MAKING OPEN EDUCATIONAL RESOURCES

Anita R. Walz
and
Julee P. Farley

with and for

PreK12

A Collaboration Toolkit for Higher Education

Higher education and PreK12 are vastly different domains. As such, well-intended, collaborative efforts between higher education and PreK12 do not always result in creation of useful and reusable learning materials for PreK12 classrooms or effective, productive partnerships. *Making Open Educational Resources with and for PreK12: A Collaboration Toolkit for Higher Education* is a toolkit of instructional resources designed to support higher education personnel who wish to improve or build strong and generative collaborations between higher education and PreK12 educators.

The toolkit aims to expand use and re-usability of PreK12-centric learning resources through informed practices regarding copyright, open-licensing, and accessibility and includes a variety of resources: videos, presentations, transcripts, activities, guides, assignments, and assessment tools.

Making Open Educational Resources with and for PreK12 is intended to prepare and position practicing and future academic librarians and interested higher education faculty, staff, and students consulting with librarians to address gaps related to PreK12 outreach. Designed for use in formal graduate-level library and information science courses and relevant for self-study by academic librarians already in practice, this toolkit includes a variety of resources for learning and delivery by librarians to faculty and students in higher education. While it is designed for librarians, it is also relevant to the broader audience of interested instructional designers, higher education faculty, staff, and graduate students seeking to improve the quality of their service to and collaborations with PreK12 educators.

The toolkit is part of the Scholarly Communication Notebook, available at https://oercommons.org/hubs/SCN.

Cover image: RROOK and Arthur Dias via The Noun Project
Cover design: Kindred Grey
DOI: https://doi.org/10.21061/OER_PreK12_highered
ISBN: 978-1-957213-80-4

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PDF AND EPUB FREE ONLINE AT: https://doi.org/10.21061/OER_PreK12_highered

Published by The Open Education Initiative of the University Libraries at Virginia Tech
Blacksburg, VA

Suggested citation: Walz, Anita R. and Farley, Julee P. (2023). *Making Open Educational Resources with and for PreK12*. Blacksburg. https://doi.org/10.21061/OER_PreK12_highered. Licensed with CC BY 4.0 https://creativecommons.org/licenses/by/4.0.

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Publisher: This work is published by the Open Education Initiative of the University Libraries at Virginia Tech.

Open Education Initiative, University Libraries
560 Drillfield Drive
Blacksburg, VA 24061

Publication cataloging information:
Walz, Anita R., author
Farley, Julie P., author
Making Open Educational Resources with and for PreK12 / Anita R. Walz and Julee P. Farley
Pages cm
ISBN 978-1-957213-80-4 (PDF)
ISBN 978-1-957213-78-1 (Print)
ISBN 978-1-957213-79-8 (EPUB)
ISBN 978-1-957213-81-1 (Pressbooks) https://pressbooks.lib.vt.edu/higheredk12collaborationtoolkit
URI (Universal Resource Identifier): http://hdl.handle.net/10919/112264
DOI: https://doi.org/10.21061/OER_PreK12_highered

1. College-school cooperation—Textbooks.
2. Instructional systems—Design—Textbooks.
3. Open educational resources—Textbooks.
4. Library education—Textbooks.

Title: Making Open Educational Resources with and for PreK12
LB2331.53 .W35 2023
378.103

Cover images: RROOK and Arthur Dias via The Noun Project (Noun Project license)
https://thenounproject.com/browse/collection-icon/people-solid-112100/?p=1
https://thenounproject.com/icon/wheelchair-2966427/
Cover design: Kindred Grey

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ACKNOWLEDGMENTS

The authors express their thanks to the principle investigators of the *Scholarly Communication Notebook* who selected this project in the 2021 project round. We are grateful to the project investigators for selecting our proposal for this project and we thank the Institute for Museum and Library Students for funding the SCN project.

We are also grateful for the contributions of Phyllis Newbill, Center for Educational Networks and Impacts (CENI)[1], at Virginia Tech.

And, for review and feedback from:

- Talea Anderson, Scholarly Communication Librarian, Washington State University,
- Cynthia Curry, National Center on Accessible Educational Materials for Learning (National AEM Center) at CAST,
- Amee Godwin, Institute for the Study of Knowledge Management in Education (ISKME), and
- Hannah Scherer, Associate Professor and Extension Specialist Teaching and Learning, Virginia Tech.

Thank you to Kindred Grey for cover design, and PDF and EPUB layout assistance.

Notes

1. Center for Educational Networks and Impacts at Virginia Tech. [n.d.] https://ceni.icat.vt.edu

INTRODUCTION

Introduction

Higher education has a long history of outreach, sharing, and collaboration with formal PreK-12 education. Some outreach and collaboration attempts have been more successful than others. In sharing this openly-licensed toolkit and the curriculum resources within, we hope to raise the success rate of partnerships initiated by higher education in service to and collaboration with PreK-12 administrators and teachers, expand the number of healthy, sustainable partnerships between higher education and PreK-12, and broaden the availability of usable, customizable, open educational resources created with and for for PreK-12 teaching environments.

Origins of the Toolkit

This curriculum guide and toolkit originated from a series of consultations between the authors, a Higher Ed – PreK-12 liaison, and an open education and copyright librarian. It initially culminated in a series of documents [1] including curator and OER contributor checklists, release forms, and contributor agreements developed to support university students and faculty to create and share open educational resources. We presented this work at the Open Education Conference 2021 under the title "Boundary Spanners: Bridging Gaps Between Higher Education and PreK-12[2]." After our presentation, we decided to pursue more formal documentation of the project and its resources. In our search for a publication venue, we realized that the Scholarly Communication Notebook (SCN)[3], a resource for training graduate students, especially those enrolled in library and information science programs, may be a natural fit for developing the types of skills librarians and others in higher education need to assist others in forming informed and productive working relationships with PreK-12 audiences.

What is the Toolkit?

The openly-licensed toolkit includes editable course materials—readings, slides and presentation transcripts, sample communication templates, assignments, and partnership evaluation forms. These are intended for self-study and mediated graduate and undergraduate instruction. The toolkit covers diverse areas of knowledge in a linear progression, including working with minors, educational standards-related issues, copyright, open-licensing, acceptable uses of third-party works, communication skills, empowering teachers to provide their expertise, and adapting and sharing openly-licensed works. Each section of the toolkit contains presentations or readings, and either self-assessment or reflection questions. Some sections contain communication templates and customizable forms.

Intended Audience

This toolkit is designed for higher education faculty and librarians, instructional designers, graduate students, and undergraduates who aspire themselves, or to assist others, in building informed and productive outreach relationships with PreK-12 teachers, and to create relevant open educational resources for use within the PreK-12 context.

Notes

1. This includes four documents: Contributor Checklist, Curator Checklist, Release form, and Contributor Agreement template. Retrieved from Walz, Anita and Julee Farley (2021). Boundary Spanners: Bridging Gaps Between Higher Education and PreK-12. Open Education Conference 2021. http://hdl.handle.net/10919/105384
2. Walz, Anita and Julee Farley (2021). Boundary Spanners: Bridging Gaps Between Higher Education and PreK12. Open Education Conference 2021, https://youtu.be/gYzCzWaNJb0.
3. Scholarly Communication Notebook. (n.d.) https://www.oercommons.org/hubs/SCN

ABOUT THE AUTHORS

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Julee P. Farley, Ph.D.

Julee Farley is a boundary spanner and evaluator whose work focuses on increased access and equity for under-resourced populations. She works with PreK-16 educators and researchers to create mutually beneficial research-practice partnerships, research impactful interventions, and design inspirational outreach and engagement experiences. Julee began this project while working at the Center for Educational Networks and Impacts at Virginia Tech; go to juleefarley.com for more recent updates about her work.

HOW TO USE THIS TOOLKIT

Librarians and instructional designers at institutions of higher education are often tasked with instructing or coaching faculty, staff, or students involved in curriculum-related or grant-funded outreach projects to PreK-12 audiences. As this type of coaching is not a typical area of training for librarians and instructional designers, we designed the toolkit for multiple user audiences: for use by practicing professional librarians or instructional designers, and for active-student learning course experiences within graduate-level library and information science and/or instructional design courses. While these reader communities may conduct direct outreach to and within PreK-12, we generally envision librarian and instructional design professions taking on the role of instructor and coach to subject matter experts seeking to conduct PreK-12 outreach.

This material may likewise be used for project-based university-level education in which graduate or undergraduate students form new outreach-oriented partnerships to contribute usable content to PreK-12 learning environments. A third potential use for higher education faculty or staff, and especially librarians and instructional designers involves leveraging open licenses on the various presentations, transcripts, forms and templates to support and customize their outreach efforts to PreK-12 generated from within higher education.

Philosophical and Praxis Framing

This toolkit is built on the premise that **freely sharing educational materials is good**, and that **sharing with open licenses is even better**. Further, this toolkit assumes the reader and collaborators' intent to build and share content under the conditions of open educational resources (OER)—namely, that collaborators using this material *intend* to freely and publicly release their original works for others to use under a license that permits free use, reuse, modification and sharing with others.

Consistent with Davis (1989) Technology Acceptance Model[1] which posits that the acceptance of new practices, like new information technologies, depends on the perception of usefulness and perceived ease of use, with ease of understanding (Rogers and Shoemaker, 1971)[2]) and self-efficacy (Bandura, 1982)[3], the level of one's ability to execute a course of action being a determinant of ease of use, and cost-benefit analysis relating to perceived usefulness. We hope that readers find that the concepts and practices shared within are understandable, easily transmittable, can be combined with readers' and collaborators' expertise, and will ultimately be actionable and productive.

Selected Learning Objectives

This resource was created with a variety of learning objectives. These are located at the beginning of each chapter.

- Summarize the nature of challenges in collaborative partnerships between higher education and PreK-12 education
- Identify how to obtain training required of faculty, staff, and students who work with minors
- Identify different formats/displays of Creative Commons licenses on works found on the web or items in the wild
- List five allowable cases in which something can be incorporated into one's OER
- Download and correctly attribute Creative Commons-licensed images
- Use tips and strategies for connecting with school districts
- Articulate general features of collaborative partnerships
- Determine who your potential partner(s) may be
- Reflect on the level of effort and level of benefit of your proposed project for the school district
- Make informed and user-centric decisions regarding what software to use
- Demonstrate how to adapt an openly-licensed resource
- Articulate basic steps to develop and evaluate resources for accessibility
- Demonstrate how to correctly attribute adaptation of a Creative Commons' licensed work
- Evaluate your own work and request evaluation of your work from teachers or other stakeholders
- Create and share an open educational resource

Collaborative partnerships are as unique as the individual partners and their contexts, so advanced topics on collaboration are not included. With regard to development of learning resources, we have aimed to be agnostic regarding technical platforms, with the understanding that the best environments in which to develop and share resources are ones that will actually be used.

How the Toolkit is Organized

The toolkit is organized sequentially in the order needed for learning, instructing and coaching faculty, staff, and students within higher education, and those faculty, staff, and students developing and engaging in collaborative partnerships with PreK-12 educators. Each of these sections includes one or more of the following: video, presentations, transcripts, activities, guides, assignments, assessments, templates, and self-assessment tools.

- **Part I: Mastering the Context** includes preparatory materials for all three levels of learners. These are designed to build foundational knowledge regarding collaboration challenges, best practices for direct work with students under age 18, an introduction to open educational resources, principles of copyright, a practical guide for finding, using and attributing openly-licensed images, an accessibility guide, and an introduction to empowering and building collaborative partnerships with PreK-12.
    - These resources are designed to be used and presented by librarians and/or instructional designers who are engaged in instructing or coaching higher education faculty, staff, and students who will make the connections with PreK-12.

- **Part II: Explore and Build a Collaboration** is action-oriented and intended to enable an informed and reflective practice for higher education personnel reaching out to PreK-12 educators.
    - These resources are intended for use by higher education faculty, staff, and students making connections with PreK-12 educators

- **Part III: Develop and Evaluate Learning Resources** describes adapting Creative Commons-licensed resources, includes guidance for adapting openly-licensed resources, tools for checking one's work, and obtaining structured feedback from a PreK-12 partner. A brief discussion regarding selection of software or hosting sites is included. The list of software/hosting options are specific to the current mainstream PreK-12 uses and are not intended to be comprehensive.
    - These resources are intended for use by higher education faculty, staff, and students.

- **Part IV: Share Learning Resources with a Broader Audience** presents rationale for sharing with an emphasis on making the learning resources discoverable by a broad audience.
    - This section is intended for use by higher education faculty, staff, and students, and PreK-12 partners.

- Finally, **Part V: Evaluate Your Learning** presents a self-assessment exercise
    - This resource is intended for use by all learners.

When provided, slide decks are available in GoogleSlides and PPT. Each slide deck contains a text transcript in the "notes" section of the Google slide deck and within the toolkit. Most slide decks contain self-test questions throughout.

Navigating the Toolkit by Role and Paths through the Material

Relevant to all roles are sections in Part I: Mastering the Context which is designed to encourage development of baseline knowledge regarding: 1 documented challenges in PreK-12 and Higher Ed collaboratives, 2 working directly with minors, 3 the case of open educational resources, 4 copyright, 5 using others' works, 6 finding, using, and attributing openly-licensed images, 7 accessibility, 8 the need for librarians to reset expectations regarding their role, and the ultimate purpose of the toolkit, 9 empowering teachers and building successful collaborative partnerships. The toolkit is designed for use in formal instructional settings, specifically for use as an experiential learning resource for courses in graduate programs in library and information science. However, there are multiple paths through the material for collaborators with many different roles.

- **Higher education librarians** consulting with higher education faculty and students may find it helpful to familiarize themselves to the point of being able to teach and respond to inquiries related to Part I: Mastering the Context, 13 adapting Creative Commons-licensed resources, and 16 share resources publicly, then review materials in Part II: Explore and Build and judge the relevance in providing these to collaborators conducting direct outreach to PreK-12 audiences.
- **School librarians** engaged in such projects may be interested in taking a leading role teaching and leading PreK-12 teachers and administrators through content on chapters 3 open educational resources, 4 copyright, 5 using others' works, 6 finding, using, and attributing openly-licensed images, 7 accessibility, 13 adapting Creative Commons-licensed resources, 14 / 15 reviewing quality, and 16 sharing resources publicly.
- **Instructional designers** may especially find material in sections 3-7 from Part I: Mastering the Context, 13 adapting OER and 14 self-test quality control checklists, and 16 share resources publicly. Each of these sections directly address issues and practices for developing learning content.
- **Subject matter experts, graduate and/or undergraduate students** in direct contact with PreK-12 personnel are encouraged to first familiarize themselves with 1 challenges in collaboration between higher ed and PreK12 and 9 successful partnerships and empowering teachers to share their expertise.

- **PreK-12 teachers and administrators** may appreciate learning about 1 challenges in collaboration between Higher Ed and PreK-12, 3 an introduction to open educational resources, resources on 4 copyright and 5 using others' works, 6 finding, using, and attributing openly-licensed images, and 7 making resources more accessible. They may benefit from discussing 12 improving a proposed collaboration, 13. learning to adapt Creative Commons-licensed resources, 15 teacher/administrator/school librarian reviewer rubric, and 16 sharing resources publicly.

Sample Scenarios

For readers without a specific scenario in mind, the following sample scenarios may spark some ideas regarding potential uses of this material:

- A professor in earth science is enthusiastic for PreK-12 students to learn about new research they have published regarding Yellowstone National Park[4]. The research includes specific scientific methods and has practical impacts for understanding the geology of the park. The level of the research and language of recent articles is too advanced for PreK-12 students. The researcher wonders, "This is so interesting. How can I make this relevant to a PreK-12 audience? How would I narrow the content to be useful? Is there any alignment with PreK-12 standards? What might that look like in a PreK-12 context? Can I use this as a "broader impacts" part of a grant proposal[5]?
- A graduate student who studies video gaming thinks that PreK-12 students might be inspired for future careers in music, technology, or programming by exposure to methods for research in her area. How does this graduate student find a teacher who might also be interested in exploring the feasibility of this idea and collaborating to develop learning resources around it?
- A librarian has been asked to provide guidance to a group of researchers who have a grant to create learning materials[6] with and for specific PreK-12 grade levels in the area of their expertise. What value added does the librarian provide on copyright, open licensing, and training others?
- An undergraduate student in education is tasked with developing content for a PreK-12 class as part of an accredited college course. How can they get up to speed on all they might need to know in order to create something useful for the PreK-12 audience? Where might this student start? What is most important for the student to know?

Using the Toolkit in a Formal Instruction Setting

This modular toolkit contains assignments, activities, and links to additional readings which provide practice or real-world application for those courses focused with an PreK-12 outreach or consulting within higher education component.

The toolkit also provides introductory materials regarding open educational resources (OER) for readers whom this concept may be unfamiliar. In an instructional setting OER may be adopted "as is," arranged, curated, customized/adapted, or added to. Each level of practice has different implications for the level of effort. Regardless of the route a teacher takes to use open educational resources, there are things to learn and things to do that are not without effort. Here are some of the costs—and things that teachers or collaborators involved in making OER may need to learn to do. These are addressed within the toolkit.

- Locate OER
- Review OER
- (optional) Adapt or author OER
- Apply copyright, open licensing, and fair use knowledge
- Track added content, licenses, and required attributions
- Ensure the accessibility of the open educational resource for most users with disabilities

Other toolkits, such as the OER Starter Kit [7] contain even more practical information for OER beginners.

Notes

1. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 318-340.
2. Rogers, E.M. and Shoemaker, F.F. Communication of Innovations: A Cross-Cultural Approach, Free Press, New York, NY, 1971.p.154
3. Bandura, A. "Self-Efficacy Mechanism in Human Agency," *American Psychologist* (37:2), February 1982, pp. 122-147.
4. Finn, C.A., Bedrosian, P.A., Holbrook, W.S. et al. Geophysical imaging of the Yellowstone hydrothermal plumbing system. Nature 603, 643–647 (2022). https://doi.org/10.1038/s41586-021-04379-1
5. U.S. National Science Foundation. [n.d.] Broader Impacts. NSF. https://new.nsf.gov/funding/learn/broader-impacts
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7. Elder, A., (2019) The OER Starter Kit. Iowa State University Digital Press. https://iastate.pressbooks.pub/oerstarterkit

PART I: MASTERING THE CONTEXT

Part I: Mastering the Content forms the core conceptual and technical knowledge librarians will be expected to convey to higher education subject matter experts and those that subject-matter experts will be expected to implement in the course of their project. It provides information regarding the challenge of collaboration between higher education and PreK12 faculty, safety information regarding working directly with minors, an introduction to open educational resources, copyright considerations when planning to share, and options for using others' openly-licensed works. A step-by-step guide is provided regarding finding and using openly-licensed images. Introductory to intermediate information regarding accessibility for students with disabilities is covered. Paradigm changing guidance is presented for librarians hoping to establishing productive, collaborative working relationships with subject matter experts, and key considerations for forming empowering relationships with PreK12 teachers.

1. CHALLENGES IN COLLABORATION BETWEEN HIGHER ED AND PREK-12 | *VIDEO*

Anita R. Walz and Julee P. Farley

Faculty in higher education have very different day-to-day work experiences and expectations than PreK-12 teachers. These differences range from differences in job descriptions to use and planning of time, number of hours in the classroom, criteria for promotion, level of administrative oversight, level of contact with people outside of one's primary institution — and beyond. This section aims to inform readers of potential challenges in forming collaborative partnerships by individuals from these seemingly similar but vastly different groups of educators.

Learning Objectives

Learners should be able to:

- Summarize the nature of challenges in collaborative partnerships between higher education and PreK-12 education.
- Locate permissions and created-works release documents[12], and evaluation checklists relevant to open educational resources for PreK-12 materials created in higher education.

Assignment

1. Read the presentation abstract and watch the presentation (25 minutes) or read the full transcript (below) of "Boundary Spanners: Bridging Gaps Between Higher Education and PreK-12" presented at the Open Education Conference 2021 by Anita Walz and Julee Farley at Sched or on YouTube[3] here or below.
2. In up to two pages
    - Summarize the main goals, issues, barriers, and challenges as described by the presenters.
    - Read and summarize the purpose of the associated artifacts (permissions forms, checklists, and templates).
    - If known, describe the preliminary goals and objectives (yours or of the group or individuals you are working with) for outreach from a higher education setting to a PreK-12 setting and document potential barriers.
3. Optional: Review and write a one paragraph summary of one or more of the additional readings.

Presentation Abstract

Boundary spanners serve as linking pins between organizations and can also fill structural holes, allowing networks with no previous connection to share information and resources. Using boundary-spanner practices, this presentation summarizes efforts between one university and area PreK-12 schools regarding development and broad sharing of relevant, adaptable PreK-12 OER course materials. Many personnel in higher education want to share their knowledge with a broader audience but lack the ability to create materials that best meet the needs of PreK-12 students. We were able to address these issues through collaboration between university content experts, teachers who have deep expertise in creating individualized learning materials, and processes and platforms for curation and broad sharing. When learning resources are created by the university in consultation with teachers, and shared as accessible and editable OER with broader geographic

areas, the materials better fit the actual practice and needs of PreK-12 teachers, as well as allow the university to expand its reach and impact. As PreK-12 teachers are required to provide individualized levels of instruction and course materials for all students, it is critical that these materials be easily and legally editable as well as accessible for students with disabilities. Some of the most significant contributions of this work are in the areas of accessibility, copyright, permission and ability to edit, and broad sharing. Our case study presents rationale, need, process, and the artifacts (permission forms, checklists, and templates) developed together by two "boundary spanners" in order to enable partnership, creation, curation, and free sharing of more useful learning resources.

Boundary Spanners: Bridging Gaps Between Higher Education and PK12

https://www.youtube.com/watch?v=gYzCzWaNJb0

Presentation slides and associated artifacts (permission forms, checklists, and templates)[4]

Video Transcript

Good afternoon everyone. Welcome to boundary spanners: bridging gaps between higher education and PreK-12. I am Anita Walz and I serve as the assistant director of open education and scholarly communication librarian at the university libraries at Virginia Tech. Hello everyone. I am Julie Farley. The work that we'll be talking about today was completed while I was the university PreK-12 liaison for the center for educational networks and impacts at the institute for creativity arts and technology at Virginia Tech.

Thank you, Julie. Thank you to those of you who went ahead and took our informal survey. We would love to see what kinds of roles you have and what you're interested in learning. It looks like about half of you are instructors at the college and university level. We have some librarians. We have some PreK-12 teachers. One student—maybe more than one student.

And things that you want to learn:

- K-12 involvement
- Could this be applied to adult basic skills course?
- How did the partnership originate?
- How have you made it sustainable?

These are really great questions and areas of learning. If we don't address your specific question we're planning to leave at least 10 minutes for questions at the end.

In this presentation we'll discuss the expectations, usefulness, and communication in sharing between higher education and PreK-12. We will talk about misconceptions and implementation. We'll also introduce this concept of boundary spanners and boundary objects. And as a potential solution to these problems, we'll overview our project and what we did, how we got started, and what we accomplished. Then we'll finally leave some time for questions. To give you some context for this sharing between higher education and PreK-12, there is a big history, a long history of sharing between higher education and PreK-12 and some attempts of sharing have been more successful than others. Right now how a lot of teachers share their resources teacher to teacher (usually in the same grade level or within the same school) and often a lot of sharing within school districts. There is not a lot of sharing across districts. So higher education faculty, staff, and students often want to share their resources. PreK-12 is very receptive to this usually because they really want these expert materials authored by people that are outside of their classroom and are really doing this new cutting edge research. But there can be some significant implementation issues.

