Exploring Educators Experiences Implementing Open Educational Practices

by

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B.Comm, Ryerson University, 2005
M.Phil., University of Cape Town, 2011

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Supervisory Committee

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Abstract

This research focuses on how educators are using openly accessible sources of knowledge and open-source tools in ways that impact their pedagogical designs. Using a phenomenological approach with self-identifying open education practitioners, I explore how open educational practices (OEP) are being actualized in formal higher education and impacting learning design. Specifically, I examine how educators are bringing elements of openness into their everyday teaching and learning practice using educational technologies. I draw upon Giddens (1986) structuration theory, further developed for use in technology adoption research most notably by DeSanctis and Poole (1994) and Orlikowski (2000). This approach positions technologies as being continually socially constructed, interpreted, and put into practice. In an organizational context, the use of technology is intrinsically linked with institutional properties, rules and norms, as well as individual perceptions and knowledge. The findings suggest that OEP represents an emerging form of learning design, which draws from existing models of constructivist and networked pedagogy. Open technologies are being used to support and enable active learning experiences, presenting and sharing learners work in real-time, allowing for formative feedback, peer review, and ultimately, promoting community-engaged coursework. By designing learning in this way, faculty offer learners an opportunity to consider and practice developing themselves as public citizens and develop the knowledge and literacies for working with copyright and controlling access to their online contributions, while presenting options for extending some of those rights to others. Inviting learners to share their work widely, demonstrates to them that their work has inherent value beyond the course and can be an opportunity to engage with their community.

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Acknowledgements

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Chapter One: Introduction

Introduction

Educational technologies have been characterized as variable, unstable, and opaque: variable, in that they can be used in a variety of possible ways (Papert, 1993); unstable, in that they are changing and evolving rapidly over time; and opaque in that their potential applications and inner workings are not always made explicit (Turkle, 1997). Unlike traditional teaching tools which have more evident uses such as a pencil, which is used for writing, or a microscope, which is for viewing small objects, educational technologies can be applied in a number of different ways in an educational context (Koehler & Mishra, 2009). The affordances, or ways of using, educational technologies present a myriad of opportunities for innovative usage in education, but due to their rapid evolution, remain a challenge to apply effectively.

One affordance of technology that is widely recognized is the ability to create digital resources, which can be copied and shared with little cost or effort, allowing for new ways of building, combining, sharing, remixing, representing, and repurposing knowledge. The internet now provides a global network which facilitates search and access to online resources, a growing subset of which have been created and shared using open copyright licenses which allow their reuse and adaptation by others. That distinction between ‘online’ and ‘open’ resources is important. In the latter, resources are shared in such a way that they can be both accessed and reused by others; while in the former, resources by default and without an explicit statement otherwise, have more ambiguous implications for reuse. Open licensing models support the legal copying, adaptation, and re-sharing of educational materials but are not applied uniformly across the internet.

In the context of higher education, the proliferation of online and, by extension, open online teaching and learning resources including educational content, shared learning designs, software, and learning activities provide both a challenge and an opportunity for educators and learners. The challenge for faculty, students, and independent learners is in navigating this new landscape of abundance, engaging with a wealth of information, dealing with new formats and representations of knowledge, and selecting appropriate resources for use in teaching and learning. This abundance creates a complex environment for individuals who are designing and accessing education as they require an emergent set of literacies required for building impactful learning experiences. Further, digital literacies are required to contribute to the open web and develop knowledge in technically appropriate and legal ways. Learning designs which take advantage of the networking capabilities of the internet and the affordances of open content remain emergent and ever-changing. While simultaneously there exists an opportunity to move towards a more participatory culture in light of these changes, by using these resources to build upon, combine, share, and explore creatively in the process of teaching and learning (Blomgren, 2018; Brown & Adler, 2008; Ehlers & Conole, 2010).

Rationale for the Inquiry

A recent development in the field of education technology is the movement towards more open and accessible practices in education. The development of open and collaborative internet technologies has been a major support for this movement and provides new methods and techniques for contributing knowledge as part of pedagogy. Various phenomena can be identified which encompass these changes, including the emergence of open educational resources (OER), discourses around increasingly open and flexible pedagogies, contributions to open access research, and opportunities for increased personalization and open sharing of

educational experiences. These trends in higher education are largely based on the philosophy that information and knowledge technically can and should be made accessible to as many people as possible and that modern technologies allow us to share and collaborate in enhanced ways.

For many working in higher education in Canada, open-access has become a familiar term and approach to sharing the results of academic research, largely due to a series of policies developed to promote open access to research. The Canadian Institutes of Health Research (CIHR), Natural Sciences and Engineering Research Council of Canada (NSERC), and Social Sciences and Humanities Research Council (SSHRC) have all confirmed their support for a Tri-Agency Open Access Policy. However, the cultural shift around how we share and evolve teaching and learning practices, processes, and information have been less well established, resulting in a grey area between open access and open education (McGreal, 2017). Only recently, educational consortiums and provincial systems are starting to consider ways in which, working together collaboratively on developing teaching resources and pedagogical practice, we can do more with a goal of providing a richer educational experience for our learners.

Despite the changes to the way research is conducted and advancements in educational technologies, many in higher education continue to operate as they did in the past (Bates et al., 2017; McGoldrick, Watts, & Economou, 2015). However, there are educators, albeit a minority, that are beginning to use open technologies and knowledge in ways that impact their pedagogy, especially now that the internet enables access to a wealth of information and knowledge ubiquitously (Yuan, MacNeill, & Kraan, 2008). The most common example includes making use of OER as part of the curriculum, thereby facilitating more reasonable access to course materials instead of those purchased commercially from a publisher at a high cost. However, this

essentially represents a change to the resource used as part of the curriculum while not necessary resulting in changes in pedagogy.

While awareness of the availability of OER in general is increasing; adoption, usage, and contributions by educators remain low (De Los Arcos, Farrow, Perryman, Pitt, & Weller, 2014; Allen & Seaman, 2016; Jhangiani, Pitt, Hendricks, Key, & Lalonde, 2016). Educators cite the challenges of locating relevant, high quality, and topical resources in their subject area as a significant barrier to more actively using OER and that integrating these resources into their curriculum is a time-consuming task (Allen & Seaman, 2016; De Los Arcos et al., 2014; Petrides, Jimes, Middleton-Detzner, Walling, & Weiss, 2011). OER and the affordances they bring represent new and largely optional technologies for busy educators to integrate into their practice. Researchers have explored technology integration with educators at length, most notably finding that perceptions around usefulness and ease of use contribute most to the ongoing usage of new technologies (Davis, 1989). Allocating time to develop literacies in working with OER, as well as time to work with colleagues to develop and share practices, are cited as significantly important considerations for fostering more open practices (Kimmons, 2016). More theoretical research is needed on the time, effort, and literacies needed to conduct these activities as well as their impacts on pedagogy (Beetham, Falconer, McGill, & Littlejohn, 2012; Blomgren, 2018; Jhangiani et al., 2016; Alison Littlejohn & Hood, 2016; Weller, de los Arcos, Farrow, Pitt, & McAndrew, 2016).

The open education movement has been focused on creating awareness of the potential for the creation, sharing, and adoption of educational artefacts under open licenses. Awareness has grown in terms of what open access to knowledge can offer educators, the potential cost savings for learners, and the impact of collaboration and open sharing of teaching and learning

practices (Pitt, 2015; Weller, de los Arcos, Farrow, Pitt, & McAndrew, 2015). This is a significant shift that has impacted many learners in positive ways in terms of resource access and provision and yet we know little more than that learners appreciate freely accessible resources and that these resources are gradually increasing in quality (Bliss, Hilton III, Wiley, & Thanos, 2013; Feldstein et al., 2012; Fischer, Hilton, Robinson, & Wiley, 2015; Jhangiani & Dastur, 2018; Ozdemir & Hendricks, 2017; Robinson, Fischer, Wiley, & Hilton, 2014). Further research is still needed to understand the additional impacts on learner's personal knowledge management practices, the implications of ongoing access to OER, and their concerns when engaging with open education. These can include how we address online safety, the learners' online footprint, privacy; and how this impacts our pedagogy (Mason & Kimmons, 2018).

Purpose of the Study

Beyond replacing traditional forms of knowledge resources, there is a further need to understand how open access to resources change what an educator can do and how this impacts their pedagogical practice. This shifts the focus from the use or replacement of content (OER), to teaching and learning practices that are associated with open education (Deimann & Farrow, 2013). If open education is framed only as the adoption and use of OER or open textbooks, we miss an opportunity to consider how it may also afford new modes and approaches to teaching and learning. Many educators who have adopted OER report simply replacing an existing commercial resource with no significant changes to pedagogical approach or practice (Pitt, 2015). There is an opportunity for educators to engage with open education in emergent ways; through the promotion of open learning design methodologies, engaging learners with openness, and fostering and developing digital and network literacies for working in the open. This implies that educators look beyond open education as a source of free content but rather "as a catalytic

agent that can be used to fuel innovation that encompasses fundamental questions about pedagogy, the power structures of the academy and the manner in which access to knowledge is provided, shared and evaluated" (Porter, 2013, p. 147). The pedagogical knowledge, practices, resources, and activities exposed through open education show promise in supporting innovation, yet a challenge remains for educators in determining how specifically to integrate open practices as part of their pedagogy. Thus, the availability of open resources alone cannot be considered a panacea for educational innovation, as the practices associated with working successfully in the ecology of open education require an understanding of the affordances of emerging open tools, digital and network literacies, as well as pedagogical knowledge (Bates, 2011).

Definition of Terms

While many of the terms used throughout the research are discussed at length in the literature review, I present the most common terms for review below.

Open Educational Resources (OER)

The term open educational resources (OER) was initially defined at the UNESCO Forum on the Impact of Open Courseware for Higher Education in Developing Countries in 2002 as "the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes." (UNESCO, 2002, p. 24). These include "full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge" (Atkins, Brown, & Hammond, 2007, p. 4). OER's include open copyright licenses which enable them to be not only discovered but used and adapted according to the needs of an educator or learner.

Open Textbooks

Open textbooks are one type of OER that has gained significant attention as a viable alternative resource that can be taken up in higher education. These are OER that are presented in the form of a textbook available for free, with the option to print on demand. Educators and learners are free to retain and make copies of these texts, and in some cases, depending on the license, adapt them and re-share the derivative works. The provincially supported British Columbia (B.C.) open textbook initiative has collected over 260 textbooks in their collection, covering many subjects and disciplines, and providing educators with a familiar resource to adopt in their teaching.

Open Educational Practices (OEP), Open Pedagogy, and OER-Enabled Pedagogy

These terms are often used interchangeably, which represents a challenge for practitioners. Most commonly, these refer to the teaching and learning practices associated with the affordances of OER (Hilton III & Wiley, 2018). Others prefer to disconnect these terms from the use of OER, and focus on the application of open methodologies in teaching and learning by encouraging the co-creation of knowledge by learners (Nascimbeni & Burgos, 2016). Others still, have defined these terms in relation to social justice, through the prioritization of access and agency enacted through learning design (Jhangiani & DeRosa, 2017).

Open Copyright Licenses

Open copyright licenses provide tools for creators of digital media, including OER, to make clear the rights and abilities of others who find their works. Open copyright licences also enable users of digital media to understand what they can do with works when they locate them. One of the most common open licensing models used with OER, Creative Commons, provides a

legal deed and visual aid that creators can add to learning objects and digital educational resources enabling reuse by others (Plotkin, 2002).

Learning Design

Learning design refers to the process of defining learning outcomes, selecting learning resources, sequencing teaching and learning activities, and designing assessment activities in a structured way. In higher education, the task of learning design is most often taken on and controlled by faculty members, although sometimes learning design is a shared activity among academic units. Learning designs can be captured, represented, and shared as OER's providing an opportunity to share not only educational resources, but also educational process, activities, and approaches.

Affordances

Affordances, in the context of technology interaction, have been described as the "relationship between the properties of an object and the capabilities of the agent that determine just how the object could possibly be used" (Norman, 1990, p. 11). For this purpose of this study, affordances represent the possibilities for action on the part of a user when interacting with technology.

Open Web Publishing

In the context of this study, open web publishing involves the publication of creative and/or academic works by an author. This may include both faculty and learners, or a collaboration between multiple authors in a class community. Various types of software may be used to publish in this way, most commonly these include WordPress, OpenJournalSystems, or MediaWiki.

Freedom of Information and Protection of Privacy Act (FIPPA)

The Freedom of Information and Protection of Privacy Act (FIPPA, 1993) guides public sector employees in B.C. who are responsible for the access and privacy rights of individuals. In the context of teaching and learning in higher education FIPPA is considered when requiring learners to use 3rd party web technology such as social media platforms, which may present risks to privacy. Most specifically, this applies if learners are asked to provide personal information to these services in order to be successful in their coursework. In this case, faculty must engage students in a process providing notice of the use of such tools, knowledge about the risks therein, and gain informed consent from learners to participate (Office of the Information and Privacy Commissioner for BC, 2012; Portal, Cooper, & Southwell, 2011). The act provides a useful prompt to engage learners in conversations around data, privacy, and online presence when working openly.

Research Purpose, Questions, and Significance

In this dissertation, I have focused my research on investigating the lived experience of educators who describe actively changing their pedagogical practice due to their engagement with open education. My goal was to better understand the experiences of educators enacting openness in their teaching and learning practices, document and share some of their open learning designs, and explore the issues and challenges to doing this work within structured higher education. This research contributes to a better understanding of how access to open resources change what an educator can do and how this impacts their pedagogy. I investigate how open education is impacting learning design by providing educators access to legally usable educational content and promoting greater sharing of ideas and educational activities. I then further explore how this impacts the formulation of learning outcomes and affords new approaches to assessment.

While examples of learning designs which enact open education can be found online, there currently is a gap in the literature which thoroughly investigates and describes the experience of educators implementing openness in their teaching. While there is a growing body of literature which discusses how access to resources and engagement with the open web is changing teaching and learning practices (see for example Banzato, 2012; Beetham, 2011; Cronin, 2017; Nascimbeni & Burgos, 2016), it has been argued that further research is still needed concerning the pedagogical implications of openly accessible information on educator and learner practices (Banzato, 2012; Hood & Littlejohn, 2017; Kimmons, 2016; Knox, 2013; OPAL, 2011; Rolfe, 2017). In my research, I am interested in furthering our understanding of how openness is impacting teaching and learning practices in formal higher education. My research explores the ways in openness is being integrated into formal higher education through open educational practices (OEP). Specifically, I explore how educators are bringing elements of openness into their everyday teaching and learning practice and how learners are interpreting being exposed to these new practices and developing literacies associated with openness. In my research, I define OEP as teaching and learning practices where openness is enacted within all aspects of teaching and learning practice, including the design of learning outcomes, the selection of teaching resources, and the planning of activities and assessment. OEP engage both educators and learners with the use and creation of OER, draw attention to the potential afforded by open licences, facilitate open peer review, and support participatory learner-directed projects.

Relevant Research Experience

I bring experience conducting qualitative research, more specifically designing, conducting, and analysing interview data in previous research projects. In many cases, these studies were conducted by interviewing faculty members about aspects of technology relative to

learning design (Paskevicius & Bortolin, 2015; Paskevicius & Knaack, 2018), as well interviewing learners on their experiences using technology (Hodgkinson-Williams & Paskevicius, 2012a, 2013; Paskevicius & Hodgkinson-Williams, 2018). In all of these projects, interviews were conducted face-to-face, but I have significant experience communicating in synchronous online meeting spaces.

In my work as an educational developer, I had the opportunity to engage with individuals experimenting with OEP and I believe this has provided me significant insight into the research space. Spending time with faculty who are actively seeking to innovate on their teaching and learning practice has enabled me to consider theory and methods most suitable for conducting research on this phenomenon. My personal experiences as an educational developer have informed the design of this study and allowed me to make more informed judgements about research design and strategies for interviewing faculty about their engagement with OEP. I have spent the last nine years supporting faculty with educational innovation and the development of OEP, and I believe this experience has helped strengthen this study, as I have asked for feedback from faculty regarding my research interests during consultations with them.

I am interested in understanding the experience of educators who are actively engaging with openness through the design of their teaching and learning. I have worked in the field of educational technology for the past nine years and during that time, have supported faculty in their use of educational technology in the pursuit of high-quality teaching and learning. While I am excited by the prospect of open education, open pedagogies, and OEP, I am also genuinely interested in how these approaches are being taken up in higher education and understanding the issues and challenges that faculty face when bringing openness into their practice. If the promise of open education (that of improving access, promoting innovation, and greater community

engagement) is to be achieved, a more thorough understanding of openness in practice is needed. My intent is that this study will contribute to the growing body of literature on open education.

Table 1 provides a synopsis of this research agenda following the topic, problem, purpose, and research questions approach suggested by Creswell (2012, p. 60).

Table 1

Topic, Research Problem, Purpose, and Research Questions

Topic	**Open Educational Practices (OEP) in Higher Education**
Problem	Educators in formal higher education are under increasing pressure to enhance learning experiences through the use of emerging technologies. There are educators, albeit a small number, who use open education as a means to meet these pressures to enhance teaching, by changing the way they engage their learners and their community. There is little known about what the impact, issues, and supports are like in these settings to determine whether it is a viable path for other educators.
Purpose	The purpose of this study is to explore how openness is being actualized in formal higher education with regards to its impact on teaching and community engagement, as well as the issues arising and supports required for both educators and learners.
Research questions	How do faculty working in formal higher education in B.C. who are actively engaging with OEP describe their experiences? Research sub-questions: • How do faculty define OEP in relation to their teaching? • How do faculty describe OEP being actualized through learning design? • What challenges do faculty reference considering OEP learning designs? • How do faculty describe why they use OEP?

Discussion of Forthcoming Chapters

This dissertation is organized into five chapters. Chapter one provides an introduction to the research. Chapter two provides a review of the existing literature, identifies challenges and

gaps to the research space, situates OEP within a learning design methodology, and presents the theoretical framework. Chapter three presents the research methodology and describes the approach taken. Chapter four presents the findings from the study. Finally, chapter five provides a discussion and conclusion of the research conducted. In this chapter, I have introduced the study, by discussing the problem space, defining the rationale and purpose for the study, and articulating the research goals and significance. In Chapter Two, I review the literature, identify themes, and discuss significant findings that have been explored by other researchers.

Chapter Two: Literature Review

Introduction

In this chapter, I present the theoretical lens used in the study and review the literature on how openness is impacting teaching and learning. I provide a review of how theory has been applied to this research space, and present a new approach using the theory of structuration which has helped me understand and consider these phenomena. I then describe how the literature review was conducted. This includes a broad review of the term 'openness' in education, a review of the history of OER, an exploration of the impact of openness on pedagogy, and a discussion around how we might connect openness to learning design. I then discuss emerging and outstanding issues with this approach, how OEP may contribute to learning and some of the synergies with existing literature on networked learning.

Theoretical Framework

The phenomenon associated with open education remain under-theorized in the literature, which represents both a challenge and opportunity for further research (Bulfin, Henderson, & Johnson, 2013; Howard & Maton, 2011; Knox, 2013; Veletsianos, 2015). There exists an opportunity to develop new theory, as well as to connect the phenomenon associated with open education to existing theory from education, learning sciences, and pedagogical research. Much of the literature has focused on case studies, strategies for implementation, and broad approaches to institutional change which do not draw upon or develop theory. A significant amount of the empirical work reviewed makes no mention of a theoretical base (Masterman & Wild, 2011; Petrides, Jimes, Middleton-Detzner, Walling, & Weiss, 2011; Beaven, 2013; De Los Arcos et al., 2014; Pitt, 2015; Jhangiani et al., 2016; Masterman, 2016). Further, critical studies which

examine the pedagogical and educational implications of the use of OER and engagement in OEP are even less common (Knox, 2013). Empirical studies which attempt to develop theory include those using communities of practice (Harris & Higgison, 2003; Koohang & Harman, 2007; Tosato & Bodi, 2011), activity theory (Alevizou, 2012; Paskevicius, 2011; Paskevicius & Hodgkinson-Williams, 2018; Porter, 2013), and more recently social realist theory to investigate engagement in OEP (Cox, 2016; Cronin, 2016). A summary of the literature reviewed, and methods applied in the corpus of research on OEP is summarized in Table *2*. The process and scope of the literature review is discussed later in this chapter.

Table 2

Theories Applied in the Literature and Methods Used to Investigate

	Methods *(CA=Content Analysis, FG=Focus Groups, I=Interviews, S=Surveys)*							
Theories applied in the literature	CA	CA FG, I, S	CA, I, S	FG, I	FG, S	I	I, S	S
Access to education							1	
Activity theory (AT)	1					1		1
AT and affordances						1		
AT and self-regulated learning							1	
AT and social realism							1	
AT and self-regulated learning							1	
AT, social inclusion, and agency						1		
An expansive theory of open					1			
Big OER vs Little OER								1
Conceptual framework of OEP						1		
Content repository drop-off							1	
Design-based research approach			1					
Principles of design for open education							1	
Grounded theory						1		
Knowledge sharing								1
Learning through knowledge creation						1		
Literacy and copyrights education	1							
None		2		1	1	1	1	2
OER engagement ladder				1		1		
OPAL trajectory framework		1						
Personalised and social learning							1	
School change and reform			1					
Social constructivism	1							
Sociocultural and social realist theories						1		
Teacher motivation and self-efficacy					1			
Integrative pedagogies model and self-regulation							1	
Web 2.0 technologies for networked learning	1						1	

One such theory which remains undeveloped in educational technology research is that of structuration theory which has its roots in the work of Anthony Giddens (1986). The theory provides a set of concepts for framing the basic logic of social science for investigating human

behavior (Bryant & Jary, 2001). Giddens developed structuration theory to overcome the tendency for social theorists to gravitate towards either positivist or interpretive approaches to understanding the social sciences. The positivist approach suggested structure imposed agency while the interpretive approach suggested that agency existed in isolation from structure (Giddens, 1986). Giddens theory suggests that social phenomena are not the result of either structure or of agency, but of both. Individuals are actively involved in the enactment of social practices which constitute and replicate structure over time. Social structures are therefore reproduced through human activity, while at the same time structuring and informing activity. Individuals apply their knowledge, available tools, facilities, and habits to structure their current action and in doing so, recursively instantiate and thus reconstitute the rules and resources that structure future social action (Orlikowski, 2000). Structured social practices are institutionalized or normalized when they become routinized over time and acknowledged as commonplace (Giddens & Dallmayr, 1982). However, a key component of the theory is that "the seed of change is there in every act which constitutes towards the reproduction of an 'ordered' form of social life" (Giddens, 1993, p. 108). As such, individuals always have the option to enact new practices in their activities defying structural perceptions and enacting innovation. Giddens theory describes the structural elements of social systems as a set of modalities which form resources mediating social activity. The modalities include: interpretive schemes, drawing on a subjects' knowledge, beliefs, and assumptions about learning as well as their perceptions of technology in aiding learning (Halperin, 2016); facilities, including technology, land, or infrastructure being employed; and norms, which include the common practices, protocols, and etiquette common for the social context (Aktaruzzaman & Plunkett, 2016).

The theory has been developed for use in information systems research most notably by DeSanctis and Poole (1994) and Orlikowski (2000). Specifically, these theories have been used to explore the relationships between information communication technologies and the individuals who use them in their practice. Orlikowski's (2000) work draws focus to how individuals, while interacting with technologies, enact practices and structures which shape their emergent and situated use of that technology. These practices "are not fixed or given, but constituted and reconstituted through the everyday, situated practice of particular users using particular technologies in particular circumstances" (Orlikowski, 2000, p. 425). Figure 1 provides a visual model of the enactment of technologies in practice as described by Orlikowski.

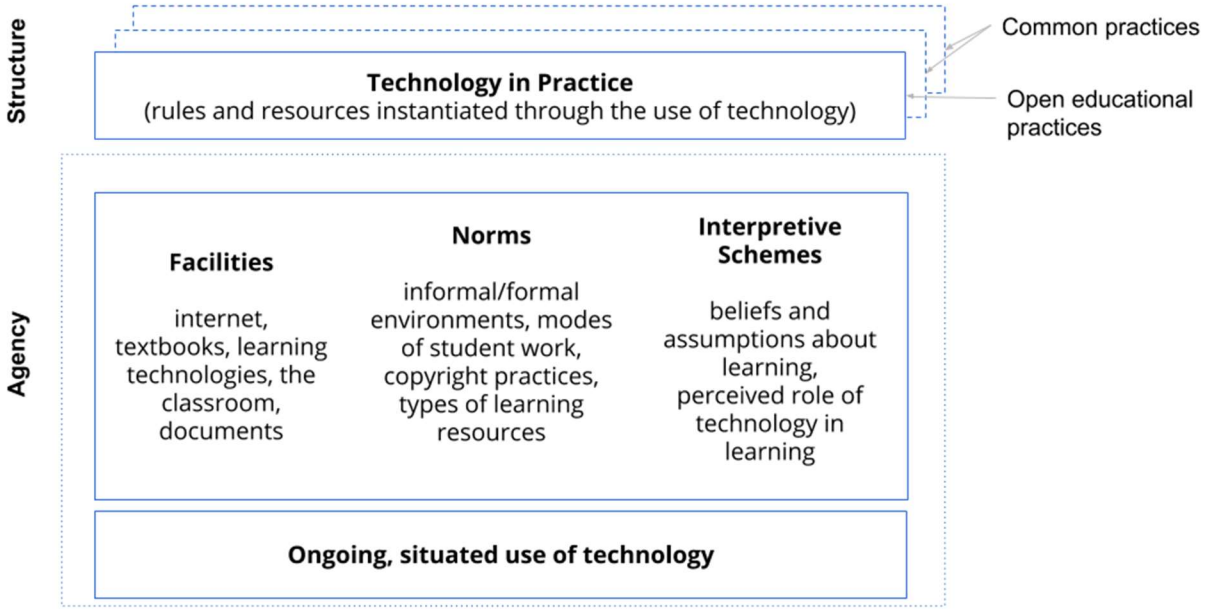
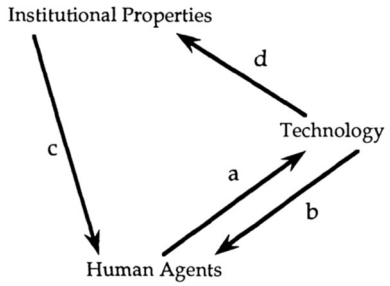


Figure 1. Technology use in practice. Adapted from *"*Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations*,"* by W. J. Orlikowski, 2000*,* Organization Science, 11(4), 404–428. Copyright 2000 The Institute for Operations Research and the Management Sciences.

Orlikowski's work is of interest as it seeks to understand the usage of technologies as continually socially and physically constructed, interpreted, and put into practice. Technology is "both the

product of human action as well as a medium for human action" (Orlikowski & Robey, 1991, p. 144). In an organizational context, the use of technology is intrinsically linked with institutional properties, rules and norms, as well as individual perceptions and knowledge (Halperin, 2016). Thus, institutional conditions influence and shape the ways in which individuals interact with technology, while those evolving interactions reshape the institutional properties of the organization over time. The factors which impact practices enacted using technologies within institutional structures are distilled in Figure *2*. The model situates technology as both a product and a medium of human activity, while recognizing the institutional conditions which impact technology use and the institutional consequences of interacting with technology.



ARROW	TYPE OF INFLUENCE	NATURE OF INFLUENCE
a	Technology as a Product of Human Action	Technology is an outcome of such human action as design, development, appropriation, and modification
b	Technology as a Medium of Human Action	Technology facilitates and constrains human action through the provision of interpretive schemes, facilities, and norms
c	Institutional Conditions of Interaction with Technology	Institutional Properties influence humans in their interaction with technology, for example, intentions, professional norms, state of the art in materials and knowledge, design standards, and available resources (time, money, skills)
d	Institutional Consequences of Interaction with Technology	Interaction with technology influences the institutional properties of an organization, through reinforcing or transforming structures of signification, domination, and legitimation

Figure 2. The structurational model of technology. Reprinted from "The Duality of Technology: Rethinking the Concept of Technology in Organizations," by W. J. Orlikowski, 1992, Organization Science, 3(3), 398–427. Copyright 2000 The Institute for Operations Research and the Management Sciences.

This study conceptualizes the uptake of OEP by educators with a structuration theory lens, and more specifically adopts a practice lens to investigate the use of technology to expand OEP. Structuration theory explores the dynamic relationship between structure and agency in understanding "the situated activities of human agents, reproduced across time and space"

(Giddens, 1986, p. 25). In the context of OEP, interpretative schemes may refer to the various subjective interpretations attached to instructional practice; facilities may refer to the infrastructure, support, technical hardware and software available; and norms may refer to common expectations of activities associated with instructional practice. Individuals use these technological frames to form their "understanding that members of a social group come to have of particular technological artifacts, and they include not only knowledge about the particular technology but also local understanding of specific uses in a given setting" (Orlikowski & Gash, 1994, p. 178). My interest is in exploring how open practitioners describe their practice, how they draw on resources available in higher education settings, and how they describe these as supporting OEP.

Scope of the Review of Literature

The literature review draws upon studies which detail the impact of openness on learning design and pedagogy. I used several methods to conduct my literature review beginning with Web of Science which was initially used to source literature in relation to the search terms 'open educational practice,' 'open education practice,' and 'open pedagogy.' The search was expanded to include the terms 'open educational resources' and 'open education,' however much of the research returned with these queries focused on resource provision. Additional queries were conducted using the University of Victoria library to scan the ERIC, JSTOR, ProQuest, and ScienceDirect databases. Google Scholar was also used to scan for additional literature. Citation tracing methods were further used to locate research cited within the works reviewed. The corpus of literature was then narrowed to focus on empirical research specifically focused on open education in relation to learning design and pedagogy. The available academic literature on OEP is emergent, although research on the impact of openness on pedagogy can be found in the

broader open education literature and has connections to the networked learning and Web 2.0 literature, which I include in this review.

Openness in Education

Peters and Deimann (2013) argue that openness in education has a long and diverse history. They suggest that openness is not driven solely by recent technological developments but represent a social, cultural, and economic phenomenon which have prompted universities to offer public lectures, open access universities, and flexible programming. Universities are increasing seeking to find ways of engaging with and contributing to society, especially in an age of knowledge enhanced by information and communication technologies (Duderstadt, 1997). Various technologies and tools have supported greater access to education, from the printing press, radio, television, and internet. More recently openness has been broadly defined as an approach to teaching and learning which embraces access, equity, and sharing as core values. The application of these values has been described by researchers to take on many forms including one's broad philosophy and approach to pedagogy from the perspective of access and equity (Kimmons, 2016) including the methods in which educational content and material are sourced, created, remixed, and shared (Fischer, Hilton, Robinson, & Wiley, 2015; Pitt, 2015; Jhangiani et al., 2016). This may also include the open sharing of pedagogical practices among educators (Petrides et al., 2011; Borthwick & Gallagher-Brett, 2014). On the other hand, openness has been framed as way to design learning experiences, engaging learners as active producers and stakeholder in the creation of knowledge (Masterman & Chan, 2015; Cronin, 2016; Masterman, 2016; Tur, Urbina, & Moreno, 2016; Wiley, 2016b) and enabling and broadening access to this knowledge into our communities (Carey, Davis, Ferreras, & Porter, 2015). Openness has a long history as a core value in higher education, and one can often see

aspects of this in university mission and vision statements. However, openness in education has garnered significant interest lately as a result of the affordances of the internet, the emergence of open copyright licenses, and open publishing tools. These technological changes have provided new ways of conceptualizing and enacting openness by supporting the sharing and collaboration of resources, sharing of teaching practices, and emerging ways of engaging openly online.

The Emergence of Open Educational Resources

The initial definition for OER was proposed at the UNESCO Forum on the Impact of Open Courseware for Higher Education in Developing Countries in 2002. This first definition of OER was described as "the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes." (UNESCO, 2002, p. 24). In the same year, Creative Commons licences were proposed which provided tools for creators of learning objects and digital educational resources to license their works for reuse by others (Plotkin, 2002). In keeping pace with advances in technology and a need for more clarity around the types of educational resources, which might be included considered OER and how they might be used, the definition for OER was further refined by Atkins, Brown, and Hammond (2007):

> 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 or repurposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge. (p. 4)

The emergence of open educational resources has been a major driver in the shift to more open education. The combination of advancing information and communication technology, open content licenses, and a culture of deliberate sharing in higher education has resulted in several institutional initiatives for sharing OER around the world, global networks of OER stakeholders, and international research projects.

More recently, several open textbook initiatives have emerged, which provide educators with a more familiar resource to adopt in their teaching. Many faculty and learners report that these textbooks are of high quality (Bliss et al., 2013; Jhangiani & Dastur, 2018; Ozdemir & Hendricks, 2017), do not negatively impact learning outcomes (Bliss et al., 2013; Colvard, Watson, & Park, 2018; Feldstein et al., 2012; Fischer et al., 2015; Jhangiani & Dastur, 2018; Ozdemir & Hendricks, 2017; Robinson et al., 2014), and invite freedom to adapt and revise as needed (Jhangiani & Dastur, 2018; Petrides et al., 2011; Pitt, 2015; Rolfe, 2017). In British Columbia, the BCcampus open textbook initiative has resulted in over 2000 textbook adoptions by 435 faculty, which equates to learners saving approximately 8-9 million dollars in textbook costs (BCcampus, 2018). B.C. was the first province in Canada to implement a provincially supported open textbook project and several additional provinces in Canada are now establishing their own projects (Bates, 2018a).

