representing a gas. The gas is labeled V_1 . Part b...”
- Unnecessary descriptive alt text: “An icon of a person smiling – I put this here as a cute picture to liven up the page!”

Video and audio content needs descriptive text as well, but these usually take the form of captions or, in the case of podcast recordings, transcripts. You can easily add captions to videos using Canvas’ Arc tool or by using YouTube’s built-in editor tools. For more help with this process, read through the excellent Captioning Videos guide from the University of Washington or reach out to an instructional designer near you.

Use descriptive link text

Ensure that all web pages and weblinks have titles that describe a topic or purpose. The purpose of the link can be determined by the text alone. That is, you don’t need to include additional information justifying the use of the link. You want the link to be meaningful in context. For example, do not use generic text such as “click here”

or “read more” unless the purpose of the link can be determined by meaning in the surrounding content.

Examples

Digital OER should have descriptive links that explain to where the hyperlink is going to navigate the reader.

- Good example: Information on the BC Open Textbook Project is available online.
- Bad example: Click here for information on the BC Open Textbook Project.

If the OER design does not permit the inclusion of explicit links in the text, implicit links can be used, and a more detailed list of sources should be provided at the end of the resource or in a separate document. Footnotes are a great way of providing more explicit links for content without cluttering the text on a page.

Use Accessible Fonts & Colors

OER should be readable for those with disabilities related to color as well. Some best practices for ensuring that fonts and colors are accessible are described below:

- Use dyslexic-friendly fonts, such as Arial, Century Gothic, Open Sans, and Verdana. Your institution might recommend certain fonts for digital and print materials. These recommended fonts are usually chosen for ease of use and

accessibility and may be a good fit for your needs as well.

- Make sure there is a clear contrast between colors (e.g. between the background and font color, or between separate colors on a graph). There are many free online tools available for checking color contrast, but we recommend WebAim's Color Contrast Checker and ContrastChecker.com.
- Do not use color to communicate meaning without other markers of that meaning present. If you have color-dependent information in images or within the text of your resource, be sure that either alternative methods of recognition (such as differing patterns) are present, or that the contrast can be adjusted by users.

Online Accessibility Tools

A great deal of OER content is displayed on websites, where we can use accessibility-checking tools to identify areas that can make it difficult for assistive technology tools to work properly. The online WAVE tool does just that: identifying errors and possible issues with the accessibility of websites.

The Flexible Learning for Open Education (floe) website provides access to a suite of tools intended to “supports learners, educators and curriculum producers in achieving one-size-fits-one learning design for the full diversity of learners.”⁷

7. For more information, see floe's Inclusive Learning Design Handbook online at <https://handbook.floeproject.org/> or visit their source code on GitHub: <https://github.com/fluid-project/>

Suggested Reading

While this toolkit is designed to provide you with what you will need to start using and creating OER, it is by no means the only resource available. This chapter provides an overview of other guides that can help you on your journey.

OER Handbooks

Aesoph, L.M. (2016). *Adaptation guide: A reference to adapting or revising an open textbook*. Victoria, BC: BCCampus. Retrieved from <https://opentextbc.ca/adaptopentextbook/>

Aesoph, L.M. (2018). *Self-publishing guide: A reference for writing and self-publishing an open textbook*. Victoria, BC: BCCampus. Retrieved from <https://opentextbc.ca/selfpublishguide/>

Coolindge, A., Doner, S., Robertson, T., & Gray, J. (2015). *Accessibility toolkit – 2nd Edition*. Victoria, BC: BCCampus. Available from <https://opentextbc.ca/accessibilitytoolkit>

Crump, M. (2018). Open tools for writing open interactive textbooks. Retrieved from <https://crumplab.github.io/programmingforpsych/>

Doner, S. & Chandler, A. (2017). *OER toolkit for trades instructors*. Victoria, BC: BCCampus. Retrieved from <https://pressbooks.bccampus.ca/oertoolkitfortrades/>

Falldin, M. & Lauritsen, K. (Eds). (n.d.) *Authoring open textbooks*. Open Textbook Network. Retrieved from <https://press.rebus.community/authoropen/>

