## **Open Education: An Introduction**

The purpose of the Graduate Diploma and Masters in Climate Action Leadership (GD/MACAL) programs is not just intellectual growth and the acquisition of specialized knowledge, although these are an important and necessary part of the curriculum. It was primarily designed with the intent of developing practitioners who engage in climate action in ways that are informed by research and connected to other scholars, practitioners and communities to promote societal change . Therefore not only the content but also the pedagogical design of the program curriculum is oriented toward engaging in learning activities that model many of the practices that constitute climate action practice. This means that rather than one-time disposable assignments that are read once by an instructor and then discarded, we have encouraged faculty to create student activities that can have early real-world impact and extend over time into their practice beyond the confines of the course.

An open learning design philosophy centres around teaching and learning in a way that increasingly focuses on democratizing and decolonializing education, empowering learners, improving access to learning and promoting advocacy towards a social justice view of learning. This philosophy aligns well with the purposes of climate action education in that it promotes agentive and sustainable learning practices and activities that have the potential to immediately impact, replicate and grow in the community.

In this open education primer, you will explore possibilities for open education learning activities based on three main elements:

- Open educational resources
- Open access
- Open pedagogy

Each of these areas interacts with the others to enable learning activities that open up education outside of a rigid template and siloed topics. These elements invite a wide array of possible learning activities that adopt fluid, creative and community/change oriented processes attuned to diverse cultures and worldviews.

This toolkit is provided as an introduction to the types of technologies available to support the design and creation, and participation in open pedagogical activities. You may find that you are already familiar with many tried-and-true learning activities that meet learning outcomes. Of course these are still encouraged, but, if you are an instructor you may want to explore any adjustments that could be made to extend their open pedagogical possibilities in addition to trying out new ideas. These could be a simple as suggesting to students the option of sharing the work they develop with open licences such as Creative Commons, inviting class and/or community feedback, and sharing it on community websites or through social media. As a student, you may want to explore how you can use your social media channels (e.g., blog) to share what you are learning. You may also be interested in exploring with your instructor how and whether you can frame an assignment in ways that draw on these open educational practices.

We hope you enjoy this adventure in open education and that it provides you with inspiration for dynamic learning opportunities for your learners and sustainable action and change in the community.

## Part 1:

## What is open education?

The purpose of this section is to provide a brief overview of open education, and to focus on the aspects that could apply to the GD/MACAL programs and may be considered for incorporation into your own course.

#### Defining open education

There is no one complete definition of open education; it includes an evolving set of educational philosophies and practices that together are intended to shift education more generally, and teaching and learning more specifically, toward an increasingly democratizing role in society. Philosophies of openness extend beyond education and yet in most ways flow from the same aspirations. As described in the <u>Open Pedagogy Notebook</u> (DeRosa & Jhangiani, 2018),

... we can think about Open Pedagogy as a term that is connected to many teaching and learning theories that predate Open Education, but also as a term that is newly energized by its relationship to OERs and the broader ecosystem of open (Open Education, yes, but also Open Access, Open Science, Open Data, Open Source, Open Government, etc.) (Open Pedagogy chapter, Para 5).

Clearly each of these areas of openness can have a very significant impact on public policy that could permeate every area of the MACAL program.

#### Background

Historically, open education emerges from a broad array of approaches, policies and practices ranging from such developments as experimental classroom models in schools to the offering of flexible models of distance education and open schools and universities. Its goals include improving access to education, supporting open access to publishing and knowledge, promoting the use of open educational resources and open textbooks, and empowering learners to engage actively in their learning and communities beyond the siloed classroom. In summary, the impact of open aspirations involve both institutional and pedagogical changes oriented toward more access to education, engaged learners and a commitment to social justice.

#### Three aspects of open education

This brief video by <u>Dr. Robin DeRosa</u> at Plymouth State University gives an introductory overview of three aspects of open education. Please take a moment to play the video.

#### Intro to Open Education Video

Three aspects of open education described by DeRosa are:

- Open educational resources (OER)
- Open access
- Open pedagogy

We'll take a closer look at each of these and then see how they point to possibilities for teaching and learning in the MACAL program.