Some of the implementation issues include a lack of communication that we're not communicating effectively across our different contexts. In fact, the sharing has been predominantly one-directional: from higher education to PreK-12. When in reality, it is far better for this type of work to be participative. Higher education faculty, staff, and students can create really great resources but if they don't fit the context, they can't be personalized by teachers and they don't consider the classroom environment in mind they're not helpful and they won't get used. There are some implementation-related misconceptions on both sides.

We'll talk first about the misconceptions by PreK-12 and then we'll move on to the misconceptions by higher ed. The first one in PreK-12 is that teachers may believe that faculty and staff and students in universities are required to do outreach, which is often not the case. And because they believe that faculty, staff, and students are required to do outreach, they may believe that they are skilled in doing outreach, which may not also be the case. Another thing to keep in mind is that teachers may be looking for something to use in their classroom within the next month, but in higher education there is often a grant funding cycle where you apply, you wait to hear, and then you might get funding, you might not. So there can be dramatically different timelines. As far as misconceptions by higher ed: there may be a lack of knowledge about what PreK-12 teachers need in their classroom. For example, often teachers have to teach to standards that are set by the state and prepare their students to take standardized tests at the end of the class. There could be time constraints in the classroom, teachers may be required to cover a certain amount of material within a certain amount of time, so they may not have more than a day or more than 30 minutes to do a certain outreach activity. Also teachers may be required to submit detailed lesson plans that may have specific requirements based on their district. Someone who is not in K-12 public education may not have the knowledge or skills to create the level of detail needed in the lesson plan, and teachers may be required or may prefer to do differentiation for their students meaning that they may make slightly different tasks for their students who have different skills. So what's really the important takeaway here is recognizing that PreK-12 teachers are experts in teaching their grade and they're experts at differentiating for their students. So, while teachers may recognize that university faculty, staff, and students are experts in their field, university and higher ed may not have that same recognition of teachers. Or even if they do they might feel that they [those in higher ed] cannot or they should not ask PreK-12 teachers for guidance…that it might be too much of a burden. But with these participatory partnerships it's really much more beneficial to ask the the expert to help collaborate with you on your resources. And similarly to higher ed, there's not an obligation for most PreK-12 teachers to bring outreach into their classroom.

Regarding implementation issues in higher education: there are a number of significant issues. First of all, guidance is needed in several different areas. Guidance is needed regarding including and sharing things that are not original to the author such as student works, third-party graphics, and other sorts of elements. Guidance is needed regarding formatting. What kind of formats? What kind of file types are helpful? If we assume that teachers want to customize the things that are shared with them, what kinds of formats can they easily edit? And then lastly, why accessibility or ADA compliance is important, and how to achieve this?

How do we bridge this chasm? How do we bring together two different groups that have compatible goals but different languages, different contexts, and assumptions about each other that are not quite accurate? How do we work together? How can work that benefits both groups be coordinated so that both may reach their goals and move forward in ways that are productive? How do we do this when the work is of great benefit to both groups but is extra— it's not required. It's really on top of everything else. And then how do we make the common ground apparent to others —because *there is common ground*.

One possible solution to this is the boundary spanner. A boundary spanner is a person who can link an organization or groups to share knowledge and resources. One of the tools that boundary scanners often use are called boundary objects. Boundary objects are any object that is part of multiple groups and that can facilitate communication between these groups. Some examples of this could be something like a business plan. It could be a map. It could also be things like field notes to help share your information. So there's a wide array of what a boundary object can be. So who is a boundary spanner? We are! And it's likely that there are probably more boundary spanners in your organization than you might realize.

On this next slide we'll talk about what the roles of a boundary spanner are and their goals. This will help you to identify if you might be a boundary spanner or if you have a boundary spanner in your organization. So the biggest goal of a boundary spanner is to bring together diverse communities in a productive way. Boundary spanners can be formal or informal—meaning that this could be your job. You could be formally assigned to communicate between groups, or it could be informal. It could just be something that you've discovered you're good at and that you're doing without necessarily being paid or told by anyone to do that. But the big goal is to either link organizations that don't have overlapping people in them or to span holes in networks. So you may have groups of people that are separate and one person can help bring these groups together. So we're really focusing on the idea here of mutually beneficial partnerships and that we don't need to be recreating the wheel at the same time. So it's much more efficient for us to team up and to share our resources.

Our project started with a referral from Julee's supervisor regarding copyright and open licensing which is an area in which I (Anita) work. I was happy to meet with them. But something interesting happened. So initially we thought that we would just talk with Anita maybe once or twice to get some information and that after that we would be good to go. We would have everything figured out. But what we really found is that it was much better for us to meet routinely and that we could have this goal of creating documents that can scaffold what our creators are doing.

So we're hoping that the documents we've created can really help guide the process that we're going to talk to you about. We wanted to make the process more independent for potential contributors. As we've alluded to before, we identified several areas in which the additional documentation was needed:

> *How our project started*
>
> *Consultation regarding copyright and open licenses [lead to] development of instructional documents and forms*

1. *Further instruction needed regarding use of in-copyright third-party works, preferred file formats, and document accessibility*
2. *a) Higher education students own their own work b) Faculty must have (non-coerced) permission from students to share student work*
3. *CENI needs permission to "publish" works*
4. *Process-management checklists (for authors and CENI)*

This led us to create a review checklist for submitters. This clearly communicated to higher education faculty, staff, and their students the best practices for designing shared content for PreK-12, focusing primarily on ownership including (1) student works, and (2) other third party works, so looking at things like fair use, open licenses, public domain, using your own original work, and secondly accessibility of created resources for students with disabilities.

We also created a form to obtain permission from a third party (including students) to release under an open license. This will be used by the submitter for students and or third party works. We adapted a form so that submitters are giving permission to the Center for Educational Networks and Impacts at Virginia Tech (the Center) to publish and release the materials under an open license. And the last thing that we created were these process management checklists. These are really review checklists to make sure that the submitter can ensure that they're submitting all the things that they should be [submitting] like their content, any of their third-party agreements, and that they're agreeing to let the Center publish their work. We've since learned that GoOpen Virginia, which is the platform through which the content will be shared, provides some guidance resources that meet some of these needs. These were added in July 2021. We also feel it's valuable for Virginia Tech and for the Center to have customized instruments because we're finding more projects within the institution that need this type of guidance.

We're going to talk about what we accomplished and why it matters. One of the most important goals that we've accomplished is that faculty can share more easily. Faculty, staff, and students can share more easily—which was really our original goal. We wanted these people to be able to get their resources out there in a widespread way that's going to work for teachers. We now have documentation, or we have documents, that can be used in projects where faculty are creating and sharing their original learning materials and incorporating students in the learning process to share their [students'] original learning materials. With regard to my learning and learning in higher ed about the K-12 context, there's a lot to be learned about past problems and existing processes, the blind spots that higher ed may have toward PreK-12.

Knowing about the importance of a bi-directional flow of information in developing these these tools has helped us to inform the collaborative ventures. We hope for the better.

And for me, I learned a lot more about copyright, open licensing, accessibility, and how some of these things aren't necessarily as complicated and scary as they might initially seem. We also found that we looked for these kinds these kinds of resources and we did not find them. So we think the framework may exist in pieces but we're not finding that it exists anywhere else (or not that we easily found). So we're working on an open publication regarding this project to document some of our work. We have some additional findings and observations from our work in the form of messages for higher education and then messages for PreK-12. So if we were to address a higher education group that is interested in starting a project with PreK-12 teachers, these are the messages that we would want to share: (1) PreK-12 teachers are experts at teaching, (2) that there is a lot of effort that goes into creating a generalizable lesson plan that is shareable (it's complex, it's not small and it's not easily accomplished), and (3) generally in projects like this, teachers who create these sorts of resources don't own them (and they are usually paid for their contributions).

So, some questions that you can ask to help you create your partnership with K-12 could be things like: (1) What standards are your students struggling with? This could help you get an idea of where the teachers might need a real world example that could help their students better understand the concept. (2) How much time do you have to spend on this specific task? This could help you make sure that the thing that you're designing will fit into their classroom constraints. (3) Is there specific terminology that should be included that you want students to be exposed to? With a lot of educational standards, teachers are told to cover very specific terms in their lessons. So, including those [terms] in yours will really help validate that and reinforce what teachers are teaching. (4) What would make it easy for you to actually use the material? Creating something is great but if it's really difficult to use, and it doesn't get used, then it's not as great.

So being able to have something that's easily-editable, for example, often helps teachers. (5) When do you plan to teach the material? (6) How far in advance would you like to receive it? This is really being aware that when a teacher receives a lesson plan they still have to review it and prepare for implementation in their classroom. So, being aware of how much leeway they need to actually make that happen [is important].

We're now going to talk a little bit about messages that would be appropriate for PreK-12 people in these sorts of projects. Right, so keeping in mind as we discussed earlier that project timelines in higher education can be much longer than they are in PreK-12 and may also have a higher degree of uncertainty. For example, if you're applying for a grant, this project may or may not be funded which indicates more uncertainty than teachers might anticipate in their classroom.

There's also [the reality that] if you apply for this grant you may not hear about a funding result for months. So keeping in mind that maybe you're even planning implementation for something in the next school year. Also knowing that without funding, higher education faculty, students, and staff may *not actually have an obligation* or an actual opportunity to conduct outreach. And the outreach generally isn't something that's rewarded by the tenure and promotion process.

Resources and Additional Reading

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1. Release form for media, illustrations, and figures. (2021) In Boundary Spanners. VTechWorks. http://hdl.handle.net/10919/105384
2. Contributor agreement template. (2021) In Boundary Spanners. VTechWorks. http://hdl.handle.net/10919/105384
3. Open Education Conference. (2021) Boundary Spanners: Bridging Gaps Between Higher Education and PK12. YouTube. https://youtu.be/gYzCzWaNJb0
4. Boundary Spanners. (2021). VTechWorks. http://hdl.handle.net/10919/105384

2. WORKING WITH MINORS | *PRESENTATION*

Julee P. Farley

Teachers and subject matter experts are involved in OER development processes, but the ultimate audience for some OER will be PreK-12 students themselves. Some projects may feature direct involvement with PreK-12 students. Others might not. This section provides background knowledge on requirements for working with students under age 18. Before proceeding with in-person work with minors, make sure to complete any training required by your institution.

Learning Objectives

Learners should be able to:

- Identify legal requirements and best practices for working with minors.
- Deliver this presentation to faculty/students who may in the future be working with minors.
- Identify how to obtain training required of faculty, staff, and students who work with minors.
- Articulate ways to make working with minors safe, fun, and educational.

Assignment

1. View the slides titled Working with Minors [PPT][1] and transcript below.
2. Summarize these in a series of talking points and next steps useful for others at your institution.
3. Identify the office at your institution responsible for training faculty, staff, and students who work with minors.
4. If you plan to work directly with minors, sign up for training with your institution.

Working with Minors: Training for Working with PreK12 Teachers and Students

Google Slides: https://docs.google.com/presentation/d/1xqMqIlHUOuz_hVKHLCrbgl9EumS2NwdSwL6i1XHEsMk/edit#slide=id.g10d0b519b24_2_115

PowerPoint Slides: http://hdl.handle.net/10919/112264

Slide Deck Transcript

Welcome to "So you want to do outreach: Training for working with K-12 teachers and students." This training was based on materials originally created by the Center for Educational Networks and Impacts at Virginia Tech.

The priorities for informal education may differ from formal education in that the goal of informal education is to inspire and interest students rather than focus on acquiring facts. These priorities [safe, fun, and educational] for informal education were created and pioneered by Dr. Phyllis Newbill at the Center for Educational Networks and Impacts at Virginia Tech.

Always remember that safety is the number one priority. If people do not feel safe or comfortable, then they are not able to focus on learning or feel inspired. You must ensure that you are creating a space that is both emotionally and physically safe for your learners. When you are leading an activity, you are in a position of responsibility, and children and even teachers will look to you for help.

The topics we will discuss are: ensuring you and anyone you are working with are never alone with a minor and how to determine if you are legally bound to report abuse or neglect.

Never be alone with a minor in a physical or virtual space (e.g., Zoom) and do not allow others on your team to be alone with a minor. This policy protects both the minor and the adult.

Consider this scenario and what you should do in this situation: A young person is the only other person in the bathroom when you arrive there. What do you do? [Answer: The best choice is to go find another bathroom to use. If that is not possible, you can wait until the young person leaves the bathroom to use it or find another adult and take this second adult with you to the bathroom. All of these solutions prevent you from being alone with a minor.]

Your organization may legally require you to report abuse and neglect. This is known as being a "mandated reporter." Those who work in educational, childcare, and healthcare facilities are often mandated reporters although the laws vary by state. If you are not sure if you are a mandated reporter, you can check the laws in your state, talk to your supervisor, or contact the HR department of your workplace. If you are a mandated reporter, your workplace will likely have a procedure for reporting abuse/neglect, and you should familiarize yourself with it as well as take any trainings your organization requires.

If you are a mandated reporter, you must report suspected child abuse and neglect. Remember that a culture of silence allows abuse to continue.

Sexual abuse and sexual harassment are covered under Title IX (nine). Title IX is a federal civil rights law, and it states that "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

Preventing and reporting abuse and neglect keeps people safe. Remember that abuse can be emotional, physical, or sexual. Neglect is the failure to provide for a child's basic needs. Remember that abuse is not rare.

To summarize the safety section: remember to never be alone with a minor in either a physical or virtual space. Don't allow others to be alone with a minor. You may be a mandated reporter and be legally bound to report abuse and neglect.

Priority number two is fun. You want your activity to be fun because if a learner is doing something fun then they will likely want to learn more about it. If the activity is not fun, you probably won't choose to learn more about that activity or that topic.

When planning your activity, you should include a hook, personal stories, and two-way conversations. Make sure to leave out stereotypes, assumptions about relationships, and sensitive topics. We will cover each of these topics in greater detail in the following slides.

A hook is a good way to get learners interested in and engaging with your activity. You can engage learners verbally, by introducing yourself or your activity. You can also engage learners visually by using color or displaying intriguing objects from your work.

You can also engage learners by sharing a personal story or a story from your work. For example, you might talk about how you got in to your work, what is exciting or you, what makes your experience different from others, or an interesting story about the history of your work.

Another way to engage learners and to increase learning is to encourage two-way conversations in your activity. You encourage two-way conversations by asking questions as well as listening to learners and responding to them.

Avoid stereotyping your learners based on any physical or observable characteristics. For example, don't assume that only female learners will be interested in your activity and male learners will find it boring. Also remember that teachers and students come from a wide range of backgrounds and home living situations, some of which may make the learner feel uncomfortable or singled out when discussed in front of their classmates.

Don't make assumptions about families and living situations, for example, assuming that every child has a mother and father at home or that every child has their own room. Avoid talking about sensitive topics such as tattoos, romantic relationships, sex, religion, politics, curse words, alcohol/drugs, and partying and focus your language and conversation on your activity instead. Your activity has the potential to reach and engage all learners and using inclusive language will help make sure you achieve that goal.

When creating an exhibit or setting up an activity, especially one where you may be at a table and waiting for learners to approach you, think about how you can make your space a "yes" space. A "yes" space is one in which you can say yes as much as possible and minimize the number of times you will say no to a learner (e.g., ask them not to touch something). Put touchable items (remember that touchable items can be used as a hook to engage learners in your activity) where they can be touched. Create physical barriers for fragile items that you may not want to be touched and if you must tell a learner not to touch something, set a clear expectation by letting them know not to touch before presenting the object.

See an example of a "yes" space on the next slide: This exhibit pictured demonstrates a "yes" space. There is a hook of a cool object to touch that is placed in an easily accessible area of the table. There is also a hook of a person asking questions to promote engagement with the exhibit. This exhibit does showcase fragile objects that should not be touched; notice how the fragile objects are protected by a physical barrier. Think about how you can set up your space so that you can maximize the number of times you say yes to someone who wants to engage with you and your activity and minimize the number of times you will say no.

As a review of the second priority, "fun": 1) Make sure to include a hook, stories, and conversation in your activity; 2) avoid stereotypes, assumptions, and sensitive topics; and 3) arrange your space to be a "yes" space.

We will now move onto priority three: making your activity educational.

In this component of the training, we will discuss how to determine learner capabilities, language use, making your activity sensory-friendly, how to choose an appropriate activity, and educational standards in your state.

Consider the scenario presented on this slide: A boy in a wheelchair comes with his family to your exhibit. His body is twisted, and he does not make eye contact with you. Should you address him? The answer: Many diseases attack the body and not the mind. Assume that the child can understand you until you have information otherwise and engage this learner as you would any other learner.

Consider the scenario presented on this slide: Two children come to your exhibit with an adult. One child is six inches taller than the other. Which one can understand bigger words? The answer: Heights vary greatly among children. They might be the same age, or the shorter one may be older. Learner capabilities are not related to their height.

We learned in the previous module that assumptions about learner abilities based on physical appearance are not reliable. Instead, you can ask questions of children, beginning with simple questions and asking more complex or difficult questions if the learner seems interested and seems to understand you. You can also ask the learner to describe an object, which will give you a good idea of their vocabulary and sentence structure skills.

Plan what you will say to learners during your activity, both to ensure that your content is age appropriate as well as to ensure that your activity will take the amount of time you believe it will. Once you have your script, you can use readability functions in Microsoft Word/PowerPoint or readability score applications to determine the grade level for your content. Make sure that your content is not too difficult or too easy. For example, a fifth grade reading level would likely be too difficult for a second grader and too easy for a twelfth grader.

Try to ensure that your content is easy to understand for your learner group. Other resources that may be helpful are The Thing Explainer book[2] and The Up-Goer Five text editor[3] both of which use only the vocabulary of the 1,000 (or "ten hundred") most common words in the English Language.

When preparing your activity, remember that some sensory experiences may be overwhelming for learners, which will limit their ability to engage with your activity. Having a written sign to describe your experience may be useful, and if you have sensory aspects to your activity make sure to let learners know about those ahead of time. Leave out bright lights and repetitive or loud noises if possible. In general, avoid surprises, which may frighten some learners. Also, do not put pressure on learners to engage with your activity if they seem hesitant; instead, let them engage at their own pace.

When you are trying to determine what activity you should do, try to select something that you think is interesting or exciting. If you're excited, your learner group will be able to detect your excitement, and they will be more interested. You can also think about why you want to do outreach, what has inspired you, and how this outreach might fit into the bigger picture of your life and career. You can also ask local teachers or school administrators what their needs are. For example, they may have difficulty meeting certain educational standards in standardized testing or may have an existing venue for outreach in their district. You can also discuss with teachers which grades or subjects may be best aligned with your activity; be sure to be honest about which grade levels or ages you feel most comfortable talking to and if there are any subjects you feel more comfortable talking about.

The state you live in likely has educational standards that schools must meet, such as standardized testing. These tests and standards typically cover key concepts and vocabulary that students must know.

These standards vary by state and are related to student learning and achievement in grades K-12 in English, mathematics, science, and history/social science, among others. Finding and becoming more familiar with the educational standards in your state may help you include important information in your activity and help you determine which subjects and grade levels may be most appropriate for your activity.

As a review, remember to determine learner capabilities by asking them questions or asking them to describe objects. Make sure you plan what you will say in your activity and that your language is at an appropriate level for your learner group. If possible, avoid loud and repetitive noises, bright lights, and other overwhelming stimuli in your activity. When planning your activity, think about what ages you feel comfortable talking to as well as what interests you and what you are excited about; if you are excited, your learners are more likely to be excited. Finally, use educational standards in your state to help create your activity.

Resources and Additional Reading

Virginia Tech Policy 4815: Minors on Campus or Participating in University-Related Programs. https://policies.vt.edu/assets/4815.pdf

GoogleSearch. University websites regarding interaction with minors. https://www.google.com/search?q=university+%22working+with+minors%22

Notes

1. Center for Education Networks and Innovation. (2021) Working with Minors: Training for working with PreK12 teachers and students. VTechWorks. http://hdl.handle.net/10919/112264. CC BY NC-SA 4.0.
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3. OPEN EDUCATIONAL RESOURCES AND THE CASE FOR PRIORITIZING, USING, FINDING, AND SHARING OER CONTENT | *READINGS*

Anita R. Walz

In this section, we introduce and describe characteristics of open educational resources (OER), describe ways of using OER, methods of locating existing OER, and review pros and cons of OER for PreK-12 teachers.

Learning Objectives

Learners should be able to:

- Define and differentiate open educational resources (OER) versus free resources.
- Describe the general level of awareness regarding OER in PreK-12 contexts.
- Articulate the work required to adopt OER.
- Try on a posture of "planning to share".
- Reflect on one's own current practice of sharing (or not sharing) under open licenses.

Assignment

- Adapt or create a 10-15 minute interactive presentation and transcript you can use to introduce teachers to open educational resources. If you use materials that you did not create yourself, make sure that you have some sort of permission to use them, and be sure to attribute them (if required).
- Choose an open license for your presentation and write one paragraph regarding why you selected that particular license.

Introducing Open Educational Resources

Imagine finding a resource that fits your course. It fits how you or your collaborator tend to teach. It has nearly all of the features you need and want. It aligns with course objectives or learning standards. It would help students to understand key concepts and relationships and extend their knowledge to other situations or tasks. The reading level is appropriate for your students. You believe it will help students to collaborate with each other when critically evaluating and assessing information, and that students will perceive the subject material as relevant. It is already free online too. It is as close to perfect as it gets! You want to incorporate it into your course materials and share your version with your colleagues.

Beyond these characteristics, what sort of upfront permission do you find most useful? Your answer might be something like this: "I want to be able to copy and share it" or "I want to be able to edit it to fit my students' needs and make copies for my students" or "I want my students to adapt or build on this as part of their learning."

Using open educational resources may help educators get there.

Definition: Open educational resources (OER) are freely and publicly available teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license [such as a Creative Commons license] that permits their free use, reuse, modification, and sharing with others. They include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. (Adapted from the Hewlett Foundation[1])

The three main things to know about OER are:

1. OER are freely and publicly available,
2. OER have some form of upfront permission that allows free use, adaptation, and sharing, and
3. OER can be exhibited in a variety of formats.

Something Greater Than "Free" is Here: OER versus Free Resources

Educators especially value the ability to adapt and share. Freely-shared educational materials, especially ones that are thoughtfully designed, reviewed, described, and released in a way that maximizes the potential for others to find, evaluate, and use them can greatly expand a teacher's toolbox. However, low awareness exists among teachers regarding how OER are different from other "free" resources.

Free online works or items for which we own a print copy *are still subject to copyright*. Whereas, an open license on an OER, often a Creative Commons license, allows the ability to reuse, modify, and share content with others.

Teachers don't often know or understand this. In a 2020 study (n=2,137) of K-12 academics, 31% percent of respondents indicated that they they are "Very Aware" or "Aware" of OER, but when these numbers are controlled for awareness of Creative Commons, the rates drop to 24% (Seaman and Seaman, 2020).[2]

Introduction to OER and OER creation engagement during in-service and pre-service teacher trainings have been found effective practices for teachers to realize the large number of resources available for diverse educational settings, and overcoming a lack of awareness and understanding that keeps teachers from using OER.[3]

Examples

A few examples of open educational resources relevant to the PreK-12 contexts include:

- *School Librarians as OER Curators: A Framework to Guide Practice*[4]—Online guide by the Institute for the Study of Knowledge Management in Education, licensed under a Creative Commons Attribution (CC BY) 4.0 International License
- *Trauma-Informed School Practices: Building Expertise to Transform Schools*[5]—Book by Berardi and Morton, licensed under Creative Commons Attribution NonCommercial-ShareAlike (CC BY NC-SA) 4.0 International License
- Virginia Inquiry Collaborative curriculum inquiry units[6]—Nineteen downloadable inquiry units by various teachers, licensed under Creative Commons Attribution NonCommercial-ShareAlike (CC BY NC-SA) 4.0 International License
- CUNY Teacher Education OER Hub[7]—Videos, educator testimonials, etc.
- K-12 OER Collaborative[8]—From the State Educational Technology Directors Association
- K-12 Teaching and Learning hub in OERCommons[9]—Lesson plans with various licenses

The Work of OER

As mentioned in the section How to Use This Toolkit, there are several things OER adopters, adapters, curators, and authors will need to do to leverage OER for instruction. These include locating and reviewing OER. If you are adapting or authoring, it is necessary to apply copyright, open licensing, and fair use knowledge. It is also necessary to track the licenses and required attributions of added content. All instructors will need to review and some may need to obtain assistance ensuring the accessibility of the selected course materials for students with disabilities. Finally, as teachers are experts with regard to student needs, the resources will need to be adjusted to fit desired pedagogical practices and technical environments. So, first: Finding OER. (Note that a list of links for items included in "The Work of OER" are available at the end of this section.)

