

9. Three Approaches to Open Textbook Development

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In this contribution, three open textbook authors outline the motivations and mechanics of three successful yet different approaches to writing open textbooks. These approaches include textbook creation and adaptation projects, individual and collaborative efforts, and traditional timeline and compressed “sprint” models. Following these cases, the authors discuss similarities and differences across approaches, along with broader issues concerning how particular disciplines and philosophies of teaching influence writing open textbooks.

Three Approaches to Open Textbook Development

We believe that we are entering a technological age in which we will be able to interact with the richness of living information — not merely in the passive way that we have become accustomed to using books and libraries, but as active participants in an ongoing process, bringing something to it through our interaction with it, and not simply receiving something from it by our connection to it (Licklider and Taylor, 1968, p. 21).

Introduction

In October 2012, the British Columbia (BC) Ministry of Advanced Education launched the Open Textbook Project (OTP) (<http://open.bccampus.ca>). The project's goal was to create sixty open textbooks in the forty highest-enrolled subject areas in post-secondary education in the province. As a provincial agency that supports teaching, learning and educational technology, BCcampus was chosen to lead the project. Four years later, BCcampus has surpassed their initial targets with over 150 open textbooks in the BC Open Textbook repository. These textbooks have been adopted by nearly 200 faculty teaching 606 courses at thirty-one (twenty-three public and eight private) post-secondary institutions. The savings to BC students are estimated at \$1,850,715-\$2,298,878 USD (BCcampus, 2016), a small fraction of the \$174 million that students worldwide have saved as a result of open textbooks from organizations that include OpenStax College and MIT's OpenCourseWare (Creative Commons, 2015).

These significant financial savings do not come at the expense of educational outcomes. Indeed, students who have been assigned open textbooks perform just as well as or better than those assigned traditional textbooks (see Hilton, 2016, for a review). The story remains the same for retention and program completion. These results — improved access, significant cost savings and equivalent or improved educational outcomes — have encouraged philanthropic organizations to support the development of entire college programs without traditional textbooks costs (Bliss, 2015).

Yet, the very success of open textbooks raises a series of questions, not the least of which is how this beneficent system can be sustained and why a faculty member would ever undertake the onerous work of

creating or adapting an open textbook. In the absence of royalty cheques, prestige, or institutional recognition, faculty have few professional incentives. For faculty with the will, little is understood about the different approaches available and even less about how these different approaches may align with disciplinary requirements. In other words, we know the elixir works, but we know far less about its methods of production.

The authors of this chapter have created five successful open textbooks as part of BC OTP.¹ In what follows we outline the motivations and mechanics of three different approaches to writing open textbooks. These approaches include textbook creation and adaptation projects, individual and collaborative efforts, and traditional timeline and compressed “sprint” models. Following these cases, we discuss similarities and differences across our approaches, along with broader issues concerning how our particular disciplines and philosophies of teaching influence our approaches to writing open textbooks.

History Making in Open Textbooks

John Douglas Belshaw

The open textbook project was, for me, an intersection of interests, obligations, and coincidence. My interests begin in my work as a teaching and research-active Canadian historian. With conventional texts, we are held hostage to the table of contents. A 13-week course is bound to follow fairly closely the chapter organization of the narrative textbook — which is typically and not surprisingly built around 12–15 chapters. This is one of several teaching-to-the-textbook traps that one encounters. Beyond that, I am concerned as a pedagogue that history textbooks tend to adhere to a core “master narrative” tradition (which can be very difficult to escape). Twenty years ago this was a more entrenched phenomenon: the arc of the pre-Confederation historical