Inclusive Design Research Centre. (2017). *FLOE inclusive learning design handbook*. Retrieved from <https://lincs.ed.gov/professional-development/resource-collections/profile-1004>

Mays, E. (Ed). (2017). *A guide to making open textbooks with*

students. Rebus Community. Retrieved from <https://press.rebus.community/makingopentextbookswithstudents/>

Meinke, W. (2018). *UH OER training*. Manoa, HA: University of Hawaii at Manoa. Retrieved from <http://pressbooks.oer.hawaii.edu/oertraining2018/>

Moist, S. (2017). *Faculty OER toolkit*. Victoria, BC: BCCampus. Retrieved from <https://pressbooks.bccampus.ca/facultyoertoolkit/>

Munro, D., Omassi, J., & Yano, B. (2016). *OER student toolkit*. Victoria, BC: BCCampus. Retrieved from <https://opentextbc.ca/studenttoolkit>

Wiley, D (Ed.). (2014). *An open education reader*. Retrieved from <https://openedreader.org/>

Wright, L. & Lambert, K. (2019). *Working group guide*. Victoria, BC: BCCampus. Retrieved from <https://opentextbc.ca/workinggroup>

Research & Case Studies

Bodily, R., Nyland, R., & Wiley, D. (2017). The RISE Framework: Using Learning Analytics to Automatically Identify Open Educational Resources for Continuous Improvement. *International Review of Research on Distance and Open Learning*, 18(2).

Chiorescu, M.(2017). Exploring Open Educational Resources for College Algebra. *The International Review of Research in Open and Distributed Learning*, 18 (4).

Clinton, V. (2019). Cost, Outcomes, Use, and Perceptions of Open Educational Resources in Psychology: A Narrative Review of the Literature. *Psychology Learning & Teaching* 18 (1), 4-20

Coleman-Prisco, V. (2017). Factors Influencing Faculty Innovation and Adoption of Open Educational Resources in United States

Higher Education. *International Journal of Education and Human Developments* Vol. 3 No 4; July 2017, 1-12.

Grewe, K., & Davis, W. P. (2017). The Impact of Enrollment in an OER Course on Student Learning Outcomes. *The International Review of Research in Open and Distributed Learning*, 18(4).

Hendricks, C., Reinsberg, S. A., & Rieger, G. W. (2017). The Adoption of an Open Textbook in a Large Physics Course: An Analysis of Cost, Outcomes, Use, and Perceptions. *The International Review of Research in Open and Distributed Learning*, 18(4).

Koh, A. (2015, August 1). Teaching with the Internet; or How I learned to stop worrying and love the Google in my classroom. *Hybrid Pedagogy*.

Martin, T., Hilton, J., Wiley, D. Fischer, L., Belikov, O. (2017). An Analysis of Student and Faculty Perceptions of Textbook Costs. *Open Praxis*, 9(1), 79-91.

Page, C. (2018). Open education, justice, and learning strategies – What's the connection? *Open Pedagogy Notebook*.

Wiley, D. (2017). The Evolving Economics of Educational Materials and Open Educational Resources: Toward Closer Alignment with the Core Values of Education. In R. A. Reiser & J. V. Dempsey (Eds.), *Trends and Issues in Instructional Design and Technology* (4th ed.). New York, NY: Pearson Education.

Wiley, D., Tonks, D., Webb, A., & Weston, S. (2017). A Preliminary Exploration of the Relationships Between Student-Created OER, Sustainability, and Students Success. *International Review of Research on Distance and Open Learning*, 18(4).

Glossary

Accessibility

Accessibility can be viewed as the "ability to access" something. The concept of accessible design and practice of accessible development ensures both "direct access" (i.e. unassisted) and "indirect access" meaning compatibility with a person's assistive technology (for example, computer screen readers). (Source: Wikipedia.org)

accessible resources

Learning materials that can be accessed freely via the general internet or library subscription but cannot be altered or shared under an all rights reserved copyright

Alt text

A word or phrase that can be inserted as an attribute in an HTML (Hypertext Markup Language) document to tell website visitors the nature or contents of an image. (Source: WhatIs.com)

Attribution

The process by which a content user gives proper credit to the original creator of a work when a portion of that work is reused or adopted outside of its original context. Attribution typically includes a link to the original work and information about the author and license.