Finding Open Educational Resources

Open educational resources are created by individuals and entities and are shared within social networks via the web. Some networks are geographical with a digital presence, such as the Washington OER Hub, the #GoOpenVA website, CUNY Teacher Education OER Hub, or OERColorado. Others are contributed and curated into collections such as the K-12 Teaching and Learning hub in OERCommons or MERLOT. There are sites from particular non-profit, association, or university-affiliated entities such as PhET Interactive Simulations, Khan Academy, CommonLit, ShareMyLesson, OpenUpResources or those affiliated with government and/or foundation-funded projects such as BetterLesson (CC BY or CC BY-NC) or NASA (Public Domain). CanvasCommons hosts a large number of OER directly importable into Canvas. Among sources popular in the North American context but less relevant to PreK-12 environments are the Open Textbook Library and the Pressbooks Directory. There are many others.

Several university libraries have developed tools to search for OER. These include OASIS (Openly Available Sources Integrated Search) from SUNY Genesseo's Milne Library and the Mason OER Metafinder (MOM) from Mason Publishing at the University Libraries at George Mason University. Both search across multiple OER sources. Only MOM offers real-time searching. Finally, Google Advanced Search can be helpful for locating openly licensed content. To use, scroll down to "usage rights" and set to "free to use, share, or modify."

Reviewing Open Educational Resources

Multiple rubrics exist for evaluation of course materials at PreK-12 levels. Achieve offers its EQuIP (Educators Evaluating the Quality of Instructional Products) designed to identify materials aligned to the Common Core State Standards (CCSS) or Next Generation Science Standards (NGSS). In addition, Achieve offers downloadable PDF rubrics for evaluation of open educational resources.

Projects may have their own rubrics for specific criteria they would like to have met. This could be applied during the search process or after an adaptation or authoring process. One example is the Curator Checklist for CENI projects, designed by the authors.

In the U.S. public school arena, overall curriculum policy and selection decisions are made by states and/or school districts ideally in consultation with teachers and administrators. School districts have various practices for evaluating curriculum. Nearly 40% of school districts did not use any external review sites. Of those that chose an OER-based curriculum, 17% consulted EdReports which offers evaluation of full-course OER, and 14% consulted AchieveTheCore, EdSurge, LearningList (fee-based subscription) or NCEE (Seaman and Seaman, 2020). School districts which have decided to #GoOpen were not listed as an information source for curriculum reviews, but may be a helpful source of information in sharing their strategies.[10]

Applying Copyright, Open Licensing, and Fair Use Knowledge

A Creative Commons license can be applied to any of your original work. Use the Creative Commons License Chooser to select a license. CC license icons can also be obtained here.

We will cover this topic in more depth in the next two modules.

Tracking the Licenses and Required Attributions of Added Content

Tracking the license, source, title, and author information for all added content will save a tremendous amount of time later. Think of this as a citation manager. Here is a spreadsheet for collecting this type of data [XLS], or copy the headers from the table to make your own. Note that all visual elements will require alternative text, so that is also included in the table.

Accessibility

We will cover this topic in in the section titled "Make Resources Accessible for Students with Disabilities."

Adjusting Resources to Pedagogical Practices and Technology or Vice Versa

This is one place where teacher expertise is especially important. While teachers can certainly expand their knowledge regarding the affordances of open educational resources (video—start at 23:34) and options related to learners are creators with agency—also known as open pedagogy, teachers are experts regarding pedagogy in their contexts.

Supporting Teachers

The purpose of this toolkit is to support the reader as they support PreK-12 teachers or those in direct collaboration with PreK-12 teachers. The work of OER is not without effort. It is possible but requires knowledge and training, without which, teachers are less likely to engage (Misra, 2014). Misra cites a number of projects that prioritize teacher training regarding open educational resources. You are welcome to use, build on, and create your own version of the presentation "OER: A Quick Overview for Teachers" (PPT | slides) and the accompanying two-page Teacher OER introduction handout (docx | gDocs). There are various other self-study resources to share and/or build on in the OER Starter Kit.

Resources and Additional Reading

Bishop, M.J. (2019). Improving Access, Affordability, and Achievement with OER [Video]. Virginia Tech Open Education Symposium 2019. http://hdl.handle.net/10919/88479

Creative Commons. (2020) *Creative Commons for Educators and Librarians.* Chicago: ALA Editions. CC-BY 4.0. https://certificates.creativecommons.org/about/certificate-resources-cc-by

Cummings-Clay, D. (2020). Impact of OER in Teacher Education. *Open Praxis*, *12*(4), 541–554. DOI: http://doi.org/10.5944/openpraxis.12.4.1112

Kelly, H. (2014). A path analysis of educator perceptions of open educational resources using the technology acceptance model. *The International Review of Research in Open and Distance Learning, 15*(2). https://doi.org/10.19173/irrodl.v15i2.1715

Kwak, S. (2017). How Korean language arts teachers adopt and adapt open educational resources: A study of teachers' and students' perspectives. *International Review of Research in Open & Distance Learning, 18*(4), 193-211. https://doi.org/10.19173/irrodl.v18i4.2977

Misra, P. K. (2014). Online training of teachers using OER: Promises and potential strategies. *Open Praxis*, *6*(4), 375–385. DOI: http://doi.org/10.5944/openpraxis.6.4.155

Morin, Heather M (2019). *Professional Development Series for Teachers on Locating, Accessing, Editing, Storing, and Aligning Open Educational Resources to the Middle Grades Science Curriculum*. https://scholarworks.moreheadstate.edu/msu_theses_dissertations/343

(n.d.). Open Pedagogy Notebook: Sharing Practices, Building Community https://openpedagogy.org

Thomson, Liz, Lantz, Jessica, and Sullivan, Brian. (2019) Pre-service Teacher Awareness of Open Educational Resources. *International Journal of Open Educational Resources*. https://www.ijoer.org/wp-content/uploads/2019/06/IJOER-Spring-2019-Pre-service-Teacher-Awareness-final.pdf

Tur, G., Urbina, S., & Moreno, J. (2016). From OER to open ed perceptions of student teachers. *BRAIN: Broad Research in Artificial Intelligence and Neuroscience, 7*(2), 34-40. Retrieved from http://www.edusoft.ro/brain/index.php/brain/article/view/594.

Van Allen, J., & Katz, S. (2019). Developing open practices in teacher education: An example of integrating OER and developing renewable assignments. *Open Praxis*, *11*(3), 311–319. DOI: http://doi.org/10.5944/openpraxis.11.3.972

Website references for the Work of OER

Finding OER

Washington OER Hub https://www.k12.wa.us/student-success/learning-standards-instructional-materials/open-educational-resources
CUNY Teacher Education OER Hub https://cunytedoer.commons.gc.cuny.edu
OERColorado https://cunytedoer.commons.gc.cuny.edu
K-12 Teaching and Learning hub in OERCommons https://www.oercommons.org/hubs/k12
MERLOT https://www.merlot.org/merlot/searchMaterials.htm
Khan Academy https://www.khanacademy.org
PhET Interactive Simulations https://phet.colorado.edu
CommonLit https://www.commonlit.org

ShareMyLesson https://sharemylesson.com
OpenUpResources https://access.openupresources.org
BetterLesson https://teaching.betterlesson.com/browse/master_teachers/projects
NASA https://www.nasa.gov/stem/foreducators/k-12/index.html
CanvasCommons https://lor.instructure.com/search
Open Textbook Library https://open.umn.edu/opentextbooks
Pressbooks Directory https://pressbooks.directory
OASIS https://oasis.geneseo.edu/index.php
Mason OER Metafinder https://mom.gmu.edu
Google Advanced Search https://www.google.com/advanced_search?hl=en

Reviewing OER

EQuIP (Educators Evaluating the Quality of Instructional Products) https://www.achieve.org/our-initiatives/equip/equip

Next Generation Science Standards (NGSS) http://www.nextgenscience.org

Achieve Rubrics for evaluation of OER https://www.achieve.org/publications/achieve-oer-rubrics

Curator Checklist http://hdl.handle.net/10919/105384

EdReports https://www.edreports.org

AchieveTheCore https://achievethecore.org

EdSurge https://www.edsurge.com

LearningList https://www.learninglist.com

NCEE https://ncee.org

#GoOpen https://web.archive.org/web/20230331131437/https://tech.ed.gov/open/districts/launch/welcome/https://tech.ed.gov/open/districts/launch/welcome

Applying Copyright, Open Licensing, and Fair Use Knowledge

Creative Commons License Chooser https://creativecommons.org/choose

CC license icons https://creativecommons.org/about/downloads

License-tracking and attributions

Tracking spreadsheet [XLS]

Leveraging affordances of OER

Affordances of OER (video) [start at 23:34] http://hdl.handle.net/10919/88479

open pedagogy https://openpedagogy.org

Supporting Teachers

OER: A Quick Overview for Teachers (PPT: http://hdl.handle.net/10919/112264 | g-slides: https://docs.google.com/presentation/d/13Ohu99ZMWbTMoBtdmgBuD9dbm4cjQ6Lz59GOykG9n88/edit?usp=sharing) two-page handout

Two page teacher OER introduction handout (docx: http://hdl.handle.net/10919/112264 | g-doc: https://docs.google.com/document/d/1zr0te7n8ltoAdLV9hA3Hm2L5CCa8iYb5/edit?usp=sharing&ouid=105092997159653427889&rtpof=true&sd=true)

OER Starter Kit https://iastate.pressbooks.pub/oerstarterkit

Notes

1. Hewlett Foundation [n.d.] Open educational resources defined. http://www.hewlett.org/programs/education/open-educational-resources
2. Seaman, Julia and Seaman, Jeff. (2020) *What We Teach: K-12 Educators' Perceptions of Curriculum Quality*. Bay View Analytics
3. Thomson, Liz, Lantz, Jessica, and Sullivan, Brian (2019) Pre-service Teacher Awareness of Open Educational Resources. International Journal of Open Educational Resources.
4. ISMKE. (2019). School librarians as OER creators: A framework to guide practice. https://iskme.libguides.com/SL-OER-Curation
5. Berardi, A. A., & Morton, B. M. (2019). Trauma-informed school practices: Building expertise to transform schools. Pennington ePress. https://digitalcommons.georgefox.edu/pennington_epress/4
6. The Virginia Inquiry Collaborative. (2021). goopenva.org. https://goopenva.org/curated-collections/51
7. CUNY. (2023). The CUNY teacher education OER hub. CUNY Academic Commons. https://cunytedoer.commons.gc.cuny.edu
8. SEDTA. (2019). OER. Guide to Quality Instructional Materials. https://www.oercommons.org/hubs/k12
9. OERCommons. (2023). K-12 teaching and learning. https://oercommons.org/hubs/k12
10. Note that the U.S. Department of Education opted to sunset the national coordinating role of the #GoOpen initiative in January 2022 https://www.iskme.org/index.php?q=a-collaborative-future-for-the-go-open-network)

4. COPYRIGHT PART I: FIVE PRINCIPLES OF COPYRIGHT WHEN PLANNING TO SHARE | *PRESENTATION*

Anita R. Walz

Copyright is often perceived as an overwhelmingly complex or litigious topic. However, it does not need to be necessarily so. Academics and teachers with access to accurate information, especially when applied to particular contexts, can understand and feel comfortable implementing best practices for their and others' materials.

The presentation and script "In Service of Others: Honoring Others' Copyrights — and Making Your Work Useful (to others)" provides a two-part overview of copyright and open-licensing concepts and applications. Part I covers the basics of U.S. Copyright. These presentations are not legal advice nor intended to be exhaustive; rather, they are relevant to what academics and teachers need to know. Part I is about using others' original works, and Part II is about creating and sharing works (in particular, sharing using open licenses) so that others have the flexibility to use the resources in ways that meet their specific needs or audiences.

One example is the author's own adaptation of the slides and concepts for a different audience as shared at http://hdl.handle.net/10919/112575[1].

Learning Objectives

Learners should be able to:

- Articulate copyright-related barriers in teaching, learning, and sharing.
- Describe what can be under copyright, how it gets there, who is a copyright holder, and how long copyright lasts in a U.S. context.
- Articulate and apply the default position of copyright regarding "ownership," refuting common myths about student work and online materials. Namely, that e*verything is created by someone—unless it has entered the Public Domain or is still owned by someone* (e.g., instructors are not automatically free to use student work or things they find "free online").

Assignment

1. Read through the presentation and transcript for Part I (this section) and Part II (the next section).
2. Document any questions including where the content is confusing.
3. Reflect on what in the presentation is helpful. How could you shape it to make it more helpful?
4. In two or fewer pages, reflect on what you would need to do to be able to be able to deliver some or all of this presentation.

In Service of Others: Honoring Others' Copyrights — and Making Your Work Useful to others (Part I)

Google Slides: https://docs.google.com/presentation/d/1xOhDGYZO6FIxwoZqQN5T_2W9yhFeZI-TRbEVzg8FCK0/edit?usp=sharing

PowerPoint Slides: http://hdl.handle.net/10919/112264

Slide Deck Transcript

Introduction

Suppose you own a bicycle, or other very useful, mainstream item which is common for your audience to own (e.g., a snow shovel, public transit pass, physics textbook, gaming console, etc.).

[interactive activity] Please raise your hand if you own a bicycle. [Hawa raises hand.] Ok, great. [ok to put hands down but ask students for their names.] If Javier wants to borrow Hawa's bicycle, can he? [discussion] No, he needs to ask. And if Hawa does not respond, can he borrow it? [discussion] If Hawa says he can borrow it on Tuesday from 11:00-12:00, does that mean he can also use it on Wednesday from 9:00-10:00, or for the rest of the year? If he has permission to use it to get to class can he also use it in a competitive bike race? Can he paint it a different color? Since Hawa gave permission to Javier, does that mean Max can also use Hawa's bicycle? No, of course not.

Copyright is a lot like this bicycle example. In the same way that someone owns even an unlocked, unaccompanied bicycle, someone likewise owns the digital artifact you found freely on the web, the picture published in a book you own, the architectural model you saw in Architecture Studio, or the cool diagram you saw on a conference poster. In the same way as borrowing a bicycle, you must obtain some sort of permission to use in-copyright works when those rights don't belong to you.

When teaching requires research and publication, we often want to integrate the actual materials (not just citable ideas) into our own work. These are materials that someone else made. Do you have any examples from your own life/work/studies when you wanted to do this? Our work is often better when we draw on others' expertise and what they have made. Well, this poses a problem, doesn't it? We WANT to draw on a lot of sources that we didn't create.

Two Dilemmas When Creating With Sharing in Mind

There are two questions here: 1) how to use others' work legally and ethically, and 2) making your work useful for others who may need to customize or adapt it to fit their use.

While the following idea may be controversial, there is some expectation (a "should" if you will) that **if** we expect others to share in a certain way, that we too should be willing to do the same. The following information may help you to get there.

Part I: Five Things Everyone Should Know about Copyright

Let's step back to look at some relevant underlying principles, not about what we do, but about the legal environment in which we function in the U.S.. We're going to quickly go through a series of SIX principles that outline what you need to know about copyright. (We'll cover #6 in the next section.)

Principle 1: Unless otherwise marked, always assume that every artifact's copyrights are owned by someone. That someone might be YOU. Like a bicycle, unless clearly marked, or you have a highly informed reason to know otherwise. *You should always assume that every created thing you see or hear which is somehow preserved or "recorded" (legal experts use the phrase "recorded in a fixed medium") has copyrights owned by someone.* This also includes content you don't have to pay for that you find on the internet.

This means that unless your employer, sponsor, or work agreement or policy says otherwise, you have complete ownership over your original work! Note that in the U.S. most employers by default assert ownership over their employees' work created on the job. However, if you are a university student, you own your work (unless you're an employee or you have a prior arrangement with someone funding your schooling costs). You are a copyright owner!

Apply your new knowledge

1. Who owns images you find on the internet?
2. What about content found in physical or electronic books, DVDs, and/or streaming media owned by you (or to which you or your library subscribe)? Who owns that?
3. True or false: An employer owns work-related, creative outputs of its employees.

Answers:

1. Who owns images you find on the internet? Likely other people.
2. What about content found in physical or electronic books, DVDs, and/or streaming media owned by you (or to which you or your library subscribe)? Who owns that? The copyright holders of the materials. Likely other people. You may have access to the physical or streaming media, but you likely don't own any copyrights in the work unless you have an agreement in writing.
3. True or false: An employer owns work-related, creative outputs of its employees. True (Note that some employers, like Virginia Tech, grant some but not all rights back to their employees through the university's Intellectual Property Policy.)

Principle 2: Copyright is automatic. Copyrights are established the moment a creative work is fixed in a medium , even if you never add a copyright symbol © to the work. A copyright is established by its creator the moment when they press "save," as soon as one's pen hits the paper to create a doodle, or the moment when your smartphone camera takes a video or a picture.

Apply your new knowledge

1. Which of the following can be copyrighted, and why?
    - Recorded music from 2007
    - Photos I took with my phone
    - Pictures found using Google
    - Famous person's birthday*
    - Your phone's ring tone
    - TikTok video
    - Photos taken by your child
    - Unpublished journal article
    - Published journal article
    - Song you wrote but didn't write down or record*
    - E = mc2 3.14159265358979323846264338327950288419716939937510 5…*

Answer: Items with a * are not copyrightable

Works in a fixed medium created by human beings are automatically under copyright. Examples include: a sculpture, a filed saved to your computer or the cloud, a doodle on a piece of scratch paper, or a picture taken with your cell phone.

There are some things that cannot be under copyright. These include:

- Ideas, facts, data, common knowledge
- Narrative, image, song (when there is no record)
- Works clearly donated to the Public Domain
- Published in the US pre-1926*
- Created by U.S. Government employees acting in an official capacity
- Currently, works compiled by a computer such as an AI-generated image are not copyrightable.

*Note: The entry date of works into the Public Domain in the U.S. advances each year. As of Jan 1st 2023, it will be works published pre-1927. On Jan 1, 2024 it will be pre-1928, and so on. For more info, see: https://copyright.cornell.edu/publicdomain.

Principle 3: All published works are destined for freedom from Copyright in the Public Domain, but it takes a long while for them to get there. When copyrighted materials reach a certain age, they "graduate" from Copyright and join the Public Domain and are free from copyright restrictions. (Note that "I found this free online" is not the same as being in the Public Domain.) Original works may also be donated or clearly marked by their maker as donated to the Public Domain (CC0). However, works made by U.S. Federal Employees during their official duties are automatically in the Public Domain in the United States.

So, in summary, works fall into three different categories: (1) works YOU made, whose rights you did not sell or give away, (2) works someone else made, and (3) works in the Public Domain.

Apply your new knowledge

What is the Public Domain? How does a work get into the Public Domain?

Answer

As of January 1, 2022, works published in the U.S. prior to 1927 are in the Public Domain. However, this is a rolling date that changes every year. If it is no longer 2022, use Cornell University's "Copyright Term and the Public Domain Guide"[2] to determine which works registered or first published in the U.S. are in the Public Domain.

Principle 4: Copyrights can be thought of as a creator's monopoly (in duration and use) over a bundle of different rights. Relevant here are rights to copy, create other versions, publicly display, and distribute your work. These last the author's lifetime, plus 70 years before graduating to the Public Domain. Unless a work is clearly a "work for hire," for example, in a written contract, you as the author have a monopoly on these rights.

Apply your new knowledge

- Describe the monopoly an author/creator obtains when making something.
- How does the author/creator obtain this monopoly?
- What do these monopoly rights include?
- How long do these rights last and what happens to these rights when an author dies?

Answers:

- According to 17 U.S. Code § 106 and subject to sections 107 through 122, the owner of copyright under this title has the exclusive rights to do and to authorize any of the following: (1) to reproduce the copyrighted work in copies or phonorecords; (2) to prepare derivative works based upon the copyrighted work; (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending; (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly; (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission. Source: U.S. Code § 106 subject to sections 107-122.
- This monopoly is automatic.
- See above
- These rights last (for an individual) for their lifetime plus 70 years. Upon death, unless rights were transferred, assigned, or willed elsewhere, these rights become part of the author's estate and transfer to their heirs. The length of copyright for works created under corporate authorship is longer (120 years).

Principle 5: A creator/author may commoditize, license, or donate parts or the whole bundle of rights.

As mentioned in principle 4, the "bundle" of rights relevant to us are rights to copy, create other versions (derivatives), publicly display, and distribute the work.

An author may retain, sell, donate, and/or license parts (or the whole bundle) to one party (an exclusive use) or to many parties, for limited times or for all time, within limited geographies or to all geographies, in certain media or in an infinite number of types of media.

Apply your new knowledge

Which of the following can a copyright owner do with their original writings or other creative works in a fixed medium? Which of these are mutually exclusive (i.e., for which could a copyright owner not do both)?

- License an exclusive right to distribute copies
- Apply a Creative Commons license to the work
- Sell film rights separately from book publication rights
- Give away rights to make other versions or sequels
- Donate works to the Public Domain

Answer:

A copyright owner can do any of these things. If a copyright owner is extending *exclusive* rights, the copyright holder cannot extend those rights to anyone else.

Discussion

- What five things should everyone know about copyrights?
- What problems do these raise for creators? For people who might want to use others' in-copyright works?

Additional Reading

Ellis, E. & Smith, K. (2020). *Coaching Copyright*. ALA Editions. https://www.alastore.ala.org/content/coaching-copyright [not open access]

Notes

1. Walz, A. R. (2022). Finding, using, and sharing: An Introduction to copyright, fair use, and creative commons licenses for virginia master naturalists. VTechWorks. http://hdl.handle.net/10919/112575
2. Cornell University, [n.d.] Copyright term and the Public Domain. https://guides.library.cornell.edu/copyright/publicdomain

5. COPYRIGHT PART II: USING OTHERS' ORIGINAL WORKS LEGALLY (CREATIVE COMMONS, FAIR USE, AND PERMISSION) | *PRESENTATION*

Anita R. Walz

Authors have multiple options when incorporating others' works (images, quotes, tables, etc.) into their own works. When doing so with openly-licensed works it is important to consider that downstream uses may adapt your work, and that it is a good practice to make that as straightforward as possible. This is primarily so that others have the flexibility to use them in ways that meet their needs and are not obligated to remove in-copyright elements because they lack permission or would be required to think through a fair-use analysis in order to reproduce them.

Learning Objectives

Learners should be able to:

- Summarize why using Creative Commons licenses and CC-licensed works overcome many copyright-related challenges.
- Locate and interpret the terms-of-use for example items.
- Reflect on copyright-related issues related to being an author or maker and describe practices for sharing your original work so that others are able to use it.
- Identify different formats/displays of Creative Commons licenses on works found on the web or items in the wild.