The Clark versus Kozma debate on educational media can be useful when considering OER adoption research. Clark (1994) delineated between ‘delivery technologies,’ those that influence the cost and access to education, and ‘design technologies,’ which include the practices and environments that enhance learning. He argued that the instructional strategy was far more significant than the type of medium being used. OER may be considered ‘delivery technologies’ which impact the cost and ways in which we access knowledge. Kozma (1994) argued that rather

than exploring how, or if, different forms of educational media impact learning, we investigate the ways in which we can use the capabilities and affordances of specific media to influence learning. In the research above, one must wonder if the design of the educational experience changed when the OER was introduced. If not, the researchers are simply investigating the impact of new 'delivery technologies' rather than those that impact the design of learning. Clark argued that where no significant difference exists in the learning outcomes between two forms of media, the least expensive solution is the obvious choice (Clark, 1994). It seems fairly obvious that both faculty and learners would choose an accessible and affordable text over an expensive one, where no significant difference exists in the quality of these resources.

Open textbook projects are important initiatives which have garnered interest from learners, faculty, policy makers, and governments. However, it has been argued elsewhere that many individuals now associate the open education movement in terms of open textbooks (Blomgren, 2018; Jung, Bauer, & Heaps, 2017). With a growing corpus of educational materials becoming available on the internet under open copyright licenses, a shift occurred from focusing on how do we encourage contributions to OER (Atkins et al., 2007; Stephen Downes, 2007), to questioning how and if content is getting used, what supports are needed, and how might it impact pedagogy (Conole, McAndrew, & Dimitriadis, 2011; Hatakka, 2009; Paskevicius & Hodgkinson-Williams, 2018; Petrides, Jimes, Middleton-Detzner, & Howell, 2010).

Defining Open Teaching and Learning Practices

For researchers interested in the ways in which openness is impacting teaching and learning practices of individuals, it has been suggested that "openness is the enemy of knowability" (Beetham, 2011, p. 7). This is due to the open, flexible, and unstandardized ways in which access and usage of OER occurs (Harley, 2008; Pulker & Calvi, 2013; Weller et al.,

2015). Researching the impact of openness on educational practices and outcomes represent an even greater challenge, as issues related to data protection combined with the nebulous nature of OER usage create a challenging landscape for conducting research (Weller et al., 2015). Consequently, a number of scholars have suggested more qualitative empirical research is needed to understand this phenomenon (Beetham et al., 2012; Borthwick & Gallagher-Brett, 2014; Camilleri, Ehlers, & Pawlowski, 2014; Pitt, 2015; Alison Littlejohn & Hood, 2016).

Open pedagogy, open educational practices, open teaching, or open practices, often used interchangeably, have been defined as "the next phase in OER development, which will see a shift from a focus on resources to a focus on OEP being a combination of open resources use and open learning architectures to transform learning" (Camilleri & Ehlers, 2011, p. 6). Open educational practices (OEP) have been defined as those teaching and learning practices enabled and supported by the open movement, either in making use of OER, engaging learners in openness, or making our professional practice more accessible. Scholars have suggested a movement towards OEP provides an impetus for innovative teaching and learning processes, resulting in new conceptualizations of the roles and practices of both educators and learners (Lane & McAndrew, 2010; Porter, 2013; Alison Littlejohn & Hood, 2016). In this way, engaging with open education may be a catalyst for pedagogical innovation in higher education, specifically for those not classically trained in pedagogy. Increased sharing of educational practices, enable faculty to access one another's pedagogical learning designs and approaches, providing greater diffusion of innovation.

Scholars have argued that research on openness should focus less on access to digital content, and more so on the impact of openness in supporting innovative educational practices (Jung et al., 2017; Kimmons, 2016; OPAL, 2011). By exploring a broader notion of openness in

education, we shift the focus to the practices that are possible and necessary when using that content (Deimann & Farrow, 2013). The shifting focus of discourses from OER towards open practices represents a positive advancement of the field, as this represents a change from developing and releasing OER content to researching their impact (Weller et al., 2015). As found with the costly learning object repository movement, educational technology initiatives should support and report on practices and processes rather than products alone (Friesen, 2009). Several definitions of OEP have been proposed in the literature and I have reviewed the definitions and conceptualisations which frame OEP around innovation in teaching and learning processes.

While some have suggested OEP are simply those teaching and learning practices which make use of OER, one of the founding documents on open education suggests a broader vision. The Cape Town Open Education Declaration (2007) suggests:

> open education is not limited to just open educational resources. It also draws upon open technologies that facilitate collaborative, flexible learning and the open sharing of teaching practices that empower educators to benefit from the best ideas of their colleagues. It may also grow to include new approaches to assessment, accreditation and collaborative learning (para. 4)

As previously mentioned, scholars have defined the impact of openness in education in various ways. In the field, the terms used to describe these practices vary, and include OEP, open educators, and open pedagogy. It would appear that open educational practices covers the most broad spectrum of an educators practice and may include engagement with open access research, open sharing or data, and open scholarship (Andrade et al., 2011; Banzato, 2012; Carey et al., 2015; Cronin, 2017; Hood & Littlejohn, 2017; Paskevicius, 2017; Rolfe, 2017; Stagg, 2014, 2017). Open pedagogy is more focused on the impact of openness on teaching and learning practice, essentially how we engage with learners (Hegarty, 2015; Hodgkinson-Williams &

Gray, 2009; Wiley, 2017). Wiley (2017) and then Wiley and Hilton (2018) offered the term OER-enabled pedagogy, describing the activities made possible when using OER. The term open educators has also been used to describe those that take up openness in various aspects of their teaching practice (Nascimbeni & Burgos, 2016). These studies and the interpretations of these terms are described in further detail below.

For the purposes of this study, the term OEP was used in framing the research questions, engaging with participants, and in the presentation of the research. Ultimately, the goal of the research was to investigate how faculty are bringing elements of openness into their practice, through their pedagogical designs, and in how they talk about using OEP to engage with students.

Definitions of Open Teaching and Learning Practices from the Literature

Hodgkinson-Williams and Gray (2009) perhaps the first to refer to open pedagogy in the context of open education, framed this as the opening up of educational processes largely due to new the availability of new information and communication technologies. **Error! Reference source not found.**Figure 3 provides a visual depiction of this model. The authors define OEP in terms of social, technical, legal, and financial openness, providing examples of each attribute on a spectrum of practice, from most closed to most open.

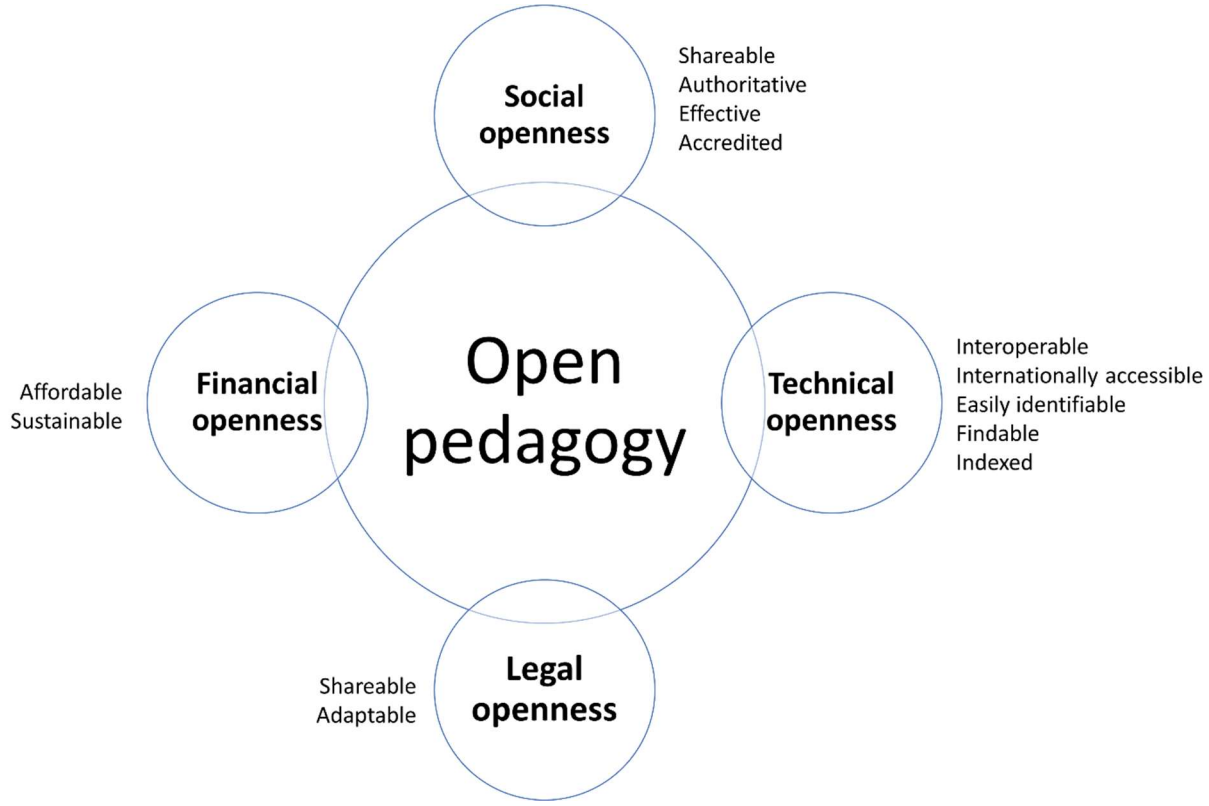


Figure 3. Degrees of openness model. Adapted from "Degrees of Openness: The Emergence of Open Educational Resources at the University of Cape Town ," by C. Hodgkinson-Williams, & E. Gray, 2009. *International Journal of Education and Development Using ICT, 5(5), 101–1.* Licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License.

Hodgkinson-Williams and Gray (2009) provide both suggestions for aspects of open pedagogy, and the elements that educators may use to define them, in an attempt to address the problem that the term open "hides a reef of complexity" (p. 101). The authors give examples of how one might engage with open pedagogy through the lens of: social openness, which may involve the use of shareable, authoritative, effective, or accredited knowledge resources; technical openness, which might include interoperable, internationally accessible, easily identifiable, findable, and indexed content; legal openness, which might include sharable and adaptable resources; and financial openness, which ensures affordable and sustainable usage and access.

Wiley proposed the 5R model to describe the affordances, practicalities, and possibilities of available to practitioners when working with OER (Wiley, 2014; Wiley, Bliss, & McEwen, 2014). This model, visually depicted in *Figure 4*, defines the way OER may be reused, revised, remixed, redistributed, and retained by both learners and educators in the process of teaching and learning.

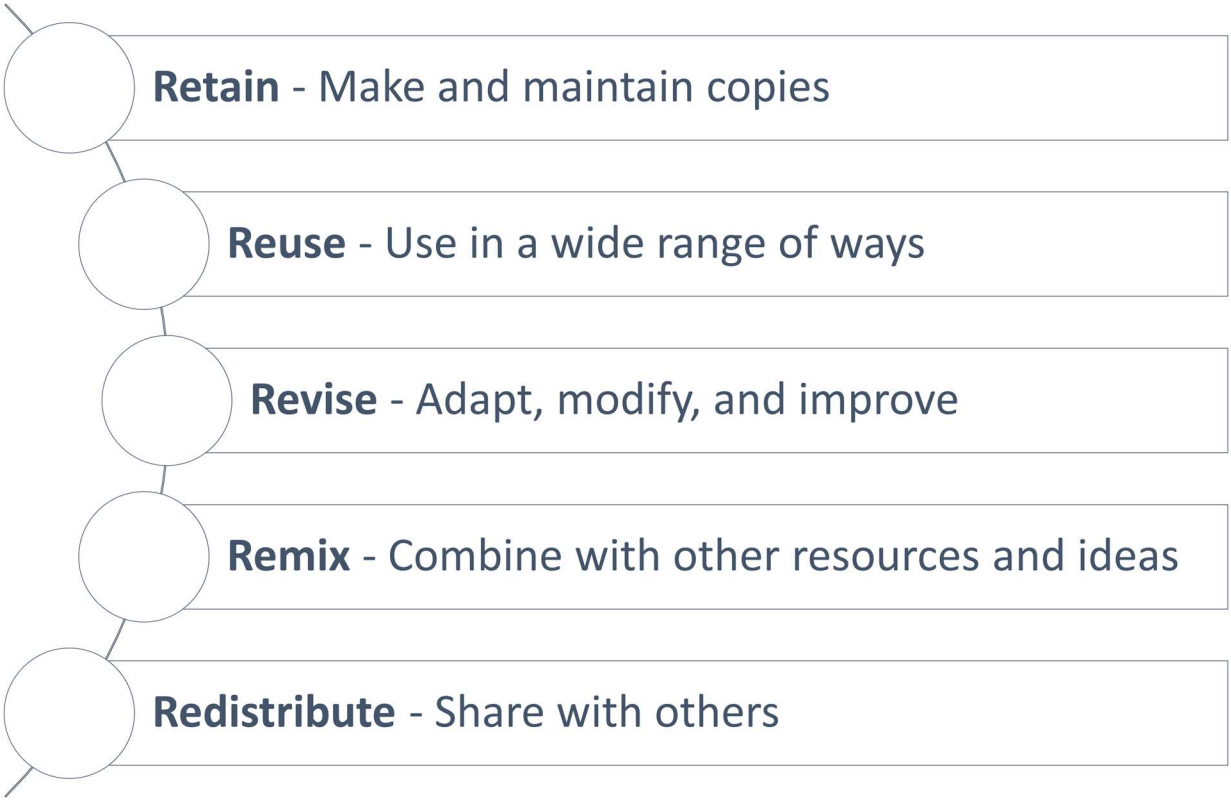


Figure 4. The 5R framework. Adapted from "Open Educational Resources: A Review of the Literature," by D. Wiley, T. J. Bliss, & M. McEwen, 2014. In J. M. Spector, M. D. Merrill, J. Elen, & M. J. Bishop (Eds.), *Handbook of Research on Educational Communications and Technology*. Copyright 2014 by Springer Science and Business Media.

Wiley more recently has defined OER-enabled pedagogy, a subset of open pedagogy, as "the set of teaching and learning practices only possible or practical when you have permission to engage in the 5R activities" (Wiley, 2017, para. 6). Wiley's model is an important contribution as it

helps to define how the affordances of open provide new possibilities for working with digital media, and this has implications for the design of learning. Openness increases the number of learners who can engage with resources by increasing access to educational resources. This means learners can more freely access the resources they need for their learning and that the broader public can access educational content on demand. Further, openness enables new pedagogical designs and approaches by allowing educators to consider ways in which learners may do things with open resources that were not possible, legal, or practical with other forms of learning material. Third, openness provides ways for learners to share their work more widely, creating opportunities for peer review, networking, indexing, and archiving (Wiley, 2016a). Wiley and Hilton (2018) hypothesize that OER-enabled pedagogy may lead to an increase in the quality of teaching and learning, by creating opportunity for learners to engage with knowledge resources in a more active way.

Stagg (2014) contributes a continuum model for OEP which ranges from awareness and access of OER, to sharing of one's own works as OER, passive remixing of OER, active remixing of OER, and finally learner engagement in the creation of OER. This model, represented in *Figure 5*, quite usefully depicts the common progression for practitioners when advancing their engagement with open pedagogy, from resource adoption, creation, remix, to engaging learners as open practitioners.

Figure 5. Continuum of open practice. Adapted from "OER adoption: a continuum for practice," by A. Stagg, 2014, *RUSC. Universities and Knowledge Society Journal, 11(3), 151*. Licensed under a Creative Commons Attribution 3.0 Spanish License.

This model suggests a trajectory of practice from basic awareness to learner engagement as creators of OER. The model is helpful to consider the trajectory of open practices but assumes that one must work through these practices to engage with learner co-creation.

Hegarty (2015) proposes eight attributes which describe the strategies and policies which encompass open pedagogy including participatory technology; people, openness, and trust; innovation and creativity; sharing ideas and resources; connected community; learner-generated; reflective practice; and peer review. See *Figure 6* for a visual depiction of the model.

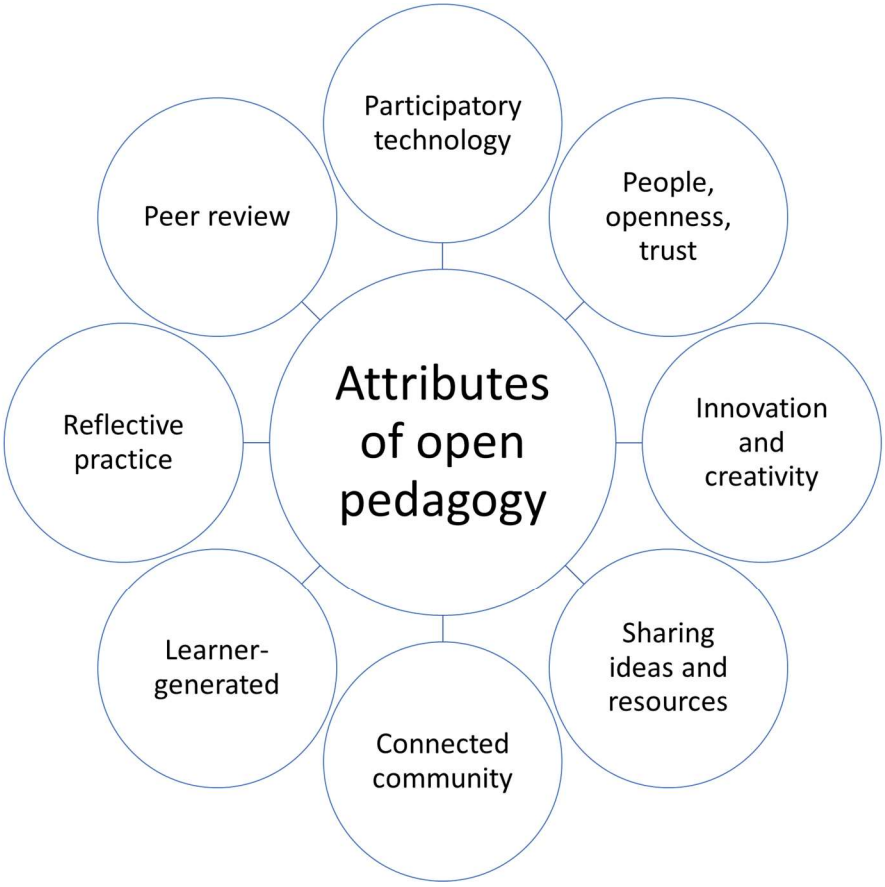


Figure 6. Attributes of open pedagogy. Adapted from "Attributes of Open Pedagogy: A Model for Using Open Educational Resources," by B. Hegarty, 2015, *Educational Technology, 4*. Copyright 2015 by Educational Technology Publications, Inc.

These attributes are broadly focused to provide guidance on the qualities and characteristics of OEP while not making specific recommendations for practice or providing practical guidance on how to design learning which might be considered OEP.

Nascimbeni and Burgos (2016) propose the term open educator, suggesting that openness can be applied in teaching and learning without the explicit use of OER. This is quite different from Wiley's OER-enabled pedagogy definition and suggests openness may be brought into teaching and learning without the explicit use of open resources. They posit:

> It is important to "disconnect" the concept of open teaching from the use of OER since many teachers are indeed using open methodologies in their classroom activities, for example by fostering co-creation of knowledge from students allowing them to enrich the course content with any complementary information they deem important. In our view, these teachers can be indeed considered Open Educators even if they do not use - and maybe do not even know the existence of - OER. (p. 7)

Their definition of the open education aims to describe more explicitly the learning design, pedagogical, and assessment activities a faculty member adopts. They suggest a series of attributes of an open educator who:

> Use(s) open approaches, when possible and appropriate, with the aim to remove all unnecessary barriers to learning. He/she works through an open online identity and relies on online social networking to enrich and implement his/her work, understanding that collaboration bears a responsibility towards the work of others. (Nascimbeni & Burgos, 2016, p. 4)

This definition advances towards defining the specific scholarly practices associated with OEP, further identifying activities such as course design, content creation, pedagogy, and assessment

design as areas for infusing OEP while providing a continuum of praxis from traditional approaches to OEP.

Hood and Littlejohn (2017) studied the types of knowledge higher education educators have to develop in order to adopt OEP. Drawing upon a theory of integrative pedagogies, the authors argue that educators require both knowledge about OEP, but also opportunities to apply that knowledge in the form of situated learning. In doing so, they develop self-regulative practices to further their expansion of OEP. Six types of knowledge categories emerged from their research, which include general conceptual and theoretical knowledge, specific conceptual and theoretical knowledge, practical experiential knowledge, self-regulative knowledge, community based socio-cultural knowledge, and workplace based socio-cultural knowledge. One could argue that learners would also need to develop this knowledge in order to be successfully engaged with OEP.

Others have described OEP in relation to learner activity specifically, and how it affords greater personalization, autonomy, and self-regulation on the part of learners (Ehlers, 2011; Kaatrakoski, Littlejohn, & Hood, 2017). OEP have also been defined as teaching and learning activities where both "resources are shared by making them openly available and pedagogical practices are employed which rely on social interaction, knowledge creation, peer learning, and shared learning practices" (Ehlers, 2013, p. 94).

Cronin (2017) found that educators who were actively engaging with OEP were driven to do so in order to foster the development of digital and network literacies, promote social learning, and challenge traditional teaching role expectations. As open practitioners, participants in the study continually negotiated privacy and openness at four levels: macro (global level), meso (community/network level), micro (individual level), and nano (interaction level).

Figure 7. Considering openness at four levels. Reprinted from "Openness and Praxis: Exploring the Use of Open Educational Practices in Higher Education," by C. Cronin, 2017, International Review of Research in Open and Distance Learning, 18(5). Licensed under a Creative Commons Attribution 4.0 International License.

Cronin's work focuses on open scholarship and the sharing practices of educators and learners as evidenced through the four-level model. The questions focus on faculty considering whether they will share, with whom, as whom, and what specific part of their work will be shared. This model contributes to an understanding of the ways in which faculty are engaging as open practitioners and could be further tested as a model for understanding learner's practices.

No single model for defining OEP has officially emerged, and few tend to explicitly acknowledge a history of related pedagogical research. While some argue that open practices in teaching and learning is dependent on the use of OER, others argue that we should abstract the term from OER completely, as many educators currently practice open learning designs in their classroom activities without creating or using OER. Is an awareness of OER a requirement or prerequisite for those engaging with OEP? Or can OEP be infused into learning design without the explicit use of OER? In the next section, I consider OEP using a learning design lens, to investigate how other researchers have presented openness in practice.

A Learning Design Model for Open Educational Practice

Open access to knowledge resources as well as open access to tools for building, curating, and sharing allow educators to engage with content and have learners engage with content in novel ways. This is evidenced through project such as the notable ChemWiki project at the University of California. The ChemWiki project challenge learners with actively creating knowledge during a course while simultaneously sharing those creations to build a knowledge resource which future learners can access (Allen et al., 2015). The learner-generated ChemWiki OER that has been created is now an assigned learning resource in Chemistry courses at ten different universities (Fell, 2015). Projects which challenge learners to work in the open, to create resources on the web, to build their own profile and portfolio, or to write collaboratively and engage in peer review, are also examples of OEP. Many examples of these types of learning designs can now be found in higher education (See, for example, Groom & Lamb, 2014); however, research on the educator and learner experience with these learning designs is limited.

A description of openness in teaching and learning, which more specifically addresses how faculty might make the shift from existing practices to open practices throughout all aspects of learning design, is needed. For the purposes of this research, a definition of OEP is articulated as:

> Teaching and learning practices through which openness is enacted in the design of learning outcomes, the selection of teaching resources, and the planning of activities and assessment. Open pedagogies involve both faculty and students using and creating OER, draw attention to the potential afforded by open licences, facilitate open peer review, and support participatory student-directed projects.

This definition is purposefully intended to align with the model of constructive alignment (Biggs, 1996) and provide logical pathways for faculty considering enacting OEP in their teaching and learning practices. Constructive alignment provides a framework to situate examples of OEP within a pedagogically sound model for the design of instructional practice. Figure *8* provides a visual model of the main themes of OEP drawn from the literature within the model of constructive alignment. For each of the elements of the model, examples are provided which may guide faculty towards how to consider OEP as part of their design or redesign process. For example, when designing assessment and evaluation activities, faculty may enact OEP by exploring ways in which they can engage students as producers of content, find ways to integrate peer review and assessment, promote student collaboration, and develop digital and network literacies. Additional examples may be developed to further enhance this model, however, this provides a starting point for faculty familiar with learning design, but not OEP, to conceptualize their practice.

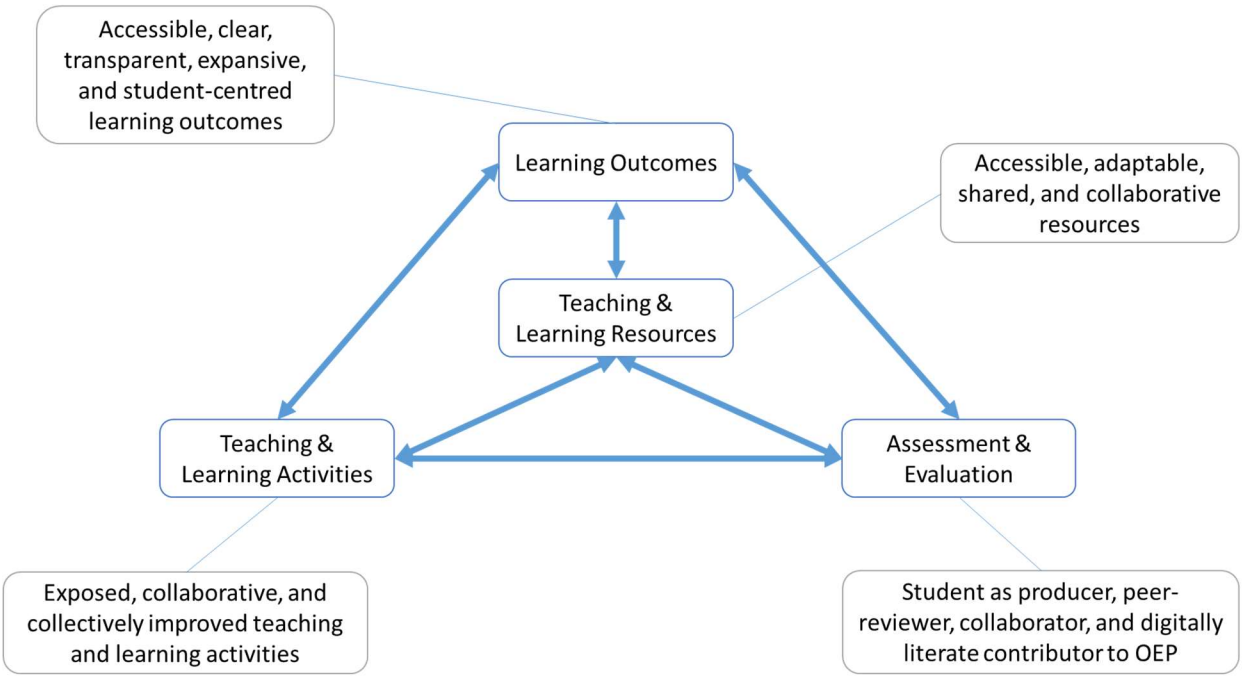


Figure 8. Aspects of OEP within the model of constructive alignment with themes drawn from the literature.

Previous research suggests there is a need to understand the potential for OEP to change educators' learning design practices (DeVries & Harrison, 2016). Others have suggested the need for concrete strategies, which provide examples for faculty to integrate open teaching and learning practices (Nascimbeni & Burgos, 2016). The proposed approach provides faculty with ways to think about building openness into the design of learning outcomes, selection of resources, planning of teaching activities, and design of assessment. This approach situates OEP within existing instructional practice, rather than taking the common optimistic view that openness alone is transformative and requires entirely novel pedagogical approaches (Masterman & Chan, 2015). Biggs' (1996) model of constructive alignment provides a framework to guide impactful instructional design and practice. The model suggests an ideal synergy between the intended learning outcomes, teaching and learning activities which meet those outcomes, and

assessment and evaluation which demonstrate the achievement of the outcomes. Inherent in the model is a constructivist approach to learning in which learners create and construct meaning by engaging in learning activities, rather than having knowledge transmitted to them by faculty (Biggs, 2003). Supporting this process are the knowledge resources which faculty select to support the development of strong outcomes, provide sources for teaching and learning activities, or sources for assessment and evaluation. When these elements of pedagogical practice are well aligned, studies have shown that learners are more likely to adopt approaches to learning which result in meaningful learning (Wang, Su, Cheung, Wong, & Kwong, 2013). Thus, learners have a clear understanding of the outcomes, see their relation to teaching and learning activities, and are better able to plan for and achieve success during assessment (Beetham et al., 2012).

The framework of constructive alignment provides a lens for conceptualizing the integration of OEP in a deliberate way. Previous studies have shown that faculty tend to pick and choose aspects of OEP which might fit their existing pedagogical approaches (Beetham et al., 2012) or apply a "bolt-on" approach to design which foregrounds the addition of technology over the consideration of how that integration contributes to meaningful pedagogy (Lyons, Hannon, & Macken, 2014). Considering OEP within a framework which supports pedagogically sound instructional design practices makes it more straightforward to identify specific, relevant, roles for integrating OER and enacting OEP (Masterman, 2016). An analysis of the literature on OEP follows considering these four core elements of constructive alignment.

Learning outcomes

According to Biggs, "teachers need to be clear about what they want their students to learn, and how they would manifest that learning in terms of 'performances of understanding'" (Biggs, 1996, p. 360). Learning outcomes provide a description of the intended knowledge,

attributes, and skills of a successful learner. Ensuring clearly articulated learning outcomes are made explicit and openly accessible to learners, thereby helping them to understand what is needed for success, may be a simple way to enact OEP. While this may seem a logical activity, some scholars have suggested that the deliberate articulation of aligned learning outcomes are often not fully considered or communicated (Blumberg, 2009).

Learning outcomes may further be made openly accessible as OER, so that learners have a better sense of the goals of a course prior to enrolling. Increasing the transparency and accessibility of the curriculum also has benefits at the departmental and program level, potentially creating greater alignment of courses within an academic program (Lam & Tsui, 2016). The process of sharing and aligning course and program learning outcomes among faculty has also been shown to positively impact collaboration and collegiality (Uchiyama & Radin, 2009; Petrides et al., 2011). Exposing learning outcomes also provides an opportunity for those who cannot enroll, to at least see what they would be expected to know and be able to seek out learning activities to complete them.

Ehlers (2011) articulated a spectrum of open and flexible practices which relate strongly to the design of more open learning outcomes. Low degrees of openness are reflected in learning outcomes where transmission and reproduction of knowledge is the intended goal. Medium degrees of openness might be said to exist when learning outcomes are predetermined, but the pedagogy is flexible, and learners are actively involved in collective dialogue. High degrees of openness would involve co-creation of the learning outcomes, objectives, and methods by learners. Moving towards the high end of the spectrum for designing learning outcomes allows for greater personalization, autonomy, and self-regulation on the part of learners (Ehlers, 2011; Kaatrakoski et al., 2017). Largely, this is about engaging learners as partners in learning and

fostering constructivist learning design approaches which involve students as active learners. The research of Hipkins (2012) and Reeve, Jang, Carrell, Jeon, and Barch (2004) further support the involvement of learners in contributing to the formation of learning outcomes, which were found to support personalization, autonomy, and increased learner engagement. The move towards more open learning outcomes shifts the role of the faculty member from transmitter of knowledge to facilitator of learning. There are clear synergies here in the higher education literature and the K-12 open-inquiry movement, which prioritize student interest, free-inquiry, and personalized learning paths (MacKenzie, 2016). Designing learning in this way, largely builds upon the notion of constructivist and social-constructivist learning, by prioritizing the activities and meaning making of the learner in a social context. Emerging technologies can support and enable social constructivist pedagogies by presenting and sharing learner work in real-time, allowing for formative feedback, peer review, and community-engaged work.

While learning outcomes have not been largely ascribed as OER, it has been argued that they represent educational artefacts worth sharing, improving, and reusing (Ehlers, 2011). De los Arcos, Farrow, Perryman, Pitt, and Weller (2014) found that OER that included associated learning outcomes were more likely to be used by both self-directed learners and educators seeking resources for their own practice. Conole (2013) further suggests the use and sharing of visualizations such as ‘learning outcome maps’ which explicitly link intended learning outcomes, activities, resources, and assessment in a visual way. Providing access to these visualized learning designs ensure learners know how to be successful and helps expose the instructional design and representative pedagogy to other educators (Conole & Culver, 2010).

Learning resources

The selection, adaptation, and creation of learning resources support most aspects of learning design when the learning outcomes, assessment designs, and teaching strategies are shared among educators and learners. Despite the increased availability of openly licensed resources, commercially developed resources are still dominant in higher education (Allen & Seaman, 2016). Many students still remain unaware of the potential for using, repurposing, and contributing to open resources in legally appropriate ways (Czerniewicz, 2016). Commercially developed educational resources limit the possibilities for teaching and learning due to their physical and digital affordances. For example, it is not always possible to customize or adapt a commercially developed text. When in an electronic format, educators and learners may also not be able to work easily with the text and in some cases, will only be able to access the textbook through the publishers' web portal. While it may be technically possible to work around some of these limitations, this may not be in accordance with most copyright laws around the world. Where a digital copy of a textbook is available from a publisher, it is often locked into a proprietary format with digital rights protection (DRM), which provides access for a limited timeframe, and under restrictive copyright (Wiley, 2014). This significantly limits what both faculty and learners can do with their learning resources.

