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In 2013, during a sabbatical year, I participated in an open online course called "ETMOOC," Educational Technology and Media MOOC (Massive, Open, Online Course) (http://etmooc.org). In that course I learned about many different educational technology topics and tools, but what stuck with me the most was the discussion of "open education," which can be understood in a nutshell as using teaching and learning materials that others have shared freely and openly, and/or sharing your own. This particular open online course was run by a group of volunteers, not associated with any particular institution nor offered through a commercial MOOC provider. They had taken the time and effort to design and facilitate the course purely because they wanted to share ideas and resources with others, and to engage with others in fruitful conversations about educational technology. I tell anyone who will listen that this was a life-changing experience for me, as it led me to not only become an open educator myself, but also to become a leader in open education on my university campus and beyond.

I have created a mind map of what I have done in open education since participating in ETMOOC: http://is.gd/etmoocmap (click on the "link" icons on the bottom right of the squares to see the links attached to most of them. Sometimes this link doesn't work directly from the document, but if you copy and paste it into a browser it works.). This mind map is also included in the appendix of supporting documents attached here, though there are no links in that document (you have to click on the link for the web version, above, to see the links). It shows in a visual way many of the things I discuss in the narrative below, the numerous sorts of activities I have engaged in under the rubric of "open education."

In what follows I begin by explaining what "open education" means, and then move on to discuss how I have become both an open educator and a leader in open education. I then discuss what is innovative about what I have been doing, including the benefits of open education activities. I conclude with a discussion of research in the Scholarship of Teaching and Learning related to open education.

Background: What is open Education?

Financial, legal, technological openness: open educational resources

What is open education? To start, it is useful to consider the various meanings the word "open" can have in "open education." Hodgkinson-Williams and Gray (2009) give a useful overview of some of these meanings, including what they call "financial openness," "legal openness," "technological openness, and "social openness."

A common understanding of "open" is "free," as in free of cost, or what Hodgkinson-Williams and Gray (2009) call "financial openness." This is the meaning one might immediately think of as associated with Massive, Open, Online Courses. These are courses that are available for anyone with a reliable internet connection to take, free of cost.[1] Financial openness is also exemplified when a teacher makes a set of lecture notes, essay topics, a video, an image, etc. available for others to use without a fee.

"Legal openness" refers to the degree to which teaching materials, student work, research and more are licensed to allow others to reuse, revise, and redistribute. Some MOOCs, for example,

[1] Many MOOCs currently are offered through central organizations such as EdX (https://www.edx.org/), Coursera

may only allow you to view materials, not download them to revise or share them with others.[2] The "Open Definition" by the Open Knowledge Foundation addresses this meaning of open directly: "Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)" ("The Open Definition," n.d.). David Wiley, in a widely-used definition of "open content," lists similar requirements for openness, and labels them the "five R's":

1. Retain - the right to make, own, and control copies of the content (e.g., download, duplicate, store, and manage)
2. Reuse - the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video)
3. Revise - the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language)
4. Remix - the right to combine the original or revised content with other open content to create something new (e.g., incorporate the content into a mashup)
5. Redistribute - the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend) (Wiley, n.d.)

Wiley argues that the more of these five activities that are allowed, the more "open" a work or set of materials is. How one alerts others to the possibility that they can use one's work in such ways is through an open license, such as a Creative Commons license. [3] Giving one's work an open license means that one retains copyright, but allows others to use, share, and sometimes also revise the work without asking permission each time.

Hodgkinson-Williams and Gray (2009) also discuss "technological openness," which refers to the use of different sorts of software tools. Those that are open source are more open technologically than those that are not. In addition, tools that allow for easy editing by anyone, without having to purchase the software, are more open: thus, documents in Open Office or Google Documents are considered more open than those in Microsoft Word. Both David Wiley and "The Open Definition" also acknowledge the importance of technological openness: if a work can only be edited using tools that are very expensive, or that only run on certain platforms, or that require a high level of expertise, it is less open.

Open education is often discussed in terms of using or creating "open educational resources," or OER—these combine financial, legal, and technological openness. According to the William and Flora Hewlett Foundation,

> OER are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks,

[2] For example, the Coursera terms of use say: "You may download material from the Sites only for your own personal, non-commercial use. You may not otherwise copy, reproduce, retransmit, distribute, publish, commercially exploit or otherwise transfer any material, nor may you modify or create derivatives works of the material." (Coursera, 2014).

[3] Creative Commons licenses provide a range of choices depending on how one wants to share one's work (e.g., one can restrict the work to non-commercial uses, one can insist that any new works made from the original be shared also with an open license, or one can allow others to reuse the work but not allow any revisions). Finally, Creative Commons has a public domain license by which one can signal that they are releasing their work into the public domain, free to use, revise, redistribute without restriction on how and for what purpose, and without the requirement that the original creator be attributed. See Creative Commons, "About the licenses" for more: http://creativecommons.org/licenses/.

> streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge ("Open Educational Resources," n.d.).

Thus, syllabi, lecture notes, video recordings of lectures, slides, animations, assignments, podcasts, and more can be OER, so long as they are given an open license. Engaging in open education can be as simple as assigning one or more OER for students to read, hear, watch in one's classes, or creating OER for others to use, revise and share themselves.

Social openness: open pedagogy and students as producers

Finally, Hodgkinson-Williams and Gray (2009) discuss "social openness": "the willingness to make materials available beyond the confines of the classroom by lecturers, students and university management" (p. 105). Social openness not only involves making teaching materials available to a wider audience, but also engaging in more collaborative activities among students, between students and instructors, and between both and the wider community. Hodgkinson-Williams and Gray (2009) point to a range between (1) lecturer-centred openness, in which, for example, an instructor creates all curriculum materials and shares them openly, to (2) more student-centred openness, involving students contributing to the curriculum through adding content in things such as blogs and wikis, to (3) inviting contributions and collaborations between students, instructors, and members of the public—such as through connecting with professionals in the field (p. 105).

Similarly, the Cape Town Open Education Declaration, drafted in 2007 and currently signed by nearly 2500 individuals and over 250 organizations, focuses on creation and use of OER; but it also emphasizes changing one's pedagogy to invite more collaboration between instructors, students and the public:

> We are on the cusp of a global revolution in teaching and learning. Educators worldwide are developing a vast pool of educational resources on the Internet, open and free for all to use. These educators are creating a world where each and every person on earth can access and contribute to the sum of all human knowledge. They are also planting the seeds of a new pedagogy where educators and learners create, shape and evolve knowledge together, deepening their skills and understanding as they go ("Cape Town Open Education Declaration," 2007).

Such collaborative pedagogical approaches are sometimes referred to as "open pedagogy." Wiley (2013) defines open pedagogy as educational activities that are only possible because materials are made available with an open license. Examples he gives include: asking students to revise and remix OER that are used in a course in order to create tutorials for aspects of the course that students often struggle with, and asking students to create or edit Wikipedia entries on topics discussed in a course. Similarly, though using a different term, Ehlers (2011) labels such activities "open educational practices": "practices which support the (re)use and production of OER through institutional policies, promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path" (p. 4). Open educational practices, like Wiley's view of open education, involve the use and creation of OER in courses where learners are collaborators and co-producers of the curriculum. Thus, "[t]he pure usage of … open educational resources in a traditional closed and top-down, instructive, exam-focused learning environment is not open educational practice," according to Ehlers (2011, p. 5), but doing so in the context of a course where students revise such materials and act as collaborators and co-producers of curriculum is.

Tom Woodward expands on this view of open pedagogy to refer to "a general philosophy of openness (and connection) in all elements of the pedagogical process," where "*[o]pen* is a purposeful path towards connection and community" (Grush, 2013; italics in original). Thus, open pedagogy can

also include open assignments, which allow students to shape how they will show evidence of learning (or even create assignments for other students to do); open course planning, in which one invites comments and contributions from others when planning a course; and what Woodward calls "open products," where students publish their work "for an audience greater than their instructor. … Their work, being open, has the potential to be used for something larger than the course itself and to be part of a larger global conversation" (Grush, 2013).