- List five allowable cases in which something can be incorporated into one's OER.
    - Demonstrate ability to identify what clearly can be used, and what is still murky or at the edges of one's knowledge.
    - Identify your questions. What else do you need to know?
- Articulate that marking and citing public domain, fair use, used-with-permission/released under an open license, and attributing CC-licensed works is important, even if one does not yet have this skill.

Assignment

1. Read through the transcript/teaching script for Part I (the previous section) and Part II (this section).
2. Document any questions. What is unclear or confusing? What external expertise do you feel you still need?
3. Reflect on what in the presentation is helpful. How could you shape it to make it more helpful?
4. In two or fewer pages, reflect on what you would need to do to be able to be able to deliver some or all of this presentation.

In Service of Others: Honoring Others' Copyrights — and Making Your Work Useful to others (Part II)

Google Slides: https://docs.google.com/presentation/d/1EMGSXUamqwRmK4iQTfLn7W0f73wH070BVvNgi-tBbJU/edit?usp=sharing

PowerPoint Slides: http://hdl.handle.net/10919/112264

Slide Deck Transcript

If you own a bicycle, it's pretty clear that you have rights to lend it out, sell it, keep it, paint it, take it on a world tour, and ride it wherever you are authorized to do so. And the same with materials in the Public Domain[1] (works that were created by a U.S. Government employee, or published in the U.S. as of a 1920ish date). Note that works in the U.S. are continually entering the Public Domain—see Copyright Term and the Public Domain from Cornell University for authoritative information. But what about when someone else owns the bicycle [the middle bucket on the slide]? What rights do you have if you are not the owner? Is there any situation in which (perhaps in a true emergency) you might be justified in borrowing something you do not own for a use and duration that was warranted?

Well, this poses a problem, doesn't it? Because we WANT to draw on a lot of sources when we create. Our work is often better when we draw on others' expertise and what they have made. How do we answer the second dilemma of using others' works? What exemptions exist for you to use others' works, and what rights do others have to use your works?

Here is our proverbial bicycle again.

Copyright is a lot like this bicycle example. In the same way that someone owns an unlocked, unaccompanied bicycle, someone likewise owns the digital artifact you found freely on the web, the picture published in a book you own, the architectural model your classmate built and left in your classroom or studio overnight, or the cool diagram you saw on a conference poster.

In the same way as borrowing a bicycle, you must obtain some sort of permission to use in-copyright works when those rights don't belong to you. This includes student academic work, because students own their own work! There is good news!

Principle 6: There ARE Legal and Ethical Ways to use Others' In-Copyright Works.

There are three basic options. We'll take these from the bottom, up (in the order we typically think of them) then we'll talk about level of effort, which is why they are numbered in seemingly reverse order. You don't need to memorize every detail about these, just reflect on the three kinds of exemptions that exist for using others' works (or others using your work).

3. Obtaining permission to use in-copyright materials for specific purposes (similar to obtaining permission to borrow Hawa's bicycle).

2. Options established through U.S. Copyright Law which allow use of works under the terms of "Fair Use" or the TEACH Act, on which some teachers will (rightly) rely on, or other exemption documented in statutory law. Because the TEACH Act exemptions require that twenty-two factors be met[2] and one of those factors is "share only with my class," the TEACH Act exemption is not useful for our "share for many uses and many classrooms" types of uses. We will not be discussing the TEACH Act further.

And 1. Using materials under the terms for which permission has already been granted. This permission is also known as a "license." (Note that CC licenses always require attribution—see the Best Practices for Attribution – Creative Commons[3] document at the bottom of the slide).

Apply your new knowledge

1. What are the three options for you to use another's work, or for others to use your work?
2. Do these rules apply to work created by students?

Answers:

1. Obtaining permission, claiming Fair Use through the TEACH Act, and using materials under a license.
2. Yes. See also your campus intellectual property policy.

*Note that using another's idea, language, argument structure, etc., always requires citation as to affirm academic integrity and avoid plagiarism.

This [3,2,1] is the order in which we might commonly think of these options. However, if we think of them from "least effort" to "greatest effort" we will start at with number 1—where permission is already granted rather than seeking out new permission.

You don't have to recall all of the details (yet) but it is important for you to remember these THREE options so that you can understand what practices are acceptable.

The three options are: (1) choosing to use works that already have a license allowing your specific, proposed use (and yes, we'll talk more later about "specific, proposed uses"), (2) leveraging an exemption in U.S. copyright law such as Fair Use, or (3) obtaining permission for your specific, proposed use.

[Resource: A Framework for Analyzing any U.S. Copyright Problem[4]]

Let's talk quickly through these three relevant options in the *Framework for any U.S. Copyright Question*. We'll dive deeper into each one momentarily.

After confirming that material is indeed in-copyright, we ask:

1. **Does the work *already* have a license permitting my proposed use?**

    - Creative Commons licenses (which always require attribution) are one such license which is appended on an in-copyright work;
    - Another license might be covered in the "Terms of use" section described on a website.

(We'll return to Creative Commons licenses and Terms of Use in a moment.)

By way of analogy, this would be a bit like Hawa placing a sign on her bicycle stating "Free to ride on Wednesday thru Friday from 4-6pm. Return in the condition borrowed or better."

2. **Is my proposed use more fair than infringing according to an informed Fair Use analysis?** Because you're not getting permission from the copyright owner or their authorized representative, fair use is all about CONTEXT. A Fair Use analysis is one you conduct yourself to determine if a use is more fair or more infringing. It's based on totaling up results for four factors established by copyright law: (1) the type of use, (2) the character of work you're using, (3) how much of the work you're using, and (4) the degree of harm to the commercial market for your proposed use.

This would be like using Hawa's bicycle *without her permission* but in a way that has minimal impact to her. You might use only part of the bicycle or use it in a novel way it was generally not planned to be used (for a very limited time and in a very limited context).

Two helpful tools include

- The "Fair Use Evaluator"[5] which can help you to organize your fair use evaluation, and
- Best Practices in Fair Use for Open Educational Resources (Pages 11-14)[6].

(We'll return to Fair Use in a moment.)

If steps 1 & 2 are not fruitful, in other words, if there is no pre-existing license or if your Fair Use analysis shows that your proposed use is more infringing than fair, move to the next step: seek and obtain) permission.

3. **Have I obtained permission for my specific, proposed use?** This is the copyright owner indicating that they grant you permission for your specific, particular use. This would be like you asking Hawa for permission to use the bicycle between 3-5pm on Tuesday, and Hawa saying "Yes, you may use my bicycle between 3 and 5pm on Tuesday, but please don't ride it through the mud." It usually involves a lot of context, e.g., where/to whom (how public or restricted the use or distribution is), what format, how long, etc. (For further information, see the U.S. Copyright Office's circular on obtaining permission.[7].) We'll talk further about a helpful way you can obtain permission, and establish helpful reuse rights as well.

In case you're looking for the overall framework, see the "Framework for Analyzing any U.S. Copyright Problem"[8].

Let's Look a bit Deeper at the Three Options

1. **Does the work *already* have a license permitting my proposed use?**

As we mentioned earlier, a work might have a Creative Commons license or some other type of open license. Alternatively, your proposed use might already be covered in the "Terms/Conditions of Use" section described on a website.

Creative Commons Licenses

What are Creative Commons licenses? Creative Commons licenses are free license markers that a copyright owner or their authorized agent add to an original work. The licenses do not remove copyright but are a layer on top of copyright, and move the permission to use the work from "All Rights Reserved" to "Some Rights Reserved." They enable the creator of a work to indicate to others what uses are permitted.

There are six licenses (at the bottom) and two Public Domain markers (at the top). The licenses have up to four icons each as you can see on the right: BY attribution (the person, which reminds us that we are required to give attribution), NC or Non-Commercial (the crossed out currency system which indicates that primarily-commercial uses are prohibited), SA or ShareAlike (the leftward arrow which indicates that any adaptions must be licensed under the same terms as the original), and ND or No Derivatives (the equal sigh which tells us that we cannot make, build-on and redistribute a changed version). The two public domain markers (CC PD and CC0 indicate respectively, that a work has "no known copyright," or that it has to the degree possible been donated to the Public Domain by its creator and marked as such.

The public domain markers and licenses are displayed in order of freedom—the most freedom at the top to the least freedom at the bottom. They are named according to the sequence of their icons. For example, the fourth one in the list is referenced as: CC BY SA or Creative Commons Attribution ShareAlike.

The bottom two icons are ND or "no derivatives," and do not allow redistribution with changes. While they are still valuable, because they do not allow adaptation and sharing, they are *not* considered to be open licenses. Nor are works marked as ND or "no derivatives" considered to be open educational resources (OER).

Here is an introductory brochure on Creative Commons licenses.[9]

What do the licenses allow, require or prohibit people from doing? Because we are specifically concerned about making our resources useful for others (including others making their own versions with changes), we've included in our discussion only those licenses which allow adaptation and redistribution in the chart below. In short, "ND" licenses are not included.

License	Users may	Users must	Users must not
CC BY (or CC Attribution)	Copy, distribute, display, perform, and remix the work.	Attribute or credit the author as requested. Indicate any changes.	
CC BY-SA (CC BY ShareAlike)	Copy, distribute, display, perform, and remix the work.	Attribute or credit the author as requested. Apply the same CC license used by the author to the derivative work. Indicate any changes.	
CC BY NC (CC BY Non-Commercial)	Copy, distribute, display, perform, and remix the work.	Attribute or credit the author as requested. Indicate any changes.	Copy, distribute, display, perform, and remix the work for commercial purposes.
CC BY-NC-SA (CC BY Non-Commercial Share Alike)	Copy, distribute, display, perform, and remix the work for non-commercial purposes.	Attribute or credit the author as requested. Apply the same CC license used by the author to the derivative work. Indicate any changes.	Copy, distribute, display, perform, and remix the work for commercial purposes.

Figure 5.1: Unpacking Creative Commons licenses

There are a lot of things you are permitted to do with Creative Commons licensed works (those that allow derivatives, anyway). These are often called the 5R permissions (retain, reuse, revise, remix, and redistribute).[10] As mentioned before, there are some restrictions. There are CC-licensed works that prohibit primarily commercial uses (NC or "NonCommercial"). And, there are others which require any versions or derivatives to have the same license (SA or "ShareAlike").

One VERY IMPORTANT thing to know is that all CC licenses always require attribution (BY or "Attribution"). You can read about the licenses (and read the individual licenses) here.[11] If you're displaying or reproducing something with a Creative Commons license that allows derivatives, you must list the title, author, source (URL), and CC-license under which it was used. Further information regarding how to do this is available in Creative Commons' wiki site, Best Practices for Attribution.[12]

If a picture, photo, textbook, etc. has a Creative Commons license on it which allows derivatives, you may incorporate it into your own work, or build on it *with attribution.* You'll also want to make certain that the licensed works *within* your overall work are compatible with the overall Creative Commons license you put *on* your work.

For example, if your overall license allows commercial use (CC BY, CC BY SA), best practice is ***not*** to include items that cannot be used commercially (CC BY NC, CC BY NC SA) within. For further information, see the Creative Commons FAWs and compatibility chart at Wiki/cc license compatibility.[13]

If you're interested, this six minute introductory video provides more background on the origins of Creative Commons licenses and why someone might want to use them. See this video at: https://youtu.be/BIhJUJ9DC4A.[14]

Terms of Use as a Second Alternative

If a resource does not have a Creative Commons license, sometimes the "Terms of Use" on a parent website or in the front matter of the resource indicates what rights you might have. Here are two examples: U.S. Geological Service[15] and TeacherTube[16]. Can you come up with a third example? Possibly one which is more permissive?

Let's talk about specific, proposed uses. Here are several examples of specific, proposed uses:

- Display a high-resolution image of an original that is in-copyright in a class lecture once per semester every semester.
- Insert an excerpt of a published paragraph or image and cite it. Distribute the overall work under a specific Creative Commons license.
- Reproduce a thumbnail image on the internet in a non-commercial setting to a global audience.
- Reproduce a high-resolution image in a commercial printed and (in perpetuity) digital publication with an anticipated print distribution of 1,000 and a digital subscriber audience of 15,000.

For which of these would you conduct a fair use analysis? For which would you already know that you should obtain permission? Do all of the examples have enough context (when, where, who, how much, public versus restricted, whether is is an economic impact) for you to even do a fair use analysis? What other information would you need?

You might ask, "What does *my specific use* mean, and why does this matter?" In the same way as lending a bicycle, owners of things may wish to enforce limits on how long you do something with their work, where it is shared, and how it might be changed (in the same way that Hawa might say "No, I don't permit you to use my bicycle in a race through the mud," or "No, you may not borrow it for a week.")

How about this example? Thinking about your specific use, especially how broad it is, can help you know how much effort your project might be. Take a moment to read through the example "allowable uses." Which seem most permissive? Which are more restrictive but still useful? If someone wanted to use your work, would they be able to do what they wanted to do?

Take a moment to compare proposed uses with allowable uses. Then we'll give you a chance to document your specific use and if we want to later, we'll return to this and to examine the possibilities for whether or not you can use something in the way you've proposed, and how.

Now, it's your turn. What is a specific use you might have? What might you want to use? How? How much? Answer each of the questions on the "Your Turn" slide. [Sharing (optional) or return to this as an exercise/follow up exercise.]

Let's Talk About Fair Use. Is my Proposed Use More Fair Than Infringing According to an Informed Fair Use Analysis?

This is not a trick question. Not all educational use is fair use. And your proposed use in class—especially if you are planning to share in a context broader than your classroom—is broader than prior situations you may have considered. A proposed, specific use should include aspects of:

- How do you hope to use the copyrighted work?
- How creative (vs. factual) is the work? Has the work already been published?
- How much or how substantive is the part of the work you are using?
- Does my proposed use harm the original copyright holder's market for their work?

There are a few things to know about fair use:

- Section 107 of the Copyright Act[17] provides the framework for Fair Use. It describes the four factors.
- Not all educational use is fair use.
- Outreach and sharing beyond your classroom changes the "purpose and character of the use."

Uses are on a continuum. Some may be more fair. Some may be more infringing. If your proposed use is not as "fair" as needed, a key question to ask is "how can I make my use MORE fair." In detail, here are the four factors from the U.S. Copyright Office:

What is Fair Use?

Fair use is a legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances. Section 107 of the Copyright Act[18] provides the statutory framework for determining whether something is a fair use and identifies certain types of uses—such as criticism, comment, news reporting, teaching, scholarship, and research—as examples of activities that may qualify as fair use. Section 107 calls for consideration of the following four factors in evaluating a question of fair use:

1. **Purpose and character of the use, including whether the use is of a commercial nature or is for nonprofit educational purposes:** Courts look at how the party claiming fair use is using the copyrighted work, and are more likely to find that nonprofit educational and noncommercial uses are fair. This does not mean, however, that all nonprofit education and noncommercial uses are fair and all commercial uses are not fair; instead, courts will balance the purpose and character of the use against the other factors below. Additionally, "transformative" uses are more likely to be considered fair. Transformative uses are those that add something new, with a further purpose or different character, and do not substitute for the original use of the work.
2. **Nature of the copyrighted work:** This factor analyzes the degree to which the work that was used relates to copyright's purpose of encouraging creative expression. Thus, using a more creative or imaginative work (such as a novel, movie, or song) is less likely to support a claim of a fair use than using a factual work (such as a technical article or

news item). In addition, use of an unpublished work is less likely to be considered fair.

3. **Amount and substantiality of the portion used in relation to the copyrighted work as a whole:** Under this factor, courts look at both the quantity and quality of the copyrighted material that was used. If the use includes a large portion of the copyrighted work, fair use is less likely to be found; if the use employs only a small amount of copyrighted material, fair use is more likely. That said, some courts have found use of an entire work to be fair under certain circumstances. And in other contexts, using even a small amount of a copyrighted work was determined not to be fair because the selection was an important part—or the "heart"—of the work.
4. **Effect of the use upon the potential market for or value of the copyrighted work:** Here, courts review whether, and to what extent, the unlicensed use harms the existing or future market for the copyright owner's original work. In assessing this factor, courts consider whether the use is hurting the current market for the original work (for example, by displacing sales of the original) and/or whether the use could cause substantial harm if it were to become widespread.

In addition to the above, other factors may also be considered by a court in weighing a fair use question, depending upon the circumstances. Courts evaluate fair use claims on a case-by-case basis, and the outcome of any given case depends on a fact-specific inquiry. This means that there is no formula to ensure that a predetermined percentage or amount of a work—or specific number of words, lines, pages, copies—may be used without permission.[19]

Resources

The following resources may be helpful to you:

The Fair Use Evaluator: https://librarycopyright.net/resources/fairuse/index.php

Code of Best Practices in Fair Use for Open Educational Resources (see pages 11-14): https://www.wcl.american.edu/impact/initiatives-programs/pijip/impact/best-practices-in-fair-use/best-practices-in-fair-use-for-open-educational-resources

As a last resort: Have I obtained permission for my specific, proposed use?

And, finally, as a last resort: obtain permission. Again, obtaining permission goes beyond just *asking* for permission. Just as you need a "yes" from Hawa to use her bicycle, you must get a "yes" to be able to copy and redistribute the work. Further information for requesting permission is available in the U.S. Copyright Office circular #10.[20] You'll need to identify and contact the owner of the work, describe what you want to use, and when and how you want to use it. You might also ask for the in-copyright work to be released under the same Creative Commons license as your overall work. And, get it all in writing.

Several resources may be helpful to you:

- Example: Release form for Media, Illustrations, and Figures: http://hdl.handle.net/10919/105384
- U.S. Copyright Office on How to Obtain Permission (Circular #10): https://www.copyright.gov/circs/m10.pdf

In Summary

There are some things you can do when you don't have enough rights , are not sure that you have enough rights, or when your Fair Use analysis is more infringing than fair:

- Look for alternatives: Find openly-licensed or Public Domain equivalent material that meets the same need.
- Look for ways to make your use *more fair.* Use less, smaller, lower resolution. . . only as much as is necessary.
- Use a work in a different or transformative* way than it was intended. Add value to the work.
- Obtain permission. When, where, how much + may I release this under the same open license as my work?
- Create your own original work. Take your own picture. Make your own drawing. Put the idea in your own words (and cite it!).

Finally, if you use content that is not your own, regardless of weather it is CC licensed, public domain, permission-granted or used under fair use, do other users a favor and indicate the status of that material. Here are some examples:

Creative Commons license

- Best Practices for Attribution of CC-license content[21]
- Example (web environment): © David Lenker Strawberry CC BY 2.0
- Example (print environment): © David Lenker. Strawberry https://flic.kr/p/8JCr55 . CC BY 2.0 https://creativecommons.org/licenses/by/2.0

Public domain (not in copyright)

- Example (web environment): USGS Website. Public Domain
- Example (print environment): USGS Website. https://usgs.gov. Public Domain.

Permission

- (c) Author. Name of the work. Reproduced with permission. OR
- (c) Author. Name of the work. Reproduced with permission under CC BY 4.0. OR
- (c) Author. Citation in a format of your choosing. Reproduced with permission. OR
- (c) Author. Citation in a format of your choosing. Reproduced with permission under CC BY 4.0.

Fair Use

- (c) Author. Name of the work. Used under fair use. OR
- (c) Author. Name of the work. Adapted under fair use.

Review / Discussion questions

- List the three options for you to use another's work, or for others to use your work.
- If you want to incorporate part of someone else's work into yours, describe the steps you would take to determine if that is ok.
- Which of the three options seem easiest for incorporating others' work in your own?
- Which of the three options require that you think most carefully about your "proposed use?" Why is that important?
- Does any of this change your thinking about how you might share?

Discussion

1. What sorts of third-party works might you want to incorporate into your OER?
2. What options do you have for incorporating third-party works into your original work?
3. Compare and constrast the options for incorporating third-party works. What are the benefits to you? What are the benefits (or risks) to downstream users?

Resources and Additional Reading

Creative Commons. (2020). Creative Commons for Educators and Librarians. ALA Editions. https://drive.google.com/file/d/1w2Kz8c7xpf-fRIqRvkUjqtgdrSRl7MRG/view?usp=sharing [open access]

Notes

1. Cornell University Library. [n.d.] Copyright term and the public domain. Copyright Services. https://guides.library.cornell.edu/copyright/publicdomain
2. University of Texas Libraries (n.d.). TEACH Act Checklist. https://guides.lib.utexas.edu/copyright/teachactchecklist

3. Creative Commons, (n.d.). Best practices for attribution. https://wiki.creativecommons.org/wiki/Best_practices_for_attribution
4. Walz, A. R. (2015). A Framework for Analyzing any U.S. Copyright Problem. VTechWorks. http://hdl.handle.net/10919/56505
5. Brewer, M. & ALA Office for Information Technology Policy. (2008). Fair Use Evaluator. Librarycopyright.net. https://librarycopyright.net/resources/fairuse/index.php
6. Jacob, M., Jaszi, P., Adler, P. & Cross, W. (2021). Code of Best Practices in Fair Use for Open Educational Resources. American University Washington College of Law. https://www.wcl.american.edu/impact/initiatives-programs/pijip/impact/best-practices-in-fair-use/best-practices-in-fair-use-for-open-educational-resources
7. U.S. Copyright Office. (2013). Circular 10: How to obtain permission. https://www.copyright.gov/circs/m10.pdf
8. Walz, A. R. (2015). A Framework for Analyzing any U.S. Copyright Problem. VTechWorks. http://hdl.handle.net/10919/56505
9. Walz, A. R. & Fralin, S. (2017). Find, Share, Remix, Create. Legally: Learn About Creative Commons Licenses. VTechWorks. http://hdl.handle.net/10919/77420
10. This material is based on original writing by David Wiley, which was published freely under a Creative Commons Attribution 4.0 license at http://opencontent.org/definition
11. Creative Commons. [n.d.]. Licenses list. https://creativecommons.org/licenses
12. Creative Commons. (2022). Best practices for attribution. https://wiki.creativecommons.org/wiki/Best_practices_for_attribution
13. Creative Commons. (2013). Wiki/cc license compatability. https://wiki.creativecommons.org/wiki/Wiki/cc_license_compatibility
14. Creative Commons. (2010). Get Creative!. https://youtu.be/BIhJUJ9DC4A
15. USGS. [n.d.] Copyrights and Credits. https://www.usgs.gov/information-policies-and-instructions/copyrights-and-credits
16. TeacherTube. (2023). Terms of Use. teachertube.com. https://www.teachertube.com/terms-of-use
17. U.S. Copyright Office. [n.d.] 107. Limitations on exclusive rights: Fair use. Copyright.gov. https://www.copyright.gov/title17/92chap1.html#107
18. U.S. Copyright Office. [n.d.] 107. Limitations on exclusive rights: Fair use. Copyright.gov. https://www.copyright.gov/title17/92chap1.html#107
19. U.S. Copyright Office. [n.d.] U.S. Copyright Office Fair Use Index. Copyright.gov. https://www.copyright.gov/fair-use
20. U.S. Copyright Office. (2013). Circular 10: How to obtain permission. https://www.copyright.gov/circs/m10.pdf
21. Creative Commons. (2022). Best practices for attribution. https://wiki.creativecommons.org/wiki/Best_practices_for_attribution

6. FIND AND USE OPENLY-LICENSED IMAGES: A STEP-BY-STEP GUIDE | *GUIDE*

Anita R. Walz

Images, figures, and other graphic elements are among the most frequently used Creative Commons' licensed materials incorporated into others' original works. This step-by-step guide walks you through how to not only find openly-licensed graphic elements, but how to create or find an attribution statement which is required per the CC license when reusing Creative Commons licensed works.

Learning Objectives

Learners should be able to:

- Use terms and synonyms to find relevant CC-licensed images or graphics.
- Download and correctly attribute Creative Commons-licensed images.
- If working with pictures that include people, be able to locate pictures of more diverse people, and describe model rights and the "right to publicity".