1 *Canadian History: Pre-Confederation* (Belshaw), *Canadian History: Post-Confederation* (Belshaw), *British Columbia in a Global Context* (Green), *Research Methods in Psychology* (Jhangiani), and *Principles of Social Psychology* (Jhangiani). All these open textbooks are available at: <https://open.bccampus.ca/find-open-textbooks>

tale begins with European-Aboriginal contact and culminates in colonial union in 1867. No matter how much economic and social and demographic history was considered, and no matter how vigorously it was reiterated, it still came out as a story of power and the voice of what is called the “Nationalist School” echoed throughout. Now, it is true that the most critically sophisticated text might challenge the master narrative but it would still be a static object constrained by its own structure and materiality. Scholarly history is a fast-moving field, stereotypes of stodgy old academics wearing suede elbow patches notwithstanding. Technologically and theoretically it is very dynamic and the conclusions drawn by historians have repeatedly shifted public policy. Getting those ideas into a conventional textbook is enormously challenging if not impossible.

I felt, too, that I owed it to my students to advance the open textbook experiment. My classes are all delivered online through Thompson Rivers University — Open Learning (TRU-OL). Each new student receives in the mail what we call a “pizza box” — a cardboard container that includes the course outline, a hefty manual, some audio lectures, and textbooks. One of the textbooks is a narrative and is among the most widely used in the country. It is now into its 7th edition and the value-added proposition of each successive edition seems to me subject to the law of diminishing returns. The release of a new edition, however, necessitates a revision of the course materials, a process that is both time-consuming and costly. TRU-OL has to contract instructors (like me) to deal with content; the production side of the house has to be involved. Hours of institutional labor occur because Chapter Y has been split in two and the pagination has completely changed or there is a new set of suggested readings. A “minor revision” contract may be welcome but the roll-out is not. Our courses are continuous-entry, non-cohort, and asynchronous: any change in course material necessitates two iterations of the course until we have flushed out of the system the old materials (and students). The fact that TRU — along with Kwantlen Polytechnic University — is a member of the Open Educational Resource Universitas (the OERu) gave my colleagues and I an institutional context for addressing these issues.

Coincidence enters into the equation as regards our audio lectures. These were compiled in the late 1970s or early 1980s by academic

historians mostly in Toronto. While some were timeless, the collection was really quite dated. Newer fields — such as gender history, Aboriginal history, and environmental history — were not represented at all. The best-before date on the audio resource had come and gone; we were ready to assemble new lecture material. The open textbook created an opportunity to build a multimedia instrument, one that included the written word but also video and sound — embedded right in the textbook (that is, in its HTML form). This seemed to me a delightfully Harry Potteresque possibility wherein an expert in the field speaks to the student right off the page.

Canadian History: Pre-Confederation was able to exploit some existing Open Educational Resources (OERs). European, American, and (remarkably) Aboriginal history of credible quality could be found in the Creative Commons in the form of other open textbooks. Beyond that, however, the material had to be created from scratch. This was a significant undertaking both intellectually and in terms of person-hours. Learning how to manipulate the Wordpress-based PressBooks platform on which the open textbook was fashioned constituted another challenge.² Looking beyond those issues, my principal concern was how the textbook would be received. Colleagues in several institutions in at least three provinces are already using it and report favorably, so I am pleased on that front.

Approaching the “sequel”, *Canadian History: Post-Confederation*, I decided to engage a large number of historians in crafting small- to medium-sized sections of the text. Nearly three dozen historians from almost every province participated. This strategy had three advantages, the first of which was an opportunity to draw on expertise that I would otherwise struggle to approximate. Not everyone can jump nimbly from nineteenth century women’s organizations to the role of Aboriginal soldiers in two world wars to the opportunities presented by oral and digital histories. I certainly can’t. Much better to include the most up-to-date interpretations by the most up-to-date academics. Secondly, this was a chance to introduce students to experts in a huge range of special

2 The BCcampus open textbooks are usually compiled and delivered on a custom-built platform called “PressBooks”. It is an adapted version of Wordpress that allows collaborative authoring and is capable of importing and exporting a variety of file formats.

fields, not by quoting them but by getting their voice and passion into the text. Finally, and perhaps most importantly, involving colleagues is a way to introduce them to the open textbook as a teaching resource. As someone put it, they've got skin in the game.