In contrast, OER offer significant financial, legal, and technical freedoms. Several empirical studies have been conducted to assess educators' engagement and use of OER. Faculty widely recognize the cost savings for learners in assigning OER and evidence of increased performance and satisfaction are emerging (Pitt, 2015; Weller et al., 2015). While previous research suggests that, in comparison to the use of traditional texts, the usage of OER does not adversely impact existing learning outcomes (Robinson et al., 2014; Fischer et al., 2015; Jhangiani et al., 2016). Yet still, faculty continue to cite the challenges of locating relevant, high

quality, and topical resources in their subject area as a significant barrier to adopting OER (De Los Arcos et al., 2014; Allen & Seaman, 2016).

Despite the challenges cited, there is a vast quantity of OER now available on the internet. Resources, many of which could be considered educational, licensed with Creative Commons have surpassed a billion, tripling in volume over the last five years. Creative Commons speculates that over 76,000 of those resources are OER; 1.4 million research papers; 46 million articles, stories, books, or documents; and over 400 million encompass other forms of media including audio, images, or video (Merkley, 2015). These resources may be compiled: into other educational resources for use in the classroom; for developing online learning materials (Beaven, 2013); as sources of inspiration (Borthwick & Gallagher-Brett, 2014; Weller et al., 2015); or for engaging learners in creative projects (Tur et al., 2016). More theoretical research is needed on the time, effort, and literacies needed to conduct these activities as well as their impacts on pedagogy (Beetham et al., 2012; Jhangiani et al., 2016; Alison Littlejohn & Hood, 2016).

Faculty's adoption of OER also has a secondary impact on learners, in that it may be their first exposure to open education, open licensing, and non-commercial sources of knowledge. Acknowledging and sharing that these resources have been collaboratively created through open education can have an impact on learners' own knowledge practices (Carey et al., 2015). Not only do these practices make the activities in higher education more relevant in modern society but they also foster the development of valuable literacies for learners entering the workforce (Royle, Stager, & Traxler, 2014).

Teaching and learning activities

The availability of OER has been frequently cited as a way for faculty to find inspiration for their own teaching and learning activities (Petrides et al., 2011; De Los Arcos et al., 2014; Jhangiani et al., 2016; Kimmons, 2016). Further, this exposure to practice can create opportunities for the collaborative development of learning resources and designs (Masterman & Wild, 2011; Petrides, Jimes, Middleton-Detzner, Walling, & Weiss, 2011).

Many faculty initially access OER to explore discipline specific pedagogical approaches and resources with the intent of enhancing their practice (De Los Arcos et al., 2014; Weller et al., 2015; Jhangiani et al., 2016). By seeking teaching and learning activities which are more openly accessible, faculty may review strategies relevant in or beyond their discipline, discovering new ways to introduce concepts or design teaching and learning activities (Beaven, 2013). Petrides et al. (2011) reported that faculty were able to build upon and adapt OER to enhance their own courses. Faculty noted that OER provides ideas for teaching activities in the classroom and resources, which can be used to design more interactive learning experiences (Petrides et al., 2011). Engagement with OER has also been found to stimulate critical reflection in faculty leading to the reconsideration of existing teaching and learning activities (Beetham et al., 2012; McGill, Falconer, Dempster, Littlejohn, & Beetham, 2013).

Much like sourcing OER, faculty report that finding appropriate resources and integrating new activities in their curriculum is time consuming (Petrides et al., 2011). Furthermore, knowing where to find resources is still reported to be one of the biggest challenges to using OER (De Los Arcos et al., 2014; Allen & Seaman, 2016). Professional development programs can be helpful in bringing faculty together to take time to share and explore practice (Borthwick & Gallagher-Brett, 2014; Kimmons, 2016). Further, promoting openness at the institutional level can support capacity building and collaboration on curriculum development within departments

(Lyons et al., 2014; Karunanayaka, Naidu, Rajendra, & Ratnayake, 2015). Faculty may gradually gravitate towards more OEP as they engage with and review further OER. Pitt (2015) reported that 25% of faculty who had engaged with OER reported changing their pedagogical approaches based on this exposure. Further research is needed to determine if engagement with OER leads to the development of OEP.

Assessment and evaluation

A constructivist view of learning emphasizes the “centrality of the learner's activities in creating meaning” (Biggs, 1996, p. 347). In conducting assessment where learners are tasked with active participation and production of knowledge, learners work towards becoming a producer rather than a consumer of knowledge (Neary & Winn, 2009). As the seminal educational theorist Paulo Freire has stated: "to teach is not to transfer knowledge but to create the possibilities for the production or construction of knowledge" (Freire, 1998, p. 30). In doing so, learners are tasked with greater autonomy and must take responsibility for their own learning (Ossiannilsson & Creelman, 2011). This may be interpreted as a risky venture for faculty concerned about learners, who are uncomfortable with less traditional teaching methods and whose professional performance evaluation is based on learner feedback (Dohn, 2009; Ossiannilsson & Creelman, 2011; Gray et al., 2012). The shift to more emerging forms of open assessment require educators to cede control they traditionally would have had over assessment (Chiappe, Pinto, & Arias, 2016). Conversely, it has been argued that OEP may be a way to bridge the formal/informal learning divide in higher education (Cronin, 2016).

While introducing learners to OER and OEP, researchers have found that learners generally hold positive attitudes around the possibilities these practices offer (Tur et al., 2016). Dohn (2009) surfaces several challenges related to learner’s perceptions around knowledge,

learning, and the goals of the practice implicit in more open forms of assessment. Engaging learners in OEP requires a change of orientation around issues such as "authorship, copyright, knowledge production, and expertise […] enabled by the distributed authorship, the renouncement of copyright, and the acceptance of one's text being edited and transformed by later coauthors" (Dohn, 2009, p. 344).

Some scholars suggest that faculty should be encouraged to design assignments which involve learners in the creation and adaptation of OER (Jhangiani et al., 2016). Engaging learners in the production of OER levels the faculty-learner relationship by engaging learners as co-producers of knowledge (Masterman, 2016). Faculty in Masterman's (2016) study reported that engaging learners with OEP supported the development of communication, analytical, and problem solving skills. Hodgkinson-Williams and Paskevicius (2012b) study investigated learners' development of agency as they engaged in the development of OER in collaboration with faculty. This collaboration resulted in the development of learners' digital and network literacies while preserving the time that faculty would have had to invest in reworking and distributing their own existing materials as OER. Involving learners in the production of OER allowed learners to practice developing digital and network literacies using both informal and formal tools and learning environments. Learners developed creative agency as they worked, initially removing unnecessary details or addressing copyrighted concerns, then questioning the pedagogic design and presentation of the materials. This feedback was presented to faculty and the team worked together to address technical and pedagogical issues.

Downes (2010) argues that those benefiting most from OER are the people who are producing the resources. This argument is reinforced in Littlejohn and Hood's (2016) study which investigates how individuals learn and construct knowledge through the creation,

adaptation, and reuse of OER. In engaging with and sharing OER, individuals promote their own work, teaching, and research processes. Further, contributors to OER may engage with and form networks around the resources they create, collecting feedback and reviews to further improve their work. Following Downes' argument, engaging learners as contributors and creators of OER as part of assessment could lead to benefits for the learner in terms of promoting their own creative work, forging connections, and building their own portfolio.

The learning management systems (LMS), has become a common tool for engaging with learners in higher education, with nearly all higher education institutions having at least one available (Pomerantz & Brooks, 2017). Learners most often produce works, which are submitted via these closed environments, then reviewed only by the faculty member who provides feedback and a grade. Consequently, much of the work learners produce within technology enabled learning environments in higher education remains invisible to their peers, wider institution, local community, or the world. Naturally, this is appropriate for many instances of assessment, for example sensitive reflections or early formative work. Moreover, learners may find themselves uncomfortable sharing openly, so flexibility and sensitivities to this should be accommodated (Masterman & Wild, 2011). However, learners may be provided with encouragement, opportunities, and literacies which empower them to share their work more widely if appropriate. In doing so, we equip them with the literacies of purposeful searching, curation of their own works, understanding of open licenses, and ways of using OER in their professional lives (Masterman & Wild, 2011). Figure 9 provides a graphical spectrum displaying how we might incrementally engage learners with open practice derived from my reading of the literature. This can be fostered by promoting openness by design, thereby supporting learners

with appropriately sourcing, citing, linking, and embedding resources when creating learning and knowledge resources.

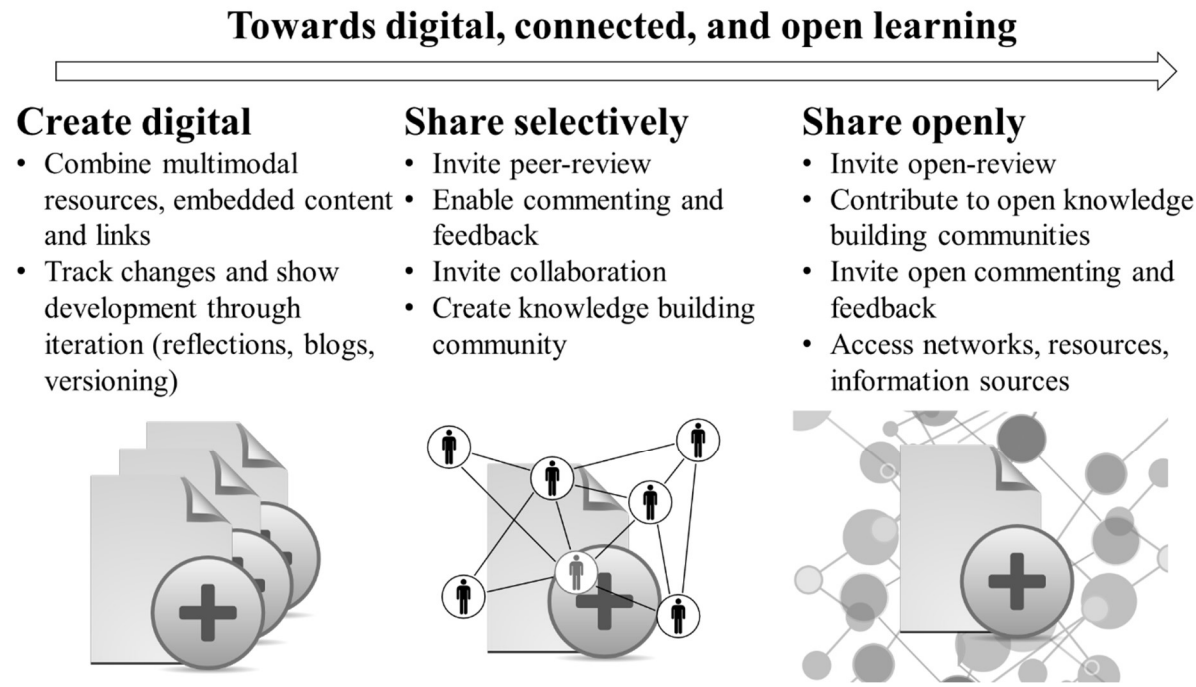


Figure 9. Towards digital, connected, and open learning.

An incremental move towards digital, connected, and open learning begins with the creation of digital works. This is common practice today as many learner works are created electronically. Digital knowledge resources can be enhanced through the integration of multimodal linked content and an ability to track changes and capture the development of work. When these materials are shared locally with peers, there is an opportunity for peer review, commenting and feedback, an opportunity for collaboration, and the building of knowledge and interest-driven communities. When works are shared even more widely beyond the class community, there exists an opportunity to engage community, gather community feedback, and interaction and contribute to open knowledge networks.

In some cases, it may be quite appropriate that resources created by learners during the process of their learning should be accessed by future students. By doing so, we enable incoming learners to build on the work of their peers. An example may be found with community outreach projects; providing learners with access to the work previously done in the community fosters the collective and collaborative advancement of a community outreach project. Making learner contributions openly available "is seen by educators as an important factor for improving teaching and learning and for creating more open and participatory cultures" (Alevizou, 2012, p. 11). Work shared openly invites review, comment, refinement, network formation, and potential opportunities for collaboration. "When work is done privately – when it is carefully hidden from the public – no synergy is possible. When the individual nodes remain disconnected, no network can emerge" (Wiley, 2016b, para. 18). Increasingly examples of the benefits of open and networked learning can be found in the development of online portfolios, social networks, and personal websites which showcase academic works developed through the course of study.

When exploring openness in relation to assessment and evaluation, some faculty have expressed concern this may lead to learners plagiarising open versions of previous work or sourcing content from the web in academically inappropriate ways (Glud, Buus, Ryberg, Georgsen, & Davidsen, 2010; Waycott et al., 2010). While this does become possible with more open methods of assessment and evaluation, it may be managed through alternative learning designs which challenge learners to build upon, critique, or evaluate previous learners work and adhere to explicit attribution and citation inherent in the practice. A core feature of OER is the practice of attribution and explicitly labelled terms of use as defined by the permissions embedded in open licences. Developing literacies around how to interpret open licenses, build upon open sources of knowledge, attribute authorship, and appropriately provide links back to

the source are valuable for working on the open web and in developing creative works. In doing so, learners may further develop an understanding of how adopting open licenses for their own works might enable the creative process of others, further developing open knowledge.

Conversely, faculty have voiced concern about learners creating inaccurate resources and a need for quality control of learner-generated OER, especially if it is going to be shared publicly (Masterman & Chan, 2015). Peer review and assessment of these works may help alleviate some of these issues. However, these are valid operational issues for enacting OEP around assessment and can be addressed through the thoughtful design and alignment of the assessments to the learning outcomes. Further research is needed to better understand how engaging learners with OEP as part of assessment impacts their knowledge creation processes and practices around institutional branding as well as personal branding via the digital footprint created by learners.

Outstanding Issues Related to OEP Learning Design

Several researchers have suggested that engagement with OEP has the potential to transform educational practices by shifting roles and relationships among faculty, between faculty and learners, and between faculty and organizations (Ehlers, 2011; McGill et al., 2013; Masterman, 2016). When considering instructional practice, these changes show "potential to flatten the traditional hierarchy and change the balance of power in learner/teacher relationships" (McGill et al., 2013, p. 7). The potential for increasing accessibility and promoting the sharing of learning outcomes, resources, activities, and assessment designs among faculty, as well as engaging learners as design stakeholders, represents an opportunity to collectively contribute to educational practice, within and across disciplines.

Despite the opportunities presented through this new landscape of OEP, many in higher education operate largely as they did in the past (Bates, 2018; Brooks & Pomerantz, 2017;

McGoldrick, Watts, & Economou, 2015; Pomerantz & Brooks, 2017). Faculty's teaching practices are largely forged through their own experiences, personal characteristics, their perceptions of the institutional culture, and organizational factors which shape the way they design and teach (Oleson & Hora, 2014). Both leadership and professional development are needed to support a shift to OEP. It has been suggested that educational leadership should embrace "openness as a core organizational value if [they] desire to both remain relevant to its learners and to contribute to the positive advancement of the field of higher education" (Wiley & Hilton III, 2009, p. 1). Further recommendations have been made to embed support for engaging with openness as part of the institutional mission (Masterman & Chan, 2015). In many ways, the ethos of higher education is closely aligned to the open education movement, however, it is often not made explicit or done in a coordinated way. For Lerman, Miyagawa, and Margulies (2008) "open sharing of knowledge is at the heart of the academic process. For many faculty, it is an intrinsic value, convincingly demonstrated in their teaching and research" (2008, p. 214). Willinsky (2014) argues that by opening access to the teaching, learning, and research processes which occur in universities, we promote the possibility for unintended lessons and unexpected interests among new groups of individuals in society. Willinsky has also suggested "the means of communication should be held by the public, the very basis of how we connect should be a public utility" (Willinsky, 2015, 11:01). Openness is a way of engaging with our communities, offering a window into the activities happening on our campuses while inviting broader access and participation from individuals, who might not have traditionally had contact with the institution (McGill et al., 2013; Willinsky, 2014).

If OEP require learners to be more active producers of openly accessible knowledge, their perceptions are also crucial to understand, as "teachers who use OER [in this way] instead of

lecturing risk being seen as 'not real teachers'" (Ossiannilsson & Creelman, 2011, p. 376). While the literature suggests that OEP supports greater learner-centred inquiry, this may not exclusively be the case, as engaging with learner-centred inquiry projects can certainly occur with an absence of OEP. Opportunities to open up the classroom have existed for years, as faculty may invite experts and mentors into the classroom or plan opportunities for connections in the field, but all in a closed way which fails to capture and share these activities. OEP promotes and encourages learners to share their work openly, allowing learners to share their inquiry projects to a wider community. The pedagogical value of a move towards OEP is that it can provide space for and foster dialogue, co-creation, and participatory learning, deconstructing the teacher-learner binary by increasing access and inviting participatory learning (Morris & Strommel, 2014). OEP increases the potential for access and participation from those beyond the classroom community. The increased access afforded through OEP can help learners grow their personal social network, develop stronger ties with community, and present opportunities for collaboration. Further, by engaging learners in this way, faculty may enable and inspire learners to recognize their role in the active creation and curation of knowledge and exercise ways of contributing to and sharing knowledge using open technologies. Research is needed to better understand the experience of faculty as they move towards the use of OEP, the subsequent impact for learners being engaged in this way, and if adopting OEP contributes to shifting the dominant model of teacher-centred education. It has been argued that many of the teaching and learning activities, which still prevail, involve an educator mediating an authoritative learning resource, requiring learners to study and reproduce it (Geser, 2007; McAndrew, Scanlon, & Clow, 2010).

Engaging learners with OEP may contribute to the development of digital and technical literacies for working in the information age. Despite the increased availability and breadth of available OER, learners report limited awareness of what this means and how to locate these resources (Czerniewicz, 2016). More research is needed into how engaging learners with OEP might impact their own personal knowledge and creative practices (Carey et al., 2015). Engaging learners with OEP may motivate learners to become engaged in the learning process by involving them as contributors, collaborators, partners, knowledge creators, and reviewers, which can lead to enhanced learning experiences (Nel, 2017). Learners may further benefit from the opportunity for peer review, assessment, and feedback enabled by the integration of OEP into assessment design. By inviting learners to make selections of their work more visible to their peers and the wider public we present opportunities for community engagement, network formation, and experiential learning.

Another significant challenge for educators considering OEP learning design involves learner privacy and data protection. Within British Columbia, the Freedom of Information and Protection of Privacy Act (FIPPA, 1993) applies to all publicly-funded educational institutions. FIPPA provides a legal framework governing the activities of all public post-secondary employees, with a goal of protecting the privacy of learner's personal information. More specifically, FIPPA provides guidance on engaging with learning activities that require learners to use web services which store data and information in the United States. This includes a mandate to not require the use of services which host user data outside of Canada, specifically if that data includes personal identifiable information. For faculty, this extends to how they design teaching and learning, when considering cloud services and computing as a teaching strategy. The use of cloud services is still possible, but only after providing information and gaining

consent from learners to raise their awareness of potential risks and the identification of an alternative, should a learner not wish to engage in this way. Alternative strategies may include the use of a pseudonym when setting up accounts, thereby allowing learners options for maintaining their privacy. At a time where individuals regularly interact with cloud services and information privacy policies are often skimmed or not reviewed thoroughly, FIPPA provides an opportunity to review and raise awareness to the risks and benefits of using these cloud-based services (Steinfeld, 2016).

A remaining challenge is higher education's entrenched relationship with closed systems and copyright enforced content. Most higher education institutions have invested in some form of LMS, a toolset characterized by its closed, rigid, over functioned, and inflexible nature (Broekman, Hall, Byfield, Hides, & Worthington, 2014). Many faculty gravitate towards using the LMS as a consequence of its availability (Bennett, Dawson, Bearman, Molloy, & Boud, 2016). The physical and digital boundaries created by these environments determine available pedagogies (Lane, 2009; Dron, 2016). Porter (2013) suggests that the rigid technical frameworks, which the LMS typically employs may act as a barrier to the creation and use of OER. Therefore, tools which explicitly support OEP should also be considered as part of the institutional offering. This is the case at many universities, where either the LMS offers an opportunity to share resources openly, or open publishing systems such as Open Journal Systems (OJS) or Wordpress are available for teaching and learning. New forms of networked and open technologies are becoming more common in higher education, and providing opportunities to enact flexible pedagogies which promote learner agency, autonomy, and self-regulation (Evans, Muijs, & Tomlinson, 2015; Kaatrakoski et al., 2017). Yet faculty, especially those at research intensive universities where, overall, research may be prioritized over teaching, innovation in teaching

requires incentives, including professional development to support the use innovative pedagogies and technologies in teaching and learning (Fung & Gordon, 2016; Hénard & Roseveare, 2012).

The literacies and competencies which support more open practices are not nurtured simply by learning about, using, and interacting with OER. Engagement with OEP creates an opportunity to return to the design stage and consider the affordances that openness provides. Constructive pedagogical approaches that are valued in teaching and learning are not only enabled, but also amplified in a course with an open learning design, as the community outreach and tools available for construction are significant. Integrating openness into learning design represents a reframing of pedagogical approaches, by encouraging the open sharing of student work, the forging of community connections, and peer review. Professional development is needed to become equipped with the skills necessary to effectively leverage OER and, therefore, take on OEP for enhancing pedagogy (Petrides et al., 2011). This is also true for learners, who may not have previously engaged with OEP (Ross, 2012). Allocating time to develop literacies in OEP as well as time to work with colleagues to develop and share practices are cited as significantly important considerations for fostering OEP (Kimmons, 2016). Faculty highly value time to collaborate with other teaching professionals and generate opportunities for open and shared practice (Petrides et al., 2011; Lyons et al., 2014; Karunanayaka et al., 2015; Masterman & Chan, 2015; Kimmons, 2016). Engaging faculty with professional development opportunities around OEP are noted as essential elements to increasing engagement with OEP (Borthwick & Gallagher-Brett, 2014; Kimmons, 2016).

The Promise of OEP Learning Designs

The literature on the impact of OEP thus far suggests three key themes for further investigation during my research. These include the development of new learning designs which

are afforded by the open nature of resources, networks, and the internet; opportunities for the increased personalization, autonomy, and self-regulation of learning; and OEP as a way of engaging our communities in an enhanced way. These themes are summarized in Figure 10.

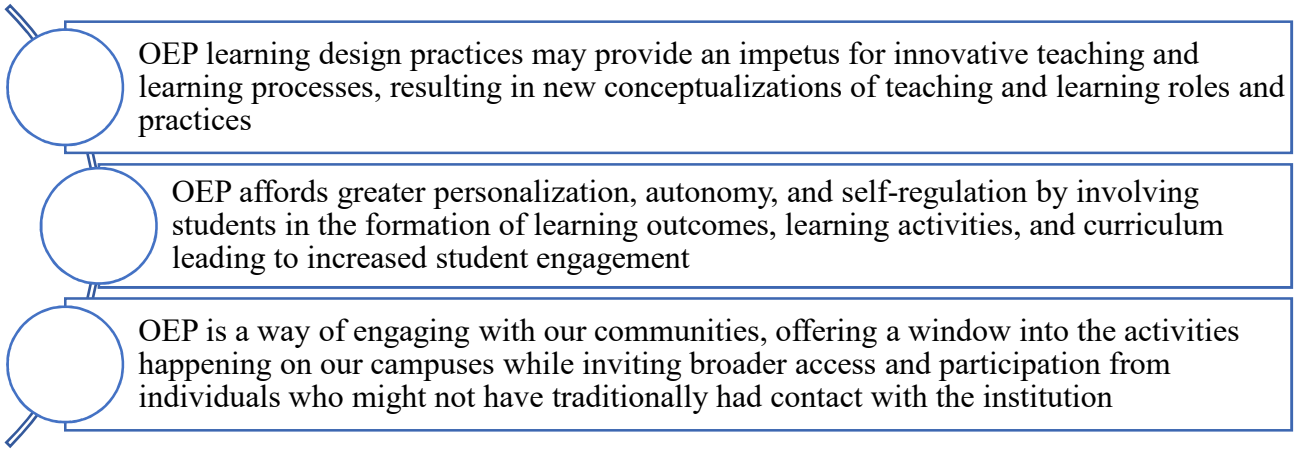


Figure 10. Potential impacts of OEP as defined in the literature.

Despite the opportunities presented through this new landscape of openness, research suggests that many in higher education operate largely as they did in the past (McGoldrick et al., 2015). It has been argued that support for OEP should be deliberately built into the academic plans of higher education institutions and in doing so benefit institutional strategies for excellence in teaching and learning (Carey et al., 2015; Jhangiani et al., 2016). Without naming OER or OEP specifically, many academic plans seem to already align tightly with the core principles, which commonly include innovative teaching, enhanced learning, and community engagement.

Engaging learners with openness can advance the competences, knowledge, and skills needed to participate successfully within the political, economic, social, and cultural realms of a more open society (Geser, 2007; McAndrew et al., 2010). For those educators taking on OEP as part of their teaching, a greater understanding of the issues, challenges, and necessary supports is

needed (Beetham et al., 2012; Borthwick & Gallagher-Brett, 2014; Camilleri et al., 2014; Alison Littlejohn & Hood, 2016; Pitt, 2015). There remains a gap in the literature in understanding how educators implement OEP in their daily practice (Cronin, 2016; Czerniewicz, Deacon, Glover, & Walji, 2016; Nascimbeni & Burgos, 2016).

Still others explore openness as a way of engaging with our communities, offering a window into the activities happening on our campuses while inviting broader access and participation from individuals who might not traditionally have had contact with the institution (McGill et al., 2013; Willinsky, 2014). Community engagement is largely considered part of scholarship and the responsibility of a faculty member (Boyer, 1997). Engaging the community openly promotes the activities in higher education to society at large and also models valuable literacies for learners entering the workforce (Royle et al., 2014).

OEP and Networked Learning

Engaging learners with OEP requires that they practice disciplinary knowledge, knowledge of design and process, open sharing and collaboration, as well as knowledge about copyrights, privacy, safety, and consent. Some of these practices and literacies may be new to learners and represent a challenge. As noted by Kapitzke, Dezuanni, and Iyer (2011), engaging learners with openness may expand the scope of their work but it is not regarded as any more or less efficient than other forms of learner work. There are some significant synergies in the literature between the concepts of OEP and ‘networked learning’ or education designs which build upon ‘web 2.0’ principles. Key to the principle of construct validity is articulating and exploring concepts which are similar in the literature and ensuring equivalency of what one is seeking to measure against the actual construct. Consequently, the criteria for defining educational activities as OEP must be clearly delineated.

In much of the networked learning literature, learners are actively engaged as co-creators and commentators rather than passive knowledge receivers, and the knowledge generated is shared among the community of learners and faculty in the class (Conole & Alevizou, 2010; Glud et al., 2010). Researchers have exposed challenges in this role shift for both faculty and learners, as faculty depart from their traditional role of expert in control, and learners take a more active role in documenting and sharing their learning processes. These shifts in practice may collide with traditional expectations of faculty and learners as well as institutional cultures and structures (Collins & Halverson, 2010). Furthermore, these new roles demand competences which may be new to both faculty and learners (Dohn, 2009; Lane, 2009; Ross, 2012). Researchers have questioned the value that OEP adds to networked learning, suggesting that learner-generated and networked content, even when locked within an LMS, might be sufficiently transformative (Beetham et al., 2012). These issues and questions which arise in the networked learning literature are also relevant to understanding learners' engagement with OEP.

The primary difference between the practices associated with networked learning and OEP is the explicit inclusion of open education literacies and the action of making works openly available in the latter. Networked learning practices introduce several key literacies to learners for working and collaborating on the web. OEP extends those literacies to include the practices of open collaborative knowledge formation and the sharing of works using appropriate copyright models such as Creative Commons and the public domain to support greater access to knowledge (Dohn, 2009). Further research is needed to determine what additional value OEP might add beyond that of networked learning designs. Much like Cronin (2016), I suspect OEP can help further bridge the divide between formal and informal learning as well as create opportunities for increased personalization. An additional benefit is the ability to maintain community among

course alumni and currently enrolled learners, allowing the latter to engage with their professional counterparts in the field. While this may be achieved without the use of networked or open pedagogies, it is enhanced and made more accessible through open teaching and learning.

Conversely, OEP introduces risks for learners by tasking them with engaging openly. In the most extreme cases, online bullying, harassment, and trolling are possible when engaging openly online. These risks can be especially relevant in certain disciplines where opinions and beliefs range, or for learners who may be specifically targeted (Veletsianos & Shaw, 2018). OEP learning designs should invoke a process of considering the sensitivities of the learners, the subject matter, and the risks involved in sharing openly. Further research is needed to better understand the risks perceived by our learners, and to determine courses of action when things go awry.

To further illustrate the relationship between OEP and networked learning, Figure 11 plots some examples of 'closed versus open' and 'non-networked versus networked' pedagogical approaches. It is possible to engage in networked learning without engaging in OEP. An example of this might be to have learners create and contribute to openly accessible blogs or discussions without consideration for open licensing and open literacies in the creation or sharing of the resulting resource. Equally, it is possible to engage in OEP while implementing very little in the way of networked learning. An example of this might be a faculty member adopting an OER resource such as a textbook, while using it to teach in more traditional ways.

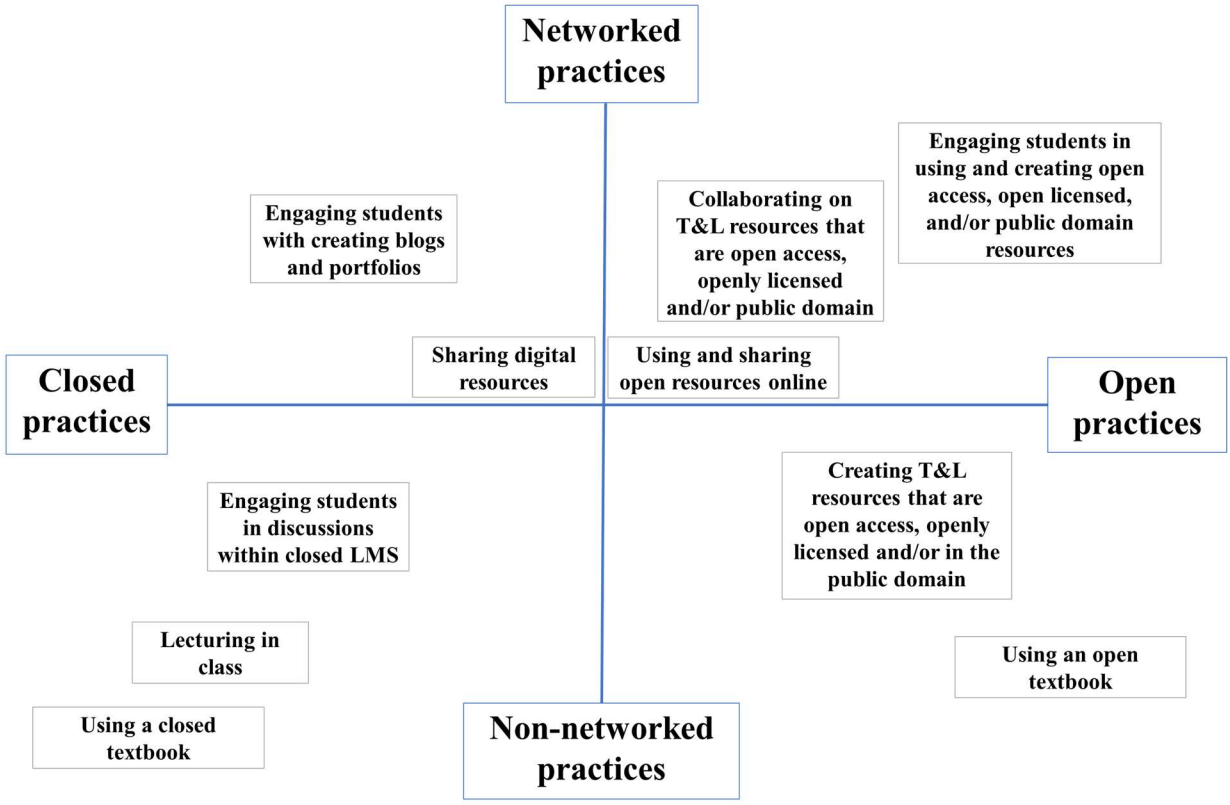


Figure 11. Open and networked practice matrix.

When considering learning design, OEP invites learner involvement in contributing to the formation of learning outcomes, learning activities, content, and assessment which supports personalization and autonomy in the learning process. This active involvement in learning has been suggested to lead to increased learner engagement (Hipkins, 2012; Reeve et al., 2004). Additional benefits to learners include the practicing of digital and network literacies in the context of teaching and learning, active engagement in the production of knowledge, working within and integrating both formal and informal learning environments, and developing competencies relevant and needed in future workplaces (Dohn, 2009).

Chapter Summary

In this chapter, I have presented the methodological frame used in this study. I then reviewed the literature on how open education is impacting pedagogical practice as illustrated in the literature. I proposed a learning design approach which can be used to conceptualise OEP considering the core aspects of teaching and learning, which includes the design of learning outcomes, the selection of learning resources, the planning of teaching and learning activities, and the design of assessment. In the next chapter, I describe the present study in more detail and describe the methods and approaches I took during this research.