Open educational resources, as DeRosa describes, involve the creation and use of learning resources that have been openly licensed (usually under a <u>Creative Commons</u> license). The use of OERs is built into the design of the RdB program, as throughout the program both faculty and students are encouraged to take advantage of the affordances of OERs. These range from developing resources for community education to collaborating on a class-developed open textbook related to course and program outcomes and releasing these into the community for further use and development. Familiarity with the "5R's" of OER as described by DeRosa is essential to unleashing their potential in

this program, as well as more widely into the community that this program aims to reach in a sustainable manner. <u>Open textbooks</u> have become a major focal point for open educational resources in education. The RRU library has an excellent <u>resource area in OER</u> that can be used to support your research for your course development.

Open access has multiple meanings, primarily associated with a scholarly publishing model that steers away from costly, commercial journals. Open access publishing usually involves open source publishing systems such as the <u>Open Journal Systems</u> and many open access journals are indexed in the <u>Directory of Open Access Journals</u>. Both faculty and student researchers benefit from open access publishing, which provides free access to research without copyright or registration entanglements as well as opportunities to publish their own research usually at no cost. As part of their scholarly work students may be encouraged to publish their own research in open access journals.

Open pedagogy centres around teaching and learning in a way that increasingly democratizes education, empowers learners, improves access and promotes advocacy toward a social justice view of education. Open pedagogy aligns very strongly with this graduate program of climate change leadership oriented toward advocacy and action. The <u>Open Pedagogy Notebook</u> provides numerous examples of open pedagogy and describes its overlap with many constitutive pedagogical approaches such as constructivist pedagogy, connected learning, and <u>critical digital ped-</u> agogy. One of the key elements arising from these approaches is a concern about "disposable assignments" which are written for a one-time read by an instructor and then discarded. Open pedagogy focuses on how student work and associated learning activities can make meaningful contributions to society beyond disposable assignments. Throughout the MACAL program there is an ongoing encouragement to design and provide student activities and assignments that have a more lasting value than one-time use in order to practice a sustainable model of community engagement.

#### Conclusion

Open educational resources, open access and open practices do not in themselves ensure engaged learning and meaningful coursework. This idea exemplifies what Lambert (2018) terms "openness determinism," an assumption that simply conducting open activities will lead to the desired outcomes. Rather, these are tools and approaches that can help facilitate intentional curriculum development and learning design toward a desire to create meaningful and sustainable learning experiences for learners and impacts for the wider community.

In the next section we will look at some specific examples of how open learning approaches may be implemented in the MACAL program.

#### References

DeRosa, R., & Jhangiani, R. (2018). Open Pedagogy Notebook: Sharing Practices, Building Community. <u>https://openpedagogy.org/</u>

Lambert, S. R. (2018). Changing our (Dis)Course: A Distinctive Social Justice Aligned Definition of Open Education. *Journal of Learning for Development*, *5*(3). Retrieved from <u>https://jl4d.org/index.php/ejl4d/article/view/290</u>

## Part 2

## Making connections: Open pedagogies

In the previous section we focused on three aspects of open education: Open educational resources (OERs), open access and open pedagogies. In this part we will look more closely at specific examples of how these aspects work together in the practice of open pedagogy.

#### Open pedagogy in action

As an introductory example, a closer look at the <u>Open Pedagogy Notebook</u> gives evidence of a number of open pedagogy intentions; for example:

• The publication has a Creative Commons license attached to it, which permits anyone to use or revise with the only condition that the authors receive attribution for the original publication.

What is Open Pedagogy?	Examples
Unless otherwise noted, all content on the Open Pedagogy Notebook is licensed The Open Pedagogy Notebook was built with WordPress by Steel Wagstaff a	under aCreative Commons Attribution 4.0 International license. and uses the Education Pro on Genesis Framework · Log in

• You will notice yellow highlights on the page. If you double-click on these you will see annotations by other readers and users in the left pane, as shown below. These annotations are made with an open source tool called hypothes.is, which permits "social reading," an open pedagogical practice that permits others to add their voices to the text including additional information, reflections, and even critiques. If you don't see the highlights and you are interested in trying it, you can download a free, open source browser plug-in.