These projects have not advanced without objections. Giving up one's intellectual property to the Creative Commons runs contrary to some scholarly instincts. On the one hand, it's called intellectual *property* for a reason. We long ago commodified our output and there isn't a historian who doesn't dream of becoming the next Eric Hobsbawm or Fernand Braudel — the sort of national historian whose books sell and for whom traffic stops and the nation mourns at their passing. As a writing historian, I have produced a number of books on aspects of Canadian history and that is part of the gig: the road to tenure is paved with peer reviewed publications. Few monographs in the Humanities and Social Sciences, however, make much in the way of royalties because they generally do not make much in the way of sales (especially in a relatively small market like Canada). All that effort and within one year the "fresh" list on which your title appeared is lining the bottom of the budget cage. That is the moment when most of us realize that what we wanted, really, was not royalties but *readers*. The commodification of intellectual property can be criticized, then, for erecting a monetized barrier between the "creator" and the "consumer", a singular reason for supporting OERs and shifting more intellectual product to the Creative Commons. But, as I said, this runs against the powerful current in our culture that privileges proprietorship of knowledge.

Furthermore, rule changes are involved. Among historians, the well-crafted footnote is a thing of beauty. Our sources are often so arcane and deeply buried in dusty archives that we devise citations as precise as coordinates for an airstrike. If intellectual property holds us back from releasing material into the commons, it is *intellectual integrity* that stops us from adapting OERs. One might blame the American historian, Stephen Ambrose (1936–2002), who was to historical writing what Lance Armstrong is to the Tour de France: undeniably amazing but the stain of dishonesty won't wash away (Harris, 2010). So, borrowing whole tracts from other open textbooks — effectively a cut-and-paste operation — flies in the face of everything we have been taught about integrity; and one feels compelled to model good behavior for students by *not* copying lengthy passages verbatim. The CC BY-SA seal is,

however, permission from the creator of material to use at will.³ At the same time, the onus remains on the scholar to ensure that one does not use inaccurate material. And that is where the tradition of intellectual integrity continues to matter. This strikes a nice balance, one that younger scholars seem able to reach sooner than those of us who are closer to retirement seminars than to tenure committees.

When the Ministry of Advanced Education in British Columbia announced that it was committed to the creation of open textbooks, these concerns came home to me. I have written several intellectual property policies and integrity policies as well. I know first-hand how strongly some scholars feel about ownership of everything from a patent through innovation and journal article to an instructional manual. I know, as well, plenty of textbook writers whose efforts brought revenue to publishing houses, bookstores, and their own pockets and I have respect for their contribution to the learning community. Embracing the open textbook project required serious second thought about a paradigm with which I had grown up.

It is worth the candle, as they say. I have come to believe that the old paradigm has become a barrier to intellectual vitality. Academics wringing their hands about the high costs of education can seize upon open textbooks as a viable solution. As well, historians ought to be seen to be doing history, not depending on someone else to provide the all-inclusive, palatable to the greatest number interpretation in three or four editions. In a world of Wikipedias, we need to show students how intellectual integrity actually functions, not by cracking down on plagiarism but by working collaboratively to improve livestock grazing across the Creative Commons. While it may be true that some folks will no longer get rich off conventional textbooks in an OER world, it is worth recalling that the monumental works in our field are not and have never been *textbooks*. Writing two open textbooks has shown me where the scholarly historian can simultaneously become a public scholar, an activist for greater educational access, a directly-engaged member of a community of pedagogues and a champion for integrity in this very important field.

3 The Creative Commons licensing system provides an alphabet soup of designations. In the development of OERs like open textbooks the “CC BY-SA” designation is the trifecta of openness. It signals: Creative Commons material with a responsibility to attribute the material’s origin (whom it is “BY”) and Share-Alike.