Chapter Three: Methods

Introduction

In this chapter, I discuss the methods used in the study, starting with a discussion of the methodological frame used which guides my approach to this research. I then detail the data collection strategies used, including participant recruitment, research procedures, and the interview process. I discuss how I have maintained trustworthiness throughout the research, followed by a thorough description of the data analysis process. Finally, I describe my decision to invite participants to contribute their interview transcript as open access data, reflecting on some of the processes in doing so.

Methodological Frame

The purpose of this study is to explore and better understand how educators in formal higher education within B.C. are employing OEP as part of their pedagogy. A qualitative approach is used to capture the experiences of participants, better understand meaning formation through and as part of culture, and to discover themes among this population through a process of discovery (Corbin & Strauss, 2008). I employ an empirical phenomenological approach in this study to investigate the personal social construction and 'lifeworld' human experience of individuals engaging with OEP (Giorgi, 1997; Gray, 2013). At the core of phenomenological research is a pursuit of understanding mental directedness or consciousness by investigating individuals' explanations grounded in their subjective experiences (Aspers, 2009). Empirical phenomenological research seeks to portray the essence of the conscious experience of others, essentially how they perceive the world, exploring what their experiences means to them, and provide a comprehensive description while recognizing the importance of social structure and

context (Moustakas, 1994). Social structures are represented through individual's interpretation and construction of meaning in the world, and this social meaning construction can be studied empirically by the researcher (Aspers, 2009). The phenomenological approach aims to understand the general or typical essential structures of individual experience, based on the descriptions of those experiences. In doing so, I seek to understand not what 'is' in the world but to understand why conscious individuals say that something 'is' (Giorgi, 1997).

Being that my research goals involve interpreting the common and shared experiences of several individuals engaging in OEP, the phenomenological approach should contribute to a deeper understanding of this phenomenon and the contextual factors which support or contradict these practices (Creswell, 2013). The goal of this approach was to capture generalizations which enhance our theoretical understanding of the experience of educators engaging with OEP and apply social theory to describe and understand the phenomenon. In the pursuit of connecting the common experiences of individuals to theory, I employ Schütz's notion of first- and second-order constructs:

> The thought objects constructed by the social scientist, in order to grasp this social reality, have to be founded upon the thought objects constructed by the common-sense thinking of [individuals], living their daily life within their social world. Thus, the constructs of the social sciences are, so-to speak, constructs of the second degree, that is, constructs of the constructs made by the actors on the social scene. (Schütz, 1962, p. 59)

This implies that the researcher seeks to explicitly make a connection between the first-order constructs described by individuals to second-order constructs derived from theory. This approach results in empirical phenomenology not simply being an act of storytelling in which the individuals experiences are described verbatim, or one where the researcher objectively attributes

meaning to the actors descriptions, but one in which theory is grounded in the meaning structure of the individuals studied (Aspers, 2009). Theory is used to guide the study and help the researcher decide what to investigate and focus on, while providing space for new elements and areas of focus to emerge. Throughout the research process, first-order constructs may clash with the second-order constructs derived from theory. This represents an opportunity to contribute, reformulate, or provide suggestions for new theoretical frames (Aspers, 2009).

Data Collection Strategy

The collection of qualitative data is particularly useful when investigating changes in educators practice and the lived experiences enacting that change (Masterman & Wild, 2011). Interviews are popular methods for gathering qualitative data which seek to explore educator's perceptions of their practice. Several researchers have conducting interviews in this research space with goals of: understanding what factors influence engagement with OEP (Alevizou, 2012; Wild, 2012; Beaven, 2013; Masterman & Chan, 2015; Masterman, 2016); determining the impact of OEP on pedagogy (Porter, 2013; Allison Littlejohn & McGill, 2016); and the impact of OEP on learners (Hodgkinson-Williams & Paskevicius, 2012b). Conducting interviews with educators regarding their practice has been suggested as a professional development opportunity to encourage thoughtful reflection about educators current practices and alternative courses of action (Danielson, 2009). In the literature reviewed, interviews were the most often selected methodological approach for investigating changes to teaching and learning practice. A total of nine studies used interviews alone, eleven combined interviews with another approach such as a survey or focus group, and five added a third method such as content analysis.

Trialing research questions in advance of a study is a common approach which can improve the efficacy the research (Creswell, 2012). Trialing can strengthen a phenomenological

study as it allows one to engage with and become familiar with the research space, learn about the context in which individuals of interest work, and gather feedback from potential participants or those operating in similar situations (Aspers, 2009). The interview questions, conducted using the Zoom synchronous meeting service, were trialed first with my supervisor, who uses open educational practices in her undergraduate and graduate teaching. My supervisor was able to provide some feedback on the questions from her perspective as a faculty member. As a result of this process, we adjusted some of the language and sequencing of the questions.

The interviews were conducted by asking open-ended questions, allowing for an in-depth and semi-structured discussion with participants. One-on-one interviews were selected with a goal of developing rapport with participants and providing space for participants to think, speak and be heard (K. Reid, Flowers, & Larkin, 2005). Interviews enable participants "to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view" (Cohen, Manion, & Morrison, 2007, p. 349). The importance of using open-ended questions is essential to the phenomenological approach as it ensure participants are offered a sufficient opportunity to discuss their viewpoints (Giorgi, 1997).

While the interview questions were designed with the theoretical framework of structuration theory in mind, I maintained open dialogue in the interview data to allow participants to bring their beliefs, interests, and explanations forth in the interview. The full interview script including introductory and demographic prompts can be found in Appendix D.

Table 3 displays the semi-structured interview questions used, as derived from the structuration theory theoretical lens.

Table 3

Alignment of Research Questions to the Structuration Theory Framework

Theoretical theme	Interview prompts
Defining technologies in practice	How are you defining OEP? How long have you been enacting OEP in your teaching? Can you provide an example of how you are enacting OEP? What has your experience been like? Can you identify a catalyst for your move towards OEP? What drove your engagement with OEP? What contexts or situations have influenced or affected your experiences of implementing OEP?
Facilities	Thinking about facilities such as the technology, infrastructure, support, technical hardware/software, space, buildings, what resources do you make use of that are available locally at your university? What external facilities do you draw upon? What are perceptions about the role of technology in accomplishing OEP?
Norms	How does your engagement with OEP align to the norms within your social and organizational context? Do you think OEP is recognized as a norm in higher education or does it remain an informal practice?
Interpretive schemes	Can you reflect on your experience regarding the value of OEP? How does your experience implementing OEP relate to your own teaching philosophy and your beliefs about knowledge? Did one influence the other? Practically how do you feel OEP might contribute to meaningful learning for learners?

Interviews were offered either face-to-face or through video conference software. Interviews have been selected as an appropriate method for this study as they enable participants to naturally contribute and explain their interpretations of engaging in and enacting OEP. Semi-structured and in-depth interviews surfaced a rich transcript describing the perceptions of structure and agency educators observe as they engage in OEP. The themes that guided the discussion in the interview were drawn from structuration theory in order to provide a frame of reference, however, the questions were purposefully posed in a way which allowed new themes to emerge in the interviews (Aspers, 2009). In addition to the interviews, open education practitioners were also invited to submit open access works associated with their practice which may serve as additional artefacts for content analysis.

Participant Recruitment

This study targets educators currently working in formal higher education who are enacting OEP through the design of their teaching practices. Participants were selected by means of purposeful sampling based on their situational ability to reflect on their experiences relating to the phenomenon of interest, in this case engagement with OEP (Creswell, 2012; Horsburgh, 2003; Kruger, 1988). This approach focuses the analysis on the individual lifeworld experiences of those relevant to the phenomenon of interest (Giorgi, 1997).

Recruitment for the study began once the certificate of approval and permission to conduct research was granted from the University of Victoria's Human Ethics Review Board on February 8th, 2018 (Appendix A). My ethics application included a request for consideration under the B.C. Ethics Harmonization Initiative which was approved, thereby allowing access to participants from the University of Victoria, as well as Simon Fraser University, the University of British Columbia, and the University of Northern British Columbia.

Participants were identified who were known to be engaging actively in OEP as identified through research papers they have produced, reflections shared online, or through recommendations by colleagues. I intentionally sought to ensure diversity among the participants in terms of their age, gender, academic discipline, and nationality. Participation in the research study was voluntary and participants were informed that they could withdraw at any time.

In the research proposal, I set a target to interview 6-8 participants. The population size was increased as the research progressed based on feedback from my supervisor and committee. Upon completing the tenth interview, I was beginning to feel that saturation had been reached, as I was starting to hear similar themes emerging from participants. The eleventh interview was conducted with someone who was less familiar with the field of open education, but very much a practitioner who espouses and enacts the ethos of open education. This participant offered an alternative viewpoint, as they did not use the term (OEP) or actively engage with the open education community. The responses however, were very much aligned with the responses of others. At this point, I determined that a reasonable saturation point had been reached and I concluded the data collection phase of the study. A smaller sample size has been suggested as a methodologically sound approach for phenomenological studies allowing the researcher to parse the narrative for each of the individual cases and the location of themes within them (Smith, 2004; Smith, Jarman, & Osborn, 1999).

Research Procedures

Interviews conducted via synchronous video are becoming increasingly acceptable considering recent technological developments (Ruhleder, 2000; Stewart & Williams, 2005; Salmons, 2010; Nehls, Smith, & Schneider, 2015). Interviews may be conducted through video conferencing software, examples of which include Blackboard Collaborate, BlueJeans, Skype,

and Zoom. This emergent method of conducting interviews has been taken up by researchers of OEP (Lane, 2010; Beaven, 2013). For both interviewee and interviewer, this method is convenient and saves potential travel costs to the research site thereby creating greater access to remote interviewees (Salmons, 2011). Another advantage of conducting synchronous online interviews is the ability not only for both participants to see each other but to also share their computer screen, thus allowing them to demonstrate or share something visual. This may be useful in the case of reviewing artefacts which interviewees would like to show as part of the interview, which may add richness to the data (Beaven, 2013). Recording of the audio, video, and artefacts captured through screen-sharing can be done quite simply and unobtrusively in these environments either through built-in tools or screen recording software. Although this utility was available to us during the interviews, it was not used during the interview process. In some cases, interviewees followed up the interview with an email to send links to online works or documents discussed during the interviews.

Interviewees were asked of their preference to meet in person or online using a video conferencing tool. All the interviewees selected the online option and the interviews were conducted online using the Zoom synchronous meeting service which allowed us to engage in a video-based conversation, affording a rich experience similar to a face-to-face interview. In one case, the Zoom service was not working for one of the interviewees, so that interview was conducted via telephone.

Voluntariness and Consent

Due to my active participation in the open education community as well as my work as an educational developer, there were cases in which I personally knew participants in this study. Several participants in this study were acquaintances from other universities or colleagues. I

maintained no power-over or influential relationship conflicts with participants in this study. Acquaintances were asked to participate, but no pressure was applied to coerce them to participate or use our relationship as a base for participation. Furthermore, I maintained no power-over relationship with participants who were colleagues. Potential participants were faculty members outside of my organizational unit. I am not an administrator and do not have a supervisory role or conduct any reporting with regard to these participants. I did not engage close colleagues to be participants in this study.

Participation in the research study was voluntary and participants were informed that they could withdraw at any time. Verbal consent to participate in the study was confirmed during interviews conducted via the video conferencing tool. Verbal consent was explained at the start of the interview and captured in the audio recording. This was required as I did not meet the interviewee in person and was unable to obtain a signature.

Compensation for Time Spent

All faculty who contributed their time and perspectives in this study were offered a $20 Chapters gift card as compensation for time spent during the interview. Recognizing that faculty are busy people, especially at the time of the year when this study took place, the compensation for time spent was offered to show recognition of the value of their time. The compensation for time spent was considered significant enough to recognize faculty's contribution and the value of their time, and to ensure diverse representation, but not large enough to coerce their willing and voluntary participation. Participants were informed that if they were to withdraw from the study at any point, they would not be required to reimburse the compensation for time spent during the interview. The compensation for time spent was sent to the interviewee once the interview was complete.

Interview Process

Interviews were recorded with the consent of the interviewees. The built-in recording tool in the Zoom service was used in addition to a handheld audio recorder. Two copies of the recording were captured in the case that one of these methods failed. While the built-in Zoom recording also captured the video in the recording, the interviewees were informed that only the audio would be used in the analysis. In all but one case, both versions of the recording were successful. In this case the telephone was used to conduct the interview and so the handheld audio recorded version was used to capture and transcribe the interview.

Interviews were transcribed using a transcription service based in Victoria. I met with the transcriptionist before securing their services to explain the nature of the research and the requirements for protecting the data. The transcriptionist agreed to maintain confidentiality of the data and to ensure that it would always be stored in a safe location and kept on an encrypted USB thumb drive**,** provided by the researcher. This was confirmed by the transcriptionist through the signing of a confidentiality agreement form, a copy of which is provided in Appendix E. We agreed that the data would always be kept in an encrypted state and that all data exchanges would occur in person on the University of Victoria campus. The audio files were provided to the transcriptionist on an encrypted USB drive and the written transcript was saved on the drive and returned to the researcher. Each transcript was then reviewed for accuracy by comparing each line of the transcript to the audio of the interview. Transcripts were edited where necessary to best represent the recorded audio of the interview. Where interviewees had referred to other people during the interview, these identifiers were removed from the transcript.

Trustworthiness of the Research

Following Lincoln and Guba (1985) I have sought to develop credibility, transferability, dependability, and confirmability throughout this research. Credibility to ensure confidence in the truth of the findings, transferability to ensure the findings can be applied to other contexts, dependability to show consistency and replicability, confirmability to ensure the research accurately reflects the participants in the study (Lincoln & Guba, 1985). An explanation of how I addressed each of these throughout the research follows.

Credibility refers to the research being truthful, valid, and reported in a way that is an accurate representation of the phenomenon (Guba, 1981). Credibility was established through prolonged engagement in the research space and by ensuring my transcripts were member checked by participants in the study. The transcripts were sent back to each interviewee for member checking to ensure the data which described their accounts and descriptions were accurately represented (Maxwell, 1992). Several of the interviewees provided amendments to their transcription and verified their accuracy. Interviewees were notified that if I did not hear back from them regarding the transcript within three weeks, I would assume it has been reviewed and approved. Only one interviewee did not respond to the request for member checking.

Transferability refers to the application of the research to other contexts and settings. Transferability of research is important to ensure the results can be related and helpful to understand the phenomena in other contexts. To address transferability, in presenting the data, I have sought to develop thick descriptions of participants' accounts, with a goal of exploring both what was described as well as the wider context in which it occurred. My intent is that this study could be generalized to other research sites, and I would encourage the replication of this study with new contexts and participants.

Dependability refers to the data being reliable and stable throughout the course of the research. Dependability may be considered conventionally, by scrutinizing the data sourcing and collection process, but also considers reliability issues which may occur throughout the research process, requiring sound data management, organization, and attention to detail (Lincoln, & Guba, 1982). To address dependability, I have worked closely with my supervisor in reviewing and analysing the data. This external perspective helped to minimize potential bias and to consider additional perspectives throughout the study.

Confirmability refers to the research being reviewed and understood by the research participants as well as external auditors (Lincoln, & Guba, 1982). Confirmability was first established by being clear to participants on the specific nature of the inquiry and explicitly stating my position and interest in the research. I then worked with participants in an ongoing way to ensure I was able to conduct the analysis by confirming the results where needed. For example, as the analysis process began, there were several instances where further clarity was needed from the participants to gain an accurate description of the experience being described. When this occurred, the transcripts were again checked and compared to the audio recording of the interview. If clarity was still need, then I contacted participants with a request to further comment or provide additional information. In all cases, participants were available to add further clarity to the data via email. These additions were appended to the data as notes and used in the analysis. Confirmability was also strengthened through the process of working with my supervisor when presenting the data and conducting the analysis.

Data Analysis

A structured analytical approach guides the analysis of phenomenological data. First, the researcher must engage in a process referred to as bracketing, which is essentially curbing their

own beliefs and assumptions about the phenomenon with a goal of capturing how it is experienced by the participants (Hein & Austin, 2001). Giorigi (1997) describes this as seeking to freshly encounter the phenomenon, describing it precisely as experienced by the individual. This can be included in the research as the researcher describes their own experiences with the phenomenon, thus bracketing out their own views before proceeding with the experiences of others (Creswell, 2013). Data is then collected from participants with the goal of generating a textural and structural description of their individual experiences (Creswell, 2013).

An important first step in the analysis is a global reading of all the transcripts in order to have a holistic sense of the data (Giorgi, 1997). The data is then analyzed to identify significant statements and organize them into themes found throughout the interviews. Themes need to be 'discovered' in the data, so it is essential the researcher maintains an open attitude to allow unexpected meanings to emerge (Giorgi, 1997). These themes are used to write a textual description of the phenomenon as experience by the individuals as well as a description of the context or setting which influenced this experience. These are used to form the "essence" or common experiences of the participants to elucidate the common structure of the phenomenon. This structured approach provides a framework for engaging with phenomenology to aid new researchers.

Interview transcripts were imported into NVivo for qualitative analysis. Each interview was reviewed by listening to each audio recording and reading along with the entire transcript. There were some small typos and corrections introduced by the transcriptionist that were corrected at this time. A full reading of all the transcripts was conducted twice, initially for a holistic analysis, then to begin thematic analysis. Additional reviewing was done as codes and themes emerged and intersected among the interviews. Qualitative coding was applied at each

iteration using the constant competitive methodology to surface emergent themes (Glaser, 1965). This involves comparing codes iteratively as the data is analyzed, integrating common and overlapping codes, then delimiting and contributing to a theory to explain the phenomenon (Glaser, 1965).

As I reviewed the transcripts, I began noticing the same themes emerging from the participants and this gives me confidence that I have a rich story to tell based on the data. I am using a codes-to-theory model to bridge the theoretical lens to the real experiences of interviewees (Saldana, 2015). As I progressed through analyzing the transcripts, no new codes were emerging as the last few interviews were analyzed. The codes which emerged early were being reused, rethought, expanded, or collapsed based on the data.

After doing a second and third pass, the coding became even more refined. I began clustering the thematically-coded passages into a document and began constructing the narrative. The audio recordings were then reviewed a third time to with a goal to identify any gaps or additional data which could be brought forward into the narrative.

In the analysis, I intended to present verbatim extracts from the interviews as this is important to the phenomenological approach (K. Reid et al., 2005; Smith et al., 1999). However, in some cases repeated words, stutters, or filler words were removed to present the data concisely. In these cases, the notation of […] is used in the analysis.

Reflections on the Coding Process

A total of 53 coded themes emerged across the eleven interview transcripts, related to the broad category of instructional practice and the methodical frame of structuration theory. In total, 661 passages were coded with the themes. In many cases, passages were coded to multiple themes. This created some challenge during the analysis as passages were reviewed multiple

times across themes. I considered only single coding passages in the future, but overall found value in the coding of passages in a matrix as many passages truly did apply to multiple themes and further review provided an opportunity to dig deeper into the data and consider meanings therein. Sample data for the instructional practice theme, with broad thematic codes and sub-codes can be viewed in Table 4.

Table 4

Examples of Codes Applied to the Data in the Instructional Practice Theme

Theme	**Code**	***Sample data***
Assessment	Encouraging learners to promote and share their work	*I think knowing that there's stakes in the research that they do, that they can contribute to the conversation and that they can find different ways besides publishing in a peer reviewed journal to make their ideas shared.*
	New modes and mediums of learner work	*We can use podcasting, for instance, as a way to communicate academic ideas that is beyond pay walls, doesn't necessitate a university library card to have access to, and that allows students a direct pipeline into sharing their ideas.*
	Supporting personalised learning	*I'm interested in that respect of how I can get students to get excited about learning and to want to do it for the sake of doing it. Because ultimately that's what we want. We want students to learn and know how to learn and have fun while they're learning. Giving them that control, I think, gives it to them.*
Content	Using and sharing content online	*I realized that there is more than just a textbook or just one source of information for students that can be a good source of information.*
	Promoting a diverse and interdisciplinary array of resources	*Creating and using such resources and facilitating student learning in ways that are diverse, in ways that take into consideration a variety of perspectives, a variety of disciplines, and my field is interdisciplinary anyway, and in ways that do not pose additional burden to their pockets.*
Learning outcomes	Promoting critical approaches to knowledge	*So, there were a couple of cases where they came back to me with, "Oh I found this article," or "Oh I found this report," and then when we looked into who wrote the report, what their funding was, realized it was biased.*
	Developing digital and network literacies	*I had this idea that platform literacy is where I see students struggle the most. Which is to say their actual understanding of how the platforms they're interacting with function, the way that they use their information, the way that they frame their interactions.*

Pedagogy	Shifting roles and responsibilities	*The other side of the coin in terms of openness in education is the actual pedagogy. How you go about teaching and how I become less of the holder of knowledge and more of a conduit through which students can access that knowledge.*
	Fostering collaboration and peer review	*I also have the students, when they peer review each other, also use the annotation tool to give each other feedback on their essays or leave a comment […] if the place where they published it has a commenting feature, then they can also leave a comment.*

Sample data for the structuration theory theme, which fell into broad thematic codes can be viewed in Table 5.

Table 5

Examples of Codes Applied to the Data in the Structuration Theory Theme

Theme	***Sample data***
Norms	*I also just think that the open movements are becoming a more common ethos or practice in institutions. Though all of the open movements are certainly nothing very new, I think that them being built into whether it be the mandate of the university or the, sort of, teaching philosophy of individual departments or individual instructors, that it's becoming much more of a social norm. And so, I think that that allows instructors to feel like they can experiment with these sorts of things.*
Interpretive schemes	*People read Open and read "free." And so that really was difficult in our business model for the institution. So, we had to do a lot of education in informing – and knowledge building – around what are we talking about here with respect to the program and how does it support the mission of the institution? As opposed to detract from it because some people thought that initially I think "oh my gosh you're giving everything away for free what's our competitive advantage if all the content, the assessment, if everything's free and out there publicly, why would people come to us?"*
Facilities	*I've found the librarians here are amazing. I think libraries are always amazing, but digital humanities librarians are doing so much of the cutting-edge work. I've found they've been so willing to support and are so excited to support. So, they have often – they've found a ton of resources for me. They come into the classroom.*

Open Access Data Options and Contributions

In the spirit of openness and with the guidance of my committee, I made the decision early in my research to seek approval from research participants to curate and contribute their interview transcripts as open access data. Participants were informed of this option in the consent forms and offered the opportunity to contribute at the time I presented them with their typed transcript. The timing of this allowed them to review the interview transcript and make an informed decision. Interviewees had two options for open transcripts, one in which the sharing of the transcript would be anonymous, and the other in which their transcript would reveal their name. The opportunity to share the transcript was completely optional; however, I was surprised to find that eight out of the eleven participants interviewed were willing to share their transcript openly.

I made use of the University of Victoria Libraries expertise when considering the open access data process and determining the infrastructure that would be used to host the data. UVicSpace was identified as a logical repository for storing the open data. UVicSpace is supported and maintained by the University of Victoria Libraries with a goal to preserve and provide access to the digital scholarly works of faculty, learners, and staff. In this way, the open access transcripts may be available to other researchers and learners to conduct analysis of the transcripts. Access to open data affords researchers and learners an opportunity to work with, curate, analyse, and interpret data without collecting it firsthand. These can be used to teach data analysis practices and illustrate different approaches to working with raw data. The transcripts which have been designated open access by interviewees will be deposited in the UVicSpace repository. I also plan to deposit the consent forms used to support the open data consent process

at the conclusion of my program. These resources could be useful to other researchers considering the open access data route.

The open transcript option was completely optional and at the discretion of the interviewee. Interviewees indicated their response in writing by replying to the email and indicating which option they preferred. Interviewees were notified that if I do not hear back from them regarding open data options, I would assume they were not interested and access to their data was restricted to the researcher and the committee.

Chapter Summary

In this chapter, I have presented the methodological design decision and approach considered in this study. This includes a description of the methodological frame of the study, a review of the data collection steps and procedures, a discussion about how I maintained trustworthiness throughout the research, reflections upon the data analysis process, and my decision to offer participants the option to contribute their transcripts as open access data. In the next chapter, I present the findings from the research.

Chapter Four: Findings

Introduction

This chapter focuses on the analysis and interpretation of the data gathered in the interviews. Although a wide range of issues emerged during the interviews, I focus specifically on participants reflections on how open education is impacting their teaching and learning practices and why they believe this practice was important. The analysis is guided by the main research question; how do faculty working in formal higher education in B.C. who are actively engaging with OEP describe their experiences? This question is presented through a series of sub-questions which include: how do faculty define OEP in relation to their teaching, how do faculty describe OEP being actualized through learning design, what challenges do faculty reference when considering OEP learning designs, and how do faculty describe why they engage with OEP? The goal of this chapter is to explore and synthesize the descriptions, perceptions, and reflections that faculty shared regarding these practices.

Overview of Participants

In total, 11 faculty members participated in the study. All participants were actively working in the formal higher education system in B.C. at the time of the interview. As my research was approved via the BC Ethics Harmonization Initiative, I was able to conduct interviews with participants from the four provincial research universities. Nine interviews were conducted with participants from large research-intensive universities, and two were conducted with teaching focused universities. The latter two interviews required separate research ethics applications. These were submitted to each university's research ethics board for review.

Although many of the research participants consented to sharing their interview transcripts as open access data, in many cases giving consent for their identity to be revealed, I have used pseudonyms for each participant in this dissertation. This is due to the fact that consent to use their identity in the write up of the research was not explicitly obtained in the consent form. Each participant was assigned a common English name for a pseudonym. For future research, it would be advisable to ask participants for their preferred pronoun so that they may be represented in the research as desired. A summary of participants and their demographic information can be found in Table 6.

Table 6

Interview Participants' Demographics

Name	Age	Gender	Faculty	Role Focus	Role Type	Years teaching
Katherine	50-49	F	Forestry / Land and Food Systems	Research	Tenured	15<
James*	30-39	M	Education	Teaching	Permanent	5-9
Patricia	20-29	F	Humanities	Research	Sessional	>5
Robert	30-39	M	Arts	Teaching	Tenure track	10-15
Alice	40-49	F	Arts	Teaching	Tenured	15<
Margaret*	40-49	F	Social and Applied Sciences	Research	Tenure track	15<
Joanne	40-49	F	Environment	Teaching	Sessional	>5
Olivia	30-39	F	Communication, Art, and Technology	Research	Tenure track	5-9
Thomas	30-39	M	Communication, Art, and Technology	Research	Tenure track	>5
William	40-49	M	Science and Management	Research	Tenured	10-15
Tracy	60-69	F	Social Sciences	Teaching	Sessional	15<

** Indicates teaching focused universities*

Participants ranged in age from 28 to 63 with a mean of 42.8 and included seven females and four males. The participants included one Assistant Professor, three Associate Professors, one Instructor, two Ph.D. Candidates, and four Professors. All but two participants, as indicated in

Table 6, were working at research-intensive universities in B.C. Six of the participants were working in research-focused faculty positions, while five maintained teaching-focused roles. Several of the teaching focused roles were situated within research-intensive universities with the title of teaching professor, which now commonly exists within many research universities. Others were working in sessional positions or at a teaching-focused institution. Participants had a variety of years of teaching experience ranging from 1 to 26 with a mean of 12.5 years.

Participants were asked how long they have been engaging with OEP in their teaching and if they could identify a catalyst for the change to practice. This is visually summarized in Figure 12.

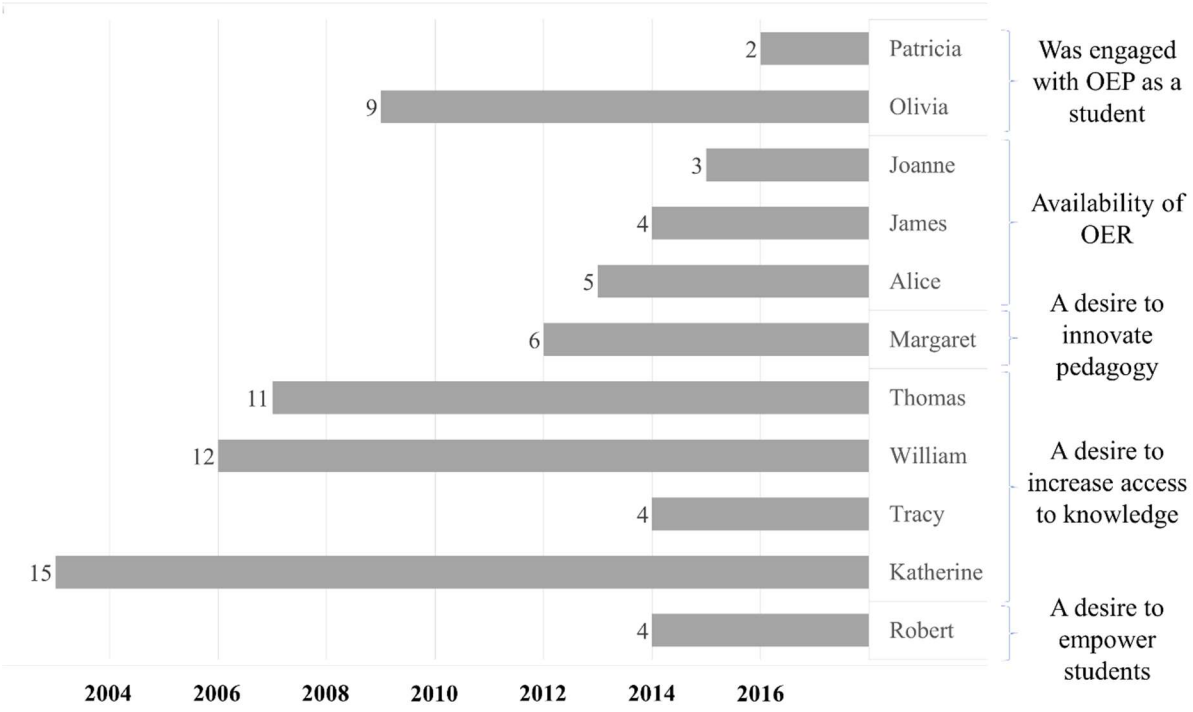


Figure 12. Participant's years of engagement with OEP and general catalyst for that change.

Participants in the study described how they have been engaging with OEP for an average of seven years, with a minimum of two years and maximum of 15 years. Participants were also

asked to identify a catalyst for their engagement with OEP. Cited by four participants was a desire to increase access to knowledge, either specifically in their discipline, or more broadly. Three participants cited the availability of OER as a catalyst, two had been engaged with OEP in their graduate studies, one cited a desire to innovate upon their pedagogical approach, and one cited a desire to empower learners using OEP.

How do Faculty Define OEP in Relation to their Teaching?

Each participant was asked to describe what the term OEP meant to them in relation to their teaching practice. As illustrated in the literature review, the term OEP carries with it many different associations and meanings for researchers, and that applied to the educators in this study as well. While all participants confirmed their awareness of the term, they defined it in relation to their teaching practices in various ways. Four broad themes and several sub-themes emerged from the responses to this question. In keeping consistent with the literature review, the broad themes were clustered around aspects of teaching and learning, which included assessment, educational content, learning outcomes, and teaching and learning activities. A visual model of the themes and subthemes is presented in Figure 13 and discussed below.

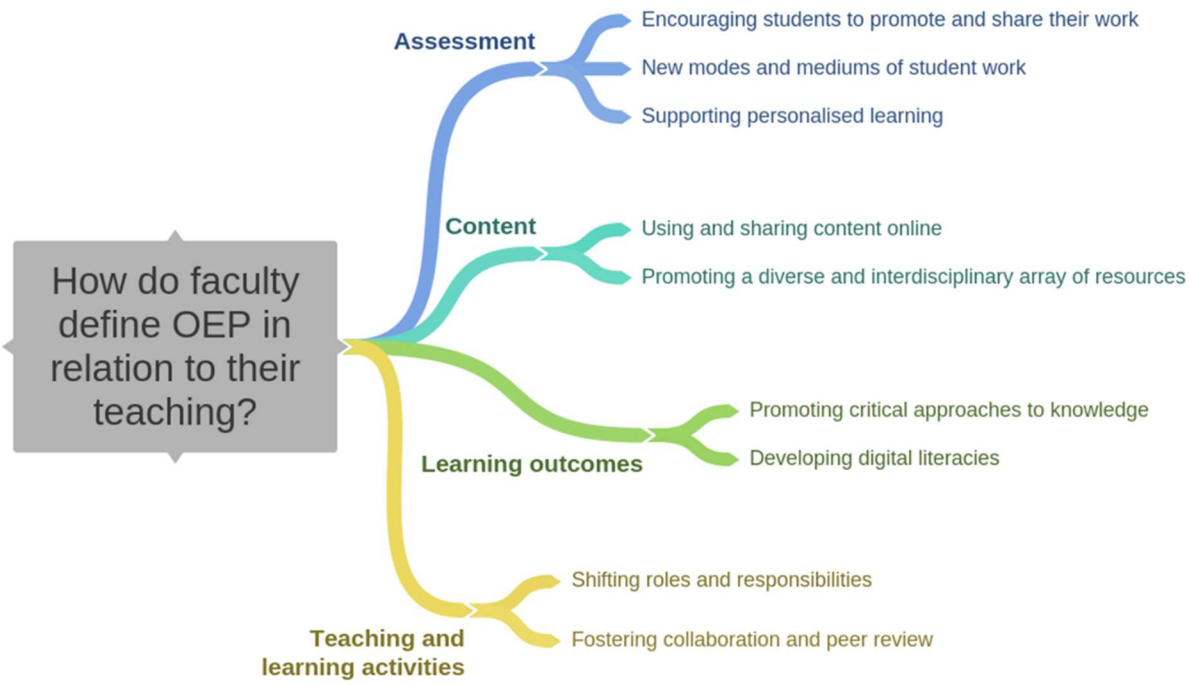


Figure 13. Themes which emerged in defining OEP.