Asking students to create open products, to do work openly and publicly and thereby contribute to knowledge production both inside and beyond the course, is also part of a pedagogical model that Neary and Winn (2009) call "the student as producer." Contrasting with the idea of the student as a "consumer" of knowledge transmitted by an expert, and higher education as guided by market forces for the sake of students' future employability, the student as producer model can be defined briefly as: "undergraduate students working collaboratively with academics to create work of social importance that is full of academic content and value, while at the same time reinvigorating the university beyond the logic of market economics" (Neary and Winn, 2009, p. 193). The student as producer approach "aims to radically democratize the process of knowledge production" (Neary and Winn, 2009, p. 201). Bruff (2013), citing Bass and Elmendorf (n.d.), emphasizes openness in the student as producer model, by arguing for the importance of students sharing their work with "authentic audiences," people beyond just the instructor who can benefit from what they are producing. In addition, Bruff (2013) lists two other elements of his view of the student as producer model: students work on open-ended questions or problems, ones that don't yet have a solution (rather than only working to get the "right" solution to a problem), and students have some autonomy in choosing and carrying out projects.

In this document I am linking the student as producer model with open pedagogy as discussed above, because I think there is significant overlap; I refer to all of these here as "open pedagogy." Examples of open pedagogy include activities from asking students to make public blog posts (or posts that are at least shared with the rest of the class, even if they are not public), having students create websites or wikis that showcase a research project they have completed, encouraging students to revise OER and re-share them for other students, teachers and the public, to opening one's classroom activities to participation by those not officially registered in the course (such as by having discussions on social media, opening up presentations by doing them on webinars, and more).

In my work in open education, I have used, created and shared open educational resources, and I have also engaged in various activities I am putting under the general label of open pedagogy. I explain all these activities in what follows.

Using and Creating Open Educational Resources in my on-campus courses

There are quite a few high-quality philosophy resources available on the web, and I include many of these in my courses in order to: (1) save students money, (2) give them multiple modes of approach for philosophical ideas and arguments (text, audio, video, etc.), and (3) provide several perspectives outside of my own on that material. Instead of asking students to purchase a textbook in my recent Introduction to Philosophy and Moral Theory courses, I have assigned readings from online resources such as the Stanford Encyclopedia of Philosophy (http://plato.stanford.edu/) and the Internet Encyclopedia of Philosophy (http://www.iep.utm.edu/), for which the articles are peer reviewed just as in academic journals. I have also given as "optional" resources various podcasts on philosophy, such as those from Peter Adamson's *The History of Philosophy Without Any Gaps* series (http://historyofphilosophy.net/), as well David Edmonds and Nigel Warburton's *Philosophy Bites* (http://www.philosophybites.com/) and *Ethics Bites* podcasts (http://www.open.edu/openlearn/history-the-arts/culture/philosophy/ethics-bites-podcast-the-full-series). In addition, I have found some video lectures by other professors on philosophical topics posted on YouTube, that I have asked students to watch. Samples of the open resources I have assigned can be found on my course websites, such as that

for Philosophy 230 (see "reading schedule" on the left menu, here: http://blogs.ubc.ca/phil230), and Philosophy 102 (see "weekly schedule" on the top menu, here: http://blogs.ubc.ca/phil102).

The readings, podcasts and videos I have used are not, however, always openly licensed: many of these resources are "all rights reserved," which means they are free to view or listen to, but one may not necessarily be able to download and revise or redistribute them. Thus, they are "financially open" but not "legally open." This has kept me from being able to just copy and paste parts of the Encyclopedias noted above, for example, to keep just what we need and take out what we don't. I also can't combine parts of podcasts together into a single audio file, taking some from one, some from another, etc., which would be quite useful. For example, I have asked students to listen to parts of a philosophy podcast that often lasts 1.5-2 hours, *The Partially Examined Life* (http://www.partiallyexaminedlife.com/). I have had to tell them to listen from one time point to another, and then start at a different time point, etc. This shows how pedagogically useful it can be to share educational resources with an open license, rather than just for free, and it's why all of my own course materials are openly licensed for others to revise and reuse as they wish.

Another way to use OER in the classroom is to assign an open textbook, a textbook that has an open license and that is easily adapted by instructors for their own particular purposes in their courses. I have not yet used an open textbook in my courses, as I haven't found one that fits my needs; instead, I have combined various OER in my courses rather than assigning one open textbook. However, I have tried to contribute to the effort to increase the number of open textbooks by reviewing an open textbook on *Ethics in Law Enforcement,* giving comments so as to help make it as good as possible. This textbook is forthcoming in the collection of open textbooks funded and produced by BCcampus (http://open.bccampus.ca/). I also plan, sometime in the next year, to begin the process of editing an open textbook for an "Introduction to Philosophy" course, soliciting chapters from other authors as well as writing one or two myself.

In addition to using free or open educational resources that others have made, I have created and shared my own. I have benefited so much from the teaching materials that others have posted online in my own course design, in trying to understand texts that are somewhat new to me, and in discovering effective ways to introduce complex arguments and ideas to students, and I want to give back to others in case they might find useful what I have created. As can be seen by the examples cited above, I use course websites that are open to the public, rather than closing them off in "Learning Management Systems" that can only be accessed by students registered in a course. I am happy to share most of my teaching materials, such as my syllabi, lecture notes, assignment instructions, and more. All the materials on my course websites, with the exception of things written by students, are given a Creative Commons Attribution license (CC BY), which allows anyone to use the materials for any purpose they choose, revising them or keeping them as is, distributing them however they want, with just the restriction that they attribute me as the original author.

Here are the open, public course websites I have created so far:

- Introduction to Philosophy: http://blogs.ubc.ca/phil102
- Moral Theory: http://blogs.ubc.ca/phil230
- Seminar in Continental Philosophy: http://blogs.ubc.ca/phil449
- Arts One seminar: http://a1hendricks.arts.ubc.ca

In addition, in Arts One (an interdisciplinary, team-taught course for first year students at UBC: http://artsone.arts.ubc.ca), we have created a site with links to recorded videos, essay topics, podcasts, tweets and blog posts by students and instructors: http://artsone-open.arts.ubc.ca. I am currently managing this site, and will be for the foreseeable future.

The lecture notes, slides and videos of lectures I have posted on course websites are not always easily found by others, so I have also cross-posted them on public collections of similar materials. I have

made a few video recordings where I speak over a set of slides, to make up for days when I had to miss class, and I have posted those on YouTube with an open license that allows anyone else to use, revise, and redistribute them (these YouTube videos are embedded at the bottom of this page: http://blogs.ubc.ca/phil230/lecture-notes/). As noted above, in Arts One our teaching team has agreed to record our weekly two-hour lectures and post them on an institutional website, as well as on YouTube (they are posted here: http://artsone-open.arts.ubc.ca/category/lecture/ and also on YouTube: https://www.youtube.com/user/artsonedigital). I have uploaded many of my slides from lectures on Slideshare, a site that allows for them to be downloaded, revised, reused, and redistributed (if they are openly licensed, which mine are): http://www.slideshare.net/clhendricksbc/presentations.

I have also posted some of my teaching materials to MERLOT (Multimedia Educational Resource for Learning and Online Teaching), a repository of teaching materials for anyone to search and use. You can see what I have added to this collection so far on my profile: http://www.merlot.org/merlot/viewMember.htm?id=932918 (click on "contributions" on the right). Materials on MERLOT can go through a peer review process, which is helpful for others to see that the materials are of good quality. Since such peer reviews can only happen if there are people engaging in them, I am also volunteering to be a peer reviewer for MERLOT. I have registered for an upcoming training session for peer reviewers, and will be doing reviews of teaching materials after that.

Open pedagogy and students as producers in my on-campus courses

Student blogs

For the past several years I have asked students to write blog posts as part of their coursework. In some courses I make students authors on a single course blog (those that are one-term long, or that have many students in them), while in another I ask them to create their own blogs (I do this in Arts One, which is both small and a full year long). In all of my courses these blog sites are public, but I offer students the following choices:

- Use their real name and post publicly
- Use a pseudonym and post publicly (but let me know what their pseudonym is so they can get credit!)
- Use their real name and post privately, just to me (and a Teaching Assistant, if there is one for the course)
- Use their real name or a pseudonym and post just to the class, by using a class password to protect their posts

I think it is very important to give students a choice in terms of both privacy and control of their work, and I have had students choosing various options each term.