Sprinting Towards an Open Geography

Arthur “Gill” Green

Three moments led me to co-author an open textbook. The first moment was when my undergraduate university roommate loaned me his copy of Freire’s *Pedagogy of the Oppressed*. Freire advocates that a change to a liberated society requires liberating education — that is, we must rethink the basic modalities of education. He writes, “Education must begin with the solution of the teacher-student contradiction, by reconciling the poles of the contradiction so that both are simultaneously teachers *and* students [...]” (Freire, 2000, p. 79). This reconciliation encourages learners to participate in the creation of knowledge rather than simply focus on consumption of knowledge. Freire’s ideas influenced my pedagogical approach and, eventually, my belief in the game-changing importance of OER.

The second moment came in my first year teaching geography. One day after an introductory human geography class, I saw some students lingering in the back of the classroom taking pictures with their phones. Curious, I approached to see what they were doing. These were not selfies. Apparently the most photogenic item in the room was our textbook. The students explained that they were sharing a textbook because it cost too much. Each week, one of them would take the textbook home and the two others would take pictures of the textbook pages in order to read them on their phones. Perhaps most disturbing was that they were apologetic, as if they were doing something wrong. This was the canary in the coal mine for me. It was time to get out. It was time to get off of the conventional merry-go-round of corporate textbooks, where the “new edition is better [...] now with more colorful insets, an exam question bank, slides, and online videos and quizzes”. This approach profits at the expense of students, and caters to the weaknesses of the modern, harried educator.

I have come to believe that the conventional textbook issue is not someone’s fault, but it *is* everyone’s problem. This merry-go-round is a logical result of the current educational labor system and the growing tendency to see the education sector as an unmined profit source (students as consumers) rather than a source of a public good (learners

as productive citizens). Faculty keep pace with the textbook merry-go-round because they are accustomed to it and sometimes reliant on it as a crutch to help balance all the other demands on their time. Even so, most faculty that I know have complaints about the textbooks they adopt and subsequently require students to buy (missing coverage on key areas, the sequencing of chapters, out of date facts, etc.). Yet complaints are no longer enough. To truly care for students and ourselves, we as faculty have to make a full stop. We must change the system within which we teach, learn, and work.

I would argue that the most important contribution of open textbooks is not the commonly cited cost savings, but that they relieve the pedagogic burden that conventional textbooks impose on students and faculty. Conventional textbooks are for transferring information to consumers — what Freire calls the banking approach to education. The teacher or textbook has the knowledge. The knowledge is purchased (at great expense), deposited in the student (account), and the student regurgitates it on demand with little to no interest (pun intended). Open textbooks are an alternative that allow flexible adaptation of the book to pedagogies that suit the learning relationship.

Despite my ambition, I was unable to locate any geography open textbooks that addressed Canadian or British Columbian perspectives. So, I decided to write an open textbook. The hurdles were significant. First, the time required — I was teaching full-time, designing courses and finishing a PhD. Second, colleagues advised me against writing a textbook, let alone an open textbook. The common logic was that an academic should focus on feeding the publication mill. Writing a textbook is just one publication, when several articles could be produced in the same time. Third, no professional credit for open textbooks. I was told they were seen as “self-publishing” ebooks compared to writing niche books (with exorbitant price tags) within publishing corporations. Fourth, why work for free when confronted with the potential and well-known employment hazards of sessional work in academia? Fifth, the unfamiliar language of esoteric terms, abbreviations, and overlapping licenses seemed to be an additional hurdle in simply trying to understand open education. Despite Freire and the canary, the disincentives caged me in.