Assessment

Participants described their use of OEP in relation to how they planned and designed the assessment of learners' work. The subthemes that emerged in the assessment theme include encouraging learners to promote and share their work and the consideration of new modes and mediums of learner work.

Encouraging learners to promote and share their work

Several interviewees shared a belief that there was value in considering how learners could share their work and creations more widely. Many spoke of a desire to design assignments which could be relevant to broader audiences that learners could choose to share more broadly with their classmates and community. Learner work that is captured digitally can in many cases

be shared, providing opportunities to review one another's work, as well as providing opportunities to share that work with individuals outside of the course. Encouraging learners to curate their own work online gives them ownership of the work beyond the duration of the course. This is different than the experience learners have when submitting work within an LMS, where their work may not be accessible or easily exportable once the course ends. Self-curated work is owned by the learner and can be retained beyond the duration of the course, giving the learners have more control over the work in the long term, and providing more opportunities for learners to showcase their work with the broader community.

Digital creations can be shared in a variety of ways, to specific people, or more widely on the web. Tracy describes how she imagines her teaching as a "collaborative performance, as you know, because […] you need the students as much as the person teaching to create that collectively and collaboratively." She described how the work that learners and faculty do as part of the class were a component of that performance, "I think what is an extension of that performance is when you can create something [that] has a certain kind of performative aspect to it. To me, that continues on into the community." The notion that what happens in the classroom could be considered a performance aimed at the community implies the need to share the activities and resources created as part of the curriculum more openly.

Robert noted that encouraging learners to share their work widely was done to address their concern that "student undergraduate research ends at the professor." Similarly, Tracy suggested that "I try to move away from doing things just for the instructor." As Robert further comments "I think to a certain extent undergrads are […] talked down to, or […] they're not ready to contribute." Robert shares how he engages undergraduate learners to find ways in which they can contribute their works openly. This is done by designing assessments that have potential

value to the community. Robert explains that "they can contribute to the conversation and that they can find different ways […] to make their ideas shared." This was suggested as a way to empower learners and encourage them to recognize their role and abilities with knowledge production in a variety of forms. Robert described this as "showing students that what they're doing is research and that they are contributing to conversations in meaningful ways." Robert goes on to comment on how he believes OEP can be used as an approach to promote meaningful learner work:

> I think part of why I like OE is that it can break down those barriers and it can show students that their work is meaningful, that it's not just, you know, another grade towards a degree but they can use these skills to participate in conversations that are meaningful to them and impacted them and their communities.

Robert describes his primary goal "was trying to empower students" through his teaching practice. In this case, Robert was working with:

> Indigenous Studies students who had these amazing ideas […] because of the way that settler colonialism works, Indigenous youth particularly [whose] voices are restricted, and they don't have access to platforms. So, my immediate reaction was how do we find spaces for […] students who have these amazing ideas to give them more breathing room and to get them out there?

Robert describes the primary motivator for engaging learners more openly was to help them develop their voice and engage broader communities. The curriculum involved helping them learn about what platforms were available to do this and encouraging learners to share their voice and ideas more openly.

Margaret describes the process of engaging learners to share their work openly as supporting the development of their capacity as "public citizens." Similarly, Thomas describes OEP as way "to promote civic engagement." Learners are encouraged to consider how they "can contribute to society [at] university [and] come out with that sense that they should be contributing." Thomas further suggests OEP as a strategy to achieving an underlying course goal as he describes:

> I believe that doing these open practices in the classroom we can teach students, […] by making contributions to the public, by having them value their own voice when they're putting their voice out into the public sphere, is that it's hopefully…it's encouraging them to be more civically engaged and I think that that's important as a contribution to our democracy and our participation in social and civic life.

Several participants reflected on how working in the open may result in the perception of higher stakes for learners sharing their work and can result in a greater investment in the work. Frequently cited was the idea that the stakes were raised when sharing was extended to those other than the course facilitator. As Tracy noted:

> If more people have eyes on it, you know, there's maybe a greater investment from the student. If their family, their community, has eyes on their work, I think that they're more committed, they're more invested to do the best possible job they can because it's something that they can point to and say "I worked on that."

This was echoed by Patricia who suggested "the stakes might feel higher when someone is creating something that's going to be open and accessible by a wider community" as well as

Alice who stated, “students will write differently, you know, if they know it’s not just going to their professor.”

Patricia reflects on her own experience as a learner describing apprehension but also a sense of reward when “creating something that was going to be online and open meant that it was going to be evaluated by my instructor but also accessible to my peers, and to people in the outside community.” Robert suggests that designing learner work that was connected to their broader community was something learners should engage with during their studies as “they can use these skills to participate in conversations that are meaningful to them and impacts them and their communities.” Patricia described how through the design of assessment she sought to be:

> Moving the scope of learning beyond the classroom in a way that people can create some research that has a broader reach. So, whether that is an online portfolio or something that’s disseminated more widely, or creating something that’s online that’s openly accessible.

This further reinforces the desire that learner work may be valued beyond the course itself. Encouraging learners to consider larger audiences gives them a prompt to also curate their work as part of a portfolio or find ways to contribute it to a knowledge community. In one case, where an important curricular competency was to be able to contribute to public knowledge, faculty had begun only accepting learner work submission as a web accessible link or URL. As Thomas describes:

> I’ve always set up a course blog where the students can publish their materials, but I actually even just require them – I only accept URL submissions for assignments. So it’s like, they need to either – they can publish it on the course blog that I set up or they can publish it anywhere else online and just send me a URL.

While learners had choice whether to publish on the course blog that been setup, through a social media site, or on their own portfolio or web space, they were only able to submit evidence of their work via a URL. Learners were still able to control access to the URL by using the privacy settings on the platform where they were publishing, by not including their name, or by using a pseudonym. The way this was handled depended on the portal that was used to publish the work as well as the learners desire when creating the work. Learners could also use this as a chance to gather feedback from the faculty member, then improve the work for wider accessibility. This workflow for submitting work and gathering feedback is a significant shift in the traditional methods for submitting learner works for assessment.

Having an opportunity to practice creating knowledge on the web and sharing it widely also supports the development of network literacies. This may be uncomfortable for some learners at first, especially if they have not been formally trained to do so or have previous experience. Patricia reflected on the apprehensions and result of engaging learners this way:

> Most people left the course feeling like their technical skills had been enhanced and that they sort of had this sense of ownership over what they had created because it was truly theirs and it was sitting out there in the world and they could show their family and their friends, and they could present it to a potential employer as a portfolio of what they had created both content and also technical specification.

In this case, the goal was not specifically to develop digital and network literacies, but learners' work was encouraged to be presented as digital media on the internet. However, the learners were perceived to have gained both new content and technical knowledge in the process. Patricia goes on to express how they imagined learners interpreted the experience:

> I think that success in creating that type of resource or project results in a deeper sense of ownership and accomplishment over the work. So, I think that creating this resource that exists out in the world is something that students maybe don't expect that they'll feel particularly fond of, but once they do that and they see people using it, there's a deep sense of accomplishment there.

Participants also shared aspirations for what they could accomplish in their classes collectively. James shared his aspirations for work done in class forming a public collection of artefacts worth sharing and promoting:

> It's really the students are working together with one another and it's all going to be online and hopefully by the end of it we'll have something that we're really proud of and we'll be able to make public and share it with the wider world. Use it as a model for what our students are doing. You know? Make it a show piece, so to speak, of student engagement and student learning and student learning […] make it a legacy project that gets adapted every year.

Not encouraging learners to consider sharing their works was cited as an issue which may impact how learners themselves perceive and value the work they do in higher education. The practice of encouraging learners to share their work was perceived by Olivia to "add more value to their work," by showing learners the work they do at university can "have an audience beyond us as their professors." However, learners also need to be made aware of the realities of contributing publicly. Alice commented how she foregrounded this by telling learners "you know what? The person you're writing about might be reading this. That might freak them out too much, but for some of them it might be exciting. They might actually get to hear from that person." Margaret also reflected on the sense of excitement learners have expressed when their work enables then to connect individuals outside of the class:

> They're just excited. They're so excited that someone would comment on their thinking, super excited when that someone happens to be someone that they read as a journal article. So, you know, that perceived expert that then actually commented on their blog. They just, they're blown away.

Several participants shared stories of student work being discovered by others due to it being shared openly, with stories of both praise and critique of their work. In these cases, openly shared learner work was cited by Robert as potentially creating "reciprocal relationships with community" and "building research communities through open access." There was a sense that by inviting community access, feedback, and participation, relationships to community could be forged. This was reinforced by Thomas:

> It gave an opportunity for them to start thinking that […] there was some value in putting their work out for the broader public to see. […] In some cases, the work gets picked up and somebody will share and people from outside of the classroom will comment on it or leave some feedback.

Thomas goes on to share a more specific example of the experience of one of his learners:

> So his essay, he wrote it, and then it got tweeted, and somebody from the community picked it up and retweeted it and the thing ended up having some legs and getting a couple of – it was like, not in the thousands or anything, but it was […] a couple hundred views. And that, you know, for the students pretty rewarding to see that their ideas are being picked up in a community that they're a part of. So in those kind of instances like that happen I think it just solidifies the value in what they are doing.

A learners' realization that their work can impact their community and garner attention from outside of the classroom was suggested to instill a sense of value in their work. Another example involved a not-so-positive story in which a learner received an unfavourable review of their

work. In this case, the reviewer, who was in another country, left a critical review of the learners' writing. Thomas invited the learner to reflect on that experience in class, in which he shared that:

> He was pretty astounded that anybody had even taken the time to read. So that's sort of the goal. If you put things out, somebody else might want to read it and take it seriously. I think that those things are all helpful to the students.

While the review of this learners' work was not necessarily positive, it was described as an 'astounding' moment for the learner in realizing the possibility of connecting to a scholar in another part of the world. Thomas describes how sharing the work publicly gives learners an opportunity to "start getting that experience of seeing what happens when you put stuff out on the web openly." Furthermore, Thomas reflects that:

> Most of the benefits come from the students losing that fear of making their materials open. […] For me the important thing is to go through it once and realize it's not that hard to just make a contribution to the public.

The notion of publicly-shared work was suggested to empower learners to value their work, share it more widely, and curate it within a community of interest. In doing so, Robert reflected how "I think that only makes their work stronger and empowers them more and shows them their work is important. This also can result in learners taking on a greater role as part of their coursework. As Tracy reflected:

> They felt that they had taught that class. It was really interesting afterwards because they said that they had taught it and they were doing it for each other. Not for me. And it wasn't for grades. And they really liked that.

In this case, learners were invited to research a social justice hero of interest and build a shared digital resource for the class. Tracy noted that throughout this activity, "there was a lot of

enthusiasm and excitement about that spontaneous class […] it made me think about how else […] we [can] use technology for students to teach themselves and each other."

Alice cautioned that we only encourage learners to share their best work and provide them a chance to incorporate feedback prior to it going public. If we are asking learners to share their work so that it "can be a value to the world, you still have to help them make it better before it goes out." This can be a challenge with larger class sizes or with work that needs significant refinement. Alice commented "if you can take the time to give feedback and have them make it better, then I think that actually does a service to the rest of the world, but that takes a great deal of time." One strategy that emerged to address this involved working with learners on closed projects initially, then encouraging learners to share more openly as their work progresses. James describes his plan for this strategy:

> I'm going to encourage my students to make this something that is high enough quality that we can share it and promote it as an open resource for anybody. You know, as we're building it, […] it's going to be […] private for us obviously. But at the end of the day, if our students [and] I think it's good enough, I'm going to approach our students and say, "Hey, let's make this public. Let's share it.

Here James describes that the work will be shared if the class deems the end product worthy of being shared but also comments that he will also be a decision maker in that process, stating if "I think it's good enough." How that process will be negotiated between the learners and faculty was not made clear. Furthermore, designing projects such as this where the finished product 'could' be shared requires some up-front planning to ensure the finished product is legally and ethically shareable and can be presented online in some meaningful way. This includes

considering how and where learners will be presenting their work, while taking into account the FIPPA implications which may govern that activity.

Digital portfolios were offered as one tool to address the quality challenge as they require the learner to decide upon and curate the works which they are most proud of. Portfolios were discussed in a variety of forms; from learner web domains, reflective blogs, and websites. In each case, portfolios were suggested to imply more ownership by the learner enabling them make decisions about when their works were presented online and in what form. Olivia describes why she has learners curating their works on their own websites: "I think having your own domain implies value to the work that you're creating, it says […] your words matter enough that you should think about […] the design decisions you're going to make." Portfolios require that a learner curate their work, and in doing so they select and present their creations to the portfolio in a structured way. Portfolios also represent a place to house a learner's collection of works which was suggested could be a benefit in the future. Olivia reflected that "we [have] had students come back and look for [their works done in as part of coursework, saying], 'Oh I want to get my essay. I'm using it for a portfolio. I couldn't figure out where it was'." This statement suggests that this learner only realized their work might be worth sharing within a portfolio following the conclusion of a course. If we do not explicitly suggest to learners that the work they do could be worth sharing with peers, colleagues, and potential employers, they may not keep track of these works or consider presenting them online. By encouraging learners to value and curate their work, we instill a sense of ownership of that work, and support personal knowledge management strategies.

Inviting learners to contribute their works openly may be daunting for learners and in all cases, participants indicated that alternatives were provided for learners who did not feel ready to

share. This was done by not enforcing public sharing for assessment, allowing learners to submit their work exclusively to the instructor, or only to their peers and class members. Another option cited was inviting learners to contribute their works with a pseudonym or without author information. This gives learners an opportunity to experience what can happen with open sharing, while not being directly attributed in the work. As Thomas describes, inviting learners to share their work gives them a chance to see "what happens when you put stuff out on the web openly", even if done so under a pseudonym in order to ensure anonymity.

New modes and mediums of learner work

The notion of supporting new modes and mediums for learners to represent their learning was represented in the interviews, with many referencing the creation of reflective writing activities, podcasts, videos, and other multimodal media projects. Tracy noted that promoting new forms of learner work also "acknowledge[s] all of the ways in which the academy, but also the community, contributes to knowledge." As Robert reflected, this promotes the idea that contributing to knowledge is not only achieved by "publishing in a peer reviewed journal", and learners can be creative and innovative in the ways they contribute to and create knowledge. Olivia described this as "thinking of alternative modes of knowledge production", as she described her end of year project:

> I always have a final project that is format agnostic. So I tell them what my goals are, what I want them to accomplish but I don't tell them what they actually have to do. So two of the groups are making podcasts, one group is doing a photo history project, and one is doing a poster project. [They are required to] figure out how the thing is going to be published and circulated. And by making that their problem, like they're engaging it more seriously, and solving the problems themselves or coming to me for help but understanding

> that because it was folded so explicitly into the assignment, they understand that as what their job is.

Here learners are given the opportunity to choose a format for their project but must also take ownership in considering the ways in which that material will be presented on the web. In this final assignment, Olivia provides the learners "absolute free reign in terms of what kind of a thing they produced." Learners used their creative interests to develop resources for the course, as Olivia reflects "some opted for essays still, but other students created digital timelines, infographics, podcasts, comic books, videos."

James suggested that he was exploring how he could allow learners to have greater choice in how they represent their knowledge. By allowing learners to create multimodal resources and making them open, he reflects on how those might create opportunities to build on one another's work:

> And that might be something with the idea of openness in the course going forward, maybe leave that up to the students. I could bring the students in as part of that decision-making process. You know? This is what we have from last year. What do we want to do? Do we want to take those and expand on them? Do we want to start from scratch? Do we want to build these other resources? For me that again brings a different twist to the openness because it's not about me, it's about the students at the end of the day. […] I want to give them a say in what we do and how we do it.

James describes his plans to invite learners to be part of the decision-making process about the work they will be doing in his course. He also suggests that this is important as "it's not about me, it's about the students" and he wants them to have a voice in the classroom in terms of how they represent their learning.

William commented on how it was important for learners to be able to "explain a concept in a way that others can understand who are not necessarily as deeply educated in that particular field." In this case, the goal is to engage learners in the communication of complex terms, concepts, and the knowledge they are learning through the course. William explains they are "trying to get students to think about what it is […] they're studying that's relevant to others and then being able to relate it in a way that is approachable by the general public. This is another example of supporting new modes and mediums of learner work, as it invites new forms of knowledge production beyond the traditional academic paper. Requiring learners to take what they are learning and present it to a lay audience was also suggested to reinforce learning and communication skills, as William describes:

> I wanted students thinking more about how they relate their work. I think part of the learning process isn't just necessarily internalizing this stuff, it's being able to synthesize it and consolidate it in such a way that you can then relay it to other people. […] I've always thought […] in any academic discipline, but science in particular […] it really does affect people's lives. Being able to relate it beyond the academy or behind the lab is an important thing.

This was reinforced by Alice as she reflected on engaging learners with assignments that involved contributing to Wikipedia:

> I strongly believe there are really good values in adding to Wikipedia. Not just because it's public and students think their work is going somewhere. […] But also, the way they make you write, it's like you have to write for a lay audience. […] You have to cite everything, you can just spout some stuff off and get away with it like you might be able to on an essay.

By offering new mediums for knowledge production and promoting the sharing of those resources, learners are required to present that knowledge in a way that is more approachable to the general public.

James describes how OEP-driven assessment could also help learners be successful by providing an opportunity for "formative assessment" which could result in a more frequent and timely feedback. In several cases, new modes and mediums were described as affording new ways of providing formative feedback. As many of these resources are likely to live online, iterative feedback may be offered through commenting and annotation. In one case, learners were tasked with seeking, contributing, and commenting on popular media stories related to the curriculum. These assignments were an opportunity to connect the curriculum to popular media and submit their relevance to the course. Katherine describes how she has learners "write a short explanation or rationale why that specific article is relevant to the material that we are covering in this course." These enabled the instructor to see how learners were interpreting the course, how they relate the course to popular media, provided a course resource for other learners to access, and presented an opportunity for discussions in class.

Other emerging forms of digital media created as part of learner work were also mentioned by participants. In one case, learners were invited to contribute memes relevant to the course to obtain bonus marks. A meme combined a still image from popular media with text relevant to the course. Learners were invited to create the memes for bonus marks, as long as they were related to the topic, courteous, and appropriate. While it was the first time this was being done, the introduction of learner-generated memes was thought to provide an opportunity for learners to be creative, relate the curriculum to popular media, and introduce humor into the

course. By the end of the course, 96 memes had been contributed by learners to the course website.

New forms of work were also suggested to provide a diverse set of resources that could be developed into a collection. By engaging with creating knowledge through a variety of modes and mediums, learners build up a repository of artefacts they have created which demonstrate a variety of technical and communicative competencies. William describes how this lets them explore "new ways of approaching the material." When speaking about a learner blogging activity, William suggests that "they're also entering a world where that is going to be the way of presenting information." James suggested that new forms of learner work may be useful artefacts to share in a portfolio if they are considering graduate school, as one participant describes:

> A student can walk into an educational program and say, "Here is part of my portfolio, this is something I created and made." It's a show piece for them […] it's something that they can use to highlight their knowledge, and their ability, and their capacity to communicate.

James goes on to describe how his intent is to have learners create "documents that live on after the course" [James] and "things that students are proud of." Katherine comment on how she believed "it really shows them that […] in a span of couple weeks they learn something that's tangible that they can use in [a] real life setting. Patricia suggests that creating assessment projects in this way allows learners to demonstrate "how that they're engaging with a wider community beyond just the classroom which I think can be particularly useful for job interviews." These works may serve as artefacts that learners could take to a potential employer, as described by Patricia, who tries to design assessment that result in "something that they can take to an employer to evidence specific skills that they've gained or use as a writing sample" or show specifically "these are some of the things that I have done." Inviting learners to create new

forms of digital artefacts allow them to demonstrate technical capabilities in digital media production and shows how they can represent their knowledge in novel forms.

Supporting personalised learning

Frequently mentioned throughout the interviews was the goal of allowing learners to explore their personal interests, culture, and social context through assessment. When possible, several participants sought to design assessment, which allowed learners to tap into these aspects of their personal lives. In doing so, Olivia reflected that:

> I let them choose a topic that they were personally invested in […] so they're producing work that they believe in and several of them have spoken about their intentions to […] continue this project outside of the course and to […] use it to start building their profiles as professionals.

Where learners could exercise choice and pursue projects of personal interest, a greater sense of ownership was observed. James commented that "They love the idea that they are in control of what they do", when given more choice around assessment. Other participants suggested it was possible to have learners working on projects that could benefit their personal lives or professional trajectories as part of formal coursework. Robert remarked on how he perceived learners responded to this:

> They're really proud of the fact that they've made these really beautiful audio pieces. They want to share them with family. They're circulating them […] I don't require them to circulate them, but they're getting them out there. And I also got a lot of feedback on how good it feels to make something like that. It's this point in the term where everyone's writing midterms and papers and then they have a creative outlet to think through these ideas as well.

Personalisation of assessment was suggested to allow learners to represent and situate themselves authentically and creatively through their work. Margaret describes how she felt this approach invites the learner to bring their personality and interests to their coursework:

> What open practice invites you to do is to be you. Be authentic and know that […] you may be challenged. You may be challenged by others, and that's okay, and let's think about ways you can respond, or ways you can be that recognize that sometimes you're just going to have to agree to disagree and that's okay. But you need to be able to have spaces and places to have those conversations. […] So I think it's that invitation to be authentic, be human, be you, and share what you know and learn from others. That curiosity, […] you've had such a different life than I have, […] there's always something that you can learn from someone else.

Personalised learning is suggested to allow learners to be themselves, represent and investigate their interest, and be open to challenges and making mistakes along the way.

Learning resources

Participants described their engagement with OEP in relation to their selection and use of teaching and learning resources. The subthemes that emerged in this theme include using and sharing content online and promoting a diverse and interdisciplinary array of resources.

Using and sharing content online

Content was largely discussed in terms of ensuring free and open access to learning resources. This included both references to open textbooks and as James described, "making information available to students in an open way." While Joanne describes her goal of reducing the "burden to their pockets", Margaret suggested her intent to and support "equity and access" through the use of open resources. OER were regarded by most as increasing in quality and

viability over time and becoming a viable resource for use in their classes. Thomas reflected on how his interest in open scholarship and open access research permeated into the ways he created and sourced educational materials for his teaching:

> Well my research around scholarly education has been about, a lot about open access to research. So that has, I think, made me hyper aware of the challenges in accessing resources. And so that, I think, has created the impetus for the first two parts of this around first giving the students materials that are openly accessible because that's the way that scholarship should be made available to the public, so it seems like for me it's always important to be able to contribute materials as well, and I found it was fairly straight forward for me to do so.

The notion that scholarship should be made available to the public in all forms, including both research and teaching materials, are referenced as the rationale for engaging more openly. Also noted was that working in this way was considered "straight forward" and this participant was able to extend open practices into their sharing of teaching resources as well as their research outputs. Alice noted their feeling that the usage and sharing of OER was one of the "less threatening" components of OEP. This comment was made by Alice, while comparing OER usage to other forms of open practices. Building openness into assessment, outcomes, and teaching and learning practices was perceived as more challenging to engage with than adopting OER.

Katherine described how their discipline was regarded as obscure so "really not on the radar" and "really not sexy" to the general public. As well, Katherine believed that "students really don't know about it." They felt that "this is not a discipline that students really get exposed to in their previous education like high school and elementary school. It's not covered." For these reasons, she explained that:

> I have lots of hurdles to go through in my first course. So, it became very obvious to me from the get-go that I have to have something to catch them besides the exciting part of the discipline, but I can't waive my hands when they have all of these notions in their heads: they've never heard of it, they think it's ugly, boring, why am I here? It's forced on me.

Katherine further shared how she believed it was important to present learning materials in an "exciting way." This started with presenting them on the internet and sharing them openly. As Katherine explains, the sharing of resources openly was considered:

> Absolutely necessary for my discipline. Again, might be different for others. But for mine, definitely […] So that's why I immediately knew, I have to go to the internet when I started teaching because in those days, 2003, internet was in. It was 'it.' So that really was obvious. I have to be there. If I'm not there, I'm losing them fast. And that's why I continued following the trend, that's why I'm in the app and mobile games, and whatever is the trend – that's why I'm going to the virtual reality in a hurry – because if nothing else, I'm showing that this generation of current students that "yeah, we […] are not dead-beat people! You know, we follow these trends.

She is now exploring ways to use mobile applications, gamification, and virtual reality to increase learner interest. The use of these emerging tools was described as a strategy for increasing awareness of her discipline and providing new ways for learners and the community to get involved with the subject matter. While reflecting on her contributions to open education, Katherine shifted her thinking to emerging technologies and innovations and how these might further enhance teaching and learning in her discipline. Virtual reality technology is not commonly considered a form of OER or OEP; however, technologies such as virtual reality environments designed for teaching and learning may in future be collaboratively created and

shared for use by others. Katherine explained her rationale for this continued evolution of her course materials:

> If I start with […] chalk board and old textbooks and nothing else, just paper, and typical lectures, I don't think I would, if you want, sell the message as quickly or efficiently as I am doing it this way.

Comparing her area of expertise to other more well-known disciplines, Katherine shared a desire to make her discipline more accessible, attractive, and well known. Ensuring that the materials for teaching were shared openly was described as essential to expanding access and attracting interest in this area of research.

Another reflection offered on openly sharing curriculum resources was the idea of openness enabled opportunities for collaboration with colleagues. Sharing openly invites opportunities to both collaborate on the creation and share existing resources among colleagues in a subject area. Katherine describes how resources shared openly were perceived to also support new faculty entering the discipline:

> I discovered younger colleagues from other institutions who don't have as many resources or supports as we do at [institution name] have benefited from this […] when they […] became professors […] they could use that material right away. Modify it, or not, but it was there, and it was really useful.

Katherine explains her sense of satisfaction that colleagues at other institutions are able to use the content they are sharing and especially how this might assist new faculty teaching in this area. She goes on to describe further unimagined uses of the resources they had shared:

> Over the years I learned how A) popular it became and then B) how many other uses for that material people were having for it. For example, not just people from other countries, but also people in […] federally-funded

> institutions […] So, lots of my colleagues […] make their students to do a refresher or […] self-study course by using this material. Or for various professional development opportunities in various professional organizations […] when I developed the material, [these] were really low on my radar as potential uses.

Katherine has been sharing her own resources openly for some time and it is starting to garner interest from new faculty, established colleagues, as well as those working outside academia across the country. Noted was a shift in willingness to collaborate once resources were shared more openly. As she explains, at their annual meeting of educators in the discipline, they now include:

> A session where we talk about our educational projects. Which before we didn't have. And that really came out of this initial cooperation and open resources that we had. Without it I don't think it would happen. Maybe it would, but much later than it happened. So that's another unforeseen benefit of having these open resources because once you have things out in the open, people are really much more keen to, if nothing else, engage in the dialogue.

The increased sharing of resources is perceived as leading to greater collaboration among educators across the country. In this case, conversations then begin around the need to:

> Develop a Canadian e-book textbook for the intro […] course. We don't have that. We don't have even a Canadian regular textbook. We are using one that's from the U.S. which is really good, but it's full of U.S. examples […] how about we organize ourselves?

Through collaboration with colleagues, it was decided that the book would be a shared resource developed for and by this community of educators. Katherine further reflects on how they had seen examples of others trying to commercialize resources without success, "because it was

closed and he was trying to charge a fee, it really didn't take off. The market is small, we're not in it for money."

Katherine also described the importance of sustained access to learning resources. She mentioned a fear that the resources provided during coursework are often only made temporarily available to our learners via a restricted access LMS. Katherine explained how:

> Whatever you're posting […] was password protected. And for my students, it was okay to use it while they were in the course, but as soon as they leave the course they lose the access. And I didn't like that idea because […] for my students it would be beneficial to have some material at their disposable that they can use later in their education and probably beyond.

A significant feature of closed access LMS environments is the temporal nature of access to course materials. While a course is running, learners have free access to their course resources. However, once a course concludes, depending on how the institution has the environment configured, learners may lose access to both the resources from the course, and any work they may have contributed in the online environment. This participant found this problematic and this formed the catalyst for them building course materials outside of the LMS which would be available to learners for the long term.

Learners were also encouraged to create and contribute resources as part of the curriculum. In doing so they were sharing and exposing resources created for the course with the rest of the class. Examples include: synthesizing, commenting and reflecting on readings; creating ancillary resources; or sharing their research openly. Participants noted that there were also opportunities where these resources could be made available and could be quite useful to learners at other levels, or to future learners. William comments on how he used these with his learners:

> I would refer students back to those blogs […] and they can look back to see what other students had done [..] so I'll let students go back to other years' work as well and see…I mean they don't see what the mark is or anything like that or the comments on the blog post, but they should be able to at least see how other people approached it.

This creates an opportunity for learners to build on or critique the work of their peers. This was also suggested to potentially benefit undergraduate learners who could gain access to the work of graduate students. As Olivia suggested:

> Because the graduate students are writing essays on new areas, I end up having my undergrad students quoting those essays that they find independently when researching topics because it's often the most up to date work on a particular field.

Olivia went on to comment how they believed this was a "great example of how doing your research in public, it immediately becomes usable." This was reinforced by Katherine who reflected that it is often hard to imagine all of the audiences and potential uses for your work when creating it, as she was always "learning […] new ways how such material can benefit beyond your initial intention." Participants reflected on the unintended consequences of engaging more openly. Both Katherine and Olivia desired to also create opportunities to demonstrate to learners the possibilities for unintended consequences when sharing openly.

Promoting a diverse and interdisciplinary array of resources

The selection of content was discussed in terms of resource diversity and ensuring multiple perspectives were being considered throughout the curriculum. Joanne suggested she seeks open resources with a goal of "facilitating student learning in ways that are diverse, in ways that take into consideration a variety of perspectives, a variety of disciplines." This may

include resources from a variety of individuals, organizations, and publishers in a variety of formats and representative of diverse global communities. As Joanne continues to explain:

> They do not just have to read one long document, or one textbook and that's it. I use all sorts of resources from audio and video to having them use databases and create artifacts and websites – create websites. And parts of MOOCs, for instance, from around the world.

Joanne describes her strategy which involves deliberately seeking resources from a diverse range of content creators, geographical locations, and media types. Joanne comments on how using a diverse array of resources as opposed to a single text "gives me so many options and so many ways of combining things." Massive open online courses, commonly referred to as MOOCs, are referenced as a possible source of curriculum materials that learners could be pointed to for alternative perspectives. Her goal is to develop curriculum that brings together "different ideas and perspectives in theory and practice from around the world and I'm not just using North American [resources]." In doing so, she explains that she is seeking to develop a practice of exploring knowledge form a variety of perspectives, "I encourage students to go to websites of other municipalities around the world, and organizations and find information. And I think that such processes has them […] engaged for the long term, not just in the course. Joanne further reflected her goal of presenting learners with a diversity of resources may provide "ways of helping students open their minds."

Learning outcomes

All participants in the study were inviting learners to engage with open education in some way. In the process, learners were also learning about digital media, open copyright models such as Creative Commons, and internet publishing. Therefore, open education literacies were being

built into the curriculum either implicitly or explicitly as a prerequisite in order to help learners work openly in the discipline. Whether this was articulated as a formal course learning outcome was not always clear; however, participants reflected on learners having to engage with open education literacies as a result of engaging them in this way. This required learners to employ critical approaches to assessing knowledge and, in the process, developed digital and network literacies.

Promoting critical approaches to knowledge

Promoting a critical lens on knowledge production was cited as a motivator for engaging with OEP. Joanne describes OEP as an approach to "engage students with the information age, […] to engage openly in the knowledge society." Robert reflected on his own philosophy for the critical interrogation of knowledge production, ownership, and hierarchies:

> I see […] top-down notions of knowledge and how knowledge is mobilized by the university as a tool of settler colonialism. And so being willing to, and ready to, critique those systems of knowledge and the way that knowledge moves is at the core of what it means to do decolonial scholarship and to engage with my students in a way that I see as ethical and necessary.

Robert used OEP as a technique to get learners thinking about knowledge structures and ways that they might contribute themselves. He described his belief that "open access is ideological. It needs to be critiqued" and took this as an opportunity in their course to have learners to critically interrogate ideas around openness. Robert described how he used this as an opportunity to get learners to think about how they can share their work but also what that means more broadly for society. As he goes on to explain, the goal is to "show students how they can produce their own meaningful relationships and can produce their own knowledge I think is a big part of how I try to move into the classroom and get them to think."

Joanne reflects on her experience in tasking learners to locate, review, and asses OER with a goal of getting them thinking about who's perspective and interests are embedded within the resource:

> I think that something they also realize is that […] they shouldn't just take in everything they read on the internet, that you can actually research things that you read. So there were a couple of cases where they came back to me with, "Oh I found this article," or "Oh I found this report," and then when we looked into who wrote the report, what their funding was, realized it was biased. So it's things like that that they aren't as well, and just this morning I had this discussion about fake news with my husband. It's trending. It's giving me another opportunity to teach things like that to students.