Course blogs are an example of open pedagogy and the student as producer model insofar as students are writing for what Derek Bruff (2013) calls an "authentic audience"—someone beyond only their course instructor. As Tom Woodward puts it in Grush (2013), what they do can become "part of a larger global conversation." They are at least writing for the other students in the course, who can benefit from their ideas and arguments, and if they post publicly students are also contributing to a larger pool of knowledge. Anyone who comes to my course sites (and I have often publicized them on social media) can learn quite a bit about the philosophers from what the students are posting, as well as from what I am posting.

My Introduction to Philosophy (PHIL 102) course in the Fall of 2013 had about 100 students, who, in addition to the twice-weekly lectures, attended one of four weekly discussion sections of no more than 25 students each. I created blog sites for each of these discussion sections, and asked students to

write blog posts on those sites—that way, the site they were posting on would be less overwhelming than if it had posts from 100 students, I did, however, collect all the blog posts from the four discussion section sites onto the main course site, so anyone who was interested could see them all in one place (though it was a lot!). Students in PHIL 102 had to do four posts over the term:

1. At the beginning of the term, they were to write about their first, preliminary ideas on what philosophy is and what its value might be. They might not have much in the way of ideas at that point, which was fine. (You can see this assignment here: http://blogs.ubc.ca/phil102/first-informal-writing-response-due-sept-11/)
2. At the end of the term, they were to revisit this first post, write their current ideas on this topic, and reflect on how their views had changed. (http://blogs.ubc.ca/phil102/second-blog-post-on-philosophy/)
3. Each student had to do two presentations to a small group during the term, in which they talked a bit about one portion of the texts being studied or the topics being discussed, and then raised at least two questions for their group to discuss (they were to facilitate this discussion). The summary and questions also had to be posted on the blog site (http://blogs.ubc.ca/phil102/instructions-for-presentations/).

By posting their presentations and their thoughts on philosophy, students were contributing to the course content (I would sometimes bring their questions up in class for the larger class discussion), and also sharing their ideas with the public (those who had chosen to post publicly, of course). I sent out messages via social media at the beginning and end of the term showcasing their answers to the topic of what philosophy is and what its value might be, because they had such great ideas!

In my Moral Theory course in Fall 2014 (PHIL 230), students had to do at least three blog posts (the fourth was optional), in which they apply the moral theories we were discussing in the class to a moral issue or dilemma of their own choosing. The blog post assignments were as follows (these can all be found here: http://blogs.ubc.ca/phil230/assignment-instructions/journal-instructions/):

1. In the first post they were to introduce the moral issue or dilemma they'd be focusing on for the series of posts, give a preliminary answer or position (which need not be their own) and give reasons to justify this answer or position.
2. In the next post they were to discuss what a utilitarian philosopher might say in response to the moral issue they're discussing, and why.
3. Then they were to write about what a Kantian philosopher might say in response to the moral issue, and why.
4. (This one was optional) Finally, they were to write about what a virtue theorist might say in response to the moral issue, and why, and also to discuss whether, after doing these blog posts, they find that studying moral theory is useful (or not) to trying to address practical moral problems.

These blog posts were, again, public for those who chose to make them such, and a number of students commented on the posts of others even though I didn't require that (there were already quite a few assignments in the course, and I didn't want to require comments as well that term). This series of blog posts was scaffolding for the term paper, if students chose: the default for the term paper was for them to write about how a utilitarian and a Kantian would answer the moral issue and why, and whether they thought one of these approaches was stronger than the other or not. They were encouraged to revise what they had already written in the blog posts, so that by the time it came to writing the term paper, they already had a set of ideas to start with. They also wrote the essay in stages, with the first draft being an outline of the utilitarianism section, the second being a full draft of the utilitarianism section and an

outline of the Kantian section, and the final including all parts. The first two drafts were also peer reviewed: students worked in small groups throughout the term, and they read each other's work in these small and gave feedback on the same categories as I use on the marking rubric for the essays.

Arts One, as noted above, is a year-long, team-taught, interdisciplinary course for first year students at UBC. It consists of one two-hour lecture per week, plus two seminar-style discussions a week of about 75-80 minutes each. Some of the professors in Arts One, myself included, are asking their students to write blog posts regularly during the year, all of which are collected into one page at http://artsone-open.arts.ubc.ca. I ask my students (I have 20 students out of the 100 who are part of a single group with a teaching team) to each create a blog, which is quite easy through the UBC Blogs platform. Students and faculty can create one or more blog sites for free, and set up is quick and easy. I collect the posts from all the students in my class onto our course site at http://a1hendricks.arts.ubc.ca, so that students can see just the posts from our group if they want. I also have a link there to the site where we collect all the blog posts from Arts One, so they can read those of other Arts One students.

Students in my Arts One group write a blog post every two weeks, reflecting on the reading for that week. In this course students write a paper every two weeks, and during the week they don't write a paper, they might not pay as much attention to the reading. So I ask them to blog on the texts they aren't writing on, to help ensure that our in-class discussions aren't dominated by those who *are* writing a paper that week. I will bring some of these posts up in our class meetings, asking the students to explain orally what they wrote, in case anyone hadn't seen it. This can be a good way to get more reticent students to speak, because they already have written about something so they may be more comfortable than if they had to think of it on the spot. I also ask students to do two presentations per term in Arts One, and they can use their blog posts as a basis for these presentations if they wish. In the presentations students must raise at least one question for us to discuss, and frame or explain that question by reference to something in the text or the lecture for that week. In this way, they are directly contributing to the curriculum, as we have two presentations per seminar meeting, and at least 30-45 minutes of each are spent on student questions about the text or lecture. In addition, because these posts are public (though again, students could just to just make them private to me if they wish, or to the class with a password), interesting things can happen: in 2013-2014, one of my students was surprised and flattered to be contacted by the student newspaper here at UBC for an interview based on something she wrote on her Arts One blog. Students can also get comments from other professors on the teaching team, engaging in conversations they wouldn't be as easily able to have if the blogs were closed off within our course alone.

In my fourth year seminar on Continental Philosophy in the Spring of 2014, I asked students to write two blog posts per month and give four comments per month during the term (http://blogs.ubc.ca/phil449/blog-posts-and-comments/). The purpose was simply to reflect on the readings and/or class discussions, giving their questions, comments, criticisms, links to other texts or to events happening in the outside world, etc. I found that this was a great way for students who didn't speak very much in class to contribute their thoughts and arguments, and engage in conversations with others. There were some excellent discussions happening this way, which, again, I sometimes brought into our class meetings by raising issues or questions that students had brought up on their blog posts or comments, and having us all discuss them together.

Other course activities posted openly

In PHIL 449, the Continental Philosophy seminar in the Spring of 2014, I allowed students to choose one of two options for their mid-term assignment: either a traditional philosophical essay, or some other kind of artifact (such as a website, a video, a podcast, an artwork). About half the class chose to do the non-essay artifact, and I got permission from many of them to post these on the course website, so that other students (and anyone from the public who looks at the site) can benefit from the amazing

things they created. You can see those here: http://blogs.ubc.ca/phil449/non-traditional-artifacts/ In addition, each student wrote a "critical abstract" of one secondary source, an article, book chapter, or other work that was talking *about* the two main philosophers we were studying. This was to be a short abstract in which they explain the main points of the work and give their own brief evaluation of it. I gathered all of these abstracts and posted them, anonymously, on the course website so that all students could see them (as well as the public), and thereby possibly get a sense of whether they wanted to use one or more of those works for their own research essay. These abstracts can be seen here: http://blogs.ubc.ca/phil449/critical-abstracts/. I will keep these abstracts for the next time I teach the course, so that later students can benefit from and build on what these earlier students have done. I may put them on a wiki page instead of in this course website, so that students could (if they wish) easily add their own thoughts on the summaries and critical evaluations of these works in addition to what the previous students have said, as well as writing up new abstracts.