Assignment

1. List up to three animals, vegetables, or common household items.
2. Search for pictures of one or two of the items using the sources below. Document your search and what you found in 1 page.
3. Provide an attribution for at least one image from each search environment.
4. If the images you found include people in them, see if you can find pictures you can use which are more representative of the diversity of your intended audience[1] and read about model rights or the "right of publicity."[2] Describe the conditions under which you could use a photo of a recognizable or famous person.
5. (optional) Compare and contrast coverage available from the various search tools.

Find and Use Openly-Licensed Images: A Step-by-Step Guide

Searchers most frequently ask how and where to find openly-licensed graphics or photos. This three step guide aids those seeking openly licensed images.

STEP 1: Create a list of search terms

STEP 2: Use specific search tools to find relevant openly-licensed images

- openverse https://wordpress.org/openverse
- Wikimedia Commons https://commons.wikimedia.org
- Google Advanced Image Search https://www.google.com/advanced_image_search

STEP 3: Determine if you can use what you find—and correctly attribute it

- Do you need more help?

STEP 1: What are you Looking for?

List your key search terms and synonyms for each concept below.

- Example 1: book OR manuscript OR textbook OR reading material
- Example 2: pachyderm OR pachydermata OR elephant
-
-
-

STEP 2: Use Specific Tools

openverse (formerly Creative Commons Search)

- Go to: https://wordpress.org/openverse
- Enter your selected search terms. Optional: use the drop down menu to limit to images or audio. Press "Search." In this example, we will search using the word "dolphin."

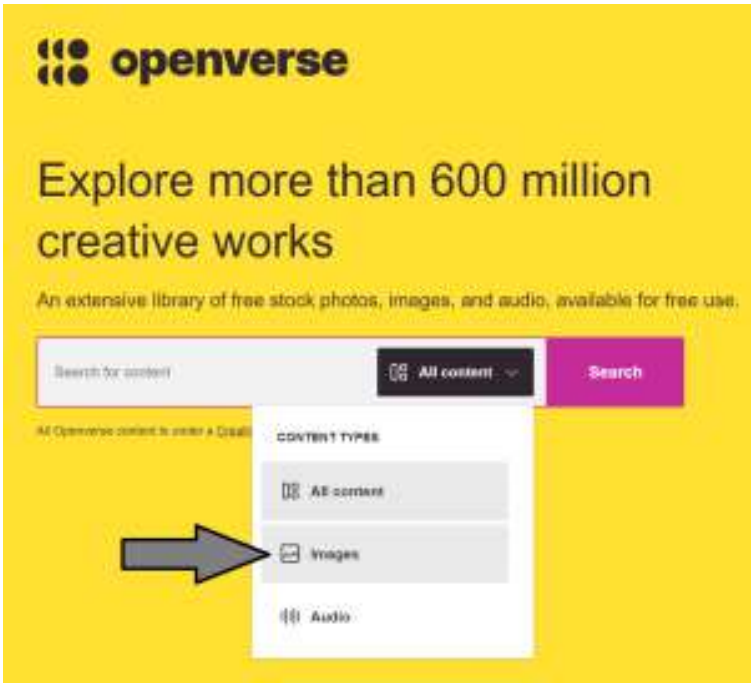

Figure 6.1: openverse search interface (annotated)

- The search results are shown below. Use the "Filters" in the upper right hand corner to filter your search results by use, license, image type, file type, aspect ratio, image size, or source, if you wish.

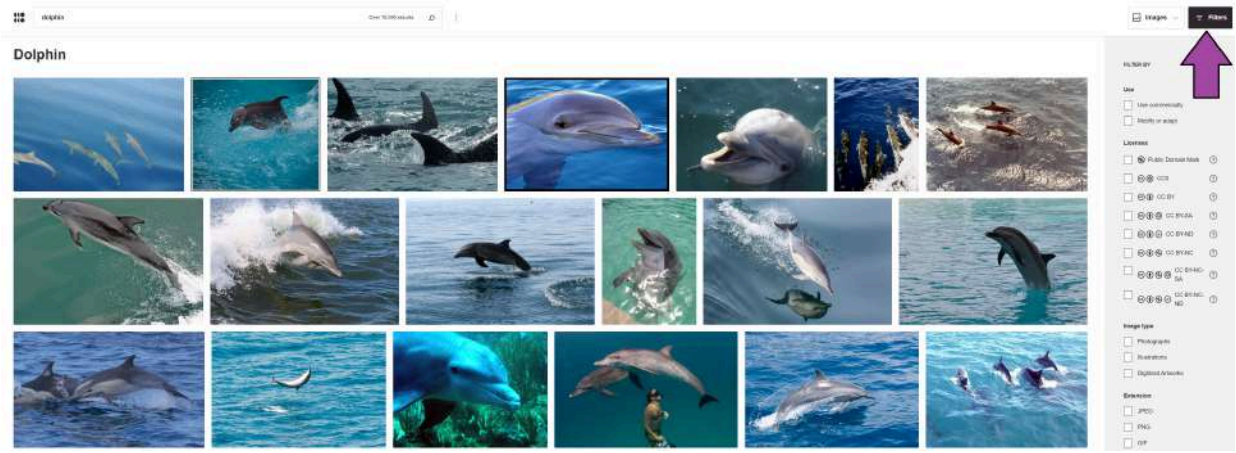

Figure 6.2: Results screen and search filters from openverse (annotated)

- Click on the image you want to use, copy the attribution information (as seen below) and add both to your document.

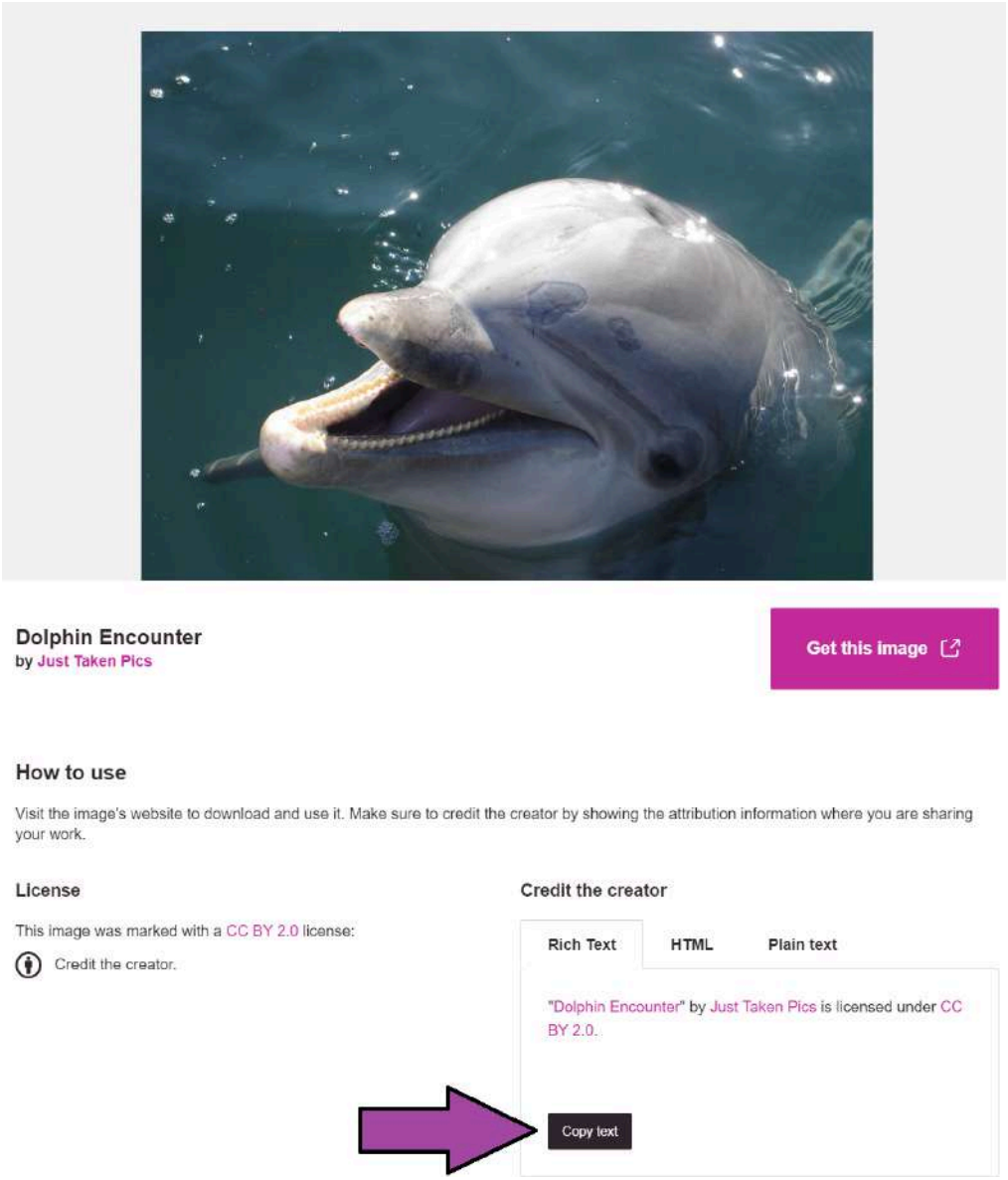

Figure 6.3: Example of individual item display in openverse (annotated)

- Click on "Get this image" to double check the license and author information, and download the image and add it (and the attribution statement) to your document.

NOTE: In this case, we discover that the name of the author in Flickr, likely the source of the image in openverse, is different than in openverse. The author may have uploaded this under two different names. Or, someone else may be falsely claiming credit. Best practice is to use and attribute the *oldest* instance of the image and attribution. In this case, we cannot tell what the upload date is in openverse. Checking this in a reverse image search tool like Tineye (https://tineye.com) or Google Reverse Image Search (https://images.google.com) can help us to determine which version of the image is oldest and/or largest or highest resolution, and thus which attribution is likely to be correct. As the image in Flickr was uploaded in 2006, it is older than any of the other options, so we will credit the photographer, Ste Elmore, in the attribution.

In this case, this image is attributed as: **(c) Ste Elmore. 2006. Dolphin Encounter CC BY 2.0 https://flic.kr/p/9Ghta**

Figure 6.4: Example of individual item display in Flickr (annotated)

Note: Flickr.com is the host website for this image. The download interface will look different depending on where the image is hosted.

Wikimedia Commons

- Go to https://commons.wikimedia.org/wiki/Main_Page
- Enter your search term(s) in the upper right hand corner

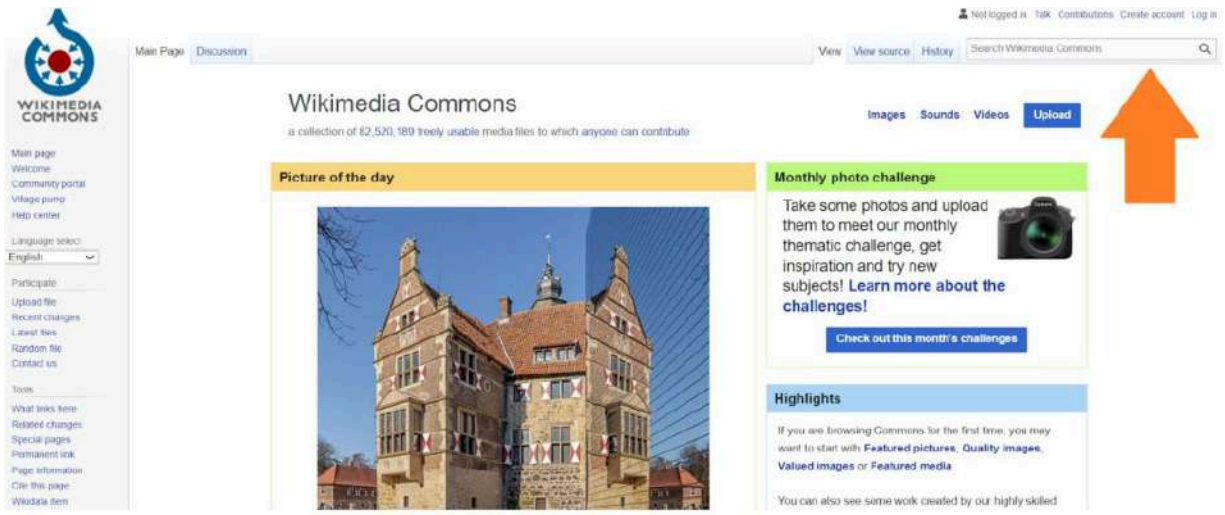

Figure 6.5: Wikimedia Commons search interface (annotated)

- We are again searching for "dolphin."

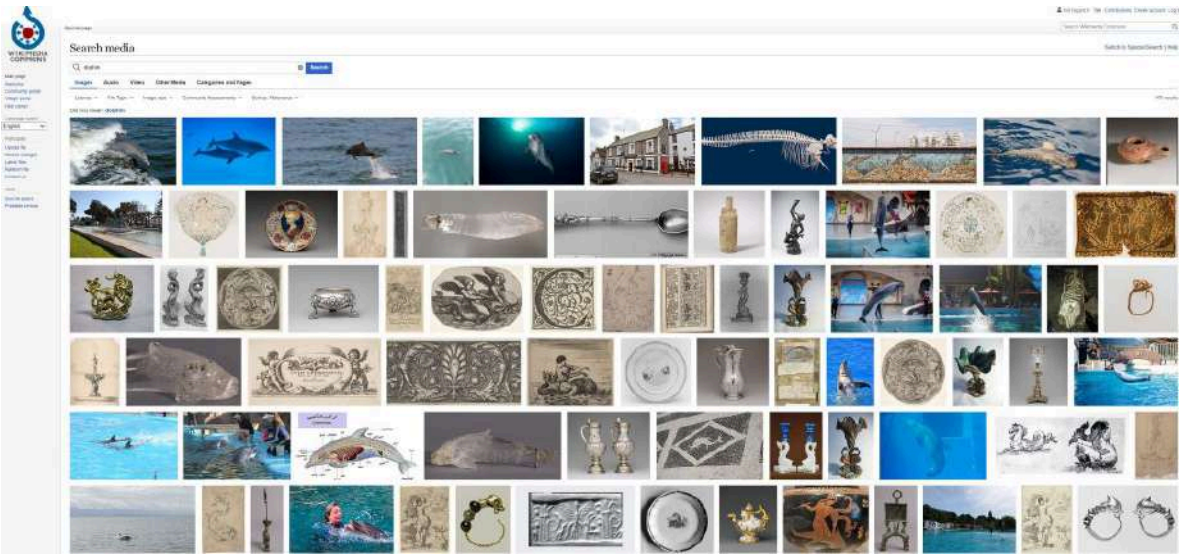

Figure 6.6: Results screen from Wikimedia Commons

- From the search results, I have clicked on an image to look at. The image appears on the right hand side of the screen as seen in the figure below. Within your search, click on the button "More Details" to see more details regarding the image you selected.

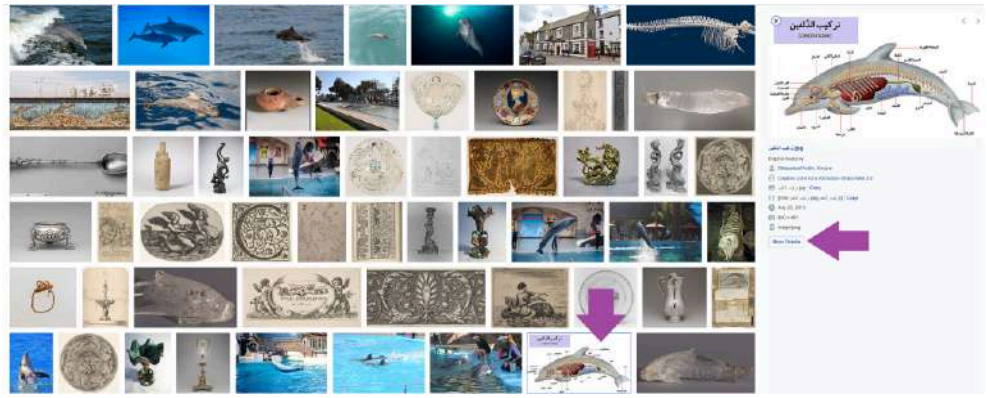

Figure 6.7: Results screen and example of individual item display in Wikimedia Commons (annotated)

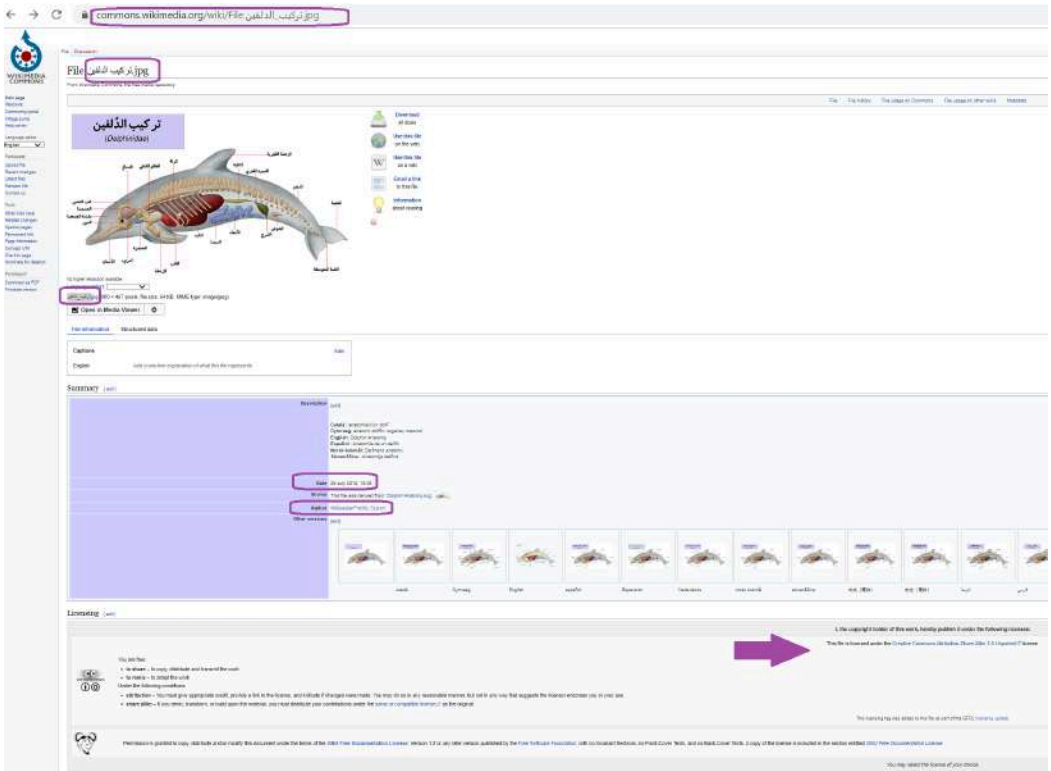

Figure 6.8: Example of individual item display in Wikimedia Common (annotated)

- Review the image (especially file size/resolution). Write your attribution statement; include the title, author, source/URL, and license (with links for each). Add the attribution statement and the downloaded image to your document.

In this case, the attribution would be:

(c) 2012. Szyizm. تركيب_الدلفين. [dolphin] Derived from Dolphin anatomy.svg by WikipedianProlific CC BY SA 3.0.

The attribution for print would be:

(c) 2012. Szyizm. تركيب_الدلفين. (https://upload.wikimedia.org/wikipedia/commons/e/e9/%D8%AA%D8%B1%D9%83%D9%8A%D8%A8_%D8%A7%D9%84%D8%AF%D9%84%D9%81%D9%8A%D9%86.jpg) [dolphin] Derived from Dolphin anatomy.svg (https://commons.wikimedia.org/wiki/File:Dolphin_Anatomy.svg) by WikipedianProlific (https://en.wikipedia.org/wiki/User:WikipedianProlific) CC BY SA 3.0 (https://creativecommons.org/licenses/by-sa/3.0/deed.en).

Google Advanced Image Search

- Go to: https://www.google.com/advanced_image_search
- Scroll down to "usage rights" at the bottom of the page and select "Creative Commons licenses"

Figure 6.9: Excerpt of Google Advanced Image Search interface (annotated)

- Scroll up and enter your search term(s) and press enter
- Click on "Tools" and verify that the Usage Rights setting does indeed reflect "Creative Commons licenses."

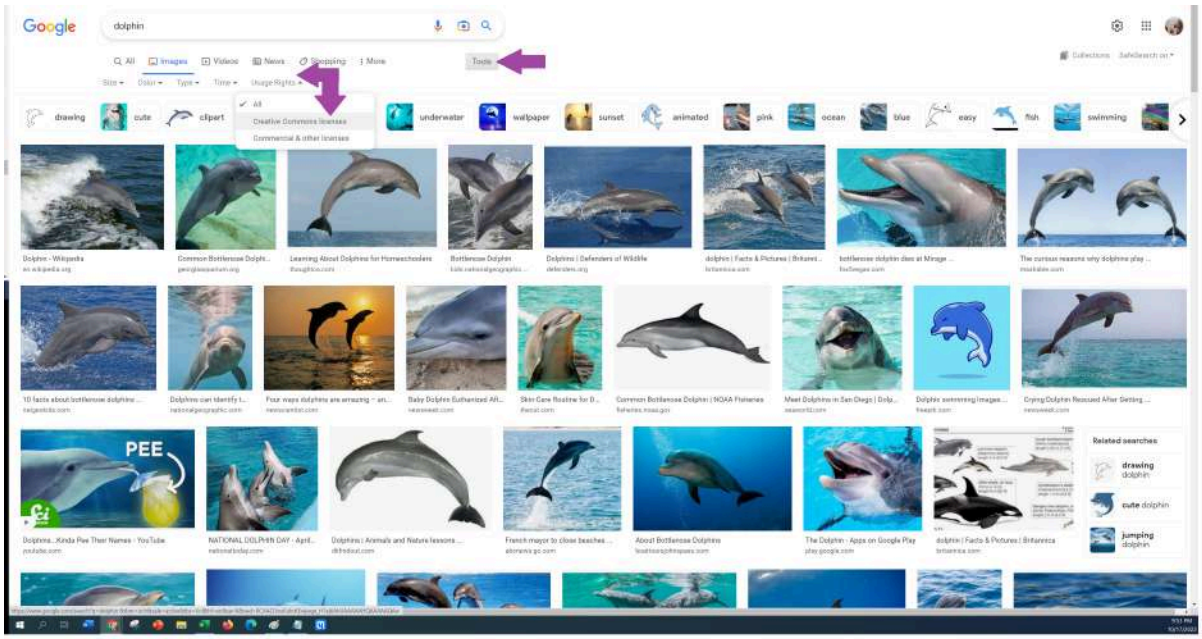

Figure 6.10: Results screen and search filters from Google Advanced Image Search (annotated)

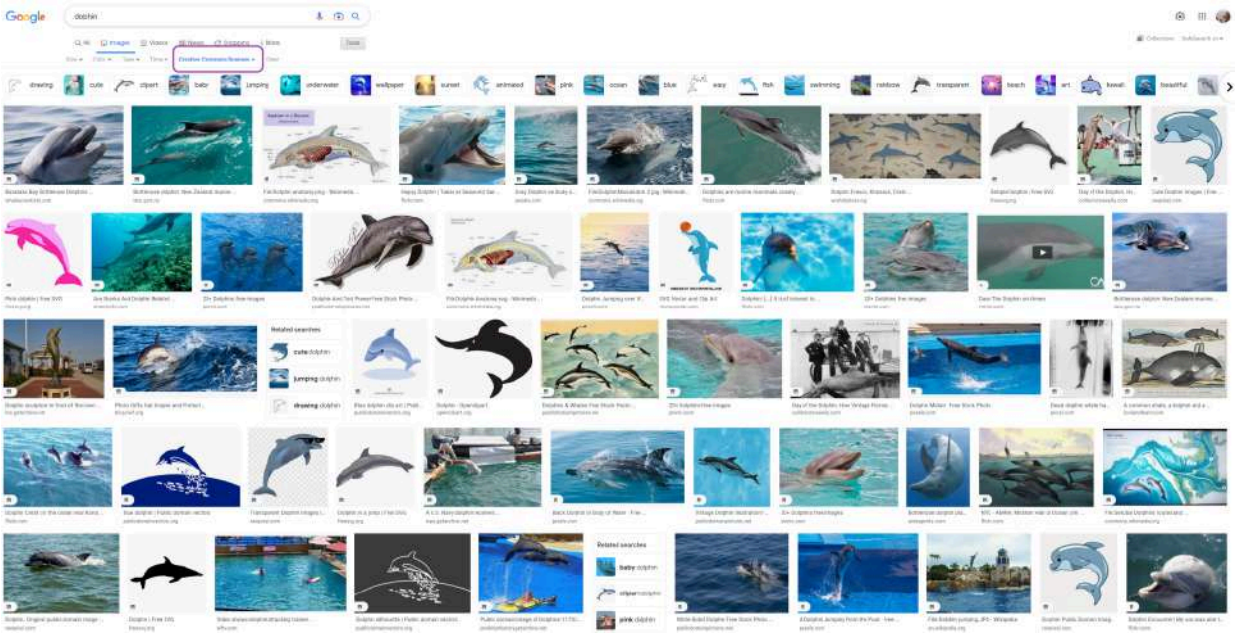

Figure 6.11: Results screen and Creative Commons license filter from Google Advanced Image Search (annotated)

- Click on an image you like. This will cause a larger version of the image you selected to appear on the right hand side of the screen. Click on the larger image displayed on the right.