Tasking learners with both finding online resources, and then scrutinizing their authorship and funding, is described as a competency for working in the age of "fake news." Getting learners involved in seeking resources outside of the course was also perceived to get them thinking about how to engage with the challenges of abundance, misinformation, and becoming critical readers in the information age.

Developing digital and network literacies

As learners were tasked with reviewing, remixing, or creating open resources, they inherently develop literacies for working more openly. In one case, the development of open literacies was explicitly and deliberately identified and described as an intended learning outcome for learners. Margaret describes how these learning outcomes had been introduced following a recent review of the program:

> So we did a pretty extensive consultation and what […] really what came back was this notion of openness, networked learning, and digital mindset. And so those became our three cross-curricular threads if you will, and then under the

> banner of learning and technology, you know, there were pieces that had to then come together.

The presence and development of digital and network literacies was frequently cited as both an important consideration in preparing to engage learners with OEP, as well as a potential consequence of doing so. As Margaret reflected:

> It gave some a way to understand what's happening in their personal lives with social media and why people are talking so much, and why people are following so much, and linking, and liking, and posting videos. It gave them a different frame to see all of that through. I think it also, for some, it caused them to be a like more circumspect about what they are saying and to view that virtual space in a different way, not in a flat one-dimensional way but in a way that, "Hey wait a minute, I have a physical community that I cultivate and nurture here in this physical world, but in this virtual space there are also things called 'communities' and if I am going to participate I need to understand what I'm participating in."

Several participants warned that while many learners may be eager to use digital and social media, they may not have a refined understanding of how to engage on the open web and cultivate their online communities. One strategy for addressing this was in developing an understanding of how to work incrementally in the open. This was described as an understanding of the gradations of privacy, essentially how it is possible to transition from working in a closed way, unfolding to a smaller group, then making the resources openly accessible. Along the way, it is possible that feedback and revisions can be made to make the work stronger. As Robert describes:

> I make sure that they're aware of the different gradations of privacy so that's sort of one of the first steps is that we, you know, initially we create sandboxes

> that are totally locked down so that only I can see them. Then we make assignments that are open just to the class, so it's open in that sort of sense. But then building towards products like the podcast now which is about going out in a really open [way] making yourself accountable for that work as well.

This was reinforced by Margaret who described her experience engaging learners in an incrementally open way:

> I think for many that initial apprehension is "woah, this is a whole world and I'm not sure I'm ready to share my thoughts with everybody yet." But then as they go and they start to get some feedback, it starts to scope in for them. They realize that yes the whole world can access it, but not the whole world does access it because people are busy they have other things to look at, they have different interests, all of those things. And so they start to get a little more comfortable in the space of okay so people are connecting with me are connecting because they think maybe we have something similar to talk about. Or maybe there's' a way – a very optimistic view – maybe there's a way we can contribute or extend. Or there's people thinking I'm not sure I agree with you. And so then it's an example of how to enter into that debate and the discussion in a professional and productive manner. And so I think modelling all of that and showing people the opportunities for that is really valuable as we continue to create ourselves as public citizens.

Working incrementally towards open sharing was described as a strategy to help learners find comfort working more openly. Gathering feedback to improve the work along the way allows a learner to improve and refine the work and prepare it to be shared more openly.

If the intention is to have learners sharing their work openly, the process by which they create their works needs to be done in an explicitly open way. Further, learners need to learn how to share their work as openly as they wish, according to their personal preferences around privacy. Learners may need to change their workflows and practices for engaging with digital

media to contribute open resources appropriately. William comments on some of the common practices they see on the internet:

> I mean we all do it, you see some hilarious thing on Facebook and you just steal it and post it on Twitter or whatever, everyone does that. And I think that that's the underlying, you know, "since I can do it there I can do it anywhere." […] Once you're really working in a real working environment and posting things that are permanent or semi-permanent you need to be pretty careful about that. […] I think that students don't realize that.

While many of these are common practices, they are not technically legal practices. Relative here, is the discussion around FIPPA, personal information, and the digital footprint learners leave when engaging online. By starting the conversation and raising awareness about good digital and network literacy, William expresses a hope that learners will be more careful and considerate when engaging online in their personal and professional lives. He suggested, while it was possible to rely on fair use principles, which allow learners to source and use content from the internet without consideration for licensing for the purposes of education, it was important that learners had an opportunity to practice working with open resources. To support stronger digital and network literacies, William has built in open and network literacies as part of his curriculum. He deliberately instructed and expected his learners to look for and use resources available with open licenses or those designated as public domain. As he explains:

> I teach them specifically how to use Google Images or Flickr or various other sites to […] find open access or public domain things and then how to figure out what that open access license is like and what you need to do. Do you need to actually attribute it? Or is this some sort of straight up you can use it without any attribution? Or are you allowed to manipulate it?

This was done in order get learners to "start thinking about later on in life when they're out of this […] fair use type of environment" so that become "careful that they are using correctly attributed and correctly licensed work of others. So that becomes part of the learning process, too." Knowledge and practices for working openly were integrated into the curriculum to prepare learners for a future of open sharing, in this case to support the communication of science. Joanne reflects on the guidance offered when tasking learners with sourcing and reviewing OER:

> I give them a list of things they need to search for, some websites they can consult, I give them an overview of a variety of Creative Commons licenses, or in which part of the website you will find that it talks about licenses. So things like that. I guide them.

Learners are guided towards specific repositories of OER, provided with an overview of open licenses, and tasked with identifying OER that could be relevant to the course. In doing so, they are learning about how to locate and assess resources, but also how to determine their copyright. Joanne believed that these were important literacies that needed to be made explicit, as she describes she aims to get learners:

> to research online for a purpose […] not just 'Googling' something, but actually doing more thorough research as if you were in the library and were searching for books and resources, same thing but online which I think nobody teaches them to do.

The concern that responsible ways of sourcing and working with content on the internet were not being formally taught as part of the curriculum were being addressed in discipline specific courses. Joanne reflected that she did not see these being explicitly developed in other parts of the curriculum and, therefore, built them into her course outcomes.

Other literacies cited include "platform literacy" which Olivia described as an "actual understanding of how the platforms they're interacting with function, the way that they use their information, the way that they frame their interactions." Learners are frequently tasked with engaging with complex software systems in higher education and open platforms represent yet another set of systems to learn and understand. Olivia shares that in her experience "unfamiliar platforms just seem to cause a great deal of panic" for learners. While engaging learners using an open platform to share their resources, she reflects that:

> I didn't anticipate how much time they would need to grapple with the platform, how frequently they would make mistakes. They did things like they didn't understand that they needed to resubmit the paper as a different file on the same submission after the review. So they created new submissions. So then all of sudden we had, like, thirty duplicate submissions. All of just these little things that just I hadn't – because I've been using OJS for years I just hadn't anticipated the degree to which it would be baffling.

These issues can impact the quality of the work that is produced, if learning how to use an open publishing system impacts the amount of time learners can spend on the core curriculum. As Olivia surmises "I think that they produced work that was not as good as work they could have produced had they not been spending time grappling with an unfamiliar platform." These challenges could exist for both faculty and learners. If the environment is unfamiliar for learners and they struggle with using it, this could impact teaching and learning overall. Patricia shared that to support their learners the faculty "created tutorial videos that walked people through" how to work with the tools and technologies in order to reduce the "anxiety around working in a platform that's unknown to them." Tracy also identified challenges for both faculty and learners in learning how to use and contribute to open system. She reflected on the need to have an:

> Institutional culture that values what people bring to their profession but also encourages them to expand on that and to gain those literacies? Maybe some additional time to do that? […] perhaps making some equipment available, easily available. […] I think having those tools easily available and to demystify it.

Tracy describes her desire for an institutional culture that values and provides resources to develop these literacies for both faculty and learners. Similar to Olivia, she suggested that there may be a misguided assumption that these literacies have already been developed and argued for an institutional culture that supported them explicitly.

Teaching and learning activities

Participants described their engagement with OEP in relation to their teaching and learning activities. The subthemes that emerged for this theme include shifting roles and responsibilities, flexibility and accommodation with learners, and fostering collaboration and peer review.

Shifting roles and responsibilities

Interviewees spoke of how openness impacted the way they engaged with learners through their pedagogy. Several participants reflected on their shifting roles and responsibilities as an educator when engaging with OEP. James remarked that this approach enabled them to, "become less of the holder of knowledge and more of a conduit through which students can access that knowledge." Others reinforced this idea, with Patricia suggesting that OEP "blurs the boundaries between instructor and student to create a more collaborative space." Alice described this as "sharing responsibility between the professor and the students" and "power sharing within the course", while Margaret cited "giving over that illusion of power" between faculty and learners. Tracy described her approach as "being open to transcending boundaries between

students and professors in terms of collaboration, participatory education." This idea of sharing responsibility for the educational experience was further reinforced by Thomas, who uses "openness in the way that we practice the actual classroom dynamics, deciding on materials, [and] coming to agreements with the students around their evaluation." Robert also reflected on this shift in power relations:

> I try to run classrooms that follow open access principles, in so far as, they are democratic and that there's plenty of room for student voice and that I'm there to, sort of, lead and facilitate conversations but that they are going to go in multiple different directions just like Twitter does. Right? You never know where it's going to end up.

Nearly all participants commented on a shift in power relations in their definitions of OEP. The nature of this power shift was articulated in several different passages. Alice states it is about "co-creating the curriculum, for example. Or having the learners be able to help choose what the assignments are going to be." Margaret describes it as evoking "a constructivist and a constructionist stance; that notion that you're co-creating and that there's value in the co-creating and there's value in that social negotiation that comes with learning in those spaces." These statements suggest that learners would need to take a more active role in their learning. This was positioned by Patricia as an opportunity for learners to "become a leader in their own learning" or "forging their own path" in terms of making choices about their learning. Margaret remarked that "we have to be open about how we're going to create this course together," suggesting that the actual design of the course included the learners as stakeholders. This was reiterated by Katherine in her statement "if you are developing something for students and users, you better involve them in the process", which suggests an active learner role in the development of course activities, resources, and outcomes.

Describing their class of learners as a "social network", Margaret suggested she sought to facilitate and support the idea that the class is "connected, that's learning together, that's changing, and you have to respond because of that." This implies a shifting role for faculty, too, in responding to the way the course manifests, rather than trying to control it. Margaret describes her belief that this pedagogical approach requires:

> The need for clarity, the need for transparency in what we're doing, the ability for channels of communication, for asking questions, for having those wrong answers, having those half-baked ideas, a place to tease those out, and then the value of that discussion.

Summing up the way they describe the use of OEP, Thomas remarked "it's openness in what we bring into the classroom, openness in what we take out of the classroom, and an openness between what happens between the students and myself and the students and each other in how we organize the classroom." This statement surmises several of the themes already discussed and represents a holistic description of openness that considers resources coming into the classroom, learner work extending out of the classroom, and openness among participants while in the classroom.

Fostering collaboration and peer review

Peer review and learner feedback were explicitly built into the assessment designs of seven of the eleven participants. This was actualized in a several different ways, using commenting features on blogs and social media, through the Hypothes.is web annotation tool, or by having learners adapt and evolve one another's work.

In one case, an added benefit to an open approach was the networking of different sections of a large course. This provided an opportunity for learners, who might not normally have an opportunity to interact, to connect and access one another's work. By having all learners

sharing their reading and reflecting on a central platform Alice reflected that “they could see what students in other sections of that course were talking about around the same material and these were also made public.” There was a perceived value in learners’ being able to access and review one another’s reflections of the course material. This allowed learners to see their peers’ perspectives on the shared course material and could lead to further debate and discussion.

By ensuring learners can access one another’s work and promoting commenting and feedback, Thomas suggested that “it’s really beneficial for them to get a lot more out of understanding what the other students are thinking.” In this case, learners were tasked with reflecting and commenting on the assigned readings for the course, and Thomas reflected that “the students respond really positively to it.” He further suggested that by having learners create comments and reflections on the assigned readings they end up “really reading all of the materials that are assigned for each week with more detail and more critically, so I really think it helps them to see.” Through the process of creating ones’ own reflection and then having access to their peers’ written reflections, there is a perceived benefit in having them review how other learners are making sense of the readings. Thomas describes this as helping the learners ‘see’ different perspectives and interpretations of the course material by reading one another’s reflections and review of the work. These reviews could be used as a source for debate and discussion around the readings. In another case, learners were required to maintain personal blogs and keep them updated regularly with reflections from the course. Margaret reflects that this allows them to “get some feedback from others and can adapt and adjust and tap into a larger group.” Like Thomas, she describes the ability to “tap into” the reflections and thinking of their peers provides a way for learners to adapt and adjust their own thinking and approaches to the course.

Thomas had begun using the Hypothes.is web annotation tool to support formative feedback and peer review. The service enables the annotation of any web-based resource in much the same way as Microsoft Word handles commenting. Unlike leaving a comment at the end of a blog post, this would allow feedback to be provided wherever the reviewer chooses on a web page. This enables a reader to attach their comment to a paragraph, sentence, word, or any form of multimedia on the webpage. Thomas describes how this enabled learners to leave more specific and targeted feedback:

> Right in line, they can point out typos, they can point out sentences that don't make sense, they can point out their thinking, sort of as they go. In the same way that you would in the margins of a Word document.

For learners who choose to make their work publicly available, the comments and feedback made by faculty were then also accessible to others. Thomas shares how this affordance enabled "any other student could come in and also see the comments I've left on the other student's essay." In this way, feedback is being provided from the faculty member directly to learners, while also being made accessible to others as well. Thomas further reflected, "I'm not sure if in practice they look very carefully at other people's essays to see what kind of comments I've given them, but the opportunity for them to do so is there." Thomas describes his intent to be open and transparent with his feedback to learners, stating "all of the feedback I give is also publicly available. Only the grade the student receives is delivered confidentially as he describes "they should have a right to keep their grades as private as they want."

Another way of supporting collaboration and peer review was described by tasking learners to build on learner work of the past. James had designed an activity in which learners were creating learning resources for the course and these resources would be made available to

future learners. The learners were designing digital learning resources to help others understand the concepts from the course. James described his desire to have "next years' students taking the projects that we have and then editing, modifying, adding to making it more robust, filling in gaps." At the time of the interview, he was still in the first iteration of this particular design and imagining how future learners could build upon the development of these resources each year. As he surmises, using the original material "as, sort of, the base, expanding out to make new resources that could be make available. James reflected considerably on the ways in which he might have learners working on developing, reworking, translating, or improving learning resources as part of their coursework. He described how getting learners involved in teaching the subject matter, creating digital resources, and developing a resource base for the course might enhance and support their own individual learning. Tracy commented that there was value in being a contributor, describing how it was "validating for them to be part of something that, you know, that lives on." By contributing their work, she sensed that learners were validating their work and situating it within a larger context. She interpreted that learners appreciated the "idea of taking part in something that promotes sharing" of knowledge.

Being more open with teaching and learning activities can create opportunities for collaboration with the community as well. Alice provided an example where learners were interrogating a book as part of their course and blogging their reflective summaries and critiques of the work. The author of the work became aware of the class activities as they were made openly accessible. In this case the author then offered, "if you ever want a guest lecturer, you know, I can come out." In the following term, the author came out to provide a guest talk with the class. Alice, comments that it "was really exciting I think, because how rarely do you get to

actually hear from the author that you're reading. Right? And that was because of the public blog post."

How do Faculty Describe OEP Being Actualized Through Learning Design?

Participants in this study were actualizing OEP through the design of learning in several ways by inviting and providing opportunities for learners to work more openly. This was done by involving learners in the building of collections of course resources, engaging in open scholarship with their own research, or by developing independent open coursework projects. In this section, I describe the three types of designs which emerged, then discuss challenges that were raised by participants as they executed these learning designs in their courses. Figure 14 provides a visual model of the learning designs represented and is further discussed below.

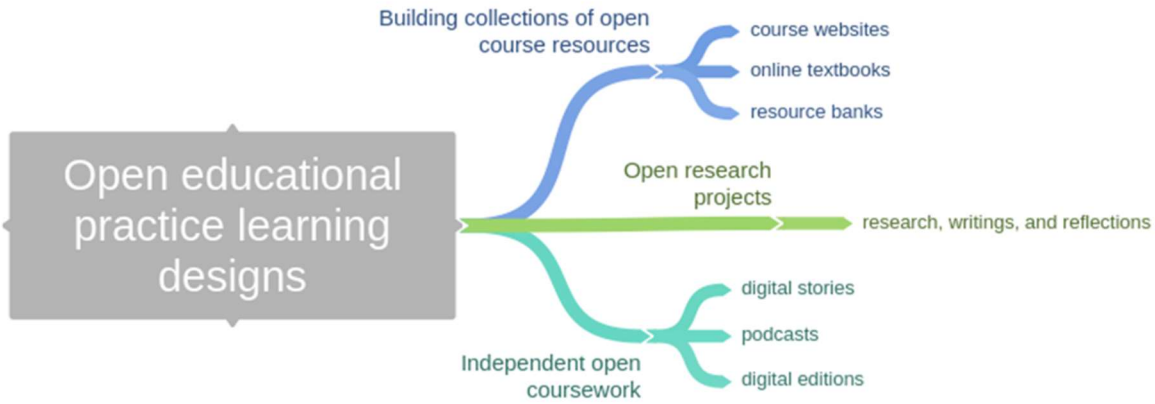


Figure 14. Open educational practice learning designs.

Building collections of course resources

Getting learners involved in scrutinizing, describing, curating, and creating collections of open resources was one of the OEP learning design approaches described by participants.

Learners were tasked with creating works independently which would form collections of works, then presented openly to their peers, and in many cases published on the internet.

One of these projects involved getting learners to find, assess, review, and curate OER relevant to the course. As learners sourced the OER they were tasked with critically assessing it in order to investigate bias. This required learners to explicitly seek out OER and critically review them, as Joanne reflects, "there's so much information that's good information out there, how to distinguish it from the bad information, and […] using OER to do that. Once the resources had been reviewed, it was then added to a collective database of resources relevant to the course. Consequently, this participant had developed a significant database of OER relevant to their discipline. Feedback from learners on this activity was positive as Joanne shares, "they're happy because they're doing something that is more current, that is more hands-on for them. And it's the internet, right? They're using their devices for a good reason in class."

Assignments and research projects in which learner work was presented as a collection of openly accessible resources was twice cited as a learning design approach. These projects required learners to build artifacts, either individually or in teams, then contribute their works as part of an openly accessible collection. In one case, this was intended to ensure learners were reading one another work and building a cohesive collection. As James described, "the students have to work together to ensure that the terminology that they're using, that the boundaries of the anatomical regions are synchronous and don't overlap too much." The intention was to have learners reviewing the work of their peers, and collectively designing resources which might complement one another within the collection. In future iterations of the course, it was imagined that learners might continue to build, improve, and reshape the collection. James hoped that future learners could:

> Take that material and instead of creating – or extending on the articles, maybe they go and make resources for those articles. You know, go through and here's the article […] make PowerPoint slides on that article, make questions, test banks, things like that. So using that as, sort of, the base, expanding out to make new resources that could be make available. Or going back and using that as, sort of, a framework and making it bigger.

James aspired for this assignment to develop into a "living, growing document" which would be continually improved by learners as part of their coursework. He imagined it being developed and grown each year by new incoming learners.

Tracy designed an assignment which developed a collection of openly accessible resources after trying to extend an existing collection of resources that was paper based and listed under copyright. That particular resource had been built in a way that was closed thereby not allowing it to be extended, as they explain:

> we had talked about […] digitizing an existing cookbook that someone had done years ago […] and that had been very successful, but it had only been available as text. […] It turned out that the author did not want to do that or didn't want any new recipes to be added […] anyways, that project, sort of, stalled.

The existing paper-based resource was an inspiration for the learner collective work but could not be built upon as the author of the work did not want to enable it to be digitized and evolved. Tracy reflected that this was a lesson of the value of working openly where new contributions and community connections are invited, "it really appeals to me to create projects that emphasize ways of accessing information that are widely, universally available that invite community participation and recognize and value that." While the original work could not be built upon, it was used as a model for the new project which was published online. The advantages of building

and showcasing a collection of learner's works was that they were then more accessible to the community.

Engaging learners in open research and scholarship

Engaging learners in open research and scholarship was another learning design that emerged. These designs involved learners maintaining their own open web space, for developing portfolios or to share reflective writing. In one case, learners were being encouraged to establish and build a personal web domain as part of their coursework. These domains were intended to host portfolios of their work that could be used for showing academic progress and developing their careers. A similar design was used in two other cases, although here learners established reflective blogs for sharing their ongoing research and reflections. Margaret describes how learners were expected to "cultivate and curate" their domains throughout the course of the academic term through reflective writing and by sharing their research. By the end of the course, learners had a reflective learning log which they could look back upon and demonstrated their development throughout the term.

As these web spaces were maintained by the learner, they had full control over how they presented their research, how it was curated on the site, and who was able to access their work. This could be done through site level controls, but also by limiting access to specific content as required, or as it developed throughout the duration of the term. A further advantage to learner-owned web domains is the portability and availability for the learner to take their work with them as they leave the university. Learners may choose to secure their own web domain after schooling, further developing their online portfolio. Engaging in this way during formal schooling provides learners an opportunity to explore the creation of personal web domains and consider their value.

Independent open coursework projects

The third category of learning design which emerged during this research was that of independent open coursework projects. In these cases, learners were tasked with creating digital media in various form such as digital editions, learning resources, podcasts, presentations, or videos. Learners were also encouraged to share these resources online, either through digital media platforms specific for the resource (for example using SoundCloud for podcasts or YouTube for video media), or through a web content management system such as Wordpress.

In this case, learners were largely developing resources in a way that would make them shareable, by using sound copyright, formatting, and accessibility practices. A variety of tools may be used to create different forms of multimedia, and much of the development of these resources would happen in closed environments or on a learner's desktop. Learners were encouraged to share their works at various stages throughout the term, by presenting them online for peer and faculty review. The end goal was to create resources which could be then shared with a broader community, based on the learner's willingness to share them.

What Challenges do Faculty Reference Considering OEP Learning Designs?

Several challenges to using OEP learning designs were cited among participants and warrant discussion. Participants largely reflected on their own experiences implementing these designs or considered the challenges which could be faced by others where institutional or structural factors differed. The themes which emerged around challenges were, conducting OEP learning designs with larger class sizes, the perils of self-publishing, and learner concerns around OEP as a design approach.

OEP with larger classes

Concern was expressed for deploying OEP learning designs in larger classes. Due to the somewhat untraditional nature of learner assessment in the open, and the need to develop some of the prerequisite literacies for learner success, this was described as more challenging than traditional forms of assessment. Speaking to the idea of getting learners to develop a collective resource, such as a textbook or collection of resources, Alice commented that "I just don't see that being easily feasible with a large class in terms of time." As Alice does work with larger classes and struggles with the desire to integrate more open practices into their teaching, she shared a strategy currently being used in a course with a large class size:

> One option I've given my students this year for participation marks […] is to write a paragraph or two introduction to one of our readings [about] what you think other students would need to know to help them understand this text." So I've given people the option: "Can you send me a paragraph or two where you help other students in the class, so later students in the class, figure out what they should focus on. What's important in this text?" And I've gotten two of those so far and they're quite good. But again it's just an option, so I don't have a hundred. And I feel l like that's manageable. Maybe slowly building up these kinds of things that could be useful not only for my future students, but I've also asked them "Can I put them public, you know, on our course website which is public?" And I'll only do it if they say "yes," obviously.

By offering an optional assignment, which enables learners to contribute openly, Alice invites contributions from learners without it being a required component of the course which would result in an onerous quantity of works to mark. Alice had also commented on the need to maintain some level of quality in openly available learner work and she believed that her role was to provide feedback so that learners could improve their work prior to it being shared. Alice

considered the process of providing the feedback necessary, however, with a larger group of learners "if you can take the time to give feedback and have them make it better then I think that actually does a service to the rest of the world but that takes a great deal of time." Where faculty feedback is a required step before learners openly publish their work, a larger class size was described as a significant barrier due to the onerous amount of feedback that could be required.

William reflected on the challenge of keeping track of activity happening within open learning designs. In this case, each learner had their own reflective writing blog and they were instructed to comment on one another's writing as part of their coursework. As he describes:

> I did early […] a mark for commenting participation but I found that it was really hard to monitor that and to apply marks especially in larger classes, figuring out who was commenting on what. […] Comments are still open and sometimes they will comment on each other's things. I have specific wording in the syllabus to keep your comments respectful and kind. And I've never had issues that way.

To properly assess all of the peer review activity, William would be required to access each learner's individual blogs to oversee and asses the commenting process. Not being able to manage that process with a larger group resulted in the commenting becoming an optional activity rather than one that was to be assessed. Other participants also mentioned the challenges of coordinating when using collaborative and distributed technologies. The challenge in monitoring and assessing collaborative and peer review activity when learner work was distributed across the web was cited and Katherine suggested "we need a structured platform for educational collaboration." A theme that emerged around scaling up OEP was this challenge of managing learning designs which engage learners in this way. Giving learners increased

ownership of their learning environments and the choice around the modes and mediums of their learning artefacts all create complexity for an instructor in facilitating distributed learning.

The perils of self-publishing openly

Self-publishing can introduce vulnerability and potential loss of control for learners by presenting their work to the public. As Robert suggested, "students don't realize the impact of open." Margaret reinforced this suggesting "it's all new to them." For many learners, this may be their first opportunity to contribute their academic creations in the open. Patricia shares how she felt that "there was this, sort of, false assumption that the students understood how to do all of these things," suggesting that in many cases learners may need extra help when engaged with OEP. While some learners may have shared their personal non-academic works through social media, they may not have done so for academic purposes which require them to build an argument, reflect on their learning, or create knowledge while also maintaining their personal identity. As Robert describes:

> They may be excited at first – I've had a number of cases where they'll make, say, a blog post about Indigenous issues. [Learners] will put it up, they'll turn it in, and then I've had folks come to my office hours the next day saying, "Oh I forgot that my community might see that, my Grandma might be reading that. I have to think: I'm not sure if I want that up there anymore."

The consequences of publishing work in the open involved a process of realization through practice for this learner. Only once the work was made available online did the learner consider who might be accessing their works, this gave them an opportunity to reflect on the implications of that access. A further example involved a learner oversharing personal information through a video which was shared on their blog. Margaret describes the video the learner created:

> It was a video of her walking around her house with her iPad and showing everybody where she lives, and what's important to her, and who she is as a person. Absolutely wonderful, fantastic, if it were behind a firewall. Except this was going out in the open in the public space. And so that raised a lot of different red flags for different people, both myself as the course facilitator, but also even some in her cohort who weighed in and said, "You know, you might not want to do quite so much detail in this video given that it's in this public domain and here's why."

This raises an important distinction between publishing openly and defining the parameters around what is appropriate for sharing openly. Margaret describes this incident as raising some red flags for them in terms of their learning design. They go on to describe:

> [In] the design of that course […] we thought of that innocuous activity that everybody always does in every course: "So, introduce yourselves." Right? In some way, shape, or form. When you layer in that cross curricular theme of open, this seemingly very simple "introduce yourself" activity takes on a whole different layer of impact, of consideration, and then of support required so the learner can make good choices about what they'd like to do.

The learner overshared in this case, as they produced a video which could have security and privacy implications for them. Margaret reflects on the need to make clear the impact of open sharing when engaging learners in this way. One may need to take time to clearly articulate what is and is not appropriate with learners. Margaret used this incident as a learning opportunity and committed to be more explicit about helping learners be considerate when working in the open. In future iterations of the introduction activity, more scaffolding would likely be provided to learners around both what they are to share and the implications of doing so openly. As Margaret reflects further:

> We actually have to think about this in a really careful and thoughtful way because we're inviting students to work in different ways, we're inviting them to learn and work in ways they have not experienced. […] So, we're asking them to do something they've never done or ever experienced before and that really is a great reminder and we constantly go back to "okay so who are these people? Who are our learners and what we're asking them to do, have we provided them enough support to do it? Or are we asking them to take this big leap that actually is a bit too far right now.

This points to the need for educators to be reflective and considerate when engaging learners with openness. It is important to recognize that learners may have never engaged openly in the past in an explicit way or have a refined understanding of the implications in doing so. Margaret explains that her learners have expressed concerns that: "I don't know if I want to go open with my conversations on my blog. I'm concerned about that." Learners may not realize initially who might be reading their work and when they come to the realization that anyone with online access could, this might change their thinking about what they have created. This may result in them presenting the work in a different way or choosing to share selectively. Robert explains how he believes this is still a worthwhile experience for learners, "I think [this] is an amazing part of the process of how when something lives in an open space that it ferments in your brain differently." He explains a similar experience when sharing his own work, "the fact that it's living out there makes me consider it differently." Margaret describes how she seeks to discuss these issues with her learners, by asking "so what's concerning to you? […] First of all, there's a lot of people out there talking on the internet so the chances that you'll be found on the day you've posted are kind of minimal." Several participants treated learner apprehensions and concerns around openness as a learning process and a conversation starter for getting students thinking about how and if they want to engage openly. As Margaret explains:

> What it comes down to is connecting with a larger group. So people are comfortable in their nests and their groups that they've connected with in their lives professionally and personally. And now going open, that's a big audience. And so initially people are apprehensive. We aren't really rigged as humans to connect with all of the billions of people on this planet. We're very social beings, but we're not social to the nth degree. We need some parameters around it.

The parameters can be defined and determined by the learner in choosing how to share their work. In the case of Margaret and Thomas, the goal was to make learners aware that they could publish openly in several ways, give them a chance to consider the value and risks, and reinforce that the choice to share was up to them. A further conversation could involve faculty and learners considering how the work might generate viral interest, be promoted through social networks, or news media. Considering these issues in advance, draws attention to the implications of the work being shared widely and help learners consider how of if they will link their authorship and identity to the work.

Another perspective offered was the need to consider the timing of when we engage learners in open sharing of their work. Inviting learners to contribute openly early in their undergraduate studies may be to premature as described by Olivia:

> I feel like that is more applicable at the graduate level because students are [then] at the stage […] where they're producing stuff that can be usable for other people. I don't think in a third-year course most students are there in terms of producing research […] that is citable by other people. And that's fine. They're still learning to produce stuff.

Whereas learners in a graduate program may be creating work that is more refined and could be considered more appropriate for access by public audiences, learners in undergraduate programs

may not be at a stage in which their work should be made public. As Olivia describes, undergraduate learners are still largely learning and practicing how to create and contribute to knowledge through their work. These learners may still need time to develop the technical skills, refine their writing, advance their reflective practice, and find their voice to develop the confidence to contribute openly.

Some participants reflected on how learners' awareness and willingness to share openly had shifted throughout the years, indicating that learner perspectives on contributing openly were becoming more sophisticated. As Alice explains:

> In the last few years more and more students are opting for the privacy […] or the anonymous. When I first did it […] three or four years ago, I was surprised at how many students were like, "hey I'll just post whatever […] public." And I wonder if they really thought about it. Like, really quite quick. I mean, nothing bad ever happened, but more and more students are like, "if I post it publicly, I don't want my name attached. Or I just want to post it to you." But I haven't really asked them why. […] I give my reasons for why I think posting publicly is useful to other people, but I don't pressure them in any way or even ask them why.

This was reiterated by Olivia as she reflected on getting learners to build their own personal portfolios, "I can't say for sure if this is a generational shift, but anecdotally I feel like students today are more afraid of building their own domains." A shift in learner perceptions around sharing openly warrants further research but may be anecdotally attributed to recent popular social media giant Facebook's mishandling of privacy and a more sophisticated understanding of the permanence and accessibility of content on the internet. As Olivia further reflects:

> They're very, very used to producing huge amounts of content for social media platforms which deliberately frame what they're doing as not knowledge

> production. And when you ask them to do almost exactly the same thing on a domain that has their name, or their identity, [where they are] personally, sort of structuring it, it seems for a lot of them to become really intimidating and decisions around, like, "What is this going to look like? How do you want to project yourself out into the world? What are your goals? What kind of role are you taking? Is this going to be anonymous? Is this going to have your name?" Those questions for a lot of students seem to be pretty viscerally scary which I find really interesting.

This seems to suggest that there may be a conceptual challenge for learners when they are given greater ownership for customising their personas online. As Olivia further reflects, that level of control and ownership:

> [It's] the opposite of the messaging that you get from social media. […] Platforms like Facebook are invested in devaluing your ideas and your words so that you'll believe that you should give them away for free and that's communicated to you via the platform on all kinds of levels, right? And so, trying to shift students out of that mindset into, sort of, valuing their work and their ideas in a different way I think is maybe unsurprisingly intimidating for them.

Whereas social media takes content and largely packages it for the user, self-publishing requires learners to take much greater ownership over the process of presenting their works and ideas. This represents both an opportunity and a new challenge for learners, especially those who might have limited experience contributing to the web, and as such they tend to respond apprehensively.

Where concern is expressed, learners are invited to take their work offline or limit the ability for authorship to be identified. Robert describes that he has "an opt out practice in all of my classes […] I don't want to make anybody uncomfortable, I don't want anybody to put

themselves at risk, and at any point they can decide to take something down." In this way learners further own the process of publishing openly. Alice shares her strategy for giving learners ownership of this process, "they can do [their work] publicly or not. There's always that option. Or they can do it publicly with a pseudonym." Thomas reflects on learner concerns that have been expressed in his experience:

> At the graduate levels there are some more concerns about putting work out there that then is going to shape what potential employers might be looking at and what they think. So you do get some questions and I do sometimes get students that want to opt out of doing this. I tend to just ask them to publish it under pseudonyms or publish it in any other way that they don't need to – they need to make it public, but they don't need to necessarily identify it under their name. If they send me the URL so that their identity can remain private, but their work can remain public. I haven't had any real resistance to doing that.