In PHIL 230 (Moral Theory) in the Fall of 2014 each student had to do two sets of what I called "reading notes," and post them on the course wiki: http://blogs.ubc.ca/phil230/wiki/. In each set of notes students were to outline at least one of the arguments in the reading assigned for that day, and also write up at least two questions for their small group to discuss (they were in one small group for the whole term). Then, in class, they were to meet with their small group and talk about what they had written, facilitating discussion on the questions they had asked. Here are the reading notes assignment instructions: http://blogs.ubc.ca/phil230/assignment-instructions/reading-notes/. Each group had their own wiki page (there were 14 groups), for ease of finding the notes from their group members, but all the notes were visible to all the students (and to the public). Students could put their name on their notes, or just their initials. The idea with this assignment was that each group would have a set of notes on several of the readings for the term, created by various group members and shared with the group and the rest of the class. In both the mid-term and student evaluations for this course, several students said they found these quite useful; a few, however, said they worried whether what their fellow students were writing was "correct," and I addressed this by starting to write notes of my own on the notes to correct any possible misunderstandings (which were, thankfully, few!).

Also in PHIL 230, and in PHIL 102, I asked students in their small groups to post their thoughts/answers to one or more discussion questions on either a shared document like Google Docs or on the class wiki page, or to hand it in on paper. I would then collect all the answers onto a wiki page and share it with the rest of the class and post it on the course website. You can see the student-generated answers to in-class discussion questions for PHIL 102 here: http://wiki.ubc.ca/Course:PHIL102/in-class-discussion and those from PHIL 230 here: http://wiki.ubc.ca/Course:PHIL230-CH/discussions. This way, what the students discuss in their small groups is easily shared with the rest of the class, even if we don't get a chance to talk about all of the small group answers orally. And again, because these documents are public, anyone could view them who has an internet connection, and benefit from the students' ideas. These wiki pages are linked to from the main course websites (and, in the case of PHIL 230, embedded directly into the course website, such that changes to the wiki are reflected on the course website page: http://blogs.ubc.ca/phil230/wiki/), so they are easy to find for anyone who is taking a look at the course, what we are doing, what I've said in lecture notes, and what the students have produced.

Overall, I have found that when students are responsible for creating work (such as blog posts, reading notes, projects) that will be viewable not only by me but also by their peers and also the public, that the quality of the work is quite high. Having students in Arts One blog about books they're not writing essays on has been an especially useful way to encourage more active discussion in class, rather than allowing those students to simply sit back and be passive during those weeks. Students are pleasantly surprised when other instructors in Arts One outside our seminar group also comment on their blog posts, and this helps them to see that their work is not just limited to an audience of me and our small class. In PHIL 449, the quality of the student interactions on their reflective blog posts was very

good, and allowed those who don't speak very much in class to engage in insightful conversations outside of class. In PHIL 230, the students tended to put *much* more effort into the reading notes than I required, going far beyond the small amount these counted for the final mark. It's possible that these being not only viewable by members of their small group, but also the rest of the class and the public contributed to this.

Open pedagogy: open course planning in my on-campus courses

One of the aspects of open pedagogy discussed above is open course planning, in which one designs a course out in the open, inviting others to view and comment. I started doing so in the summer of 2014, after seeing a presentation by Paul Hibbits on developing a course in the open (slides available here: http://slides.com/paulhibbitts/etug-spring-2014-developing-a-course-in-the-open-a-case-study#/). Instead of designing my PHIL 230 (Moral Theory) course on documents I keep on my own computer, visible only to myself, I did so on a Google doc, made public for viewing and commenting by others: http://is.gd/PHIL230planFall2014. I posted a link to this document on Twitter and other social media sites, and got some helpful comments. Paul Hibbits sent out an email to students who were registered for his course, while he was designing it, and asked them for feedback—an interesting idea that I haven't yet tried (though he said in his presentation that he got very little response from his prospective students). I am doing the same for an upcoming PHIL 102 course (Introduction to Philosophy), which I have been planning in fits and starts on my blog so far (http://blogs.ubc.ca/chendricks/tag/phil-102/), but will soon move to a publicly-viewable Google doc.

Open education in other teaching contexts

I have helped to design and facilitate several open online courses since 2013, and have used and created open educational resources, as well as engaged in open pedagogical practices, in these as well.

OOE13: a "connectivist MOOC"

I was part of a large design and facilitation team for an open, online professional development course for teachers on educational technology that ran from September 2013 to May 2014, called "Open Online Experience 2013", or OOE13: http://www.ooe13.org/ This course was put together by a group of people who had met during ETMOOC, the Educational Technology and Media MOOC I took in early 2013 (discussed at the beginning of this document). Though many of us worked together on the course design as a whole, since the course took place over a long period of time we also separated it out into topics with smaller teams designing them. The planning teams for each month were in charge of what would happen that month, such as webinars and Twitter chats, but we all consulted on each month as well, offering suggestions, advice, etc. We planned OOE13 in the open, though the use of a Google Plus group that was open to the public: http://is.gd/OOE13planninggroup. We also used many, many shared and publicly-viewable collaborative documents in our planning, which can be seen on the planning group link. At various times during the course we had people who were participating in the course ask to join the planning group, to which we happily agreed; this way, we got input from those taking the course into its continuing design as well.

OOE13 was designed as a "connectivist MOOC," or cMOOC. This means that the emphasis was less on providing content for people to learn (though we did have that, of course) and more on facilitating connections between participants that could last long beyond the course itself. That is what so many of us had found valuable about ETMOOC; those of us who were designing and facilitating OOE13 had met during ETMOOC and were continuing to work together more than a year after that course was finished. We had developed what is sometimes called a "Personal Learning Network," or

PLN, which is simply a group of people with whom you discuss, teach and learn about the subjects you are interested in. Many of us in ETMOOC have continued to stay in close contact via social media, we have worked together on other projects, and all of ETMOOC is invited to continuing monthly get-togethers through Google Hangouts or on Twitter, even now, two years after the course finished. How we tried to facilitate the development or furthering of the PLN of participants in OOE13 is through:

- We asked them to create their own blogs (if they didn't have one already), and we aggregated their blog posts onto the main course site. This is because that way, if one finds someone one really connects with, one has a link to that person's space after the course is finished, and hopefully that person will still use that blog space (many of us in ETMOOC have done so).
- We held regular "Twitter chats": hour-long discussions on Twitter, using the #OOE13 hashtag. How this works is that a course facilitator plans a series of questions, and when the designated hour starts, begins by asking everyone to introduce themselves, and then asking them to respond to the questions one by one. Anyone can follow along or join in, by following the hasthtag (they don't have to be part of the course). It's remarkable how much you can gain from an hour-long chat in which people are limited to 140 characters per message (but they can post as many Tweets as they want, of course!). Connecting people through their Twitter accounts also allows them to connect with course participants long after the course is finished, because they can then follow that person's Twitter stream. They don't have to lose track of the person after the course is finished.
- We also had a Google Plus group for OOE13, where participants could engage in more in-depth discussions, write longer posts, than they can on Twitter: http://is.gd/OOE13GoogleGroup. Again, part of the idea here was to connect participants to accounts they may continue outside the course—Google Plus is a social network somewhat like Facebook.

Connectivist MOOCs also emphasize open pedagogy and the "students as producers" idea. Though cMOOCs often have information and content presented by experts, much of the curriculum of the courses is made up of what participants themselves contribute, in discussions during webinars and on their blogs and social media. What participants get out of the course is just as much due to what others have said and written as what the facilitators and experts have done. Depending on which blog posts you read and comment on, which Twitter chats you attend, etc., you may have learned and shared quite different things with different people, and thus had a very different course experience than someone else in the course.

We have created quite a few open educational resources in this course: all of our course documents, recordings of webinars, records of Twitter chats are still available for anyone else to view, revise and reuse, as they are openly licensed. These can be found on our course website by clicking on the monthly topics, or by going to "archive" under "home" on the top menu: http://ooe13.org.