You are here: Home / Open Pedagogy		Public ~	Q 🔨 🛧 ? Sign up / Log in
	0	Show all annotations (37)	
Open Pedagogy	<u> </u>	JillianLang Public	Oct 4, 2019
There are many ways to begin a discussion of "Open Pedagogy." Although providing a framing definition might be the obvious place to start, we want to resist that for just a moment to ask a set of related questions: What are your hopes for education, particularly for higher education? What vision do you work toward when you design your daily professional practices		What challenges do your stud environments, and how does y I see increasing numbers of stu and my idea of OE addresses to learning.	ents face in their learning your pedagogy address them udents with accommodation needs them (in part) by allowing self-paced
in and out of the classroom? How do you see the roles of the learner and the teacher? What challenges do your <b>Students</b> face in their learning environments, and how does your performance.	3		ち 立 戸
address them?		dburchsted Public What challenges do your stud	Oct 7, 2019 ents face in their learning

• Additions and contributions to the publications are invited, encouraging the community to continue to add to and grow the content, as seen in the invitation to the right.

These are a few examples of what the design of open pedagogy looks like in practice - using open licensing to create a publication as an OER that then permits others to adapt and change a copy of it for their own purposes. Annotation tools allow readers and, in classroom settings, learners to comment and critique documents across the web as part of an assignment, as well as each others' work if posted on the web. Invitations to improve the source bring the community to the resource and invite a diversity of input, in the form of crowdsourcing additional content and improvements.

Each of these examples demonstrates an opportunity to use open educational practices to gain more meaningful involvement and shareable coursework within the learning community as well as the world at large.

### Eight dimensions of open pedagogy

Futher extending these practices, Hegarty (2016) has described eight dimensions of open pedagogy. These are based on three main pillars developed by OPAL (2011), i.e.:

- Use of OER and open learning architectures
- Vision of openness and a strategy for open educational practices in organizations
- Implementing and promoting open educational practices to transform learning

The eight dimensions are illustrated in a graphic format:



Each of the spheres in this graphic identifies a dimension of open pedagogy. The dimensions are summarized by Hegarty as follows:

Participatory technology	Use for interacting via Web .2.0, social networks and social apps
Innovation and Creativity	Encourage spontaneous innovation and creativity
Sharing ideas and resources	Share ideas and resources freely to disseminate knowledge
Reflective practice	Engage in opportunities for reflective practice
People, openness, trust	Develop trust, confidence and openness for working with others
Connected community	Participate in a connected community of professionals
Learner generated	Facilitate learners' contributions to OER
Peer review	Contribute to open critique of others' scholarship

These attributes are used as a framework for suggestions for open pedagogy activities in the program and are spelled out further in the next part.

Each of the dimensions is either enabled or enhanced with the use any or all of the three main aspects of open education as described earlier by DeRosa and Jhangiani (2018) as open educational resources, open access and open pedagogy.

#### Putting open pedagogies into practice

In the table below, the eight dimensions are listed along with details, as well as some key details from the Resilience by Design Lab's <u>4 P Framework</u> and the Royal Roads University <u>Learning</u>, <u>Teaching and Research Model</u>. In the right-most column, a few examples of tools and technologies are provided that may help enable learning designs that support the different dimensions. Don't be concerned if you're not familiar with some of these technologies; these are just a few examples and in the faculty workshop any tools introduced will be explained.

In addition to the eight dimensions of open pedagogy, the MACAL program adds parallel aspects of place, partnerships, purpose and process. Each of these aspects can be invoked to further inform the learning activities prompted by any individual or combinations of open pedagogy aspects. For instance, participatory technology (an open pedagogy dimension) such as Twitter or YouTube can be used to promote student engagement in virtual places (part of the 4 P Framework) to create participatory and openly practiced (from the RRU Learning, Teaching and Research Framework) learning activities in your course. By using this process as an initial guide, many possibilities open pedagogy activities may become apparent.

agogy activities may become apparent.

It's important to note these lists are in no way exhaustive; the possibilities are limited only by imagination and finding the right tools to support the activities. Part 4 of this lesson provides a detailed outline of technologies available and/or potentially supported by CTET at RRU, along with a more specific list of how these technologies may align with the eight dimensions.

Our work in the next unit will be to discuss and explore how you might be able to incorporate some of these dimensions of open pedagogy into your own course.