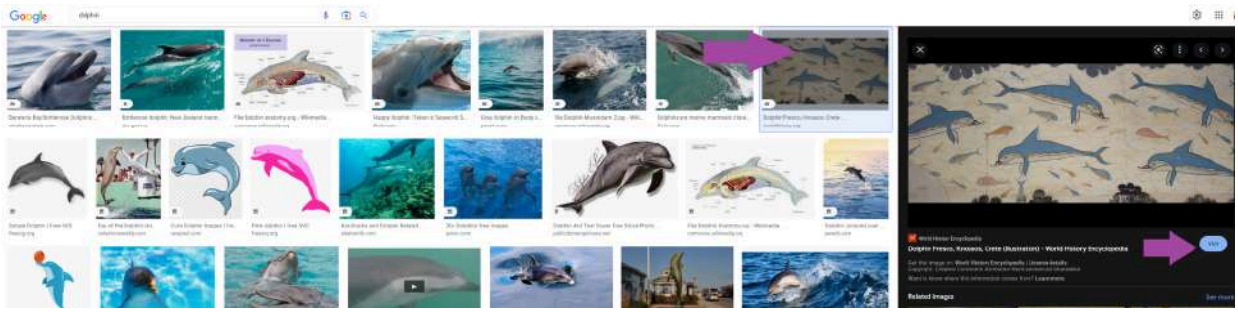

Figure 6.12: Results screen and example of individual item display in Google Advanced Image Search (annotated)

STEP 3: Can I use This?

This section covers three required and one optional question:

1. Does it have a Creative Commons license?
2. Do you understand the basics of the CC license you are using?
3. Are you able to follow the terms of the license?
4. (unusual cases) Are you mixing different kinds of licenses?

Does it have a Creative Commons license?

YES / NO

Information from Creative Commons about Creative Commons licenses (https://creativecommons.org/licenses)

There are six Creative Commons licenses and two Public Domain markers.

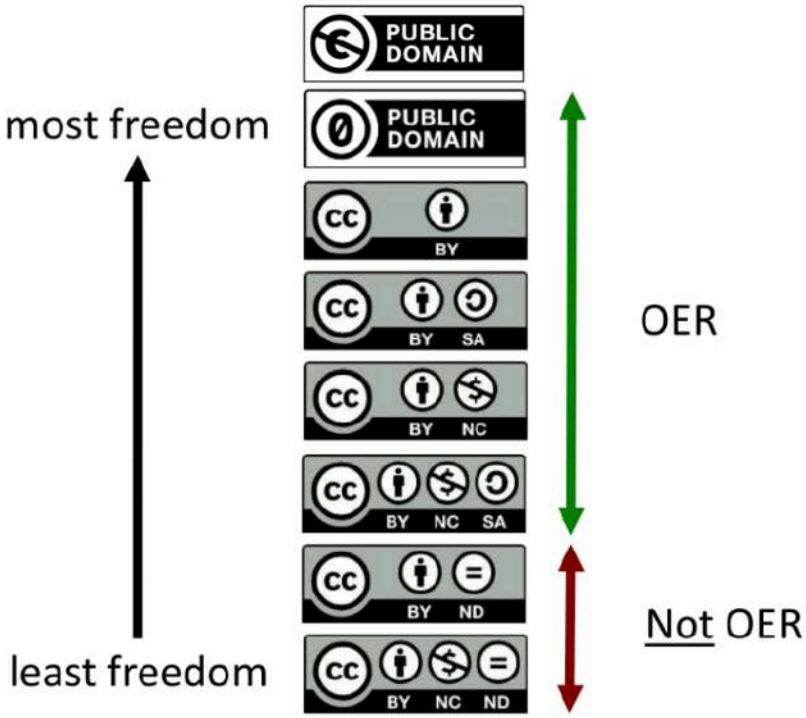

Figure 6.13: Creative Commons licenses and markers from top to bottom ordered by most open to least open

They are displayed many different ways. Here are a few examples.

CC PD	**Digital Rights and Copyright** Most information presented on the USDA Web site is considered public domain information. Public domain information may be freely distributed or copied, but use of appropriate byline/photo/image credits is requested. Attribution may be cited as follows: "U.S. Department of Agriculture."
CC0	LICENSE: Free to use CC0 CC0 Public Domain
CC BY	**License** This image was marked with a CC BY 2.0 license: Credit the creator.
CC BY SA	CC BY-SA 4.0 view terms
CC BY NC	CC BY-NC
CC BY NC SA	Some rights reserved
CC BY ND	
CC BY NC ND	BY NC ND 署名-非商业性使用-禁止演绎 3.0 未本地化版本 (CC BY-NC-ND 3.0)

Figure 6.14: Examples of Creative Commons licenses displayed in a variety of settings

Do you understand the allowances and requirements of the license you are using? (i.e., what you can, must, and cannot do?)

Yes / No / Maybe

Links to the official Creative Commons license terms (https://creativecommons.org/licenses)

License	Users may	Users must	Users must not
CC BY (or CC Attribution)	Copy, distribute, display, perform, and remix the work.	Attribute or credit the author as requested. Indicate any changes.	
CC BY-SA (CC BY ShareAlike)	Copy, distribute, display, perform, and remix the work.	Attribute or credit the author as requested. Apply the same CC license used by the author to the derivative work. Indicate any changes.	
CC BY NC (CC BY Non-Commercial)	Copy, distribute, display, perform, and remix the work.	Attribute or credit the author as requested. Indicate any changes.	Copy, distribute, display, perform, and remix the work for commercial purposes.
CC BY-NC-SA (CC BY Non-Commercial Share Alike)	Copy, distribute, display, perform, and remix the work for non-commercial purposes.	Attribute or credit the author as requested. Apply the same CC license used by the author to the derivative work. Indicate any changes.	Copy, distribute, display, perform, and remix the work for commercial purposes.

6.15: Unpacking Creative Commons licenses

See this one-page guide on unpacking CC licenses (http://hdl.handle.net/10919/64276)

You must follow the terms of the license. Will you?

Yes / No

- Attribution
  - Attribution is always required.
  - Test your knowledge by looking at good, good enough, and insufficient attribution statements provided in Best practices for attribution of Creative Commons licenses[3]
  - Attribution is easy, but specific: A simple rule-of-thumb to remember is TASL (title, author, source/URL, license)

Here are three examples:

1. Example: [Title] by [Author] [Source/URL] [License]
2. Example: VertiCrop System by Valcenteu https://commons.wikimedia.org/wiki/File:VertiCrop.jpg CC BY SA 3.0
3. Example: (c) Valcenteu VertiCrop System CC BY SA 3.0

Write your attribution statement here AND copy it into your document

---

- Certain licenses have restrictions
  - NoDerivative (ND) licenses do not allow you to modify and re-share the item.
  - ShareAlike (SA) licenses require that you release your version under the same license
  - NonCommercial (NC) licenses prohibit primarily commercial uses

Are you incorporating "insets" or small portions that have a different license than the overall work?

Think of this as adding something to a fruit salad rather than a smoothie. An "inset" makes up only a small portion of the overall work (i.e., it is a discrete object such as a photograph which generally maintains its integrity.)

Yes / No

		My license on the Whole (my Overall Work) is...						
		CC BY (Attribution)	CC BY SA (Attribution ShareAlike)	CC BY NC (Attribution NonCommercial)	CC BY NC SA (Attribution NonCommercial ShareAlike)	CC BY ND (Attribution NoDerivatives)	CC BY NC ND (Attribution NonCommercial NoDerivatives)	No open license (in Copyright)
The "inset" I want to incorporate into the whole is licensed...	Public Domain*	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CC BY	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CC BY SA	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CC BY NC	No	No	Yes	Yes	No	Yes	No
	CC BY NC SA	No	No	Yes	Yes	No	Yes	No
	CC BY ND	Yes, without changes	Yes, without changes	Yes, without changes	Yes, without changes	Yes, without changes	Yes, without changes	Yes, without changes
	CC BY NC ND	No	No	Yes, without changes	Yes, without changes	No	Yes, without changes	No
	In-copyright	No	No	No	No	No	No	No

Figure 6.16: May I incorporate this? A matrix guide for incorporating CC-licensed photos and diagrams into CC-licensed overall works (or guidance for selecting an overall license).

*Public Domain = free from copyright. According to best scholarly practices, Public Domain materials should still be cited/referenced. Public domain is not the same as "free online."

**Unless precluded by an access-related license or agreement (such as a library subscription to the work), copyright and open licenses do not preclude Fair Use. Works (including in-copyright works) marked "No" may be used when an informed Fair Use analysis is completed and is affirmative. All risks are assumed by the user. Users are advised to retains records of fair use assertions. See pages 11-14 of the Code of Best Practices for Fair Use for Open Educational Resources.[4]

- Best practice is for ONLY noncommercial materials to be incorporated when the overall resource has a NonCommercial license.
- All third party materials should be clearly marked (i.e., "Used under Fair Use." or "In the Public Domain", etc.) See below for required CC-attribution.
- Proper attribution is required for third-party works used under a Creative Commons license. You must indicate if you made changes. For more information see Best Practices for Attribution.[5]
- Other works with an almost-Public Domain license such as those from Unsplash (https://unsplash.com/terms), Pexels (https://www.pexels.com/terms-of-service), and Pixabay (https://pixabay.com/service/terms) may be used like Public Domain materials (as of the publication date of this work).

(unusual cases) Are you mixing major building blocks that have different licenses?

Yes / No

Think of this as a smoothie rather than a fruit salad.

Things not to do:

1. It is best practice to not use "NC (non commercial)" material within a work whose overall license *allows* commercial use (CC BY, CC BY SA, CC BY ND)
2. Best practice is to not combine items with conflicting ShareAlike (SA) licenses (i.e., avoid having half of your work from a source licensed CC BY SA and the other half licensed CC BY NC SA as it is impossible to simultaneously honor the terms of both licenses.)
3. Do not make changes to the content of items with NoDerivatives (ND) licenses.

Read about mixed license compatibility here.

	PUBLIC DOMAIN	PUBLIC DOMAIN	BY	BY SA	BY NC	BY ND	BY NC SA	BY NC ND
PUBLIC DOMAIN	✓	✓	✓	✓	✓	X	✓	X
PUBLIC DOMAIN	✓	✓	✓	✓	✓	X	✓	X
BY	✓	✓	✓	✓	✓	X	✓	X
BY SA	✓	✓	✓	✓	X	X	X	X
BY NC	✓	✓	✓	X	✓	X	✓	X
BY ND	X	X	X	X	X	X	X	X
BY NC SA	✓	✓	✓	X	✓	X	✓	X
BY NC ND	X	X	X	X	X	X	X	X

Figure 6.17: CC-license compatibility guide. By Mzeinstra. CC0. https://wiki.creativecommons.org/wiki/File:CC_License_Compatibility_Chart.png. Green checkmark from https://commons.wikimedia.org/wiki/File:Arbcom_ru_ready.svg.

Notes

1. University of Maryland Global Campus. [2023]. Images. Diversity, Equity, and Inclusion in OER. https://web.archive.org/web/20230402001902/https://libguides.umgc.edu/c.php?g=23404&p=8226523#s-lg-box-27293963
2. Faber Law. [n.d.] Right of Publicity. RightOfPublicity.com. https://rightofpublicity.com/statutes
3. Creative Commons. (2022). Best practices for attribution. https://wiki.creativecommons.org/wiki/Best_practices_for_attribution
4. Jacob, M., Jaszi, P., Adler, P. & Cross, W. (2021). Code of Best Practices in Fair Use for Open Educational Resources. American University Washington College of Law. https://www.wcl.american.edu/impact/initiatives-programs/pijip/impact/best-practices-in-fair-use/best-practices-in-fair-use-for-open-educational-resources
5. Creative Commons. (2022). Best practices for attribution. https://wiki.creativecommons.org/wiki/Best_practices_for_attribution

7. MAKE RESOURCES ACCESSIBLE FOR STUDENTS WITH DISABILITIES | *READINGS*

Anita R. Walz

It is important to know how to design documents. This section provides an introductory to intermediate overview of basic accessibility features for all readers, and especially those who are blind or have low vision. There are many types of disabilities. What helps one person might cause problems for another; this chapter focuses on understanding the priorities for accessibility and addressing primarily vision-related accessiblity approaches and skill development.

Learning Objectives

Learners should be able to:

- Make the case for why accessibility matters.
- Be able to articulate the P.O.U.R. (Perceivable, Operable, Understandable, Robust) framework for accessibility.
- Describe and implement basic accessibility measures for documents.
- Gain experience using one or more accessibility checkers.
- Identify additional resources to progress in understanding accessibility frameworks, user needs, tools, experiences, and possible solutions.

Assignment

- Skim the entire chapter and briefly review the types of resources and tools provided under section "understanding and implementing P.O.U.R." and in the "Resources and Additional Reading."
- Read the 15-minute guide for creating accessible documents[1] from the National Center on Accessible Educational Materials.
- View the creating accessible documents video playlist (approximately 20 minutes)[2] from the National Center on Accessible Educational Materials.
- Choose a file type or technical platform which would likely be used by a PreK-12 collaborator, such as MSWord, LibreOffice, or GoogleDocs. Insert at least one content item for each category in the list below into your document. (Math is optional if you are not in a technical field.)
    - Apply a first-try accessibility solution to each of the items.
    - Evaluate the accessibility of your work using an accessibility checker.
    - Provide your first-try document, a description of where your efforts were successful and where they need improvement, and a final "as accessible as you can reasonably make it" document.

Why Accessibility Matters

The Americans with Disabilities Act[3] defines a disability as a "physical or mental impairment that substantially limits one or more major life activities of an individual". Varying abilities and disabilities may be congenital, progressive, temporary, or onset at any point in life. They exhibit themselves along the range of all types of sensory experiences and functions. Disabilities present in three ways: hidden, visible, and emergent. While some disabilities are observable, many are not visible or obvious.

The diversity in visible, hidden, and emergent abilities necessitates knowledge, creativity, and skill on the part of learning resource creators. As content-creators our goal should be to proactively provide useful access in multiple ways with the recognition that one size truly does not fit all. In many cases, solutions for accessibility are as unique as the people who utilize them; what is accessible for one person might introduce barriers for another person. However, it *is* possible to create proactively to meet a wide range of accessibility needs.

Universal Design is the process of creating products (devices, environments, systems, and processes) that are usable by people with the widest possible range of abilities, operating within the widest possible range of situations (environments, conditions, and circumstances). Universal Design emerged from the slightly earlier concept of being barrier-free, the broader accessibility movement, and adaptive technology and assistive technology. It also seeks to blend aesthetics into these core considerations.

Universal Design for Learning (UDL) is a set of principles for curriculum development that gives all individuals equal opportunities to learn and provides a blueprint for creating instructional goals, methods, materials, and assessments that ideally work for everyone. Rather than a single, one-size-fits-all solution, UDL offers a flexible approach that can be customized and adjusted for individual needs.[45] Because we are working with the creation of electronic documents, our focus in this section is primarily on accessibility for readers with low vision or who are blind.

Readers who are blind or have low vision often use software programs with a speech synthesizer or braille display to read text displayed on a website or in an electronic document. The reader uses key commands to navigate or perform more specialized functions within the structure of a page or document. The following videos demonstrate use of screen readers by readers who are blind or low vision.

Trace Dissemination. Introduction to Screen Readers [Video 7:05] (for documents and websites)[6]

TheDOITCenter. Using a Screen Reader [Video 7:45] (for websites) [7]

Further introductory information on screen readers is available from the American Foundation for the Blind[8].

The P.O.U.R. Acronym

A helpful acronym for remembering the goals of accessibility for document development especially within an HTML or web environment is P.O.U.R. or **Perceivable**, **Operable**, **Understandable**, and **Robust**.

- **P—Perceivable**. Perceivable information and user interface include alternatives to meet individual needs. For example: text alternatives for non-text content, captions, and alternatives for multimedia. Perceivable focuses on presentation of content in different ways, and content that is easier to see and hear.
- **O—Operable**. Operable user interface and navigation includes functionality available for a keyboard (rather than just a mouse), and different input modalities beyond a keyboard. Users have enough time to read and use the content, content does not cause seizures and physical reactions, and users can easily navigate, find content, and determine where they are.
- **U—Understandable**. Understandable information and user interface includes text is readable and understandable, content appears and operates in predictable ways, and users are helped to avoid and correct mistakes.
- **R—Robust**. Robust content and reliable interpretation includes content is compatible with current and future user tools.

The P.O.U.R. acronym comes from the Web Content Accessibility Guidelines (WCAG)[9], an international standard developed through the W3C process. The goal of the process is to provide a single shared standard for web content accessibility that meets individual, organizational, and governmental needs internationally.

Understanding and Implementing P.O.U.R.

The National Center on Accessible Educational Materials at CAST (National AEM) further expands and applies the P.O.U.R. Principles in their webpage designing for accessibility using the P.O.U.R. principles:[10]

Perceivable: To present information in multiple ways, one may:

- Add text descriptions to your images.
- Include closed captions and transcripts.
- Provide sufficient color contrast.

- Do not use color alone.
- Make your text readable and legible.

To learn more about making your documents perceivable and building your skills see: https://aem.cast.org/create/perceivable

Operable: To help learners navigate information independently using their preferred tools, one may:

- Provide a clear structure with headings.
- Create descriptive links.
- Check for keyboard accessibility.
- Provide sufficient time.
- Avoid content that flashes

To learn more about making your documents operable and building your skills, see: https://aem.cast.org/create/operable

Understandable: Using consistent and predictable design to support learners' understanding one may:

- Provide clear directions.
- Aim for consistency.
- Use plain language.
- Identify the language.

To learn more about making your content more understandable and for resources to build your skills, see: https://aem.cast.org/create/understandable

Robust: Content that works for learners on current and future technologies, including assistive technologies, is robust. To make your content robust you may:

- Provide descriptive metadata.
- Perform an accessibility check.
- Test for accessibility with people.

To learn more about making your content robust, and to build your skills, see: https://aem.cast.org/create/robust.

Tools for Getting Started

S.L.I.D.E. Acronym for Creating Accessible Documents

Also useful is National AEM's S.L.I.D.E. acronym[11] which provides an entry point for authors working in MSWord or GoogleDocs that may be new to implementing accessibility in open educational resources or other documents:

- **S—Styles** are used for section headings.
- **L—Links** are descriptive and meaningful.
- **I—Images** have text descriptions.
- **D—Design** is perceivable, with high contrast.
- **E—Evaluation** is holistic and authentic.

The National AEM Center at CAST provides two guides with background information and step-by-step instruction for accessibility and open educational resources created in MSWord or Google environments. Both are released under CC BY SA 4.0. These include:

- *Protocol for Creating Accessible OER* (2002). https://aem.cast.org/get-started/resources/2022/protocol-for-creating-accessible-oer [Archived version]
- *Protocol for Curating Accessible* OER (2001). https://aem.cast.org/get-started/resources/2021/protocol-for-curating-open-educational-resources [Archived version]

Accessibility Solutions for Readers Who are Blind or have Low Vision

Meeting some common accessibility needs *is* possible. The following list provides tasks a document creator can do to proactively improve their documents for a diversity of visual abilities.

1. **Organize your document and use properly nested headers.** Instead of calling out different sections of a document with bold, italics, or changes in capitalization, use Header1, Header2 etc. features commonly found in authoring software and nest them correctly. This makes document structures more easily navigable, and requires you as a document creator to deliver a well-organized document. Using and correctly nesting headers especially benefits readers who rely on screen readers. A well-organized document benefits everyone.
2. **Be consistent and predictable** with placement of figure titles, table headers, captions, and other repeating elements. For example, knowing that a figure title will consistently be displayed before a figure makes it easier to navigate a document.
3. **Describe visual elements** using alternative text (alt-text), in-context descriptions, or long-text descriptions. Figures, diagrams, drawings, and photos can add a great deal of value to a document but are of reduced value to people with visual impairments. Describing these elements in the surrounding text, in alt-text, or linked and at the end of a section or chapter as long-descriptions can provide the information intended to be conveyed by the image in a way that is accessible to readers who otherwise could not visually process the image. Alternative text is a specialized description attached to the computer code of the image and read by screen readers.[12][13][14]
4. **Use transcripts** or closed-captioning for audio-only materials. Audio materials are particularly problematic for people who are deaf or hard of hearing. As audio materials are often problematic for listeners who are accessing materials not in their native language, dialect, or regional accent, transcripts aid a broader audience than those who are deaf or experience hearing loss.
5. **Color**. There is a lot to say about color. First, avoid using color as the only way to convey information. Use something other than or in addition to color, such as dashed or dotted lines or patterns to convey information.[15] Second, the contrast between text and background color is also important. In general, smaller fonts and text/background combinations with less contrast are less readable. WebAIM's color contrast checker[16] is a helpful tool for measuring to what degree the color and size of text on particular color of background is accessible. And third, various technologies can be used to transform the reading experience of a document to make

it more effective. For example, some software changes the darkness or color of text from the beginning to the end of a word, making reading faster for readers with dyslexia. Other software provides options for inverting colors, controlling contrast, and light and dark modes. While end-user technologies are not something that a document creator has control over, knowing what functionality is available can better inform document creation practices.