Backward design

A model for designing instructional materials where the instructor or designer begins the design process with a focus

on the desired results (i.e., the outcome) of instruction. (Source: Learning-Theories.com)

copyleft

A method in which a software or artistic work may be used, modified, and distributed freely on condition that anything derived from it is bound by the same condition.

Copyright

A set of intellectual property laws that give the rightsholder of a work (usually the author) exclusive rights over the reproduction, reuse, remixing, display, performance, and redistribution of their work.

Copyright license

A license permits users to certain rights over a copyrighted work. These can be exclusive (allowed for individual groups) or nonexclusive (allowed for all users). Licenses can be restricted by certain factors such as purpose, territory, duration, and media (Source: Findlaw.com).

Course Learning Outcomes

The major, final outcomes that an instructor expects their students to gain by the time the students complete a course.

Creative Commons

A set of open licenses that allow creators to clearly mark how others can reuse their work through a set of four badge-like components: Attribution, Share-Alike, Non-Commercial, and No Derivatives.

Derivative works

A work based on or derived from one or more already existing

works. Common derivative works include translations, musical arrangements, art reproductions, and abridgments. (Source: USLegal.com)

Fair Dealing

A legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright protected works in certain circumstances. In Canada, this is known as Fair Dealing.

fair dealing

the user's right, within copyright law, to use material from a copyright protected work (literature, musical scores, audiovisual works, etc.) without permission when certain conditions are met. People can use fair dealing for research, private study, education, parody, satire, criticism, review, and news reporting. In order to ensure your copying is fair, you need to consider several factors such as the amount you are copying, whether you are distributing the copy to others, and whether your copying might have a detrimental effect on potential sales of the original work

inclusive access

A textbook sale model that adds the cost of digital course content into students' tuition and fees.

Inclusivity

The quality of trying to include many different types of people and treat them all fairly and equally. (Source: Cambridge Dictionary)

Learning Management System (LMS)

A piece of software that manages, analyses, and runs

educational courses. Canvas and Blackboard are two popular examples.

licence

A licence permits users to certain rights over a copyrighted work. These can be exclusive (allowed for individual groups) or nonexclusive (allowed for all users). Licences can be restricted by certain factors such as purpose, territory, duration, and media (Source: Findlaw.com).

Licensing

The process by which a rightsholder (usually the creator of a work) dictates that others can reuse their work in specific ways.

Open access

A model by which content creators make their scholarly outputs free to access without cost to users. This can be done either by publishing content with an OA publisher or by sharing a copy of the content on an open repository.

Open educational practices

Practices which encourage the development of openness, community engagement, transparency, responsibility, sharing, and accountability in education. (Source: Open Education Practices [Wikibooks])

Open educational resources

Free educational materials that are openly licensed to enable reuse and redistribution by users.

Open license

A copyright license which grants permission for all users to

access, reuse, and redistribute a work with few or no restrictions.

Open pedagogy

A set of pedagogical practices that include engaging students in content creation and making learning accessible to all.

Open science

An umbrella term for a movement comprised of a variety of practices aiming to remove barriers for sharing any kind of research output, including resources, methods, or tools created at any stage of the research process. (Source: FosterOpenScience.eu)

Open source software

Software with source code that anyone can inspect, modify, and enhance. (Source: OpenSource.com)

Open textbook

An openly licensed and free to access textbook; an OER meant to be used as a textbook for a course.

Public Domain

A work which is not covered under copyright law, whose copyright has expired, or which has been dedicated to the public domain by its rightsholder is said to be in the public domain.

Student Learning Outcomes

The knowledge and skills that an instructor expects their students to display at the end of a learning experience (an activity, process, or course). (Source: Elhabashy, 2017).

Universal Design

A process intended to design products that are usable by all people, with or without disabilities, to the greatest extent possible (Edyburn, 2015).

Universal Design for Learning

A framework to improve and optimize teaching and learning for all people based on the concept that, by providing multiple ways of engaging with content, the diverse educational needs of learners can be met.