#### References

Ehlers, U. (2011). Beyond OER: Shifting Focus to Open Educational Practices. <u>https://www. oerknowledgecloud.org/archive/OPAL2011.</u> <u>pdf</u>

Hegarty, B. (2015). Attributes of open pedagogy: A model for using open educational resources. *Educational Technology*, 3-13.

OPAL (2011). Beyond OER – Shifting Focus to Open Educational Practices: OPAL Report

2011. https://pub.h-brs.de/frontdoor/index/index/docId/4148

Eight Dimensions of Open Pedagogy	Dimensions details	RDB Lab 4 P Framework	LTRM	Examples of tools and technologies
Participatory technology	Use for interacting via Web .2.0, social networks and social apps		Applied and Authentic -	Twitter, <u>Mattermost</u> , Mastodon, blogging, syndication, Google Docs, video/audio conferencing, shared project management, mobile apps, MS Teams
Innovation and Creativity	Encourage spontaneous innovation and creativity	Place - built, natural, digital Partnerships - individuals, communities, networks Purpose - belonging, resilience, sustainability Process - the "how" of actions not just the "what"	built, digital flexible and fle	Digital multimedia - videos, audio, podcasts, photography, art, multimedia, 3-d printing, maker spaces, SPLOTs
Sharing ideas and resources	Share ideas and resources freely to disseminate knowledge			Publish research articles, blog posts, posters, conferences, pamphlets, curate
Reflective practice	Engage in opportunities for reflective practice			Reflective diaries, portfolios, essays, multimedia
People, openness, trust	Develop trust, confidence and openness for working with others			Invitational communities, respect for safety and privacy needs, positive communications, mentoring, avoiding negativity
Connected community	Participate in a connected community of professionals			Build professional networks
Learner generated	Facilitate learners' contributions to OER		Respectful of Indigenous Peoples and traditions - Impactful -	Create open educational resources, textbooks, 5 R's of openness, open licensing
Peer review	Contribute to open critique of others'		Reflective	Social annotation - hypothes.is, commenting

#### Connecting Hegarty's 8 dimensions of open pedagogy (Hegarty 2015)

## Part 3:

## OER Toolkit – Digital Tools

As we make plans to implement open practices and pedagogy, it is natural to start thinking of the digital tools we might need to support our goals. Working in an online environment means that we have access to "the whole web", but does that mean that everything we do online is (or should be) open? How do we make decisions about the software, apps, and websites that we use, or that we ask (or require) our students to use?

There are some basic conditions that we try to adhere to. Online digital tools used for open education should:

- Promote sound educational practices and support a rich online learning experience;
- Be easy to learn and use;
- Incur no extra cost to the student;
- Have reasonable system requirements (works on a range of computers);
- Be easy for the university to support and administer;
- Allow anonymous usage without requiring a login, OR at least, gathers as little personal information as possible;
- Give students complete agency over their data;
- Whenever possible, personal data is stored in Canada, and treated ethically.

Even though students at Royal Roads are informed about, and accept the use of, "cloud-based learning tools", we should always do our best to ensure online privacy. Imagine if you went skydiving: Just because you signed a waiver, you would still expect them to pack your parachute properly! Our decisions around technology usage should be deliberate, backed by research and with thought towards the educational experience. Teaching in the open means that students should always be informed and made aware of their evolving online 'footprint'.

Luckily, many educators and 'open' practitioners have already blazed a trail for us. Through both exploration and experience, Royal Roads University already has the beginnings of a curated list of effective, safe, and open technologies that we can be confident in using in our classes.

### Digital tools that are regularly used and supported by Royal Roads

#### KALTURA MEDIA

- Creating webcam videos
- Creating narrated slideshows
- Creating screencast videos
- Creating audio
- Sharing in Moodle and Wordpress
- Machine Generated Closed Captions

#### PADLET

Virtual 'corkboard' or wall where stcomputerudents can:

- Record audio or video on-the-fly
- Upload audio or video

- Upload a photo
- Write short, text-based entries
- Share a link on the web
- Make text comments on other's posts

#### COLLABORATE ULTRA

Synchronous online classroom (web conferencing).

- Share slides
- Share screen
- Whiteboard with student engagement tools
- Record sessions
- Student teams can have their own rooms for collaboration

#### **FEEDLY**

RSS aggregator

- To monitor blog posts and comments class-wide
- Students can be provided with an OPML file for easy setup
- Can also be used to monitor industry sites and other professional blogs

#### TWITTER FEED WORDPRESS PLUGIN

Shows a custom Twitter feed embedded on a Wordpress site.