6. **Links**. In a digital environment, let the reader know what to expect when clicking on a hyperlink. There are several parts to this: First, link to meaningful, descriptive text rather than hyperlinking the phrase "click here." If an external file rather than a website will be opened or if a new browser tab will open, clearly indicate that by adding [PDF], [DOCX], or [New Tab] as part of the hyperlinked text. While URLs can be useful in the case of a print version, if you are working in an HTML environment you can display them and use an ARIA label[17] For more context, see this Rebus Community post.[18]. A screen reader will read the ARIA label instead of reciting a lengthy, an perhaps annoying URL.
7. **Tables**. Because screen readers read tables horizontally — cell by cell and row by row — tables need row or column headers to provide context for each cell's data. Tables should always have a table title or caption, and a complete set of row or column headers. Cells should have adequate padding, and merged or split cells should be avoided. Further instructions exist for complex tables which include those with merged/split cells or with more than one row or column of headers. Methods for accessibility of tables will vary depending on the software in which you are creating your document. See the end-of-chapter resource list below for more details.
8. **Mathematical formulas**. The facility of a person with sight disabilities (who is blind or has low-vision) to access mathematical equations depends mainly on two factors: the type of software or braille reader the person finds effective for use in reading formulas, and the machine-readability of the document. Beyond the web, equations generally appear in documents as: (1) text which is acceptable for simple equations (e.g., a+b=c), or (2) as an image with alternative text. Both of these are accessible for most screen readers, though there is some variation in which fields alt-text for an image is stored and which fields screen reader softwares access for alternative text. Because mathematical formulas can be difficult to typeset, it can be tempting to merely insert pictures of mathematical equations. If alt-text is not included and included in fields accessible to the screenreader software a reader is using, pictures of equations are not helpful to readers who are blind or have low vision. (Creation of spoken alt-text for math equations is also possible.) We suggest that document creators working with math should typeset math using the approach best for the document type they plan to provide to readers. Various tutorials exist online. A search for "how to put math equations in _____"

[e.g., Moodle, Canvas, D2L, MSWord, PPT, etc.] should reveal which type of editor, language, or syntax is supported by that system. There are three main paths, some of which are convertible to other forms, some with some effort.

a. **MathType** is formula editor and equation writer supported by OpenOffice, MSOffice (for PC and Mac) and web applications such as Gmail and Google Docs. MathType equations in MSWord can be converted to and from LaTeX and math markup languages TeX, LaTeX, and MathML can be entered directly into MathType.
b. **MathML** is an XML markup language designed to display both mathematical structure and meaning. Because MathML with MathJax[19] renders or displays in many browsers and systems, it is often considered the best choice for accessibility of math on the web. **ASCIIMath** and **ASCIIMathML** are also occasionally used for math on the web.
c. **LaTeX** is a non-WYSIWYG document preparation *system* that is commonly used for medium to long technical publications of nearly any type or format. It is built on top of TeX macros which enable application of custom styles. It is a popular typesetting approach in academic authoring and in some disciplinary publishing contexts LaTeX most commonly exports to PDF. However, making accessible PDF documents from a LaTeX-generated file requires use of a command line interface and has a steep learning curve.[20] LaTeX can also be converted to HTML and MathML, which may make it more possible for screen readers to access on the web. This can be done using TeX4ht[21] or via the command line using PanDoc[22] or via other methods.[23]

Various tools exist for remediating PDFs to make math accessible, but it is preferable (for the purpose of not having to re-remediate if making changes and generating a new file) to embed accessibility into the originating source file (.docx, GoogleDocs, etc.) and to share that file rather than only sharing a PDF that has an added layer of remediation.

Resources and Additional Reading

Organizations

National Center on Accessible Educational Materials for Learning at CAST
https://aem.cast.org

Guides

Anderson, Talea. (2021). "Learning More: Tutorial and Resources" in *Accessibility Case Studies for Scholarly Communication Librarians and Practitioners.* https://opentext.wsu.edu/accessibility-case-studies/back-matter/learning-more.

Coolidge, Amanda, Doner, Sue, Robertson, Tat, and Gray, Josie. (2019) *BCCampus open education accessibility toolkit*, 2nd edition. https://opentextbc.ca/accessibilitytoolkit [Some content is applicable for a primarily HTML environment.]

Elder, Abby (2019). "Accessibility and Usability". *The OER Starter Kit.* https://iastate.pressbooks.pub/oerstarterkit/chapter/accessibility

Organ, Nancy. (2021). An incomplete guide to accessible data visualization. https://towardsdatascience.com/an-incomplete-guide-to-accessible-data-visualization-33f15bfcc400

National Center on Accessible Educational Materials. (2022). *Protocol for Creating Accessible OER*. https://aem.cast.org/get-started/resources/2022/protocol-for-creating-accessible-oer CC BY SA 4.0.

National Center on Accessible Educational Materials. (2021). *Protocol for Curating Accessible OER*. https://aem.cast.org/get-started/resources/2021/protocol-for-curating-open-educational-resources CC BY SA 4.0.

SETDA. (2014). The accessibility of learning content for all students, including students with disabilities, must be address in the shift to digital instructional materials. SETDA Policy Brief. https://files.eric.ed.gov/fulltext/ED545198.pdf

Color and color contrast

Virginia Tech (2021). Why checking color contrast is important

WebAIM Color Contrast checker. Check any color combinations for contrast level

Color contrast checker (Canvas). Check contrast of colors used in Canvas

Check contrast of colors used in PowerPoint

Convert between different color value formats (e.g. RGB to Hex or HEX to RBG)

Document accessibility by format

Video

For audio/video (original or linked) YouTube automatically generates a time-stamped transcript. At the time of publication this feature was not available from Vimeo.

HTML

Creating Accessible Documents from the National Center on Accessible Educational Materials at CAST (includes links to closed-captioned videos) https://aem.cast.org/create/creating-accessible-documents

Web Accessibility Evaluation Tool from WAVE(R) https://wave.webaim.org

W3C (2022). Web Accessibility Tutorials. https://www.w3.org/WAI/resources/#tutorials

W3C (2022). Where should I start? (to learn about web accessibility). https://www.w3.org/WAI/standards-guidelines/wcag/faq/#start

W3C. (2021). Web Accessibility Fundamentals Overview (resource list). https://www.w3.org/WAI/fundamentals

WCAG. (2021) Understanding the Web Content Accessibility Guidelines. https://wcag.com/resource/what-is-wcag

Web Accessibility Initiative. (2022). Technical and educational resources from the W3C Web Accessibility Initiative

DOCX

Protocol for Creating Accessible OER in MSOffice or Google Workspace from the AEM Center at CAST. https://aem.cast.org/get-started/resources/2022/protocol-for-creating-accessible-oer

LibreOffice accessibility documentation. https://www.libreoffice.org/get-help/accessibility

OpenOffice accessibility whitepaper. https://www.openoffice.org/ui/accessibility/whitepaper.html

OpenOffice accessibility [wiki]. https://wiki.openoffice.org/wiki/Accessibility

Check contrast of colors used in MSWord. https://vt4help.service-now.com/sp?id=kb_article&sys_id=be169252dbdc2b041c1e86171b96195a#word

Create Accessible Word Documents (menu of videos to create and check MSWord document accessibility). https://support.microsoft.com/en-us/office/video-check-the-accessibility-of-your-document-9d660cba-1fcd-45ad-a9d1-c4f4b5eb5b7d

Make your PowerPoint presentations accessible to people with disabilities. https://support.microsoft.com/en-us/office/make-your-powerpoint-presentations-accessible-to-people-with-disabilities-6f7772b2-2f33-4bd2-8ca7-dae3b2b3ef25

Create accessible tables in MSWord. https://support.microsoft.com/en-us/office/video-create-accessible-tables-in-word-cb464015-59dc-46a0-ac01-6217c62210e5 (video)

Accessibility checker for MSOffice products. https://support.microsoft.com/en-us/office/improve-accessibility-with-the-accessibility-checker-a16f6de0-2f39-4a2b-8bd8-5ad801426c7f

Slide Decks

Webinar on Creating Accessible Documents and Slide Decks from the National AEM Center at CAST. https://aem.cast.org/get-started/events/2020/04/creating-accessible-docs-slide-decks

PDF

Create accessible PDFs (from MSWord) https://support.microsoft.com/en-us/topic/create-accessible-pdfs-064625e0-56ea-4e16-ad71-3aa33bb4b7ed

Create and verify PDF accessibility (using Adobe Acrobat Pro) https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html

Create and verify PDF accessibility (using Adobe Acrobat ProDC) https://www.adobe.com/accessibility/products/acrobat/using-acrobat-pro-accessibility-checker.html

EPUB

Creating Accessible Publications with ePub from the National AEM Center at CAST. https://aem.cast.org/create/creating-accessible-publications-epub

Notes

1. National Center on Accessible Educational Materials. [n.d.] Creating accessible documents. https://aem.cast.org/create/creating-accessible-documents
2. https://www.youtube.com/playlist?list=PLgtNP6aow70u-nADphT4_0OEb2E5o_CNI
3. U.S. Department of Justice. (1990). Americans with Disabilities Act as amended. https://www.ada.gov/law-and-regs/ada
4. Coolidge, Amanda, Doner, Sue, Robertson, Tara, and Gray, Josie. (2019) *BCCampus Open Education Accessibility Toolkit*, 2nd edition. https://opentextbc.ca/accessibilitytoolkit. CC BY 4.0
5. CAST. (2018). Universal Design for Learning Guidelines version 2.2. http://udlguidelines.cast.org
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8. RENEGOTIATING THE TRADITIONAL REFERENCE/INSTRUCTION LIBRARIAN AND PATRON RELATIONSHIP | *READINGS*

Anita R. Walz

This section will be most relevant for librarians or librarians-in-training. Taking on a longer-term role as a consultant or coach requires a paradigm shift regarding the librarian roles. Ultimately, it requires renegotiation of what may be considered a traditional reference/instruction librarian and patron relationship.

Learning Objectives

Learners should be able to:

- Librarians and future librarians will be able to articulate ways in which a consultative partnership is different than a traditional one-and-done teaching, reference, or short-term consultative relationship.
- Non-librarian subject matter experts will be able to identify some of the expectations on which they may be asked to operate, and those they may need to navigate in the future in order to form productive working relationships with healthy boundaries among individuals with very different job expectations than their own.

Assignment

- Interview a respected, experienced librarian regarding their experiences working as both a reference or instruction librarian, and in ongoing collaborative partnerships with subject matter experts.
    - In comparison, how have their expectations varied?
    - At what point in their career did they begin to differentiate between consultations and partnerships, if they have?
    - What advise might they give a new librarian regarding forming long-term collaborations with subject matter experts?
    - If they have navigated boundary-setting, how have they done this successfully?

Being a consultant or coach is much more of a partnership than a transactional relationship. Rather than one or two-shot instructional sessions on a somewhat predictable schedule or a one-and-done reference interaction, the librarian's role as a consultant or coach will most likely require iterative consultations, collaborative goal setting, regular checkins, identification of preferred methods for communication, and articulation of clear expectations from both parties. The expectation for a consultative partnership is best established at the start of a consultative or coaching relationship but will need to be revisited throughout the partnership.

Faculty and graduate students consulting with you need to know what they should expect from a librarian in a consultant or coaching role—and such librarians are wise to also articulate what they expect from faculty.

Being a librarian in a consultant or coaching role requires that you:

- Carry yourself as an equal in the partnership. Even though you are coaching, your collaborator owns their project. They are ultimately responsible for doing the work. The librarian coach or consultant is not the collaborator's assistant or research intern. While the librarian could help the collaborator with many additional things, the librarian's role is consultant and coach. The librarian must learn to say "no" and not offer to take on work beyond the role of consultant

and coach. The librarian teaches, encourages, and helps the collaborator to plan and problem solve. But, the librarian does not do the collaborator's work for them. The collaborator's role is to lead and complete their project. Even if a librarian is still learning, the librarian should expect that their role, time, and expertise be respected by the individual or group who is consulting with them;

- Work to understand collaborators' goals, unarticulated needs, and assumptions and double-check your understanding by communicating clearly regarding what you perceptive those goals, needs, and assumptions to be;
- The librarian should be able to clearly indicate the type of assistance you are able to provide, not provide, and are able to communicate in a timely manner when an ask or need goes beyond your role or capacity;
- Develop or encourage your collaborator to develop shared, asynchronous ways of tracking project progress — so that you both have a high-level view, a dashboard, of the project steps and status. Use a shared whiteboard, shared GoogleSheet, Trello board, or some shared place to keep track of project progress.
- Find a trusted colleague or mentor to help you (librarian) reflect on whether you are overextending yourself beyond your role and how to reinforce communication regarding your role;
- Have (or build) a referral network for parts of the request which are beyond your capacity;
- Request feedback regarding your contributions.

Renegotiating the relationship also requires that the faculty member or group who is consulting with you or being coached fulfill their obligations, do the work, and be mindful of the value of your involvement. Working with them has a cost—it means that you are not doing the many other things on which you could be spending your time and expertise. It is also helpful when those coached share with the librarian the impact of the librarian's work. In a typical reference interaction, a librarian might never know the long-term impact of their contribution.

Modeling good practice is helpful for others in their formation of healthy long-term relationships. The same dynamics of coaching will be expected of the collaborator, the faculty member or graduation students consulting with the librarian, when they begin a partnership with a PreK-12 educator.

Resources and Additional Reading

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9. SUCCESSFUL COLLABORATIVE PARTNERSHIPS AND EMPOWERING TEACHERS TO SHARE THEIR EXPERTISE | *PRESENTATION*

Julee P. Farley

Successful collaborative partnerships of any type require thought and planning. This section explores aspects of planning, guidance for higher education personnel making a first connection with a school district, and contextual details which may aid in improving communication between higher education and PreK-12 educators.

Learning Objectives

Learners should be able to:

- Articulate general features of collaborative partnerships.
- Determine who their potential partner(s) may be.
- Use tips and strategies for connecting with school districts.
- Implement strategies to achieve impact.
- Identify practice steps to empower teachers and administrators to provide feedback.

Assignment

- Review the presentation titled "An Orientation to Building Collaborative Partnerships with Schools." [12]
- Document any questions.

An Orientation to Building Collaborative Partnerships with Schools

Google Slides: https://docs.google.com/presentation/d/1Kn0WV8dk3FCEXe8UrSaGYPN0l0h9whbvujlEssw1JEA/edit?usp=sharing

PowerPoint Slides: http://hdl.handle.net/10919/112264

Slide Deck Transcript

Collaborative higher education/PreK-12 partnerships require planning and evaluation to be successful. Collaborative partnerships require:

- Joint planning between all parties involved
- Meaningful and measurable outcomes for all parties
- An evaluation plan to determine which outcomes were met
- Opportunities for iteration and improvement

Explicitly state who the audience is for the work. The audience could be all kindergarten students, female students in 6th grade, or students who are graduating high school without employment or college plans. The audience could also be earth science teachers, high school counselors who need recertification, or administrators who want to learn about emotional intelligence. Having a specific audience is best so that you can tailor your project to meet the needs of this group. If you try to make your project applicable to too many groups (for example, designing an activity that both an elementary and high school student would enjoy), you may make your project meaningless to both groups.

Once you know who your audience is, that will help you know who to approach for building a partnership. If your project involves earth science, you may approach the science administrator of your school district to start your partnership. **In general, approaching administrators is recommended over approaching specific teachers, because administrators can ensure that outreach is spread equitably throughout the school or district.** You may also want to suggest involvement of a school librarian or media specialist as part of the project in addition to a teacher or group of teachers. School librarians may be interested in expanding their knowledge about OER as part of their role in supporting classroom teachers.[3]

Once you know who to approach, you should first investigate any existing partnerships with the school or district. Your goal should not be to become an expert in the school district, but rather to know the current events and have a general familiarity with the school. We discuss how to complete this research at length in the assignment in the next chapter "Before You Approach Your School District."

Discuss mutual goals and benefits with the school district. Make sure that you are both getting some of your needs met and that the project is aligned with your higher level, long-term goals. This may take more than one conversation.

Make sure to communicate and be honest about what you need from the beginning of your relationship. Make sure to be direct and don't use jargon that is specific to your field. Your goal is to be clearly understood by someone who is likely outside of your field.

As part of this communication, make sure your timeline is clear and that it works for your partner. You should also present and discuss an evaluation plan, describing how the evaluation will help shape your project (formative evaluation) as well as how you will determine if the goals and outcomes were met (summative evaluation).

When working with schools, make sure that you keep their working timelines in mind. For example, many schools require approval by the school board to participate in grant funded projects. These meetings likely happen once a month, so leave time to ensure that you can get all the approvals you need.

Be very clear in what you are asking for and what you need. If you are not sure, start a conversation with the school about what their needs and resources are.

Be mindful of the return on investment, not just for yourself, but for your partner. What is in it for them? What will they get out of participating in this project? Is the project sustainable in some way?

Above all else, respect your potential partner and remember that they are likely experts in their field. Avoid making assumptions and demands; rather, try to create a partnership of equal value and power. Explore any requirements the school may have in place for working with minors (we provide some training in our slide show: Working with Minors). Treat the school/district you approach as an equal and valuable partner.

In order to achieve impact, you must have a strategy. Just as research is conducted thoughtfully and with specific goals in mind, outreach should also be done thoughtfully and with specific goals.

Make your strategy for achieving impact consistent with the technical project tasks. For example, if you are studying novel research methods in geology, make sure that your outreach can be related to your field of research. This alignment will likely make outreach more interesting and easier for you.

Make sure you know what you will be doing for implementation and evaluation. When doing outreach, always plan your activities at a detailed level. Try to estimate, or ask someone familiar with your audience, how much time each task will take and how difficult it will be for your audience. Make sure your outreach can be done in the time allotted but not so quickly that everyone is sitting around doing nothing. You may allow opportunities for students to explore on their own or have a "back-up" activity in case your first activity takes less time than expected. Ensure your task won't be too challenging and disheartening for your audience or so easy they lose interest.

For evaluation, how will you evaluate your impact? You should evaluate the impact of your outreach from both your perspective and the perspective of your partner. Ensure that your outcomes were met or determine why they were not met.

Examples of outcomes can include both learning outcomes (e.g., what did the students learn from this experience?) and experiential outcomes (e.g., was this activity fun and enjoyable?) as well as interest and career outcomes (e.g., are students more interested in this field?) among others.

Finally, ensure that your activity is appropriate and relevant to your audience. Make sure that this activity aligns with what students are learning in the classroom or with the professional development goals of the district and teachers.

Email is a great way to introduce yourself and your work, but most teachers, school librarians, and administrators will also want to have a phone call, zoom meeting, or in-person talk to learn more about you and your work. Provide opportunities for talking to create a better partnership and to make sure that you and your partner are on the same page. When possible, try to defer to the needs and wants of the potential partner you are approaching. Is parking on campus difficult? Go to their workplace. Do they find responding to emails too time consuming? Give them a call. Try to be flexible and considerate.

Workday hours in a school district likely differ from the typical nine-to-five. Most of the time that teachers have at school is spent with students; teachers lack flexibility for mid-day meetings and may need to schedule meetings before or after school, rather that during the school day. If a teacher asks you to meet them during their planning period, arrive promptly and leave on time. Allow time for checking in to the school, which will often have some security and sign-in measures.

Teachers and administrators are experts in their field. Remember to respect their expertise and ask for their opinions.

When empowering teachers and administrators to provide feedback, the first step is to convey your respect for their expertise. Tell your partner that you value their knowledge and skills and that you would also value their input and feedback on your work. If needed, remind your partner that feedback is a way to ensure alignment of the project with your goals and needs.

Ask for feedback in a professional manner, remembering your partner's timelines and needs. Make sure that you don't ask for feedback at the last minute and that you've discussed the way to provide feedback with your partner. We provide a model for this discussion in the Rubric for Teacher/ Administrator Review and the Template for Inviting Review Teachers and Administrators.

Self-Test Quiz Questions:

1. What are the features of a collaborative partnership?
2. How much notice do many school districts need to participate in grant funded outreach?
3. True or False: School teachers and administrators often work typical nine-to-five jobs.
4. Why might you consider involving a school librarian or media specialist in the project?

Notes

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2. Farley, J. (2022). Ch9_Building_Collaborative_Partnerships_with_Schools.pptx. Making Open Educational Resources with and for PreK12. http://hdl.handle.net/10919/112264
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PART II: EXPLORE AND BUILD A COLLABORATION—RESOURCES TO SHARE

Part II: Explore and Build a Collaboration—Resources to Share provides nuts and bolts details, templates, and guides for inviting collaboration from PreK-12 experts.

10. BEFORE APPROACHING SCHOOL ADMINISTRATORS, TEACHERS, OR SCHOOL LIBRARIANS | *READINGS*

Anita R. Walz and Julee P. Farley

A significant amount of public information may exist regarding the school district you plan to approach. This section outlines potential sources of publicly available information and why understanding these contextual details may be helpful to know about *before* approaching a school district.

Learning Objectives

Learners should be able to:

- Thoughtfully consider a potential conversation with a school district administrator. This is especially true if you do not have prior familiarity with the geographical area or its school system.
- Be prepared with some practical, contextual information before meeting with school administrators or teachers. Being prepared in advance will save you time in the long run, and show that you are doing your part to inform yourself before asking for a meeting.

Assignment

Gather practical, contextual information before approaching school administrators or teachers.

1. Review the information types below and gather information relevant to the school district you wish to approach.
2. Write up a no more than 1-2 page summary of what you learned.

Assignment Goals

- Gather practical background information
- Learn whether a previous relationship has existed with the district (and if it has been good or bad, from the perspective of one side of the partnership)
- Identify some district or school goals to mention in your conversation
- Be able to identify where your potential topic or project might fit within state standards of learning, next generation science standards and/or foundational skills for your area
- Get the "vibe" by gathering practical and readily-available information

The goal is not to become an expert in the school district or particular school or to make a case for exactly where a potential project fits. *While you have deep subject matter expertise, school administrators and teachers have deep expertise regarding the characteristics and needs of their particular contexts.* The goal of this exercise is rather to gather contextual information about the school district and its context to get the "vibe" prior to approaching and meeting with a school district representative.

Information to Gather

- General awareness regarding where the district is excelling;
- General understanding of district goals;
  - Review the district's strategic plan;
  - Any recent requests for volunteers in areas of need;
- Basic demographic information (such as languages spoken, geographical notes, etc.);
- Any current issues, events, or news (from local news/newspaper/social media, etc.);
- District/school schedule (school breaks/link to calendar);
- Types of schools in the district (public, private, special focus, charter, etc.);
- Location and travel time between your location and prospective sites;
- Contact information for the district area administrator and/or school's principal and assistant principal;
- Past partnership experiences with the district (positive, negative);

Contextualize

- Review state standards relevant to your school district and identify where (or if) your topic or area of expertise might fit;
- Think through foundational skills for your area of expertise. How might these be engagingly presented for audiences of different ages? Be ready to brainstorm.

Potential Sources of Information

- School district website—look for strategic plan and budget request documents
- Local news (newspaper/ news website)
- Social media
- The school's website (may or may not be helpful)
- People! Your colleagues may have worked with the school district or a particular school before
- State standards (for example, Standards of Learning (SOLs) in Virginia[1] [Archive site],[2] or Next Generation Science Standards[3])
- Video: One researcher's experience building a collaboration with an educational organization [museum]. By Gabriel Isaacman-VanWertz [6:05-11:08] in (Feb 25, 2022) CENI Playdate – Connecting University Researchers to the Public Through Educational Outreach[4]

[Advanced users] If you need maps or statistics:

- EDGE (Education Demographic and Geographic Estimates from the National Center for Education Statistics)[5]

Notes

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3. Next Generation Science Standards. [n.d.] https://www.nextgenscience.org
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5. National Center for Education Statistics. [n.d.]. Education demographics and geographic estimates. U.S. Department of Education. https://nces.ed.gov/programs/edge/Home

11. INITIATING A CONVERSATION WITH A SCHOOL DISTRICT: WHO TO CONTACT AND HOW | *READINGS*

Julee P. Farley

This section addresses how to reach out to a school district and includes sample email templates for making a first contact in a school district.

Learning Objectives

Learners should be able to:

- Explore potential contacts.
- Demonstrate making an informed, initial contact with a school district.