Using a pseudonym or omitting author information allows the learner to still engage openly without being identified in the work. This gives them the option to keep an eye on their work and witness how it may or may not attract attention online, giving them the experience of sharing openly without attribution.

Robert commented on how he engages learners with sharing their work openly with a hope that they recognize "that there's different states of getting it out there and the different emotions it creates […] the kind of thinking it creates, I think is really […] something I don't get out of traditional educational practices." In a very real and fairly high stakes way, the invitation to openly publish gets learners thinking seriously about how they might want to engage openly which this participant describes can only really be experienced by engaging them in practice.

Olivia describes how she hoped to demonstrate to her learners that the publishing process itself is a complicated activity. By requiring learners to engage in open publishing, she hopes "it

will show students in a very visceral way how serious publishing is a series of steps, it's time consuming, it's labour intensive, it's nowhere near as easy they might be imagining it is." Further, as described previously, it requires learners to consider what is appropriate to share openly, how they will situate themselves in the work, and how to present the work in a way that makes sense in context.

Learner concerns around OEP

As many of the learning designs represented in this study are novel, participants reflected on those learners have expressed some personal concerns when engaged in this way. Alice reflected that while "some of them love it. It is not universally liked […] and when you're balancing like that you're not going to please everybody." James and Thomas suggested the important of communication and open dialogue with learners to help them understand the rationale for new forms of learning design. James made efforts to let "the students know that I'm doing this for a reason and providing context as to why it's happening, addressing their concerns, and their fears." Thomas made time to discuss the goals and rationale of working in this way:

> I have found it to be very important […] to make it really explicit what are my motivations and why I'm justifying doing things in this particular way and to really get them not to just do it out of some sense of obligation to what I've said, but out of understanding that it's coming from a place of wanting them to engage with the material more and wanting them to engage with the outside world more and that there's an explicit agenda there.

Alice further stated that through their course experience surveys, learners sometimes provided feedback such as "I just want to hear you lecture more. I don't want to hear from the other students. If I already knew this stuff I wouldn't be here." This was reiterated by James, who had also heard feedback such as "can't you just give me a lecture?" or "can't you just tell

me what I need to know?" from learners unfamiliar with their approach to teaching. This feedback suggests a desire from learners to have more traditional educational experiences, which may be more familiar to them. Thomas reiterated this in his statement:

> Students are so accustomed to doing schooling in a particular way that it's working against how education has been institutionalized in their brains and that as soon as you ask them to do anything differently, they feel uncomfortable. So you take them out of their comfort zone.

Participants reported that learners feel more concerned about how they will be graded when they are given more choice around assessment and when there are producing unconventional learner work. Thomas explained, "when you try to give them more flexibility around these things or you try to get them to set their own standards, then you bump up against the institution." Learners ultimately want to know how to be successful in the course and achieve high grades, so unfamiliar, multimodal, and learner interest-driven projects may instill cause for concern. Untraditional work is unfamiliar, and learners expressed trepidation as it may not be clear what a successful project looks like. Two participants commented further on this issue. James reflected on receiving learner comments like "how is this going to affect my mark? […] you're affecting my ability to get into [graduate] school. What are you doing?", and Thomas suggested that learners "want to know, like, all of the parameters and rules about how to get an A." This is a fair concern on the part of learners who want to achieve high grades throughout their courses. The issue of grading brings up a host of peripheral issues related to their validity and relevance, as a movement towards grading less, or at least differently, is emerging among scholars (Schinske & Tanner, 2014; Schneider & Hutt, 2014).

Olivia reflected on the need for a cautious approach when engaging learners with untraditional practices and work. She comments "You can't just be like, I'm going to tear up the

syllabus in front of you. Now we're going off road." Her sense was that radical approaches may be "terrifying because students […] are also super overworked and exhausted and need really clear structures and need really clear outcomes." Olivia explains that in being untraditional one needs to carefully consider the learner experience. She considers the use of OEP in "really careful and deliberate ways" and at the same time seeks to "open up those structures" referring to feedback and dialogue. With the learner experience in mind she invites "a lot of informal student feedback throughout the semester" by conducting "check-ins weekly to be like, okay, how are you doing? Are you confused now? Are you overwhelmed? Is this terrifying? What can we do?" This type of constant feedback was believed to bring some comfort to learners as they engaged with unfamiliar work and open scholarship. Olivia describes this as a necessary strategy to minimize learner anxiety as "students need to be supported with lots and lots of check-ins where an activity is new and ambiguous to them."

How do Faculty Describe Why They Use OEP?

Despite the challenges referenced in the previous section, faculty provided rationale for why they continue to engage with OEP. I now address the fourth research question, how do faculty working in formal higher education in B.C. who are actively engaging with OEP Describe why they use OEP? Three broad themes emerged as participants explained why they chose to engage in this way. These included a desire to promote new conceptualisations of teacher and learner roles, to engage with community, and to support professional development.

To promote new conceptualisations of teacher and learner roles

Several participants reflected on how open education shifts their role from that of a holder of knowledge to a facilitator of learning. Rather than providing knowledge to the learner,

learners were engaging with scrutinizing and building on knowledge as part of their work. This role involved creating space for learner voice, offering choice around assessment and learner work, and breaking down authority differences. Faculty described how an open approach prompted them to facilitate learning in ways that are diverse, in ways that considered a variety of perspectives, and traversed disciplines in interdisciplinary ways. Olivia reflects on her role, facilitating in a way that supports:

> the classroom being a collaborative space where we are thinking things through and arriving at ideas together and it is not about me creating arbitrary rules and structures. It's about me being transparent about what my goals are and the way I'm running things and the decisions that I'm making, and then being willing to let those goals shift, depending on what that particular classroom as a community ends up needing.

Similarly, James shared that he now goes to the effort to "let the students know that I'm on the journey with them. […] I'm not that sage on a stage like you traditionally think about when you go to university […] "I'm on this journey with you. James suggested that for him, it was less about the use of OER or even the broader open movement, and more about "wanting to become a better educator." James found that OEP provided one way "to help students find that spark, and it's giving them the awareness that they're in control of what they do, and I think that, for me, I think that's where it comes from." This suggests he believes faculty members may support learners as they navigate their world of information, interests, and passions as related to the curriculum. "Giving them that control", James continues, has prompted him to get more involved in OEP. This idea of ceding authority was also referenced by Alice as she sought:

> to sort of break down some of the authority differences. And not just because I kind of am a more democratic person, but because I think that students – I

> think that just passively learning from an expert is not going to produce the best learning.

Joanne reflects on how her research into feminism and anti-oppressive regimes has led to her engaging more openly as an educator. She comments:

> I was very interested in creating a classroom space that was a feminist and non-oppressive space. I joke very frequently that my primary pedagogy is a pedagogy of not traumatizing my students. Which is honestly a lot of work inside the university because the university is primarily a trauma machine.

Joanne is striving to create a positive space for her students to learn, by recognizing the risk of trauma that can be experienced in higher education and recognizing the strengths and diversity of her learners. She continues by describing how she seeks to be:

> decentring my own authority in the classroom, believing that students have forms of expertise and forms of knowledge that often extend beyond my own, particularly when we're talking about issues like race politics in Canada. Like, I am a white woman. I am often teaching in classrooms that are full of people of colour and Indigenous people who have backgrounds and experiences I do not have. And it is my job to cede my authority to their – to what they know that I do not know. So ceding authority was a very important part of my pedagogy from early on and I think that that lends itself very well to, sort of, open models of pedagogy.

This idea of ceding authority and opening up space for learner interest, creativity, voice, and contributions was common among interview participants. While some described enacting this through their facilitation, others made sure students had opportunities to exercise their voice through assessment, the shared design of learning outcomes, or in the ways that teaching and learning played out in the classroom. In a similar way, Alice maintains ongoing opportunities for

students to feedback and share with one another during classes, so they might define the discourse and discussions that take place. As she describes:

> I have a Google Doc where they can write questions and comments on – and I go through that and then I see "ah there was a lot of questions about X maybe we should, you know, take a little turn over here and we'll talk about X in the class for a while." That's going to lead to better learning. It's going to be the things that they are interested in and the things that they are wondering about.

Learners can use this space to introduce other relevant links from the web, engage in dialogue, ask and answer one another's questions, and use the document for their own studies.

Learners were described as taking on new roles as well, with an opportunity to exercise their own curiosity and exploration as they create their own interest-driven projects and narratives. Patricia describes how "the open movement is really helpful in making those values deep and intrinsic to a classroom because you are involving a broader audience […] presenting outside instead of it just being the student presenting something just to the instructor."

To engage with community

Several participants reflected on the ways in which OEP can be a means to engaging with the community beyond the classroom. Open sharing of faculty and learners' work was positioned as a way of attracting new learners, inviting community involvement, and broadening access to the work happening in higher education. Statements such as "moving beyond the classroom" offered by Patricia, "beyond the bounded walls of the academy" offered by Robert, "interacting with the larger community", and "transcending boundaries" offered by Tracy were all cited as a component of OEP. Patricia positioned the use of OEP as helping us move "away from the idea of university being this silo learning institution and, sort of, brought it into conversation with

other scholars and with community members and enthusiasts." This involves using technology to engage communities by providing greater access to educational experiences, resources, and student work. Some participants talked about this in a general way, by ensuring the way they teach, and the work learners do, is made publicly available. While others talked about deliberate partnerships with community, which Patricia identified as partnering with "academic specialists" to benefit and engage with learners. Olivia suggested the opportunity of pairing students with community members so that the activities they engage in result in "work for a community organization" that benefits both the community and learner. Further, Tracy suggested that we design projects that can "invite community participation and recognize and value that."

Openness also provided a vehicle for faculty to engage beyond the classroom, including future learners and community members. In doing so the activities, creations, and conversations may have a broader reach. In some cases, faculty commented that it is important that learners' work also be public and may add more value to their work being that the stakes are higher when having an audience beyond just faculty and peers. Tracy reflects on her experience getting students working in the community:

> They're responsible to the person that they've interviewed, to the organization, to the class, to me, to all of the various participants, and quite often students at that level don't engage in projects that have that kind of multiple levels of accountability. And they also had to be out in the community and realize that when they were doing that they were representing [the university], not just themselves. I think those were all really valuable skills to learn. Sometimes I think they didn't take it as seriously as I would have liked them to. You know, they didn't get back to the person they had interviewed as quickly, didn't follow through. But over time, it was a learning process. I think they walked away from that course with some valuable skills and also connections to

> community and the recognition that the individual in practice [can] contribute to well-being in the community.

Designing learning which engages learners directly with community is described as raising accountability and developing credibility among the university and community. For the learner this also provides an opportunity to gain real world experiences and forge greater connections with relevant community members. Margaret describes how she designs learning which creates an "opportunity to really reach out and start to make even broader connections and then become that person that people can start to go to or get pointed from and they can give service back."

Tracy suggested her motivation was to nurture relationships between her unviersity and the larger community, with a goal of "strengthen the ties between the community and post-secondary education and see that as just an extension of the community and not separate from." Tracy believed that OEP could be a way to foster better community connections with the university, by engaging learners with work that was in service to the community and had tangible benefits. Reflecting on her own experience engaging learners, she suggests that operating in this way can instill a sense that "learning can be exciting, when learning is exciting it doesn't mean it isn't academic or that it can't be intellectually exciting and academically grounded and all that, but you can do that and also engage with the community."

In reference to community engagement, Robert uses OEP to raise awareness and critically explore how "open facilitates a very western ideology of knowledge circulation which can be very extractive and can replicate colonial processes." He shared that in his experience, he has seen that in some communities, people may be "suspicious of academics coming and working with them and taking data and then never seeing that data again." To alleviate this, Robert focuses less on the resources created as part of OEP, and is focused more on:

> Reciprocity, it's also about relationship building. But if we're going to use open practices, well how can we use open structures to then give back to those communities? What returns are they going to see on the data that is being extracted? How is that information going to support them? I advocate for open access in these communities, it has to be approached from a super critical, a razor sharp critical, lens that gives that open space for Indigenous perspectives.

Robert brought a refreshingly critical lens to OEP, especially when considering engaging with Indigenous communities. Community-engaged work aims to transcend boundaries between the classroom and the community providing benefits for both the learners and community members. Further, community engagement encourages learners to think critically about how the work they do might add value to the community, act appropriately, and explicitly make these connections to the real world.

To support professional development

Several participants referenced OEP as a form of professional development and an opportunity for sharing with colleagues. Some faculty shared how they were driven to find ways to innovatively teach a mundane topic in their discipline, while others shared how they were using OEP as way of sharing their own teaching and learning practices more widely. As openness provides a window into practice, faculty reflected on how they took this opportunity to keep evolving their pedagogical approach. Joanne describes how she deliberately sough to keep "updated with what's new and what are the tools I can use and at the same time because I come from a different culture and from a totally different way of learning and teaching." Margaret also found that OEP led to an opportunity to rethink teaching and learning, as she reflected:

> Our associate faculty, and even some of our core faculty, is it has in many ways revitalized their practice to go this way because it's new and it's different

> and it's made them think differently about teaching online. And so, if you've been teaching online for twenty-plus years, you kind of get into a pattern. Everybody does, right? Copy the Moodle shell, I'll do some edits, we'll have some discussions, we'll post some stuff, off you go. And so, this has really caused them to rethink why they're having those discussions. What could it look like if they didn't? Where should those discussions be? So, I think it's been a bit of a rejuvenation of practice there.

Designing for learning in the open requires some novel approaches to planning, communicating, and facilitating learning, in this case prompting a refresh of some technology usage practices among faculty. As this was a program wide OEP initiative, faculty teaching in the program all had to consider how they might engage with more open tools and technologies.

OEP has also prompted faculty to consider how they might engage in conversations around teaching and learning. Katherine described how some faculty believe their teaching strategies and learning designs are "just my hidden secret," and that sharing and discussing them may allow more people to become "better instructors." James commented on the need for more explicit conversations around teaching and the sharing of practice:

> I don't know if educators do that enough. I mean, there's lots of opportunities to communicate with people from your department, but from faculty to faculty the opportunities are rare […] I've been very active in the council where there's lots of different departments and different faculties that work together, but a lot of the things you do in your classroom don't often come up and you don't get a chance to, sort of, brag about them as much as we maybe should and maybe can and let people know that cool stuff is happening. Because I'm sure there are people who know wicked stuff that I don't know about.

Alice commented on how OEP has prompted the way she shares aspects of her practice:

> I think of open practice as wider than that because it can also include things like reflecting on your own process and your own teaching and learning. You know, 'how did I do this thing that my students thought was great? Let me give you, you know, the steps I took. And here's the materials.' […] So it can be, reflections on a blog post on teaching and learning, it can be sharing your process about how you did something in teaching and learning.

Beyond engaging learners with OEP, faculty reflected on the way in which some of these practices benefited their own professional development and changed they way they talked about teaching and learning.

Chapter Summary

In this chapter, I have presented the analysis and interpretation of the data gathered in the interviews. I focused specifically on how faculty define OEP in relation to their teaching, how faculty describe OEP being actualized through learning design, the challenges and implications faculty reference when considering OEP learning designs, and their motivations for engaging in this way. The goal of this chapter is to explore and synthesize the descriptions, perceptions, and reflections that faculty shared regarding these practices. In the next chapter I will discuss the findings using the lens of structuration theory.

Chapter Five: Conclusion

Introduction

In this study, I focused on understanding the ways in which educators in B.C. describe how open education is impacting their pedagogical practices. The analysis is guided by structuration theory and the notion of technology innovation enacted through practice. Structuration theory situates innovation in practice through three modalities, which include facilities, norms, and interpretive schemes. The analysis identifies how participants in this study draw upon these modalities to support innovation in their teaching. A discussion of the findings, recommendations, limitations, implications for future research, and recommendations for pedagogy and policy follows.

Openness in Practice

As a lens for the analysis, I use structuration theory which emphasises how technology usage is both under the influence of, and at the same time contributing to, the shaping of the social practices in an organizational setting (Halperin, 2016; Orlikowski, 2000). Many of the OEP learning designs represented in this study draw upon existing strategies for learning design, including social-constructivism, peer review, inquiry driven assessment, and ongoing formative feedback. For those with extensive experience researching education theory, learning design, or pedagogy, these practices may not resonate as new and emerging. However, the availability of new and emerging technologies are providing refined tools for enacting these principles in learning design, and providing opportunities for faculty to change their practices, employing principles of sound learning design, under the guise of OEP. This may lead to new norms and interpretations of how we design learning and conduct teaching and learning in higher education.

Supporting the findings of McAndrew et al. (2010) as well as Petrides et al. (2010), the present study found participants using openness as an agent of change and innovation. For many participants in this study, who come not with an academic background in education, it seems evident that openness has provided a stimulus to engage in innovative forms of pedagogy. Based on the findings of this study, openness in practice may be framed as one approach to promote technology-enhanced teaching and learning, precipitated on the values of openness rather than specific technologies. This reiterates the need to develop greater awareness of the pedagogical affordances of designing learning using OER, open tools, and open licenses (Masterman & Chan, 2015).

Facilities

Faculty in higher education have a myriad of technologies available to use in their practice. Most commonly, the LMS is the default tool for engaging with learners and facilitating learning in higher education, but increasingly more open technology tools are becoming available as well. In addition, an entire web of tools exist online which can be taken up in the practice of teaching and learning. The way that faculty make use of these tools in the practice of teaching and learning can be driven by various motives. Faculty in this study describe being driven by a spirit of openness, which guided their use of technologies in practice. They described doing so for several reasons; to promote access to knowledge, to engage with communities, and to get learners critically engaging with public knowledge. In order to be successful in achieving these goals, educators require an understanding of the affordances of emerging open tools, digital and network literacies, as well as pedagogical knowledge for enacting open education.

Throughout the study, participants described how they were making use of technology to support their engagement with OEP. Their approaches to using technology were largely nascent

and not necessarily a consequence of the technologies inherent design. As described in chapter four, participants were motivated by a variety of factors which prompted their use of technology to achieve those goals. From a structuration standpoint, participants appropriated some of the structures presented in available educational technologies in order to enact OEP (Orlikowski, 2000). This enactment relies upon their understanding of the perceived rules and available resources shaped by their pre-existing knowledge and past engagements with these technologies. Through regularised practice, their perceptions of the interpretive schemes, rules, and facilities iteratively structured their ongoing interaction with the technology (Halperin, 2016). This study has revealed some of the situational and local factors supporting the learning design strategies of faculty using educational technologies to support OEP.

The emergent learning designs described in this study are both under the influence of, and contributing to, the shaping of teaching and learning practices in higher education. Through in-use design, where innovators experiment with new learning designs and approaches, they concurrently contribute to reshaping and establishing new approaches to using technology in teaching and learning. (Halperin, 2016). The structuration practice lens approach suggests that: "rather than starting with the technology and examining how actors appropriate its embodied structures, this view starts with human action and examines how it enacts emergent structures through recurrent interaction with the technology at hand" (Orlikowski, 2000, p. 407). Open technologies including content, software, and licenses afford individuals greater possibilities for action as illustrated in this study. As these open technologies are characterized as networked, modular, reusable, shareable, and remixable they afford designers a highly flexible and open-ended quality, amenable to a wide variety of uses and adaptations over time. One additional advantage of working more openly involves the adoption of open standards, allowing a learner

more options to export both the literacies gained in using open technologies, as well as being able to take their work with them for personal pursuits.

Inherently, the use of technology by faculty for teaching and learning can be considered a shared practice. That fact that most educational technologies are selected, administered, and directed individually by the faculty member does not change their shared nature (Halperin, 2016). Whether learners work within a physically shared software system, such as a multi-author publishing platform; or are tasked with creating individual domains or reflective writing spaces, they still operate within a collective at least for the duration of the course. Various collaborative software tools were instrumental in mediating these experiences, including Wordpress, Open Journal Systems, Hypothes.is, Google docs, and even the closed access LMS, which was often used for coordinating, planning, and preparing for an OEP learning design. The various combinations and configurations for using these tools were selected by the faculty member based on their availability and appropriateness to support the design. Additionally, various creative software tools were important to support flexible forms of digital media. These included video authoring and editing tools, software for creating podcasts, portfolios, digital editions, textbooks, or other ancillary resources.

As participants reflected on their experience engaging learners with openness, a distinction emerged between the ways we might engage with more open practices as part of learning design. This distinction is drawn between how we consider openness in terms of the ways in which we source materials for our own designs, how we compile and build our own resources, and how we use open tools and resources as a means of communicating and sharing more openly. This seems to imply at least three distinct approaches to openness around pedagogy: the exploration of open resources, explicitly building openness into the process of

designing learning resources and artefacts, and openness as an approach to publishing. These three types of openness are not mutually exclusive and may be combined as part of a learning activity. The three categories of openness are represented in Figure 15.

Figure 15. Three categories of openness embedded in learning design.

Throughout the research, these three types of openness did not necessarily transpire together, as participants brought aspects of these approaches into their teaching and learning in various ways. I found synergies with the idea of parsing out specific components of openness in Clark's dichotomy between design and delivery technologies (Clark, 1991, 1994). It may be helpful for practitioners to consider openness in learning design by considering how it impacts design and delivery independently, while recognizing that increasingly, these are merging within popular social media technologies.

Exploring open resources involves bringing awareness to the availability of OER, open copyright licenses, online repositories, and techniques and strategies for locating OER.

Additionally, as represented in two of the learning designs described in this study, this provides an opportunity to critically asses the source of materials, investigate authorship, and vested interest. Working with OER as source material also provides an opportunity for individuals to practice working with digital media; selecting, copying, editing, adapting, and remixing materials as needed to construct their own works. This represents an analysis task, which necessarily precedes a design task, requiring learners to engage closely with open sources of information, make decisions about how they scrutinize, compile, and present information, and consider how they could build new knowledge resources. It is important that learners recognize that they are working with OER and have an understanding of what that makes possible under an open license. This may require faculty to be explicit to learners when they are using OER as a knowledge resource, drawing attention to open licenses, and making clear the possibilities for repurposing the resource because of the affordances provided through the open license.

Openness by design, involves engaging with the tools, resources, and practices for creating resources that can be legally shared openly. This is done by using legally reusable source material, properly attributing content creators, and designing resources in open formats. These resources may or may not be shared in the end, but they are created in a way that would allow them to be shared openly once complete. Furthermore, these resources may be initially shared locally, on a user's hard drive, or within a closed learning environment; they may not be developed in the open. Openness by design implies a set of tools, techniques, and literacies for the design of digital media which can be shared openly. The author of the resource makes an informed choice if they wish to share their work more widely by moving on to open publishing. Should they make the decision to share their work, the resource will have been designed in a way that it can then be openly shared. Should they decide not to share, the resource may remain

offline or in a password protected environment but still technically could be revised by another individual.

The third approach involves individuals publishing their reflections, engaging in peer review, and contributing resources more broadly on the open web. In some cases, this is done not by creating standalone resources that might be considered OER, but rather in the form of reflective practice, blogging, or journaling. This may be motivated by the opportunity to share learners' work more widely, invite peer review, or engage the community. Additionally, open publishing could be used as a way to share the creations developed through the exploration of open resources or openness by design. In this way, open publishing can take on many forms, from reflective blogs to collections of resources. Open publishing requires more explicit attention to what is being shared, to avoid the oversharing of personal or identifiable information. Using Clark's terminology, this may be considered a delivery technology, which is enhanced by real-time access, formative peer or instructor evaluation, and community engagement. Increasingly, learners can design resources within delivery technologies, for example creating and combining resources together on a website. Alternatively, the website may be used as a means to deliver a resource, which may have been authored in another program, for presentation on the web. In Figure 16, I have attempted to capture the relationship between the described approaches to openness represented in this study.

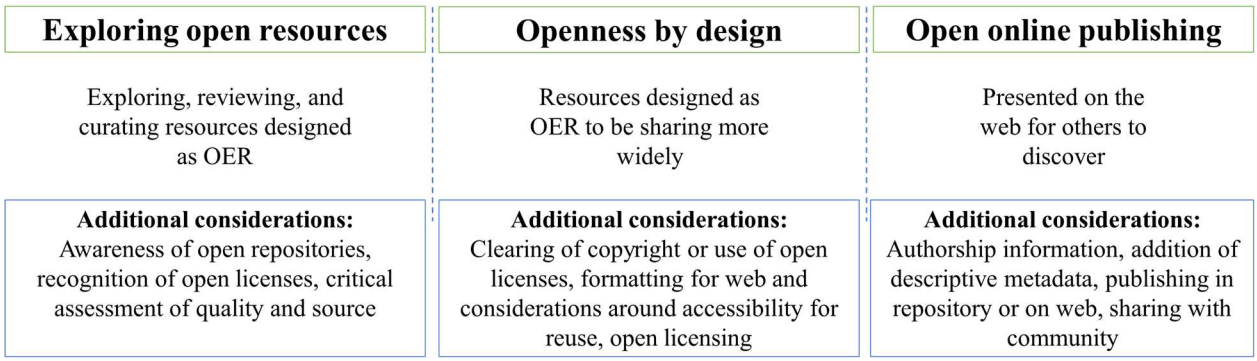


Figure 16. Parsing out open learning designs.

For several participants, the goal for using OEP learning designs was the development of resources which could be shared in the open, in other cases the goal was to locate, scrutinize, and review open resources. Analysis and review of OER could precede an activity where learners are tasked with adapting or building upon the resources they have found. In a third case, learners were tasked with starting directly with open publishing, often in the forms of reflective blogs or portfolios.

If the starting point is to assess and review OER or build resources which could be shared as such, much of the development work can happen in private, allowing learners to work incrementally towards openness. This also provides opportunities for faculty and peer feedback to improve their work. Yet still, learners must be skilled in the open literacies which enable them to build digital media that could be shared openly if they choose to do so. So, it is possible in this case to have learners working within a closed environment to develop open resources. This is different to what is most commonly happening today, where learners are developing fully copyright resources within closed learning environments. These resources can end up being both legally and technically impossible to share, while trapped within a closed learning environment.

Furthermore, learners may lose access to the resources they have created, the discussions they have contributed to, and other artefacts of their learning which are removed from the LMS as their courses end.

Where learners are tasked with open publishing, they are often invited to work in the open from the beginning. Again, open and network literacies are crucial for learners to work appropriately in this way. It is possible for learners to source or use copyright resources on an open platform, which could constitute a copyright violation. Learners also need an awareness of how to share digital media openly while using appropriate formats so that others can make use of their work, if that was the intent. Some of the permeations represented through this parsing out of openness are represented in Figure *17*.

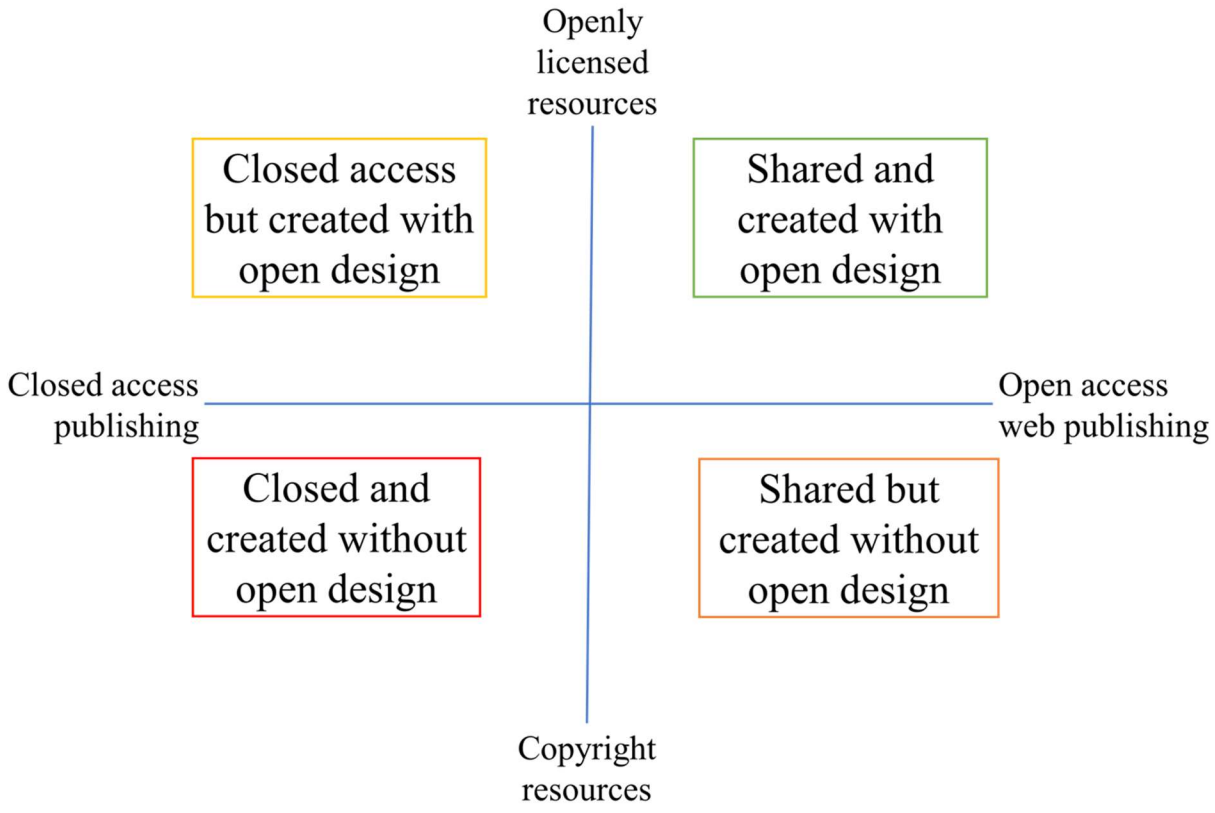


Figure 17. Open and closed creation and publishing matrix.

Figure 17 displays common ways in which learners create and distribute learning artefacts and resources through the OEP learning designs represented in this study. Faculty largely encouraged learners to create resources, designed in a way that could be openly shared. These may be developed by learners while not being shared openly, either on the learner's local machine or within a password protected environment. This is represented in the upper left quadrant, and required learners to source material with open copyright, appropriately cite sources, and use web-ready open formats. These resources, while not necessarily shared immediately, have the potential to be shared at any time at the learners' discretion, represented in the upper right quadrant. An alternative approach represented in the lower left quadrant, is in designing learning artefacts and resources which do not use OEP as a design approach. These works may include fully copywritten materials or other source materials that could make them inappropriate for sharing openly. Learners may very well choose to share these works openly, but in doing so they may be violating copyright or exhibiting improper practice by doing so.

In addition to open technologies being widely available at their institutions, many faculty members reflected on the other facilities used to support their work engaging with OEP. These included grants, which allowed them to focus time and money towards changing their pedagogical practices. When grants, specifically aimed at supporting pedagogical innovation, are made available, faculty can use these to make change, reflect on that experience, and share the innovation more widely at their institution or among their colleagues.

Not all cases studied required grant funding, and many had engaged with pedagogical innovation without additional resources. Partnerships at the university can also be integral to supporting change. Olivia reflected on her experience working in partnership with colleagues:

> I would not be doing any open pedagogy of any kind if other members of the university community hadn't invited me to do so. Which is to say that, like, it came from community service learning at the [institution], and it comes from the library here, and it's almost entirely been driven by, sort of, invitations to experiment, or invitations to collaborate that came from those people. And that is in part because I don't know if I would have known those resources existed otherwise but also because it is too much work to take on as a single person to, sort of, reinvent the wheel. I think those partnerships have been really, really, key.

Both the library and teaching and learning support centres were frequently cited as helpful facilities supporting innovation. Partnerships with individuals who work in service departments such as the library or teaching and learning centre, allow faculty to get support and guidance from individuals who bring expertise from across campus.

Another support cited which may be relevant to supporting OEP, is that of the community outreach office, responsible for supporting student work that is embedded in the community or through partnership with industry. These offices can be integral to coordinating student work in the community, ensuring it meets community needs, is conducted with the appropriate community partners, and has the required support. Community outreach centres can support OEP, potentially supporting greater impact in the community, by forging connections between community partners and learners, ensuring the work they do meets a community need. Many of the participants in this study had made connections between OEP and community engagement, however, not all had coordinated with a community outreach centre at their institution. For some the connection between OEP and community engagement was not entirely clear, as Alice reflected:

> What about community-based learning? Is this an open practice because in some sense you're opening the doors of the classroom? Right? You're connecting with people outside. And the way that we had discussed open practices as connecting, it sounded like it was. So, then that might involve if you define that as an open practice that might involve a lot more people because there's a lot of community-based learning, or community-engaged learning. I don't know if you think, you know, community connections count as open practice, but it's just something that came to us as a colleague and I were talking recently.

Community-engaged learning can be considered a significant component of OEP, further enhanced by the capturing, curating, and sharing of those activities more widely. This can be useful for displaying and promoting the work learners do in the community, while also providing a resource for future learners to sustain community engagement activities. By detailing and sharing their activities, future learners can develop further those community engagement activities, rather than starting from scratch. Olivia commented on the challenge in trying to coordinate these relationships alone, especially if each learner has a different community partner, "I would have to be tracking down those organizations, communicating with them, convincing them to work with the university, facilitating the relationship." Although, it was possible to develop community partnerships independently as evidenced through Tracy's project, which worked with a single community partner, this relationship, and the subsequent OEP project, was only realized after several years working together incrementally. OEP initiatives which impact community partnerships may require additional support to ensure the results are deemed as positive for the learners, faculty, and community.