In 2014, BCCampus gave me my third moment as they recruited a team to write a BC regional geography open textbook. This textbook would be unlike any of the previous textbooks supported by BCCampus

as it would be written through a book sprint — a collaborative, rapid (less than a week) writing method. The book sprint required bringing a team together for four days to collaboratively outline and produce a textbook. The authors would be supported by a librarian, a graphic artist, facilitators and BCcampus staff. Each author would receive a stipend. The methodological innovation, support staff, stipend and fact that I already had four years of content developed from teaching BC regional geography broke down the disincentives for me to get to work. I was the first of five authors to sign up.

We worked over four days to complete the first draft. The first day we met each other, learned how to use the online writing platform, learned the book sprint method and collectively outlined the book. We identified service learning and community based research as important pedagogical aims and decided to provide example activities for each textbook section. Some content sections that we identified as critical had never before been included in a BC regional geography textbook (e.g. food systems). The following days involved a frenzy of writing and editing. Book sprint participants are encouraged to not prepare materials before meeting as a team. We soon found that as a geography textbook there were a number of images and maps that we needed to obtain permissions to use or to create from scratch. We soon realized that the time pressure would force us to rely on some background materials for both these images and for content. So, I opened up the materials that I created during four years of teaching BC regional geography. Giving access to my course content to all my colleagues was at first a bit intimidating. Then, I realized that this was part of the process of being open. I had just created OERs by sharing my course materials. Through daily 12–14 hour cycles of text creation and editing, the textbook evolved into a coherent draft and I came to understand that all open textbooks are simply drafts that should be further adapted. After four days, we emerged with a nearly 200-page open textbook. BCcampus spent the following months conducting a peer review process and converting the book to their online open textbook repository. This institutional support was critical in garnering colleagues' respect for the work.

Most of the challenges we encountered were specific to the book sprint method and our team composition. One of the first things we learned is that while the official book sprint method emphasizes making

everything on site, this is a challenge for a textbook — especially for a geography course that combines insights from numerous sub-disciplinary areas in human and physical geography. In retrospect, the unique requirements of a textbook might require changes to the book sprint method. For example, a preliminary meeting of authors for establishing the content of the book would allow them time to find resources that they could bring to the book sprint. This would have allowed us to contribute better materials, identify our weak content areas and spend more book sprint time on creatively crafting the text and our pedagogical approach. In our book sprint, we found our team was weak in the area of physical geography. As well, division of labor issues negatively impacted workflows and brought up concerns about free riders. This might also be addressed by a preliminary meeting that allows a better division of labor and accountability as it would allow content experts to create quality first drafts or lists of core concepts within their area of expertise that could then be introduced to the collaborative writing process.

There were additional challenges, but these are truly opportunities. For example, we did not have time to develop ancillary resources — now commonly expected with conventional textbooks. Yet, the presence of ancillary resources influences teacher-student interactions and assessment choices when educators are pressed for time. Perhaps a more sustainable approach is to crowdsource, inviting others to share the ancillary resources that they develop in an associated OER repository. This could provide many different approaches to the same open textbook material and opens up pedagogical discussion.

To recap, there are unique challenges to sprinting through an open textbook. Yet this sprint format can create a first draft and open us to potential, because all open textbooks really are first drafts waiting for improvement. The sprint format is a point of departure for the reconciliation of the student and teacher relation. This format can be adopted for course projects to improve textbooks. Open education resources reveal possibilities for liberating geographic education from the pedagogic burdens that conventional textbooks place on how we think about geography as a discipline, our students as people, ourselves as educators and the foundations of a truly democratic society.

Review, Revise, Adopt. Rinse and Repeat

Rajiv S. Jhangiani

My red pill moment was when I first heard the term “OER” uttered by David Wiley in May 2013 at an annual workshop held at Thompson Rivers University for faculty in their Open Learning division. This is when I began to see the Matrix for what it was — an artificial, parasitic, publisher-driven system in which faculty are unwitting carriers. I am ashamed to say that it never occurred to me to look beyond the unsolicited glossy hardcovers that appeared in my mailbox every week. Or to reach out to my university librarians, instead of relying solely on the affable representatives who periodically knocked on my office door asking if I had a spare moment, offering greater automation and promising better outcomes (and when that would not work, inquiring about sponsorship opportunities). The complicity of higher education with the interests of for-profit publishing houses is truly staggering. It is a partnership that successfully preys on heavy faculty workloads while peddling the false notion that higher education is about delivering scarce (and therefore valuable) content. A textbook case of a principal-agent problem.