- Ability to follow by account or #hashtag
- Students don't have to leave Wordpress to check Twitter.

# D.I.Y. digital tools that aren't specifically supported by RRU, but could be implemented by instrutors or students

#### <u>TWITTER</u>

Social media feed. Connect with peers and outside experts.

#### GOOGLE DRIVE

Commonly used collaboration tool where documents can be edited my multiple people in real time. Open links can be shared with anyone. Commenting and revision tools.

- Text documents
- Spreadsheets
- Slideshows
- Forms

#### <u>YOUTUBE</u>

Share videos to the web

#### **PRESSBOOKS**

Textbook editing and publishing platform. Allows for download in a number of formats (HTML, PDF, EPUB, etc.)

#### <u>SPLOTS</u>

Wordpress-based sites for sharing of user-generated items

#### **HYPOTHES.IS**

Social annotation tool. Make and share comments on any webpage, private or public.

#### MATTERMOST

Messaging platform. Open source Slack alternative.

### Table of tools and some ideas for their usage in open education

Digital tool	Used for	Hegarty	CTET rating and notes
Moodle	Learning Management System	Our digital 'central loca- tion' - acts as a 'connector' for all of the Dimensions as listed below	(+) RRU offically supported learning platform.
Wordpress	Blogging and website de- velopment	<ol> <li>Participatory Technol- ogy</li> <li>Innovation and Creativ- ity</li> </ol>	(+) RRU Webspaces - host- ed blogging solution.
		3. Sharing ideas and re- sources	
		4. Reflective practice	
		6. Connected community	
Kaltura Media (MyMedia)	Creating and sharing audio and video	<ol> <li>2. Innovation and Creativ- ity</li> <li>4. Reflective practice</li> </ol>	(+) Integration with Moo- dle, can be embedded in Wordpress.
Padlet	Sharing posts on a virtual 'wall'	<ol> <li>Participatory Technol- ogy</li> <li>Reflective practice</li> <li>Sharing ideas and re- sources</li> </ol>	(+) Can be embedded IN a Moodle or Wordpress page as an iFrame, no login needed for participants (optional).

Digital tool	Used for	Hegarty	CTET rating and notes
Collaborate Ultra	Synchronous online virtual classroom(web conferenc- ing tool)	1. Participatory technolo- gies	(+) RRU supported re- al-time online classroom spaces. Added in Moodle, but can be linked to from Wordpress. Student rooms are available.
Google Drive	Collaborative documents, spreadsheets, and presen- tation slides. Real-time team editing.	<ol> <li>Participatory technologies</li> <li>Reflective practice</li> <li>People, openness, trust</li> <li>Learner generated</li> <li>Peer review</li> </ol>	(+) Real-time collabora- tion, can be open or pass- word protected, includes commenting tools and track changes.
Feedly	RSS feed aggregator	<ol> <li>3. Sharing ideas and resources</li> <li>5. People, openness, trust</li> <li>6. Connected community</li> </ol>	(+) When combined with OPML, a tool for students to monitor each other's blogs, as well as the websites and blogs of the larger professional com- munity.
Twitter Wordpress feed plugin	Live-updated feed of Twitter posts embedded in Wordpress	<ol> <li>Participatory technolo- gies</li> <li>Connected community</li> </ol>	(+) A simple plugin avail- able in RRU Wordpress that monitors a Twitter account or hashtag, and presents it in a feed.
Pressbooks	Student-generated pub- lishing or open-textbook development	<ol> <li>3. Sharing ideas and resources</li> <li>5. People, openness, trust</li> <li>7. Learner generated</li> </ol>	(=) Can be shared openly, a non-disposable project that builds over time.
Twitter	Social media feed	<ol> <li>Sharing ideas and re- sources</li> <li>People, openness, trust</li> <li>Connected community</li> </ol>	(=) Student sharing, follow- ing and engaging with oth- er subject matter experts.
YouTube	Host user-generated video content	<ol> <li>Innovation and Creativity</li> <li>Sharing ideas and resources</li> <li>Learner generated</li> </ol>	(=) can be linked or em- bedded into Moodle or Wordpress.
SPLOTS	Sharing of ideas on the open web	<ol> <li>Innovation and Creativity</li> <li>Sharing ideas and resources</li> <li>People, openness, trust</li> <li>Learner generated</li> </ol>	(=) Myriad of creative uses. Contributors can share without login. Control is with the user.