Norms

Several participants in this study described the importance of building in the literacies required to create open resources and use their networks appropriately as part of the curriculum. These emergent open and network literacies may be established as new norms and expectations for learners in the information age, and have been referenced as motivators for OEP by previous researchers (Cronin, 2017; Kimmons, 2016; Masterman, 2016; Masterman & Wild, 2011). However, as evidenced in the literature and reflected in this study, these open and network literacies are not often well established in learners, even as they enter higher education. How will learners develop open and network literacies if we only engage them in using the LMS, an environment that they may never use again in their professional lives? In each case of this study, learners were tasked with using tools and technologies they could take with them or use independently outside of formal higher education. In the process of using these tools and technologies, learners practiced and developed transferrable open and networked literacies.

It is essential that learners have an opportunity to develop and practice open and network literacies to be successful in OEP initiatives. These literacies include knowing what and what not to share, for example personal or sensitive information. The case of a learner oversharing represented in this study demonstrates that learners may not always recognize the implications and potential reach of their personal information when sharing openly. Further, an understanding of the norms of what is appropriate to share, how to engage with an open audience, and how to respond to queries and challenges, are essential for learners being tasked with OEP. These represent emergent literacies for working in the information age. OEP embedded as part of the curriculum provides an opportunity to explore and interrogate open and networked literacies while enabling learners to consider their own philosophy for engaging in this way. This will

better prepare learners to contribute to public knowledge in the future by providing them with a chance to experience open publishing on the open web.

In many instances, universities are required to keep copies of learner work that is assessed for at least one year following the conclusion of a course. This ensures that learners have an opportunity to appeal a grade received, or access work they submitted within a reasonable timeframe. In many cases, OEP assignments put the ownership of data under the learner's control. If, for instance, learners are creating a portfolio or online resource, they may be the only one with a login to the service they are using. This means that learners may take their work offline, or alter it, after it has been assessed. This could complicate the appeals process, as the work originally assessed may have evolved or changed at the time of appeal. While this issue did not emerge in the interviews, it certainly is something faculty should consider when designing OEP assessments. The risk may be mitigated in keeping a copy of student work, captured by faculty at the time of assessment. This may be done by taking a screenshot, printing, or saving a PDF copy of a web resource. Another approach is to aggregate content from the learner's online resource at the time of assessment, thereby capturing a static copy of the work at the time of import. This is technically possible for text and basic multimedia, using the Really Simple Syndication (RSS) protocol. This issue becomes more challenging when assessing online streaming multimedia, which may be technically impossible to save offline or copy.

If OEP learning designs do become a norm in higher education, a thoughtful approach should be taken. Considering OEP more strategically at the program level can help to ensure learners are being engaged with openness in a way that is timed, framed, and sequenced in an appropriate way. One can imagine that tasking learners with multiple concurrent open assignments could be onerous. Further, if learners are asked to set up reflective spaces for

multiple courses, should they be able to use a single portfolio to do so, or would they be required to set up a separate reflective space for each assignment or course? In my own teaching, I have encountered learners who have requested to use a previously developed portfolio for OEP activities. From the learner's perspective, it makes sense to keep all of their open artefacts in a single location, but it can be challenging for faculty to accommodate environments unlike those used by the majority of the class. Challenges such as this suggest a need for a considered and more macro approach when considering engaging learners with OEP, which is discussed later in this chapter.

Interpretive schemes

Participants were asked about how they believed their engagement with OEP aligned with the mission and vision of the university. Olivia cited her university's branding "as the engaged university, I think it's one of the primary goals of this institution to be community engaged. So, I think experimental and public pedagogy in particular align very well." James felt his work with OEP aligned well with the academic plan and the intended institutional graduate outcomes "it's embodying what the university wants to provide and through the graduate attributes: lifelong learning, civic engagement, intellectual and practical skills come into play. And I think open pedagogy can facilitate many, many, many of those." Similarly, Margaret echoed that it is "critical is to be able to find those larger documents, the sustainability plan, your academic plan, and where can you see a direct correlation between what they're asking for and a belief of value that comes with open practices." This suggests that while OEP may be a means to achieving some of the institutional goals outlined in university mission and vision documents, the linkages between rhetoric and practice still need to be further explored. Joanne commented in a similar way, reflecting on her institutional mission and vision, "I don't know how much it's

been put in practice." This suggests a need for greater clarity around how specifically faculty can enact the principles found within mission and vision statements in their everyday teaching and learning practices. While Masterman and Chan (2015) argued that openness should be explicitly incorporated into the educational mission of the university, I would argue that aspects of openness are already in place in many of these documents. OEP may serve some of the most common visions for our institutions, including open access to knowledge, collaborative learning, and community engagement.

On the other hand, Robert suggested a more critical approach to meeting the mission and vision of the university, specifically in relation to engaging Indigenous learners with OEP, warning "a Provost or a President to snap this thing off the web, off of Twitter and say, look at, wow, we're supporting Indigenous students!" Robert's concern was that openly accessible work could be overtly framed by the administration, thereby misrepresenting the actual lived experience of his students. Robert concluded his thought by stating that OEP is:

> Definitely supporting the goals and aspirations of my program […] insofar as an undergraduate program we've always been about holding up student voices, illustrating the work that the students that come out of our program can do with community, that they do with community, and really creating more space and creating change at the university, but in Canada more broadly.

The motivation for engaging with OEP was not necessarily that of achieving the university's mission and vision, but rather, meeting the needs of the learners of the program and demonstrating how they could meet community needs as graduates. OEP was positioned to be more about supporting learners in developing their voice rather than representing the institution in a positive way.

Conversely, participants reflected on how challenging and unfamiliar it can be for learners when creating and sharing their academic work online. Aligned with the recommendations of Wiley and Hilton (2018), learners should not be required to share openly or license their works using open licenses. Rather, we can invite learners to share their works and provide them with the tools and literacies to do so appropriately. The key word there is invite; openness is an invitation to participate and share knowledge resources more widely. The work that learners share ultimately becomes part of their own digital footprint, and how that footprint takes shape should be considered. Where learners are sharing prior to peer or faculty review, there can be opportunity for negative exposure, where a resource is still in progress or unrefined at the time of sharing. Recognizing that learners may be taking upwards of six courses, working part-time, struggling to keep up with assignments, they risk degrading their own digital footprint when also asked to share openly. Furthermore, depending on where and how that artifact is shared may make it more challenging for a learner to unpublish or add more context to work. We should also recognize that our learners may come with special needs regarding privacy, where they might need or wish to remain anonymous online. Having realistic conversations with learners about how they might manage their digital footprint is another open and network literacy that several participants sought to address by discussing topics such as digital identity and online presence as part of the curriculum. Alternatively, learners should be made aware that it is possible to share openly while at the same time remaining anonymous or limiting access to specific individuals. This can be done through the use of pseudonyms or by using unlisted links to online resources. As Thomas suggested, “they send me the URL so that their identity can remain private, but their work can remain public.” So, while it is possible for learners to share

openly, yet anonymously, we may need to offer learners guidance on making that choice and technical help in making it possible.

For faculty, openness as an approach to design has broadened access to resources and presented opportunity for sharing their own pedagogical practices, as more faculty share the resources they create, the way they use these resources to support learning, their best facilitation techniques, or their entire courses. Openness in practice has created channels for the sharing of pedagogical practice, an opportunity for those seeking inspiration, and ultimately, appears to have led to increasing discourses around teaching and learning on a broader scale. William comments on how being more open has created opportunity for collaboration and the sharing of practice:

> I don't know what happens […] in my next door office neighbour's courses specifically unless I ask and even then I don't know how that necessarily integrates with what I'm doing. So I mean universities are funny that way […] different instructors really have no clue what's happening in the next door classroom.

Openness enacted through practice presents an opportunity for enhanced sharing among colleagues, within and beyond their own department and institution. This can support professional development, networking among colleagues, and foster communities of practice among faculty.

A Macro View to Open Practice

If OEP learning designs continue to be taken up by faculty in structured higher education, it would be prudent to consider the frequency and timing in which they take place within an academic program. When it makes most sense for a learner to be engaging openly, may differ by

program and assignment. Taking a holistic lens, and considering the student experience throughout their academic career, OEP activities may be planned to coincide with milestones and other capstones within an academic program. William reflected on this issue, noting that "It has to be well-rounded. There has to be opportunities to express yourself in different ways across a degree and learn to relate to the world that you're going to be stepping into as well." William suggested that he felt assured that his use of OEP was appropriate, as he was confident that learners were doing more traditional assessment tasks in other courses. However, if OEP do become more common practice across the institution, he reflected "if it ever got to that point – I'd say 'okay kids time for a term paper'." This quote suggests an assumption that a more traditional approach defaults to closed access, while one could argue that a term paper could just as well be shared in a public space. Again this brings us back to Clark (1994), as it is now possible to share resources from within the same environments in which those resources are created, blurring the lines between design and delivery technologies. This quote also represents an increasingly common assumption that OEP is a combination of open in terms of access and open representing a more flexible inquiry-based pedagogy. This suggests the importance of a delineation of boundaries for terminology so that the semantics around access and pedagogical strategies are clear.

Overall, the findings of this study suggest it is worthwhile to consider the integration of OEP at the program level, or at least with a holistic view of the learner experience, to ensure that learners are not being overwhelmed with creating different open spaces using different technologies for every course they take. As well, it would make sense to leverage a single learner-owned portfolio or website for the sharing of a learner's work, rather than having them setup a new site each time they are engaging openly.

Discussion of the Findings

Similar to the findings of Cronin (2017) and Nascimbeni and Burgos (2016), I found that participants in this study did not use OER as a prerequisite to their engagement with OEP. In fact, one participant was not even actively using or contributing to OER. These findings reiterate that OEP are not simply the use of OER. While OEP draws upon the affordances of OER, in that they are making teaching and learning activities more visible and accessible using open tools, they also result in emerging forms of teaching and learning practices. This research provides evidence that openness can change the ways in which we conduct teaching and learning, as well what we will need to teach learners in order to be successful. This study also contributes insight into how faculty describe aligning OEP to their institutional context and how they describe their use in relation to their own teaching and learning goals. Further, participants have shared the importance of inviting learners to be creators of openly accessible public knowledge, raising awareness to the stakes in doing so, and enabling them to make informed decisions about how they want to engage publicly.

In this study, I set out to better understand how openness is impacting teaching and learning practices in B.C. higher education. In the pursuit of OEP, I found faculty engaging in teaching which draws largely upon constructivist and networked learning principles. While those do not necessarily represent new approaches to teaching and learning, what is novel is that these approaches are now presenting opportunities to share and further expose both the artefacts creating during that learning, and their actual learning designs. Openness as a design approach, encourages and supports constructivist learning approaches, by prioritizing the interests and voice of the learner, while open technologies support and enable more active pedagogies, by

presenting and sharing learner work in real-time, allowing for formative feedback, peer review, and community-engaged work.

While the issue of finding the time to engage with OEP has been raised several times in the literature (Allen & Seaman, 2016; De Los Arcos et al., 2014; Kimmons, 2016; Petrides et al., 2011), this study contributes a more explicit understanding of the ways in which educators described using that time to support OEP learning designs. These include the necessary time to prepare OEP learning designs, specifically with larger classes; the need to proactively address learner concerns, develop literacies, and support them in openly publishing their work; and supporting learners concerned about the use of OEP as a design approach. These concerns may be alleviated by having time dedicated to plan, scaffold, and address concerns in class.

Above all, it would appear that OEP is getting more faculty talking, sharing, and collaborating on approaches to teaching and learning using open technologies. Openness has certainly made teaching and learning resources and practices more accessible and reusable, and those affordances have encouraged the sharing and reflection of practice among communities of educators. As a consequence, participants in this study were discovering and testing out active and engaged pedagogies in their pursuit of openness. While it may not always be possible for faculty to enact aspects of OEP at all times throughout their practice, it is important to promote open principles, as they may support enhanced teaching and learning. This study found evidence that OEP can support a more active role for the learner, forge pathways to community-engaged learning, and create opportunities for enhanced professional development.

Limitations of the Study

The participants in this study were exceptionally generous, both in expressing their interest in the study, and offering their time in conducting the interviews. Many spoke with passion and excitement when asked to reflect on their engagement with OEP. This presents a risk in that the faculty in this study may introduce a positivity bias, by speaking highly about OEP. Fortunately, many of the interviewees also commented at length of the challenges and considerations taken into account based on their experience with OEP, including reflections on learning design, learner concerns, and critical approaches to open learning.

Participants in the study represent a small sample of faculty in B.C. engaging with OEP. The sample size was deemed appropriate due to the emergent nature of these practices, with a limited number of faculty defining and recognizing their teaching learning practices as OEP. As this is qualitative research, the study should not be interpreted as making general claims, it rather makes a novel contribution by describing the ways in which openness is currently impacting pedagogy. I believe the findings are generalizable to other populations, specifically those in which awareness of OER is increasing, and faculty are beginning to explore the ways in which the affordances of open can impact pedagogy.

By using the phenomenological technique of bracketing, I have sought to curb my own beliefs and assumptions about this phenomenon, and freshly encounter the data with a goal of capturing the lived experience of the participants. However, the results of this study and the way I have presented the data represent my own reading of the existing literature and interpretation of the experiences shared by participants. It is possible that those with different viewpoints or more significant research experience may interpret the data differently. In striving to make the data openly accessible to other researchers, I am inviting an opportunity for new interpretations of

this data. This may provide us with alternative perspectives and modes of analysis upon the data, which represents an exciting legacy of this research project.

Recommendations for Further Research

While a significant amount of research has been done to measure the efficacy of OER and open textbooks as learning resources by exploring outcomes and grade point averages, little has been done to measure the impact of openness on learning design and how this impacts the teaching and learning practices of faculty, as well as the learner experience in being engaged in this way. Like others, I believe researchers should focus on exploring how and if openness stimulates innovation in teaching and learning, to what extent it provides greater autonomy for both learners and educators, how it contributes to the professionalization of teaching, and if it can be used to prepare learners with the skills and literacies necessary for engaging in a more open society (Kimmons, 2016; Masterman, 2016).

A challenge to doing research in this area is in measuring how and if OEP impacts student learning and in what way faculty evolve their practices over time to engage learners with OEP. What is perhaps most needed are detailed case studies of OEP, represented through learning designs, traces of which have been contributed as part of this research. Similar to Littlejohn and Hood (2016), this study reinforces the need for longitudinal studies which interrogate how faculty develop and enact OEP learning designs, the specific knowledge artefacts developed therein, and the subsequent impact on student learning.

In talking to participants throughout the research, there appeared to be a feeling that the limited research on open education, specifically in relation to pedagogical innovation, currently makes “enthusiastic claims,” which rely on several factors and considerations which would be

context dependent. In this study, Olivia suggested that "I think counter to the many enthusiastic claims that are frequently made in essays about open education, I think the overall quality of the projects was lower as a result." This warrants further investigation and research by those promoting OEP as an approach to designing learning, specifically interrogating the contextual factors which lead to successful OEP designs, the necessary supports needed, and best practices for designing learning in this way.

Research is still needed to investigate the learner perspective of participating in a collective OEP experience. Thus far, very little research has explored OEP from the learner's perspective. In addition to increasing student access to resources, OER enables learners to engage with digital educational resources in ways that were not previously possible or practical (Petrides, 2017; Petrides et al., 2011; Wiley, 2016a). For example, learners can select a digital format which suits their needs and use the affordances of the digital material to clip, curate, highlight, revise, or organize the material as needed. Due to the open access licenses associated with OER, faculty may also engage learners in the adaptation, remixing, creation, and curation of knowledge that build upon or complement existing knowledge resources. In doing so, learners can be creating resources accessible to their peers, their community, and future students. Research is needed to determine how engaging learners with open education might impact their own personal knowledge and creative practices (Carey et al., 2015; Farrow, 2015). Furthermore, research is needed to investigate learner readiness for engaging with OEP, how they interpret learning in this way, and what concerns they raise.

Very recently, Hilton and Wiley, call for further research in this area suggesting that there may be new metrics, approaches, and tools for measuring the impact of OEP (Hilton III & Wiley, 2018). This research is expected to contribute to the emerging body of literature which

explores openness as related to learning design. As well situating OEP within the structuration theory practice lens demonstrates a heuristic for analysis which can be applied in other studies exploring innovation in teaching and learning.

Implications for Pedagogy and Policy

Virtually any artefact that a learner creates could be made openly accessible if they have designed it with openness in mind. Even physical artefacts can be digitized, captured, and shared. Learners need both open and networked literacies to create resources in this way, and the appropriate knowledge to decide how they want to engage openly with their creations. This study has found that we should not assume that learners inherently bring this knowledge and these literacies with them as they enter higher education and need to be explicitly developed as part of the curriculum.

Educators should consider what is most appropriate to share at the program level, so that the best learner-generated resources are presented to the community, at the right time in the learner's academic career, and that learners are not required to share every piece of work they create. Building OEP into the learning design of our programs, should be planned and coordinated at the macro level, to ensure that learners are engaging in this way at appropriate times in their academic careers and are doing so in a meaningful way.

Conversely, learners could quite easily be made aware of the ways they can share their academic work more openly. One of the ways this can be most easily achieved is using online portfolios. When a work is shared, learners can make informed choices about if their name is attributed in the work, the license they wish to use, and how actively it will be promoted. They may also learn about metrics for tracking the use of their resources online, using utilities such as

web analytics, or developing systems for commenting and feedback. Learners may be encouraged to share, at their discretion, using web publishing tools that are now commonly available to them in higher education. Leveraging these web publishing tools, provides opportunities for greater access by their peers and the community, and shows them how to further engage as public citizens, at the same time developing open and networked literacies. By encouraging them to share, we further instill a sense of value in the work they do while engaged in higher education.

A remaining challenge for policy makers is in recognizing faculty who enact OEP that results in community-engaged learning or open scholarship. There remain contradictions between common institutional values such as community engagement and open access to knowledge, and the evaluation and recognition of teaching and learning practice which espouse these values (McKiernan, 2017). These contradictions are seen most in research intensive universities where, overall, research may be prioritized over innovation in teaching and learning. It seems evident that faculty ought to be engaging with more open forms of education and scholarship, as these goals and objectives are evident in the text of many university mission and vision statements.

Summary

OEP can be represented in emerging forms of learning design, which draw from existing models of constructivist and networked pedagogy, prioritizing the interests and voice of the learner. Open technologies support and enable active learning experiences, presenting and sharing learners work in real-time, allowing for formative feedback, peer review, and ultimately, community-engaged coursework. Engaging learners in this way can promote the development of open and networked literacies, now critical for success in the information age. By designing

learning in this way, faculty offer learners an opportunity to consider and practice developing themselves as public citizens. Further, OEP provides learners an opportunity to develop the knowledge and literacies for working with copyright and controlling access to their online contributions, while offering them options for extending some of those rights to others. Inviting learners to share their work widely, demonstrates to them that their work has inherent value beyond the course, can be an opportunity to challenge them to engage with their community, and further contribute to open knowledge.

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Appendix A: Certificate of Ethical Approval for Harmonized Minimal Risk Study

Board of Record
University of Victoria

Human Research Ethics Board (HREB)
Administrative Services Building
Room B202
PO Box 1700 STN CSC
Victoria, BC V8W 2Y2

Certificate of Ethical Approval for Harmonized Minimal Risk Study

Also reviewed and approved by:

UBC
UNBC
SFU

Principal Investigators:
Michael Paskevisius

Primary Appointment:
University of Victoria

Board of Record Approval Reference #:
BC17-472

Study Title: **Exploring Educators Experiences Implementing Open Educational Practices**

Study Approved: **08-FEB-2018** Expiry Date: **07-FEB-2019**

Research Team Members: **Not Applicable**

Sponsoring Agencies: **BCcampus**

Documents included in this approval:

Document Name	Approved version date
Research Ethics Application – v2	February 5, 2018
Recruitment Letter – v2	February 5, 2018
Interview Script – v1	December 12, 2017
Participant Consent Form – v2	February 5, 2018
Participant Verbal Consent Script – v1	December 12, 2017
Confidentiality Agreement – v1	December 12, 2017

This ethics approval applies to research ethics issues only and does not include provision for any administrative approvals required from individual institutions before research activities can commence.

The Board of Record (as noted above) has reviewed and approved this study in accordance with the requirements of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2, 2014).

The "Board of Record" is the Research Ethics board designated on behalf of the participating REBs involved in a harmonized study to facilitate the ethics review and approval process. In the event that there are any changes or amendments to this approved protocol, please notify the Board of Record.

Board of Record Research Ethics Board Representative
Name: Dr. Rachael Scarth
Signature:

Title: Associate VP Research Operations
Date: 08-FEB-2018

Appendix B: Recruitment Letter

Exploring Educators Experiences Implementing Open Educational Practices

You are invited to participate in this study which explores educators' experiences implementing open educational practices in formal higher education. This research is being conducted as part of my Ph.D. research with the Department of Curriculum and Instruction at the University of Victoria. I can be contacted at any time at [redacted] or by phone at [redacted]. This research is being conducted under the supervision of Dr. Valerie Irvine, Assistant Professor, Educational Technology. You may contact my supervisor at [redacted]or by phone at [redacted].

Purpose and Objectives
The purpose of this research project is to explore the experiences of educators implementing open educational practices in formal higher education with regards to its impact on teaching and community engagement, as well as the issues arising and supports required for both educators and students. In conducting this research, I am hoping to better understand how openness is impacting teaching and learning practices in formal higher education. I define open educational practices as teaching and learning practices where openness is enacted within all aspects of instructional practice, including the design of learning outcomes, the selection of teaching resources, and the planning of activities and assessment.

The study is framed by the following research question: how do educators who are actively implementing open educational practices within formal higher education describe their experiences in relation to teaching and community engagement?

Participants selection
You are being asked to participate in this study because you are actively involved in open educational practices as evidenced by the work you do.

What is involved
If you consent to voluntarily participate in this research, your participation will include reflecting on your work implementing open educational practices through an interview conducted either face-to-face or online. If you wish to meet face-to-face for an interview, please let me know and I will do everything I can to meet you in a convenient location of your choosing. If you prefer to meet online, I will provide access to a synchronous web-based communication tool to conduct the meeting. You will need access to a microphone and speakers to communicate in this environment. I welcome you to make use of a webcam as well, but this is optional as video will not be used in this research.

In either case the interview should take approximately one hour. I will be recording the audio of the interview for transcription and analysis. I also welcome you to submit any further web resources or artifacts you feel would be useful for this study.

Compensation

As a way of compensating you for time spent and any inconvenience related to your participation, you will be offered a $20 Chapters gift card. If you consent to participate in this study, this form of compensation to you must not be coercive.

A full consent form is attached to this email for your review. Once you have reviewed the consent form, kindly let me know via email if you would consent to participate in a face-to-face or online interview.

Sincerely,
Michael Paskevicius
Ph.D. Candidate, Department of Curriculum and Instruction, University of Victoria

Appendix C: Participant Consent Form

Exploring Educators Experiences Implementing Open Educational Practices

You are invited to participate in this study which explores educators' experiences implementing open educational practices in formal higher education. This research is being conducted by Michael Paskevicius, a Ph.D. candidate with the Department of Curriculum and Instruction at the University of Victoria. Michael can be contacted at any time at [redacted]or by phone at [redacted]. As a graduate student, I am conducting research as part of the requirements of my Ph.D. in education. This research is being conducted under the supervision of Valerie Irvine, Assistant Professor, Educational Technology. You may contact my supervisor at [redacted] or by phone at [redacted].

Importance, Purpose, and Objectives

The purpose of this research project is to explore the experiences of educators implementing open educational practices in formal higher education and how this impacts teaching and community engagement. There are a limited number of educators working in higher education who have embraced open as a core value in their teaching practice. This study seeks to understand the experience of these educators and the implications of adopting open educational practices as a teaching strategy. In conducting this research, I am hoping to better understand how openness is impacting teaching and learning practices in formal higher education. I define open educational practices as teaching and learning practices where openness is enacted within all aspects of instructional practice, including the design of learning outcomes, the selection of teaching resources, and the planning of activities and assessment. The study is framed by the following research question: how do instructors and learning designers who are actively implementing open educational practices within formal higher education describe their experiences in relation to teaching and community engagement?

What is involved

If you consent to voluntarily participate in this research, your participation will include reflecting on your work implementing open educational practices through an interview conducted either face-to-face or online. If you wish to meet face-to-face for an interview, please let me know and I will do everything I can to meet you in a convenient location of your choosing. If you prefer to meet online, I will provide access to a synchronous web-based communication tool to conduct the meeting. You will need access to a microphone and speakers to communicate in this environment. I welcome you to make use of a webcam as well, but this is optional as video will not be recorded. In either case, the interview should take approximately one hour. I will be recording the audio of the interview for transcription and analysis. I also welcome you to submit any further web resources or artefacts you feel would be useful for this study.

Should you choose an online interview, please be advised that the U.S. based synchronous video meeting tool (Zoom) used in this study may route real-time data through the U.S. While no data will be stored in the U.S., there is a possibility that information may be accessed without your knowledge or consent by the U.S. government in compliance with the U.S. Patriot Act.

Compensation

As a way of compensating you for time spent and any inconvenience related to your participation, you will be offered a $20 Chapters gift card.

Inconvenience, Risks, and Benefits

Participation in this study should cause minimal inconvenience to you. Aside from offering your time and willingness to participate, I do not foresee any additional inconveniences. There are no known or anticipated risks to you by participating in this research.

The potential benefits of your participation in this research include a better understanding of how open educational practices are being implemented in higher education. Currently, there are a limited number of educators who are actively evolving their teaching and learning practice to include open education approaches. This study seeks to document the issues and implications of enacting open educational practice. Specifically, I seek to understand how these practices are enacted in the context of formal higher education, how it impacts their teaching practices, and how these practices might impact their community engagement activities.

Voluntary Participation and On-going Consent

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or explanation. If you withdraw from the study, then the interview audio, interview transcript, and any other artefacts you provide will be either destroyed or returned to you based on your instructions. To make sure that you continue to consent to participate in this research, I will give an opportunity to review and contribute to your interview transcript.

Researcher's Relationship with Participants

The researcher may have a relationship to potential participants as a colleague working in higher education. I do not believe this represents a power-over or influential relationship. If you have any questions or concerns about this, please let me know.

Anonymity

The principle researcher will protect access to your data. In terms of protecting your anonymity, I will do everything in my power to protect your identity and the protection, access, control, and security of your data and personal information during the recruitment, data collection, reporting of findings, dissemination of data, and after the study is completed.

Confidentiality

Your confidentiality and the confidentiality of the data will be protected by keeping this data stored on an encrypted hard drive. I will also anonymize the transcripts to ensure confidentiality. I will be the only person who will have access to the identifier list. Throughout the study, I will be diligent in ensuring to protect information from unauthorized access, use, disclosure, modification, loss, or theft.

Dissemination of Results

It is anticipated that the results of this study will be shared with others through website, research papers, as well conference presentations or posters.

Use and Disposal of Data

Data from this study will be disposed of ten years after the study is completed. The data will be held for ten years in case a changing landscape prompts the need to reexamine the findings, which may result in you being contacted again. During this time, the data may also be combined with other data and be used

for future data analysis in collaboration with other researchers (i.e., graduate students and faculty members) who sign a statement of confidentiality. After ten years, the digital audio files, transcripts, notes, and artefacts will be deleted.

I am also presenting you with an option to release your anonymized transcript as open access data. This is completely optional. The data will be cleansed of identifiers and made available in the University of Victoria research repository UVicSpace. UVicSpace is supported and maintained by the University of Victoria Libraries with a goal to preserve and provide access to the digital scholarly works of faculty, students and staff. In this way, the transcript becomes available to other researchers who might want to analyze the transcript. If you choose to release your transcript as open data, I will seek your consent again prior to releasing the anonymized transcript in the University of Victoria research repository.

Contacts

Individuals that may be contacted regarding this study include Michael Paskevicius (principal investigator) and Dr. Valerie Irvine (supervisor). Contact information for these individuals can be found on the first page of this consent form. In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria [redacted].

Signed Consent

Your signature below indicates that you understand the above conditions of participation in this study, that you have had the opportunity to have your questions answered by the researchers, and that you consent to participate in this research project.

_____	_____	_____
Name of Participant	*Signature*	*Date*

Option 1: Open Access Data (Please leave blank for non-consent)

I would like my anonymized transcript to be openly licensed in the public domain for future research. _____ (Participant to provide initials)

Option 2: Open identity (Please leave blank for non-consent)

I would like my identity and other identifiers preserved with my open transcript. _____ (Participant to provide initials)

A copy of this consent will be left with you, and a copy will be taken by the researcher.

Appendix D: Interview Script

Interview Script

The purpose of this study is to investigate the experiences of educators in formal higher education who are implementing open educational practices within their teaching and learning practices. I would like to confirm that you fully agree to participate in the interview for this study which has undergone ethical review. As well, I would like to confirm that you agree for audio of the interview to be recorded?

If, at any point, you are not comfortable with a question you are welcome to not provide an answer. If you would like to end the interview at any time, please let me know.

Before we begin do you have any questions or concerns?

Preliminary information

1. Name – so it is logged on the audio file.
2. Date of interview
3. Would you be willing to identify your age?
4. Would you be willing to identify your gender?
5. Would you be willing to identify your ethnicity or other ways that contribute to diversity in society?
6. Please identify your role or job title
7. In which department and faculty do you primarily teach
8. Can you clarify your subject area or speciality?
9. Which post-secondary institution do you teach at?

10. What type of employment configuration do you have (sessional vs. tenure-track or tenured; teaching vs. research focused)
11. How many years of experience do you have teaching post-secondary? Do you have a longer teaching history beyond post-secondary? If so, what is your overall teaching experience?

Your engagement with OEP

12. How are you defining open educational practices?
13. How long have you been enacting open practices in your teaching in higher education?
14. Can you provide an example of how you are enacting OEP (around learning outcomes, assessment and evaluation, teaching and learning strategies, or learning resources?
15. Can you identify a catalyst for your move towards open educational practices (Expecting exposure to OER, desire to engage students with inquiry learning, emergent curriculum, open access and open scholarship, availability of web 2.0 tools, could be others)?
16. Would you say that you wanted to change your pedagogy and therefore looked to open, or did you find open revealed opportunities to change pedagogy?
17. What have you experienced while implementing open educational practices?
18. What contexts or situations have influenced or affected your experiences of implementing open educational practices? (What experiences led you to OEP, what experience influenced your decision to enact OEP, what contexts or situations are relevant to your experience?)

Exploring the practice lens as a construct

19. Thinking about **facilities** (the technology, infrastructure, support, technical hardware/software, space, buildings), what resources do you make use of that are available locally at your university, what external facilities do you draw upon?
20. How does your engagement with OEP align to the **norms** (common practice, protocols, and etiquette common) within your social and organizational context?
21. Could OEP be recognized as a formal **norm** in higher education (via academic plan, etc) or remain an informal practice?
22. Can you reflect on your experience (**interpretive schemes**) regarding the value of OEP?
23. How does your experience implementing OEP relate to your own **pedagogical and epistemological beliefs**? Did one influence the other?
24. Practically how do you feel OEP might contribute to **meaningful learning** for students?
25. What are perceptions about the **role of technology** in accomplishing OEP?

Appendix E: Transcriptionist Confidentiality Agreement

Transcriptionist Confidentiality Agreement – Exploring Educators Experiences Implementing OEP

1. Confidential Information

The 'Exploring Educators Experiences Implementing Open Educational Practices' Research Project hereby confirms that it will disclose certain of its confidential and proprietary information to their interview transcriptionist, **(transcriptionist)**.

Confidential information shall include all data disclosed or submitted, orally, in writing, or by any other media, to **(transcriptionist)** by Michael Paskevicius .

2. Obligations of Transcriptionist

A. **(Transcriptionist)** hereby agrees that the confidential 'Exploring Educators Experiences Implementing Open Educational Practices' research study and is to be used solely for the purposes of said study. Said confidential information should only be disclosed to employees of said research study with a specific need to know. This research project team consists of only **Michael Paskevicius** and his supervisor **Valerie Irvine**.

(Transcriptionist) hereby agrees not to disclose, publish or otherwise reveal any of the Confidential Information received from **Michael Paskevicius** , research assistants or other participants of the project to any other party whatsoever except with the specific prior written authorization of **Michael \ Paskevicius.**

B. Materials containing confidential information must be **stored in a safe location and kept on the encrypted USB thumb drive** provided to avoid third persons unrelated to the project to access said materials. Confidential Information shall not be duplicated by **(transcriptionist)** except for the purposes of this Agreement.

3. Completion of the Work

Upon the completion of the work and at the request of Michael Paskevicius **, (transcriptionist)** shall return all confidential information received in written or tangible form, including copies, or reproductions or other media containing such confidential information, within ten (10) days of such request.

At Michael Paskevicius ' option any copies of confidential documents or other media developed by **(transcriptionist)**and remaining in their possession after the completion of the work need to be destroyed so as to protect the confidentiality of said information. **(Transcriptionist)** shall provide a written certificate to Owner regarding destruction within ten (10) days thereafter.

With his/her signature, **(transcriptionist)** shall hereby adhere to the terms of this agreement.

_____ _____

Signature Date