A summer break from teaching allowed David’s message to incubate. So when the open textbook team at BCCampus put out a call for faculty to review the open textbooks they had harvested from other repositories, I expressed an interest in reviewing two open textbooks, one of which (*Principles of Social Psychology* by Charles Stangor) was in their repository, and another (*Research Methods in Psychology* by Paul C. Price) that was not, but which I brought to their attention.

Over that summer I evaluated both open textbooks using a rubric from College Open Textbooks that (perhaps fittingly) had itself been twice adapted, initially by Saylor Academy and subsequently by BCCampus (see <https://open.bccampus.ca/bc-open-textbooks-review-criteria>). Happily, both textbooks passed muster and fell well within what I considered to be one standard deviation from a traditional publisher’s offering (my internal threshold for adoption).

Emboldened by my generally positive evaluation, I took the leap and formally adopted the open textbook for the one section of the Research Methods in Psychology course that I was scheduled to teach during the

Fall semester. However, a number of deficiencies remained related to context (e.g., US vs. Canadian research ethics policies), currency and the absence of navigational tools such as a table of contents or glossary. Which meant work. Moreover, there was no available suite of ancillary resources (a question bank paramount among these). Which required an ongoing commitment.

With three weeks remaining before the first day of class, I performed a little triage to determine the most urgently required revisions, using my own review and those of other faculty to guide this process. The availability of the open textbook as a Microsoft Word file meant that I would be able to make the necessary edits within a familiar platform. And so I did, using every one of those twenty-one days to make only the most critical additions and changes to the content. Along the way, I taught myself about Creative Commons licensing and added a cover and a table of contents to make the 377-page document more presentable, before uploading the newly revised textbook (in two digital formats) to the University's learning management system and my personal website.

And so the adoption proceeded, with the 35 students in my Research Methods course that Fall making for rather happy guinea pigs, having saved \$135 USD apiece (the cost of the incumbent textbook). Although some had to be taught how to use the navigational features of a digital textbook, the students overwhelmingly reported positive experiences with the book, ranging from the ability to print pages as necessary to being able to read the book on all of their digital devices. One unexpected collateral benefit of this was the stronger rapport that resulted from my choice to save my students' money and improve their access, something which paid dividends throughout the semester and even in my end-of-semester evaluations.

One student wrote to me in an email at the end of the semester:

Being a mature student on a tight budget, not having to pay \$120 for a textbook is a big deal. That's one of the many reasons I really enjoyed the free textbook for Research Methods. Having many years of school left it would be nice that more teachers and schools could use these kinds of books to help take off some of the financial strain that students like me face.

Funnily enough, I did not think to inform the folks at the BC OTP about my adaptation and adoption or to share the modified files until the end of the semester. Awareness of my efforts at BCcampus led to a press

release from the Ministry of Advanced Education and a post on the university blog, attention that served as quite a contrast to my twenty-one-day salute to social justice. But while concerns about student access provided me with the motivation, several factors enabled my work:

1. The benefit of a non-teaching semester and no institutional requirement to perform research provided the necessary time.
2. The small size of my then-institution meant that mine was *the only section* of Research Methods offered that semester. This in turn meant that the choice of textbook was mine alone and did not belong to a committee that might have raised questions about textbook standardization or prattled on about their preference of the smell and touch of a physical book.
3. First reviewing the open textbook served as a foot-in-the-door to the revision process, providing me with the necessary familiarity with the book's strengths and weaknesses.
4. My experience teaching this course at other institutions provided familiarity with different institutional expectations and allowed me to evaluate whether any critical material was missing or required revision.
5. I was able to modify the textbook using familiar technology (Microsoft Word), even if this technology imposed its own technical constraints.
6. My competency-based approach to teaching Research Methods made it easier for me to adopt the book in the absence of any ancillary resources, an outlying position within a discipline for which reliance on publisher-supplied question banks and test generation software is the norm.