Digital tool	Used for	Hegarty	CTET rating and notes
Hypothes.is	Social annotation and bookmarking	1. Participatory technolo- gies	(=) Comments and annota- tions on any webpage.
		3. Sharing ideas and re- sources	
		8. Peer review	
Mattermost	Messaging platform (simi- lar to Slack)	<ol> <li>Participatory technolo- gies</li> <li>Connected community</li> </ol>	(=) web hosting supported by the Open Ed-tech Col- lective #OpenETC
Zoom	Web conferencing	1. Participatory technolo- gies	(-) Not appropriate for classroom use, login and security issues. 'Zoom- bombing' issues. Use for departmental meetings or 1-on-1 meetings is more acceptable.
Flipgrid	Sharing webcam videos	<ol> <li>2. Innovation and Creativ- ity</li> <li>4. Reflective practice</li> </ol>	(-) requires login, heavily relies on third-party collec- tion of user data
Facebook	Personal social media tool	<ol> <li>Sharing ideas and resources</li> <li>Connected community</li> </ol>	(-) requires login, difficult to separate public/person- al lives, heavily relies on third-party collection and sale of user data.

### The relationship between Moodle and Wordpress

The current digital 'ecosystem' at Royal Roads supports the use of both Moodle shells and Wordpress sites on a percourse level:

Moodle is used for private, 'closed' classroom activites such as private class forums, posting of internal communications, and of course, student grades. Anything that needs to be kept within the walls of the classroom can happen inside Moodle. Outside users are unable to access this part of the 'classroom'.

Course Wordpress sites fill the role of an outward-facing open classroom. Each course has its own Wordpress site, where the instructor facilitates and supports student learning in the open. The class wordpress site can be accessed by anyone, at any time.

Student Wordpress sites are personal blogs, with one site hosted for each student while they are at Royal Roads.

They are able to add content such as pages and blog posts, uploading text, images, and video, thus sharing their work not only with the rest of the class, but the whole web. If students want to keep thier site after the end of the program, they can easily download all their content, and create their own self-hosted wordpress site.

RSS feeds tie this all together. RSS is an internet standard that allows client software (like Feedly) to monitor a website or blog for updates, and report back when new content is available. By connecting Moodle, Course Wordpress, and student Wordpress, RSS keeps both the instructor, and all the students up-to-date on what's happening in the class.



## Conclusion

Higher education has seen rapid changes in response to disasters such as the global COVID pandemic, and other disruptors such as the introduction of the internet, MOOCs, and the growing suite of educational approaches and offerings that exist outside formal educational systems and institutions. In this context, open learning reimagines the relationship between providing education and those wanting to learn and leans into a more open future.

When it comes to education, content is only one part of a social learning experience. The transmission model of education, where knowledge is delivered to students (the lecture model) is rapidly giving way to a more transactional approach which stresses learning as an activity of identity formation with key concepts such as learning as doing – learning as active, social or shared meaning making, that contributes to a sense of belonging in a process of becoming (Wenger, 1998)<sup>1</sup>.

From a transmission approach to learning, content is key. However, in this day and age of Google and the world wide web, content is easily available. Content is no longer king. In the context of an open learning approach, content is available for anyone to see, remix and reuse, and the learning is active and shared in ways that contribute to collective learning and capacity building. Open learning is taking root alongside other newer learning mechanisms such as serious games, virtual reality-based learning and the integration of other technology driven innovations.

We hope that this open primer has been useful, and we look forward to watching and contributing to the continued evolution of education in the 21st century. This open primer has been developed for the GD/MACAL program at Royal Roads University by open educator and Associate Faculty, Dr. Irwin DeVries, with support from Instructional Designer, Ken Jeffery. It is licensed using a Creative Commons 4.0 license.

Sincerely,

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<sup>1</sup>Wenger, Etienne. 1998. *Communities of Practice: Learning, Meaning and Identity.* Cambridge: Cambridge University Press.