"Why Open?" open online course

In the summers of 2013 and 2014 I was part of a design and facilitation team for a course called "Why Open?", which is part of the School of Open at Peer 2 Peer University (http://schoolofopen.p2pu.org/)—a platform for volunteers to create and run courses for others to learn from. This course focuses on questions such as: "What is openness?" and "What are the benefits and drawbacks to working in the open?" You can see the most recent course site, here: http://p2pu.org/en/courses/2314/why-open/. A group of four people created and facilitated the course during the past two years, and will likely do so again in the Summer of 2015. We did the planning for this course openly as well, on Hackpad (there is a link here to our planning document from the previous year as well, which was also publicly available): http://is.gd/WhyOpen2014Planning

In the first iteration we asked people to write on their own blog sites in cMOOC style, but that seemed to be a barrier to a number of participants, so for the second year we held all course discussions on one site: http://discourse.p2pu.org/c/why-open. As with OOE13, though we had some content from experts, most of what went on in the course was through what the participants said, the links they posted, on the course discussion page or on Twitter. The activities we asked them to engage in were open-ended, encouraging them to focus on whatever aspects of openness they were interested in (open education, open research, open government, open source software, etc.). Though we provided sample discussion questions for people to answer if they wished, participants also raised their own issues and discussed them together.

Open Educational Resources were the backbone of this course, in that most of the content we asked participants to read or view were OERs. And again, the entire course is an OER, as it is openly licensed for others to revise and reuse.

Teaching with Wordpress cMOOC

I am part of a design and facilitation team at the University of British Columbia for a cMOOC on "Teaching with Wordpress," which will take place in May 2015. This is a course to help people learn how to use Wordpress for a course website (whether they are teaching face-to-face, a blended face-to-face and online course, or purely online). There are numerous people at UBC who are interested in using a Wordpress site for their courses (and UBC has a platform through which instructors can freely and quickly create such a site), so we could have just created a workshop for UBC instructors to learn how to teach courses using Wordpress. But given that Wordpress is a platform that allows for courses to be publicly visible (as opposed to many types of Learning Management System sites), and because those of us planning the course believe in the value of open education, we decided to make this into an open online course that anyone can join, so long as they have an internet connection. All of the course activities and content will be publicly viewable, and anyone who wishes to can register to be a participant. The main site for this course (which is still very much under development, and will be changing weekly from now until May), is here: http://blogs.ubc.ca/teachwordpress/

The course will begin with discussions of what open education is, its benefits and drawbacks, and why one might want to teach with an open website, use open pedagogical methods, etc. Then in the second part we will focus more carefully on the nuts and bolts of using Wordpress for a course, including how to have blog posts, discussion boards, Twitter feeds, YouTube videos, embedded wiki pages, and more on the site. We will also showcase several models of how people are using Wordpress in multiple ways in their teaching, and how the fact that Wordpress provides a fairly blank canvas for organizing one's course and the activities in it can be a virtue for innovative pedagogy. Then in the third part of the course we will talk about course design in Wordpress, and participants will develop their own course site (at least a shell of it) that they can use in the future.

We are designing this course in the form of a connectivist MOOC, hoping that participants can enlarge their personal learning networks by adding other people who are interested in open education and teaching with Wordpress. To that end, we are asking participants to complete course activities in part on their own blogs, so that others can connect with them in that space (if they keep it) after the course is finished. The useful thing about Wordpress is that they can use the Wordpress course site they are working on also as their own blog for our course—they can write posts on that site that we will aggregate into our blog hub on our main course site. We also have a Twitter hashtag for the course, and encourage people to share ideas, questions, and resources through that as well as through their blogs. We will have weekly synchronous presentations with experts, and content provided for each section of the course to read/watch/listen to, but as with the cMOOC model, the emphasis will be on what the participants produce. The activities will be open-ended, such that what gets talked about in blog posts, discussion boards, Twitter and discussions during synchronous presentations is what the participants are

interested in. We expect people to learn as much or more from each other as they do from us, as they share their views on open education, their pedagogical strategies, and their ideas on how they might shape their Wordpress site to fit their own teaching needs.

As part of this course we plan to create a number of screen cast videos on how to do various things with Wordpress, which we think will be useful to others as open educational resources. The activities we create and the recordings of our synchronous presentations will also be openly licensed for anyone to revise and reuse.

#TvsZ online game

I am part of a design and facilitation team for an open online game called #TvsZ (http://tvsz.us). This is not actually a course, but rather a game that one could use within a course. Originally designed as a zombie game played on Twitter (and thus called "Twitter vs. Zombies"), we have also created a new version called "Technology vs. Zen." Both games are played through Twitter, and are meant to bring people together in order to create collaborative stories. The other part of the purpose of the game is to help people learn how to use Twitter, and to give them motivation to create and share digital artifacts such as blog posts, images, videos, and more. The game usually happens over the course of a weekend, often lasting about three days.

In "Twitter vs. Zombies" the overall setting of the game is a zombie apocalypse, where there are zombies who have started to infect humans. You can see the website for the third iteration of the zombie version, here: https://twittervszombies3.wordpress.com/basics/. On Twitter, one can be bitten by a zombie through the use of a hashtag, and then has a certain number of minutes to dodge or be rescued by someone else before they turn into a zombie themselves. But the game goes beyond this; the most interesting parts of the game are when people take on missions where they have to add to the ongoing story in the game through a blog post, a picture, a video, a drawing they take a picture of, a song, or many other things. These aspects of the game happen through new rule releases that occur about every 12 hours: https://twittervszombies3.wordpress.com/rules/

In "Technology vs. Zen" the setting is an apocalyptic scene of unknown origin; participants are to imagine that they have woken up to find a wasteland around them, dead and dying plants, deserted city streets. The game site for this version is here: http://tvsz.us. The point of the game is to figure out what has happened and to determine how to approach solving the problem. Players begin on one of two teams: "technology" or "nature," each team devoted to either a technological solution or one that has to do with working more in tune with nature. Participants start out recruiting others for their teams, but then are asked to engage in missions such as finding food, building a shelter, describing what they think has happened, and determining an approach to solving the problem (examples of such missions can be found here: http://tvsz.us/story-2/).

A number of people have used #TvsZ in their courses, asking students to play in order to experience collaborative storytelling and connecting with people around the globe in a team that has to work together in order to accomplish their missions. They have also used it to show an example of open and emergent pedagogy, though outside of a specific course context. Finally, it serves as an engaging way to encourage students to learn how to create and post digital objects—though the game sites don't have information on how to do so, participants learn this from each other (or from their instructor, if they are playing the game as part of a course). As the current TvsZ planning team wrote in an abstract for an upcoming conference presentation:

> This game builds digital literacy through creating avenues for participants to engage in international collaboration, to compose for a visible and active audience, and to craft personal learning networks. It is a dynamic experience for engaging students in transmedia storytelling and narrative collaboration, and it can democratize the classroom by blurring the line between

> teacher and student. The game design itself is democratized through emergent rules: players re-shape the rules and revise the narrative as the game unfolds. (Bali et al., 2015)

I have not yet invited my own students to play #TvsZ, but plan to do so for the next iteration, in April 2015.

Leadership positions in open education

In September of 2014 I was chosen as one of three "Faculty Fellows" with the BCcampus open textbooks program (BCcampus, 2014). The provincial government of British Columbia has dedicated funds to be used in creating and reviewing open textbooks, and BCcampus is administering these funds through its open textbooks program (http://open.bccampus.ca). There are currently 81 open textbooks in the BCcampus collection, many of them faculty reviewed, 143 known adoptions, and 14 institutions with faculty members that have adopted open textbooks.

During this one-year fellowship, we faculty fellows are engaging in research on OER and open textbooks, outreach and advocacy, and also giving feedback to BCcampus on their open textbook program itself. So far we have jointly worked on one research study examining faculty use of and attitudes towards OER and open textbooks. We are currently still collecting data from that survey of faculty members in British Columbia and beyond. The survey will close at the end of February, and we will begin analyzing the data at that point. The survey asks faculty about whether and why faculty have used OER, what challenges they face in doing so, the impact doing so has had on their teaching, and whether they post their teaching materials publicly for anyone else to use (and why/why not).

In addition, during my time as a faculty fellow so far I have written a chapter based on a workshop on open education that I gave in July of 2014 (Hendricks, forthcoming), in which I explain the nature and value of open education, including the use and creation of OER and open textbooks. I am also scheduled to speak to two student groups at UBC about open textbooks in the next couple of months, and am working on a podcast in which I interview several people who have used and/or created open textbooks. I plan to design and facilitate a workshop at UBC in May or June of 2015 in which we will discuss the pedagogical value of using and creating open textbooks and OER, including a focus on the "student as producer" model. I and one of the other faculty fellows have put together a proposal for the 2015 STLHE meeting on this topic of the pedagogical value of OER and open textbooks, and the other faculty fellow and I are putting together a presentation for the BCcampus Open Textbook Summit in May of 2015 (http://otsummit.bccampus.ca/). The other faculty fellows and I will also, after completing the data analysis for the research study noted above, will write up one or more reports or articles from it, and apply to present our findings at one or more conferences.