Assignment

The authors suggest that you start a conversation with the school district, district curriculum coordinator, or a pre-designated contact rather than a particular teacher. The school district can point you to a school and contacts that would be the best fit for their needs—rather than starting at the school or teacher level.

Bring what you learned in your information gathering stage, and build on that:

- You might have learned almost nothing from your web search regarding the school district, and there might not have been previous collaborations between your institution and the school district.
- Or, you might have learned a great deal about the school district from your web search and conversations with colleagues about past partnerships.

When approaching a school district, aim to:

- **Affirm that they are most familiar with their needs.** Do not assume that you are an expert in the school district or school. They are most familiar with their needs.

Requesting a Meeting (Sample Email)

Dear <<NAME>>,

My name is <<YOUR NAME>>, and I am <<YOUR ROLE and AFFILIATION>>. I am reaching out to start a conversation about how I can begin to engage with and support your <<SCHOOL, DISTRICT>>. I would like to <<BRIEFLY DESCRIBE YOUR PROJECT. MENTION IF YOU ARE PLANNING TO SUBMIT A GRANT PROPOSAL, WANT TO DO IN-PERSON OUTREACH etc.>>, and I believe we could potentially collaborate on this project. I'd be happy to answer any questions you may have, and I hope that we can meet to discuss potential opportunities to collaborate. If you would like to meet to discuss this further, please let me know your availability.

Thank you for your time and interest.

Best,

<<YOUR NAME AND CONTACT INFO HERE>>

EXAMPLE:

Dear Dr. Administrator of Science Curriculum,

My name is Dr. Green, and I am an assistant professor in Geoscience at Virginia Tech. I am reaching out to start a conversation about how I can begin to engage with and support the Montgomery County School District. I would like to submit a grant proposal to the National Science Foundation (NSF) on June 28 (6 weeks from now); as part of this grant proposal, I would like to provide students with opportunities to learn about local geology, and I believe we could potentially collaborate on this project. I'd be happy to answer any questions you may have, and I hope that we can meet to discuss potential opportunities to collaborate. If you would like to meet to discuss this further, please let me know your availability.

Thank you for your time and interest.

Best,
Dr. G. Green
Assistant Professor
Virginia Tech
Phone

What to Ask

These are helpful questions to consider and to ask administrators and/or teachers when forming a relationship and cooperatively shaping your activity. You may not need to ask every question (e.g., you may not need to ask what the district needs are and what standards need to be met). Consider if you have specific follow up questions you may need to ask or questions specific to your situation.

- Does your district/classroom have any needs that I can help meet? Are there any learning, career, or social standards that my activity could help meet? What help feels welcomed right now?
- What do your students already know about the topic in my activity?
- Are there any terms or information I should include in my activity?
- How much time do you have/do you want to spend to complete my activity in the classroom?
- What kind of materials and technology do you have available? What should I provide?
- How long before the in-class activity do you need my materials in order to be prepared? Will you be able to provide feedback to me on my activity and changes I should make before using the activity in your classroom? Will you provide feedback to me after classroom implementation to improve the activity for future groups?

12. IMPROVE A PROPOSED COLLABORATION | *GUIDED QUESTIONS*

Julee P. Farley

Collaborations are effortful for all involved. Sometimes the value to PreK-12 outweighs the costs, and sometimes it does not. This reflection activity asks those early in the process of engaging in direct contact with PreK-12 schools or districts whether a higher education personnel's proposed project indeed provides value to the school or district in the context of what work PreK-12 teachers are being asked to do beyond their existing responsibilities. **The key questions are: Is the proposed project and approach helpful for one's potential PreK-12 partners? How might you or another from higher education adjust your approach to make this collaboration and its outputs *more* valuable to PreK-12 districts, schools, or teachers?**

Learning Objectives

Learners should be able to:

- Reflect on the level of effort and level of benefit of your proposed project for the school district.
- Describe adjustments needed and how to introduce and discuss those adjustments with PreK-12 collaborators.

Assignment

Please read and consider the questions and prompts below. You may choose to only think about the prompts rather than writing answers down, but writing the answers will likely provide higher quality responses and serve as a point of reference for future discussions.

1. Articulate in a clear and simple manner the current needs of the school or district. You may describe one need or multiple needs. Describe how you found out about these needs (e.g., informed by school administration, found information on a website, etc.).
2. Describe the value your project adds. Does your project provide a solution the school or district needs? Be specific in how much value you think your project will bring and how you are providing a solution. List specific steps and proposed outcomes when possible. Try to describe all the proposed benefits your project will provide.
3. What work is required on the part of the teacher, school, or district to implement your project? Do you create more work or are you using existing school mechanisms that make implementing your project easy? How much time will it take to implement your project? Are special skills needed? Are unique supplies or additional funding required? Are there any drawbacks to implementation of your project?
4. Compare the value added and benefits of your project to the work required and drawbacks of the project. Do you add little value with a lot of work? Do you solve an important problem with minimal extra effort required on the part of the school?
5. Summarize how your project as proposed is suited to the current needs of the school district. Ideally, you should create a solution to an important problem that is easy to adopt and implement on the part of the school, but it's important to ensure that at least the benefits outweigh the costs of implementation.
6. If you have a PreK-12 collaborator, discuss a summary of this reflection and your solution for their input. Ask if they would like to proceed, further adjust the proposed plan, or share other feedback.

PART III: DEVELOP AND EVALUATE LEARNING RESOURCES

Part III: Develop and Evaluate Learning Resources addresses development of learning resources and internal and external review thereof.

13. ADAPTING CREATIVE COMMONS-LICENSED RESOURCES | *GUIDE*

Anita R. Walz

Learning Objectives

Learners should be able to:

- Articulate the value of adapting learning resources.
- Make informed and user-centric decisions regarding what software to use.
- Demonstrate how to adapt an openly-licensed resource.
- Demonstrate how to correctly attribute adaptation of a Creative Commons licensed work.

Assignment

- Practice and demonstrate your knowledge by creating an informal, short, narrated video (under 5 minutes) or slide show with script (6 or fewer slides) of you adapting an openly-licensed resource in a software with which you are already familiar. Your video or slide deck should clearly mention each of the steps listed below in "Steps to Adapt."
- With a partner acting as a PreK-12 teacher and you acting as a consultant from higher education, practice and demonstrate the process described above by actually adapting an openly-licensed resource. Switch roles and repeat. Write a 2-page reflection on your interpersonal and process-oriented approaches to the assignment. What questions or additional needs for learning did these interactions raise?

Adaptation Guide

As a faculty member, graduate student, undergraduate student, librarian, or instructional designer you may be asked to demonstrate how to adapt existing openly-licensed materials for classroom use and re-sharing under the same license. Many teachers will already know parts of this process, but might not have experience with how all of the pieces fit together. This guide describes rationale and steps for adaptation. The assignment at the end of the guide provides practice for demonstrating how to accomplish these steps.

Why adapt?

Teachers generally want to scaffold learning in their courses to fit their specific learners' needs. Reading or comprehension levels may differ from class to class. Teachers may also wish to adjust materials to fit multiple languages, audiences, or differences in local characteristics.

Why share back?

Sharing your changes and improvements back to the community in a way that people can find them is a powerful way to contribute back to other educators. Your improvements and changes may be just what someone else is looking for!

Documenting Changes and License Requirements

Other teachers who are considering using your work benefit when you include a summary of what you changed. This is helpful for them in differentiating between versions that may otherwise appear relatively similar. Documentation that changes were made is also **required by the license** if you are modifying a Creative Commons licensed work. See "Giving Credit" below for more details. Also note that CC licenses marked as "no derivatives" do not allow sharing of "derivative" or modified works.

The human-readable and legal versions of Creative Commons licenses are available here.[1]

Technology for Editing and Sharing

A teacher must have: (1) access and (2) either already know how to use the software or be able to quickly and easily learn it. **The best technologies for editing and making openly-licensed files available are those which will actually be used.** Consider that teachers may have a range of technological facility and comfort levels depending on their training and subject area. Schools and school districts may also influence whether use of a learning management system (LMS) is mandated or not. (Most LMS will import SCORM-compliant or thin-Common Cartridge files, and OER Commons allows such files to be attached to OER within their system.) Other districts or schools may lack an LMS and rely on word processing software or photocopying. Choose to work in software that will support the project and be usable for the people involved.

A few options in no particular order include: MSWord, LibreOffice, GoogleDocs, OER Commons OpenAuthor[2] (overview[3]), Merlot's Content Builder[4], LMS software such as Moodle, Canvas, etc., or code or typesetting languages such as HTML or LaTeX.

Naming Conventions and Metadata

Documents with metadata and a standardized naming convention are easier to contextualize and retrieve. Ensure that metadata appropriate to the file type you are creating or adapting has a descriptive file name, and even the most basic metadata (author, date, copyright statement, etc.) on it. If the software in which you are working provides metadata fields, use them!

Giving Credit

All Creative Commons licenses **require** that you attribute the original source and provide four specific pieces of information. This may be done in a variety of ways. It is preferable to include this information on the actual document rather than only in the metadata of the system which hosts the document. This information is brief and commonly included in the "references" or "fine print." It must include the following elements, according to the acronym TASL:

- Title
- Author
- Source (URL)
- License

Example: © Juanita Rivera. Hola amigos. CC BY NC-SA 4.0

You must also indicate if you made any changes.

For example: Angelica Juarez CC BY NC-SA 4.0. Adapted from © Juanita Rivera. Hola amigos. CC BY NC-SA 4.0 (Replaced three photos)

Recommended Resource

Best practices for attribution of Creative Commons-licensed materials[5] is available online.

Steps to Adapt

1. Evaluate the overall file.

    - What Creative Commons license does it currently have?
        - Confirm that the material to adapt has an overall license that allows adaptation and resharing. These licenses include CC BY, CC BY NC, CC BY SA, CC BY NC SA. (Materials without a license, or those with a CC BY NC-ND or CC BY NC-ND do not permit adaptation and resharing.)

    - In what format(s) is it available (and can you easily edit it in that format or pull it into your desired format)?
        - Obtain editable source files if at all possible. PDF editing does not enable text to flow across pages, thus limiting one's ability to make major changes. It also requires special software (Adobe Acrobat DC).

3. Identify changes you wish to make.

    - Consider adding your own original language and illustrations
    - Consider adding excerpts or images with open licenses from others
        - If you wish to incorporate already-licensed materials (such as photos) examine whether their license is compatible with the overall license of the main work.
            a. A helpful chart on license compatibility[6] is available online

4. Make your changes
5. Cite (and attribute) the items you added to the work. Add your name as the adapter and re-release under the same overall license if the license of the base material is a "SA" (ShareAlike) license (e.g., Angelica Juarez CC BY NC SA. Adapted from © Juanita Rivera. Hola! CC BY NC SA 4.0. Added photo of native flowers by Angelico CC BY 4.0). Use best practices for attribution of Creative Commons-licensed materials[7] to ensure that all attributions have all of the requirement elements.
6. If you are sharing in a place such as OERCommons, include a few short sentences in the abstract that differentiates your work from the one you adapted.
7. Share your openly-licensed source files and finished files back to the community

Additional Platform-Specific Guidance

- OER Commons "Create Content" library provides additional step by step guidance for content creation in OER Commons "Open Author" (https://help.oercommons.org/support/solutions/42000062384)
- It may also be of interest to know that OER Commons' "Open Author" is able to ingest content from GoogleDocs (https://help.oercommons.org/support/solutions/articles/42000046851-import-from-google-docs)

Notes

1. Creative Commons. [n.d.]. Licenses list. https://creativecommons.org/licenses
2. OER Commons. (2019). Create a resource with Open Author. https://help.oercommons.org/support/solutions/articles/42000067049-create-a-resource-with-open-author
3. OER Commons. [n.d.]. Creating with Open Author. https://www.oercommons.org/authoring-overview
4. MERLOT. [n.d.] Welcome to Content Builder. https://info.merlot.org/merlothelp/Content_Builder_Welcome.htm
5. Creative Commons. (2022). Best practices for attribution. https://wiki.creativecommons.org/wiki/Best_practices_for_attribution
6. Creative Commons. (2013). Wiki/cc license compatability. https://wiki.creativecommons.org/wiki/Wiki/cc_license_compatibility
7. Creative Commons. (2022). Best practices for attribution. https://wiki.creativecommons.org/wiki/Best_practices_for_attribution

14. QUALITY CONTROL: CHECKLISTS TO SELF-ASSESS RESOURCES CREATED | *READINGS*

Anita R. Walz and Julee P. Farley

Various resource assessment tools already exist. These can be helpful for creators and others in assessing characteristics of resources and identifying helpful elements which may be missing. The assignment in this section encourages customization of checklist resources to fit particular audiences.

Learning Objectives

Learners should be able to:

- Become familiar with OER assessment tools relevant to PreK-12.
- Review, customize, and use checklists to enable creators to self-assess the OER created or adapted through your collaboration.

Assignment

- Review the additional resources listed below.
- Download and customize the "Contributor Checklist"[1] for your project.
- Create your own version of the contributor checklist, including changes relevant to your project.
- Document changes you make to your version of the contributor checklist and indicate why you made these changes.
- Reflect and, if relevant, implement alternate formats and/or ways of presenting this information for self-assessment outcomes.
- Apply the checklist to your or another's learning resource.
- Reflect on common oversights and what you might emphasize (or plan to emphasize in your next project) to avoid these oversights.

Resources and Additional Reading

Customizable Contributor Checklist http://hdl.handle.net/10919/105384

Achieve OER Rubrics https://www.achieve.org/publications/achieve-oer-rubrics

EQuIP rubrics for lessons and units (CCSS or NGSS aligned) https://www.achieve.org/our-initiatives/equip/all-equip-resources/rubrics-and-feedback-forms

Notes

1. Contributor checklist (CENI ICAT). (2021) Boundary Spanners. VTechWorks. http://hdl.handle.net/10919/105384

15. QUALITY CONTROL: REVIEW BY TEACHER/SCHOOL LIBRARIAN/ ADMINISTRATOR | *READINGS*

Julee P. Farley

Are the resources created for teachers actually usable and helpful? This section suggests methods for quickly obtaining objective feedback from teachers regarding the usefulness of the resources you created.

Learning Objectives

Learners should be able to:

- Customize the provided version of the Ch15 Quality Control Review Teacher/ Administrator" rubric[1]
- Obtain external review of your created resource.
- Identify areas for improvement.

Assignment

1. Request feedback from your PreK-12 collaborator.
2. Submit feedback received with a one paragraph reflection.

Sample Text for Inviting Review by Teacher/School Librarian/Administrator

Dear <<NAME>>,

I am asking for your feedback regarding the educational resource I have created on <<TOPIC>>. I would use your feedback to help improve my educational resource, such as increased alignment with standards or increased usability in the classroom.

If you are able to review my resource, I have attached a rubric to help guide your review. I would encourage you to spend no more than 30 minutes reviewing although you may spend up to an hour if you wish to review more thoroughly. I would need your feedback by <<DATE>>.

Please let me know if you have any questions and if you are able to assist me with reviewing this resource. If you are unable to review this resource, could you please suggest a colleague who may be able to review it? Thank you for your time and assistance.

Best,

<<YOUR NAME AND SIGNATURE>>

Link to *your version* of the downloadable "Ch15 Quality Control Review Teacher/Administrator" rubric[2]

Questions for Reviewers

Please respond to the questions below. The answers to these questions will guide improvement for the resource you are reviewing.

Question	Yes	No
Is the resource sufficiently clear and organized?	Yes	No
Is this resource sufficiently aligned with standards/what you are teaching in your classroom?	Yes	No
Does the resource use language and visuals that relate to the topic and are easily understood by the intended audience?	Yes	No
Will this resource be engaging and interesting for your students?	Yes	No
Can you use this resource in the time allotted?	Yes	No
Are all the materials listed and available to you in a format you can adapt?	Yes	No
Are you considering using or adapting this resource for your classroom? Why or why not?	Yes, explain	No, explain

Figure 15.1: Guided questions

If you have any other questions or comments about this resource, please write them here.

Optional Questions for Reviewers

These questions may not apply to all resources; however, these questions can help to guide improvement of many resources.

1. What are the strengths and weaknesses of this resource? What are your suggestions for improvement?
2. Does the resource have appropriate sound and image quality? Is the communication engaging and confident?
3. Does this resource represent diverse social and personal identities, including race, ethnicity, gender identity, gender expression, (dis)ability, etc.?
4. How does this resource fit into the "big picture" of your classroom or district? Is there anything that is important to your students/classroom/district that this resource could help cover with some small tweaking?

Notes

1. Walz, A. & Farley, J. (2023). Ch15_Quality_Control_Review_Teacher.Administrator. VTechWorks. http://hdl.handle.net/10919/112264
2. Walz, A. & Farley, J. (2023). Ch15_Quality_Control_Review_Teacher.Administrator. VTechWorks. http://hdl.handle.net/10919/112264

PART IV: SHARE WITH A BROADER AUDIENCE

Part IV: Share With a Broader Audience introduces the value and methods for broadly sharing original learning resources under an open license.

16. SHARE RESOURCES PUBLICLY | *GUIDE*

Anita R. Walz

Resources shared with a limited audience, however excellent they are, are limited in value because they are not findable. They lack access by a broad audience. This section describes rationale for public sharing of openly-licensed resources and a list of selected places and methods by which to share. If you created something you think is helpful to one person, why not share it more publicly so that others who are looking for the same material might also benefit?

Learning Objectives

Learners should be able to:

- Be able to articulate hosting options to your collaborative partner.
- Be able to articulate options for indexing to your collaborative partner.
- Reflect on sharing.

Assignment

1. Read through the chapter and explore the links within.
2. Document the available hosting options for the school or school district with which you are partnering, including broadly-available authoring tools like open author tools in OER Commons or MERLOT, or creating and sharing publicly via an LMS. Are digital preservation and/or stable links a priority for any of these hosting options? How does one submit materials, or create an account and submit materials? How publicly available are such resources?
3. Document the existence of state or province-level link-sharing sites, such as OER Commons Microsites or Hubs. Describe the requirements for joining, criteria for submissions, and the steps for submitting materials. What credentials are required or used to create an account?
4. Document, submit, and implement your plan for sharing your resource with a broader audience.
5. Write a 1-2 page reflection: As you work with your school and/or district, what themes do you notice regarding administrator or teacher response to the invitation to share publicly? Why do you think this is? If there is resistance, how might you address the issues being raised?

A Guide for Sharing

Why Share?

If something works well in a classroom, the documentation of that activity and/or learning resources may be of value to another teacher. The learning resources are of even more value when they bear an open license, thus allowing others to customize the resources to fit their classroom specific needs.

Enabling Others to Discover Your Work

There are several things teachers/authors/adopters may do to make their openly-licensed resources more findable and usable by others. These include:

- How you describe the material
  - Descriptive abstract regarding the intended use of the materials
  - Standards alignment
  - Lesson plan for how to use the materials and in what order
- Host your material where it can be:
  - Indexed,
  - Crawled by search engines, and/or
  - Where people are looking for such resources
- Raising awareness of the existence of your resource(s)
  - Telling others about your work via formal and informal information channels
    - Teacher associations and conferences
    - School newsletters and newspapers
    - School district social media
  - Leveraging partner communication channels
    - University–School partnership networks and listservs

Aside from informal one-to-one sharing, the best places to share openly-licensed resources are the places where people are looking to find such materials.

Hosting

Publicly-available electronic versions of learning materials are always "hosted" somewhere, whether that be in OpenAuthor in OER Commons, an Institutional Repository at a university in your state or province, in an LMS, GoogleDrive, or some other site which "serves up" content for public view.

Note: There are many other places to host openly-licensed content. In terms of longevity, it may be helpful to host your content in more than one place. As platforms become obsolete, links break and content becomes unretrievable. University repositories generally implement digital preservation methods to prevent broken links when upgrading their technologies. Some but not all hosting environments do this as well.

Sharing Hosted Resources

Once you have a stable, long-term publicly available place to host your content, you may wish to also have it indexed in a variety of "referatories" by submitting the link and description of the item. See the selected list of places to share below.

- The first places to share your materials are national/international:
  - OER Commons https://www.oercommons.org
  - MERLOT (California State University) https://www.merlot.org

- You may also want to share your resources via a state or province OER Commons Microsite or Hub or other state/province-level open repository or sharing site.

> For example, the Virginia Department of Education funds #GoOpenVA, an OER Commons-cloud-based microsite for PreK-12 materials at GoOpenVA (https://goopenva.org). Click here to read more about the VA DOE's support for the #GoOpenVA program[1] [Archive].

As of the time of publication:

- OER Commons has K-12 microsite partnerships with Ohio, Utah, Virginia, North Carolina, Arizona, Sun West Schools in Saskatchewan, Michigan, and Wisconsin. The following are publicly accessible:
  - North Carolina DPI, GoOpenNC https://goopennc.oercommons.org
  - VA DOE, GoOpenVA https://goopenva.org
  - MI DOE, GoOpenMichigan https://goopenmichigan.org
  - WI DPI, WISELearn https://wlresources.dpi.wi.gov
  - Utah Education Network, eMedia https://emedia.uen.org
  - Sun West Schools, Resource Bank https://resourcebank.ca
  - INFOhio, Open Space https://openspace.infohio.org
  - Connecticut, GoOpenCT https://goopenct.org
  - U.S. Virgin Islands, GoOpenUSVI https://goopenusvi.vide.vi

- Wyoming, Nebraska, Iowa, Alabama, North Dakota, Pennsylvania, Oregon, and Washington, and Missouri (https://www.oercommons.org/hubs/missouri) also have hubs on OER Commons (https://www.oercommons.org/hubs).
- There is also a hub on OER Commons for K-12 Teaching and Learning (https://www.oercommons.org/hubs/k12)[2]

There are various other platforms and hosting options. Several platforms are discussed in the 2017 recording "Seven Platforms You Should Know About: Share, Find, Author, or Adapt Creative Commons-Licensed Resources" http://hdl.handle.net/10919/76739.

Notes

1. GoOpenVA. (2022). Open Educational Resources. Virginia Department of Education. https://www.doe.virginia.gov/teaching-learning-assessment/k-12-standards-instruction/goopenva
2. Walz, Anita. Personal communication with Mindy Boland 05.27.2022

PART V: EVALUATE YOUR LEARNING

The final part, **Part V: Evaluate Your Learning** provides ideas for self-evaluation by librarians, higher education subject matter experts, and PreK-12 educators.

17. OVERALL SELF-EVALUATION

Anita R. Walz

This final section asks all parties involved to evaluate their contributions to the project, how they might use what they learned through the project in their future work, and how these approaches might improve other areas of their work.

Assignment

Write a 3-4 page self-evaluation brief regarding your contributions to your project. Include:

- Your initial goals,
- The degree to which you mastered different areas of content new to you,
- How you used existing or new capacities you developed,
- Librarians: Your contributions toward and characteristics of your instructional or coaching relationship with those building a partnership with PreK-12 educators,
- Higher education/PreK-12 collaborators: Your contributions toward the partnership,
- Your contribution toward, and the value and suitability of open educational resource(s) created,
- How you might use what you learned in the future, and
- How you might improve the curriculum and activities in this toolkit for a course or for other use.

Resources and Additional Reading

Achieve OER Rubrics (https://www.achieve.org/publications/achieve-oer-rubrics)

Juuso Henrik Nieminen & Laura Tuohilampi (2020). 'Finally studying for myself' – examining student agency in summative and formative self-assessment models, *Assessment & Evaluation in Higher Education,* 45:7, 1031-1045, DOI: 10.1080/02602938.2020.1720595

If you have feedback or suggestions to improve this resource, please leave a message for the authors here (https://bit.ly/interest_hek12)