Research, presentations, and publications in open education

As noted above, I am currently involved in a research project studying faculty attitudes towards use and creation of OER and open textbooks; the results from the project will be available later this year.

Presentations and workshops at UBC

In May of 2013 I was invited to give a presentation at my home institution on "Open Education and Connectivist MOOCs," during which I explained what open education and connectivist MOOCs are, and talked about the cMOOC I had just finished, ETMOOC. In October of 2013 I was invited to give a presentation during "Open UBC Week" on "Open Education: From Connectivist MOOCs to UBC." In that presentation I also talked about open education and connectivist MOOCs, but focused in part on the open education work I had done myself up to that point. I discussed my involvement in

OOE13, the "Why Open?" course, and the open, online content I had created for my on-campus courses. Slides from both of these presentations can be found here: http://blogs.ubc.ca/chendricks/2015/02/18/pres-open-ed-moocs-ubc-2013/.

In June of 2014 I designed and facilitated a workshop on open education, OERs and open textbooks. In this 2.5 hour workshop we first discussed what open education is and brainstormed examples of how one might engage in open educational activities. Then we heard from a panel of people describing various ways they have engaged in open education, including a speaker from BCcampus who talked about the open textbook project. We finished off the session talking about benefits and drawbacks of open education. You can see the agenda, slides, links to the panel members' open education projects, and more, here: http://blogs.ubc.ca/chendricks/2014/07/02/workshop-open-education-june-2014/.

In October of 2014 I was part of a panel debating the value and impact of Massive, Open Online Courses on higher education, during Open UBC Week. During my presentation, entitled "The Open in MOOCs," I talked about how the content in many MOOCs is not very "open," being free but not available for revision and reuse. I also discussed the cMOOC model, since many people don't think of this sort of open online course when they hear "MOOC." There were three of us who gave presentations, and then there was an open discussion between us and the audience afterwards. You can see the description of this debate and my slides from it, here: http://blogs.ubc.ca/chendricks/2014/11/03/the-open-in-moocs/.

Presentations at conferences

I have presented at the Open Education Conference two times so far. For the Open Ed 2013 conference (http://openedconference.org/2013/), I gave a presentation entitled "Difficulties Evaluating cMOOCs: Negotiating Autonomy and Participation." In this presentation I discussed how difficult it can be to evaluate the effectiveness of a connectivist MOOC, given that participants are encouraged to come and go as they please, to do as little or as much as they wish in the course. We can't just use participation or completion rates to determine how effective a cMOOC has been. I discussed several possible ways of doing such an evaluation, noting what has been done so far in the research literature, and pointed out potential problems with each of them. Though I did not suggest a solution at that point, I left the question open for myself and others to think more carefully about in the future. You can see the slides from this presentation, the bibliography, and a video recording of the presentation itself, here: http://blogs.ubc.ca/chendricks/2013/11/08/open-ed-2013/.

For the Open Education Conference 2014 (http://openedconference.org/2014/), I gave a presentation on a policy at the University of British Columbia that was passed in February of 2014, stating that if UBC faculty share their teaching materials with anyone, they are effectively allowing anyone teaching a for-credit course at UBC to use them. This policy caused a great deal of controversy on the UBC campus. I wrote two blog posts about it, one just talking about the policy itself and what I think the motivations behind it may have been, and the second talking about my fears that it may lead some UBC faculty to be less likely to share their teaching materials with an open license. Both blog posts can be seen in this list of posts about Policy 81 on my blog: http://blogs.ubc.ca/chendricks/tag/policy-81/. For the presentation at the Open Education Conference 2014, I did a small survey of some faculty at UBC who had opted out of the policy (saying they didn't want the policy to apply to their teaching materials, which was an option), and found that some were, indeed, unlikely to share their teaching materials using an open license due in part to Policy 81. During this presentation I explained the policy, the criticisms and worries about it expressed by the UBC faculty union at the Canadian Association of University Teachers, and shared the results of the small survey I had done. You can see the slides and notes from this presentation here: http://blogs.ubc.ca/chendricks/2015/02/18/pres-open-ed-conf-2014/.

I facilitated a workshop on open education and teaching philosophy at the meeting of the American Association of Philosophy Teachers in July/August of 2014, entitled: "Doing Philosophy in the Open: Why/Not?". In this workshop I first introduced the idea of open education and open licenses, and then we brainstormed some possible examples of open education that either we or instructors we know engage in. Then in small groups the participants discussed benefits and drawbacks of one or more open educational activities, and I asked them to write these down on a shared Google document. We then came back together in the large group and discussed these, and I gave some of the answers given by respondents to the small survey on open education I had done a month or so beforehand (Hendricks, 2014). You can see the agenda, slides and shared Google doc for this presentation here: http://blogs.ubc.ca/chendricks/2014/08/08/open-ed-aapt/.

I and the rest of the facilitation team for the latest version of the #TvsZ open online game co-wrote abstracts for presentations about the game and how it can be used in teaching and learning contexts, for two conferences so far. Two of our team members presented at the Educause Learning Initiative's 2015 Annual Meeting in February 2015 (http://www.educause.edu/eli/events/eli-annual-meeting/2015/remixing-tvsz-hacking-games-narratives-and-borders), and several of us (including me) will present at the Emerging Technologies for Online Learning International Symposium in April of 2015 (http://olc.onlinelearningconsortium.org/conference/2015/et4online/perforate-your-classroom-collaboratively-hack-open-online-game-tvsz-60).

Presentations to other open online courses

Some of my colleagues from ETMOOC (Educational Technology and Media MOOC, Jan-March 2013) put together a connectivist MOOC for Alberta Educators called OCLMOOC (https://oclmooc.wordpress.com/). I was invited, along with one other person, to give a presentation through a webinar on "Open Leadership" for this open online course in October of 2014. I spoke about what I think it means to be an open leader, focusing on the need for transparency, collaboration, and courage. You can see slides from my presentation, and a link to a recording of the webinar on Blackboard Collaborate, here: http://blogs.ubc.ca/chendricks/2014/11/01/presentation-on-open-leadership-for-oclmooc/.

I was recently interviewed on Twitter for "Tinker, Make and Learn," an open online course focused on how to use the philosophy and projects from the "maker movement" in teaching and learning (https://www.canvas.net/courses/tinker-make-learn). "Makers" is a term that refers to anyone who makes things, from toys, furniture, robots, candles to videos, podcasts, digitally-enhanced images, and more. "Tinker, Make and Learn" helps teachers see how they might involve their students in making things as part of their learning. I was "Twitter interviewed" for this course because of my participation in an open online course called "Teach the Web," organized by Mozilla (http://hivenyc.org/teachtheweb/), as well as my participation in another open online course called Digital Storytelling 106 (http://ds106.us). During "Teach the Web" I learned how to use enough html coding to remix a website and create my own from it. You can see my "teaching kit" for a workshop on open education as an example, here: https://clhendricksbc.makes.org/thimble/MjA0NDU5MjEyOA==/open-education-workshop. In DS106 I learned how to manipulate images, edit audio to create podcasts, edit video, and much more. You can see my DS106 work here (note that I continue to participate in this course long after I first completed it: http://chendricks.org/ds106. There is a record of the Tweets during this interview, here: https://storify.com/robinwb/tinker-make-and-learn.

Other presentations

In November of 2013 I and Jon Beasley-Murray presented to the BC Open Educators group, as part of the BC Open Ed Chats series. We spoke about Arts One Open (http://artsone-open.arts.ubc.ca), the website that Jon created and I am now managing, where we post recordings of lectures, student and faculty blog posts, podcasts, a Twitter stream and more from the Arts One course at the University of British Columbia. You can find an audio archive of this presentation and the discussion that followed, on the Archives page of the BC Open Ed website: http://bcopened.org/bc-open-open-ed-chats/archives/

Publications on open education

I put in a proposal to write an article based on my presentation on open education and philosophy to the American Association of Philosophy Teachers meeting in 2014, and after a peer review process it was accepted for publication in the proceedings from that meeting (Hendricks, forthcoming). In this article I discuss the various ways one might engage in open educational activities and argue that the benefits of doing so outweigh the possible drawbacks. The article is geared in part specifically towards philosophy, discussing OER and open textbooks in philosophy and how I have used and created OER for philosophy, and engaged in open pedagogy in my philosophy courses.

The innovation in my open education activities

In some ways, what I am doing in regards to open education is not new. The Open University in England started broadcasting courses for free on the television back in the 1970s, for instance (http://www.open.ac.uk/about/main/strategy/ou-story). MIT started putting their courses online in 2002 (http://ocw.mit.edu/about/our-history/). But being open in the way discussed here is not the norm for institutions or faculty members in North America. A 2014 report of a survey conducted by the Babson Survey Research Group of over 2100 higher education faculty members in the U.S. said that around two-thirds of those surveyed reported that they were either unaware of OER or had heard of them but knew little about them (Allen and Seaman, 2014, p. 11). That number increases when one factors in faculty's reported knowledge of Creative Commons licenses, arguably the most commonly-used open licenses for OER: Allen and Seaman (2014) report that by adding the responses from those who claimed to not be aware of Creative Commons licenses even though they said they were aware of OER, the number of faculty members who are unaware or only slightly aware of OER rises to three-quarters of the respondents (pp. 16-18). Still, about one-half report using some OER in their courses, with the discrepancy explained by either their lack of awareness of the term "OER" or their choice of teaching materials without being concerned about whether or not they are openly licensed (Allen and Seaman, 2014, pp. 19-20). This survey suggests that quite a few faculty members in the U.S. are using OER, but not that many are really paying a great deal of attention to the fact that they are "open," or using them for that reason.

There is some evidence about faculty creation of OER from the OER Evidence Report 2013-2014, by the OER Research Hub (de los Arcos et al., 2014). This report summarizes findings from twenty surveys as well as reports of other research into OER (pp. 4-6). According to the report, only 12% of 644 educators surveyed said they had created OER and published them with a Creative Commons license, even though over 67% of them said that open licensing is important and over 55% of them recognized the Creative Commons logo (p. 14). Similarly, though 66% of users of Saylor (http://saylor.org), a provider of open courses created by combining OER collected from across the web, say that they have adapted an OER, and 24% have created their own OER, only 8% have published these (p. 14). This report suggests that the number of faculty members publishing OER for others to revise and reuse is still fairly small.

I believe, however, that I and others who practice open education are at the forefront of a movement that is steadily picking up steam, that more and more people are joining. The expansion of MOOCs is just one part of this movement; many faculty members have not and never will create or facilitate a MOOC, but we can, much more easily than even a few years ago, use and create OER, ask our students to create or revise OER, etc. The benefits are too great to ignore, and technology is making the experience of using, revising and creating OER more and more user-friendly.

Using and creating OER can have multiple benefits for students and educators. Most immediately, using them in a course can save students money: assigning an open textbook instead of a textbook from a traditional publisher, for example, means students don't have to pay for the content (if accessed digitally) or pay a low fee (if they would like to have a print copy). The College Board in the United States reports that in 2013-2014, students in institutions of higher education in the U.S. spent an average of over $1200 per year on books for their courses (College Board, n.d.). In a recent survey of U.S. college students by the U.S. Student PIRGs), 65% of respondents said they had decided not to buy a textbook for a course because the cost was too high, and nearly half said that book cost affected which courses, and how many courses, they chose to take (Senack, 2014, pp. 11-12). Thus, the issue of cost is not simply about saving money, it affects students' educational choices and their ability to do well in the courses they take. There is some published evidence that students do just as well in courses with open textbooks as in courses that do not, and sometimes better. I discuss some of this research in the section below entitled "Scholarship of Teaching and Learning related to open education."

But cost is only part of the value of using OER in one's classes; doing so has significant pedagogical benefits as well. The ability to revise as well as reuse materials that are openly licensed to allow revision makes it much easier to tailor them to one's particular course and students. Instead of having to tell students, for example, that they need to read only some sections of a text and not others, one can simply edit the text to include only those sections that one wants. Instead of telling students to watch from minute 6:30 to minute 13:00 in a video, for example, one can just cut out the portions of the video that one doesn't want to include. Further, one can add material of one's own to a text, video, audio file, image, diagram, etc. Chae and Jenkins (2015) did in-depth interviews with faculty members in the Washington State Community and Technical College system, and in addition to saving students money many report that the value of using OER includes "enhanced instructional responsiveness"—meaning that the content can be easily adapted for a particular context. As Wiley (2013) notes in his discussion of open pedagogy, using OER in a course allows for students to be able to revise them as well, which can be an excellent pedagogical tool. Students can take a currently-existing open educational resource and edit it as needed to fit the particular course context, or add what they think is missing, or make their own commentary on the topic/problem. Many faculty members in the Chae and Jenkins study (2015) also reported that they invited students to edit the open course materials and even create new OER themselves.

Chae and Jenkins (2015) and Masterman and Wild (2011) both report that faculty who use OER often cite the ability to present material in different ways as an important value of using OER in their courses. For example, while I have quite a few notes and other texts for students to read in addition to my oral lectures, if I can give them diagrams, charts, videos or podcasts as well, this might engage learners with different preferences for accessing and understanding material. Using OER that others have created can provide students with multiple perspectives and ways of approaching the material as well, which can be quite pedagogically useful in that it encourages students to think critically about what they're reading/watching/listening to.

Why create OER for others to use? In the Summer of 2014 I did a small, informal survey of some educators through social media (not a representative sample of any particular group) to ask them why they create and share OER (Hendricks, 2014). A number of people stated that the reason they engage in open educational activities is because they believe in the importance of making education and educational materials widely accessible. Some argued that when education is publicly funded, it ought to

be made available to the public. Others said that they felt a duty of duty of reciprocity, of giving back to the community of educators from whom they themselves had benefited. Having experienced the value of what others had shared with them, they felt they ought to also share. This, in particular, is one of the motivations I have: I have learned so much from those who have chosen to publish their teaching materials publicly and openly, that it only makes sense to me to contribute my work too in case someone else might find it useful. In addition, some respondents to the survey said that because they knew that their teaching materials would be open to anyone to see, this led them to work even harder to make sure they are as good as possible. Public exposure and scrutiny can provide even greater pressure to provide high quality materials than one might experience if they were not made public. Finally, increased exposure of one's teaching work may have career benefits: two respondents to the open education survey said that this had led to opportunities to give presentations on their teaching work. That has happened to me as well, as discussed above.

In Chae and Jenkins (2015), several faculty members from the Washington State Community and Technical College system reported that their use and creation of OER has the benefit of connecting them to a larger community of practitioners and increased opportunities for collaboration. There is a large and growing community of educators using and creating OER, who can connect with each other through conferences, blogs, and social media. In addition, when teachers make their materials open for others to view, it is then possible for others with similar interests to find and connect with them. My own participation in the open education community has led to collaboration with others in designing and facilitating new open online courses and the open online game #TvsZ described above, as well as planning research projects.

There are also important benefits for students creating or revising OER, as part of the "student as producer" pedagogical model. If they make their work publicly accessible, such as through blog posts, then there are opportunities for them to connect with people outside of the course, who could comment on their work and possibly even use it in other contexts. Student revisions of other OER, or creations of entirely new OER, such as texts, images, diagrams, slideshows, websites, videos and more, could be used in future iterations of the course, for other students to learn from and revise in turn (so long as the original authors agree). One could also ask students to give their work an open license so that it could be used and revised by others beyond one's own course, thereby contributing to even more curricula beyond one's particular course. If students contribute to a high-visibility site such as Wikipedia, then their work can have significant impact far beyond the classroom.

The value of opening up teaching and learning is very great, technology is making it steadily easier to do, and thus the open educational activities that are currently innovative will, I believe, soon become more mainstream.

Impact of my work in open education

The impacts for which I have tangible evidence so far have been in terms of my influence on other educators and the wider public.

I have already noted above (under "Research, presentations, and publications in open education") that due to my open education activities, I have been invited to give presentations about open education at the University of British Columbia, to other open online courses, and elsewhere. Such invitations come about in part because of one's connections to particular individuals (whether through on-campus connections or connections made through open online courses and activities), but they wouldn't result in invitations to present if the work one was doing was not also thought useful.

My blog posts on open education are also being re-posted on two web sites at the moment: the BC Open Education website (http://bcopened.org/) and the BCcampus Open Ed website (http://open.bccampus.ca/category/faculty-fellows/). All of my blog posts, about open education and everything else related to my teaching and learning, are also being re-posted on the University of British

Columbia's "A place of mind" website, which gathers blog posts, videos, slides and more from around the web, created by UBC faculty: http://www.aplaceofmind.ubc.ca/. Such re-postings indicate that others find my blog posts to be useful enough to share to their audiences as well.

Since I publish OERs on several content aggregator sites, I can use the statistics from those sites to show impact of my work in open education. As discussed above, we record many of our lectures in the Arts One course and post them to our YouTube channel; it has now been viewed over 100,000 times. The video recordings of my lectures for Arts One on this channel are quite popular (as shown on the two screen shots in the Appendix from our YouTube channel, listing the number of views per video; mine are circled on the images). Many of our videos have hundreds of views, while some have thousands. As of February 18, 2015, my lecture on Plato's *Republic* from October of 2014 has 471 views; my lecture on Plato's *Gorgias* from Fall of 2013 has 1169 views, my lecture on Freud's *Dora* has 1590 views, and my lecture on Foucault's *History of Sexuality Volume 1* has 15,274 views (the most of any of our lectures). According to YouTube analytics on the Foucault video, it led to 116 subscribers to our channel so far. The Arts One Open YouTube channel has a good number of subscribers overall: 885 as of February 18, 2015.

Slideshare also keeps statistics on numbers of views of one's slides posted there (http://slideshare.com). My slides there range from 60 views to over 3600 views, as of February 18, 2015. The slides on my presentations on open education range from over 200 views to over 1800 views, but the two sets of slides with the most views are those on Foucault's *History of Sexuality Volume 1* (2277 views) and the Stoics (Epictetus and Cicero) (3651 views). Not surprisingly, those two sets of slides also have the most downloads (58 for the Foucault slides and 34 for the Stoics slides), though my slides on Plato's *Republic* are a close third (28 downloads).

I also use Twitter, mostly for professional purposes, talking about teaching and learning and open education. As of February 28, 2015 I have 764 followers and am on 90 lists created by others. This indicates that a good number of people find what I am posting about education to be of enough value to follow my posts regularly.

Scholarship of Teaching and Learning research on open education

A good deal of the empirical research on open education to date has been focused on the use and creation of OERs and open textbooks, on faculty and student attitudes towards these, and on their impact on student learning outcomes. As noted above, I am myself involved in a research study that is going on right now, surveying faculty about their use/creation of and attitudes towards OER and open textbooks.

There is a growing body of research that shows that students in courses that use OER and open textbooks do as well or sometimes better than those that use traditional, closed materials. Feldstein et al. (2012) investigated the use of open and closed textbooks in several courses of the core curriculum of the School of Business at Virginia State University. An earlier, internal survey had shown that only 47% of students were purchasing textbooks, but when open textbooks were introduced in nine courses in the Spring of 2011, 67% of students in those courses registered to use an online open textbook, and of those, 85% downloaded at least one file. The authors also found modest but statistically significant gains in student learning, measured by grades achieved in the school's core curriculum courses that used open textbooks versus those core courses that did not. These were, however, different courses, so the results are not as significant as if they had been found in the same courses using open textbooks versus using traditional textbooks. In another study (Hilton and Laman, 2012), two instructors used a traditional textbook in several sections of an Introduction to Psychology course, and then used an open textbook in other sections of the same course the following semester. Both saw significant reductions in withdrawals in their courses for the semester in which they used the open textbook as opposed to the one in which they used the traditional textbook, and one instructor saw significant gains in the average score on the departmental final exam: 65.4% for the semester in which a traditional textbook was assigned, and

73.2% for the semester in which an open textbook was assigned. The other instructor did not see any significant gains in final exam marks between the two semesters. Two other recent studies (Hilton et al., 2013; Wiley et al., 2012) have not shown any significant differences in learning outcomes between courses that use open textbooks and those that do not.

Robinson, Fischer, Wiley and Hilton (2014) compared end-of-year standardized test scores for over 4000 high school students in a school district in Utah who were enrolled in one of many science courses, some of which used open textbooks and some of which did not (approximately 43% of the students were enrolled in courses that assigned open textbooks). After controlling for age, gender, English language proficiency, GPA, score on the previous year's standardized test, which teacher students had, and more, the authors found that "students who used open textbooks scored .65 points higher on the science CRTs [end-of-year standardized tests] than they would have scored if they had used traditional textbooks, even controlling for the effects of teacher, gender, socioeconomic status, science ability, prior academic achievement, prior science training, and student age" (p. 345). This result was small, but statistically significant. On the evidence so far, we can conclude at least that students do not tend to do worse in courses with OER and/or open textbooks than with standard textbooks, and there is some evidence that they may at times do better.

Some studies have also reported on student and instructor attitudes towards OER and open textbooks in their courses. Bliss, Robinson, Hilton and Wiley (2013) surveyed 58 instructors and 490 students in eight community colleges and asked them about their experiences using an open textbook. The majority of students and instructors thought the open textbooks were of at least equal quality to textbooks they've used in the past, and 34% of teachers and 39% of students found the open textbooks to be of better quality. In addition to the low (or no) cost, students valued the texts for their customizability to course content, as well as for things having to do with the affordances of digital technology, such as a search function, embedded videos, diagrams, and quizzes. Lindshield and Adhikari (2013) surveyed about 200 students who had taken the same course with the same open text over the course of several different semesters (some had taken it in Spring 2011, others in Fall 2011 and others in Spring 2012). On a Likert scale where 1 is strongly disagree and 7 is strongly agree, the average for "I like the idea of the flexbook" was 6.4. They rated the quality of the book at around a 6 out of 7 (where 7 is very good). To "I prefer using the flexbook vs. buying a textbook for [this course]," the average was 6.4 (where 7 is strongly agree). To "I like not buying a textbook for [this course]," the average was 6.5. Of course, student and instructor attitudes about open textbooks are going to be highly dependent on the quality of those textbooks, not just whether they are free or include elements such as embedded videos, quizzes, etc.

Conclusion

I have only recently begun to engage in open educational activities, and there is much more that I hope to do in the future. In one or more of my philosophy courses I would like to ask students to start writing an introductory textbook to the topics we're studying. After we study the philosophers' views, I would like to ask them to work in groups on a wiki page to introduce a philosopher's arguments to other students. The students in the next version of the course could then both use and revise these wiki pages, and they would be available publicly, with an open license, as well. In the coming months I hope to involve students in Arts One in recording podcasts during which instructors in the course give 5-10 minute overviews of the books they've lectured on. Students in Arts One could use these to study for the final exam, and I think that a "10-minute Plato's *Republic*," or Nietzsche's *Genealogy of Morality*, or Shakespeare's *Tempest*, for example, could be useful for many other people as well. As mentioned above, I also plan to start the process of editing an open textbook for an introduction to philosophy course, at some point in the near future. I believe the value of open education, for students, instructors and the public, is great enough that I can't imagine teaching in a closed environment ever again.

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Biography

Christina Hendricks is a Sr. Instructor (a tenured, teaching position) in Philosophy at the University of British Columbia-Vancouver, where she teaches courses in introductory philosophy, ethics, and Continental philosophy. She also regularly teaches in an interdisciplinary, team-taught course for first year students called Arts One. Dr. Hendricks started learning about and engaging in open educational activities in 2013, and since then has become an open education leader on her campus and beyond. Recognizing how much she has learned from others who have been willing to share their teaching and learning work, she is actively involved in sharing her own. She has used open educational resources (OERs) in her on-campus courses, created OERs for others to use, asked students to post some of their work openly for others to view and use, designed and facilitated open online courses, designed and facilitated workshops and given about open education, and begun to engage in research about the use of and attitudes towards OER and open textbooks. In 2014-2015 she has served as one of three Faculty Fellows with the BCcampus open textbooks program.