In the two years since this minor revision was completed, my commitment to open textbooks has deepened. In the Summer of 2014, I organized and facilitated the "Great Psychology Testbank Sprint" in which twenty psychology faculty members from seven BC institutions and with complementary areas of expertise came together for two days and created an 870-question test bank to accompany an open textbook for Introductory Psychology (See <http://thatpsychprof.com/the-great-psychology-testbank-sprint>)

I have since also completed major adaptations of the *Principles of Social Psychology* (2014) and *Research Methods in Psychology* (2015) open textbooks. Unlike my earlier experience, both of these adaptations were completed under the auspices of the OTP using the PressBooks platform

and with the assistance of a collaborator (Hammond Tarry from Capilano University and I-Chant Chiang from Quest University). Importantly, both Hammond and I-Chant were partners who complemented my content expertise and shared my commitment to good pedagogy and the principles of open.

I am particularly proud of these recent revisions as they take fuller advantage of the open licenses. In the case of the Social Psychology textbook we addressed the reusability paradox by producing the first international edition, deliberately using examples and statistics from a wide variety of cultural contexts. And in the case of the Research Methods textbook we embedded audiovisual media (video clips, QR codes, hyperlinks to interactive tutorials) and wove throughout the text discussions of recent and emerging developments within the field, including discussions of Psychology's "reproducibility crisis" and the resultant shift towards open science practices that are gradually transforming psychological science into a more transparent, rigorous, collaborative and cumulative enterprise. Rather like an open textbook.

Discussion

Several common themes emerge across our experiences creating open textbooks. Foremost is our shared interest in creating and adapting course materials that reflect the dynamic nature of our disciplines. Traditional textbooks are, at best, pedagogically impoverished, context-neutral content in an age where internet connectivity affords access to rich multimedia and dynamic, contextualized knowledge. Consider then the typical introductory course textbook chosen by a committee, the one that no one loved but, crucially, that no one despised. The one whose imperfections the faculty have learned to live with. Then imagine instead being able to omit, augment or revise sections as desired. Or embed and scaffold course assignments within and across chapters. Imagine being able to update it immediately in response to breaking developments in your field, embedding video clips, interactive simulations and other rich media. To bring in local examples, current public debates or references to immediate cultural touchstones. In short, imagine having the freedom to modify the instructional materials to suit your course and your context and your students rather than having it be the other way around. All of these imaginary frontiers have been

underexplored — worse, surrendered — territory in discussions of professional and social responsibility.

A second common theme is our recognition of the importance of access, broadly construed. Textbook costs continue to rise, having increased 1041% since 1977 and 82% since 2002 (US PIRG, 2014). These increases have been greeted by relatively little change in the amount that students actually spend on textbooks, on average about \$600 USD (Caulfield, 2015). How is that possible? Nearly 65% of students opt out of buying a required course textbook (even though 94% of these recognize doing so hurts their performance), 49% take fewer courses, 45% do not register for a course, and 27% drop a course, all due to concerns over cost (Florida Virtual Campus, 2012). Those who do obtain a copy of the required textbook often do so by buying used copies, renting, sharing with classmates, using a reserve copy, photocopying and illegally downloading. These student choices are forced and stressful, yet largely invisible to faculty.

Of course issues of access go well beyond affordability. Open textbooks grant access that is immediate (no student loan delay), permanent (no need to resell), flexible (across formats and devices), and compatible with assistive learning technologies. Conventional textbooks dictate pedagogical decisions that limit opportunities for people with different learning preferences. In creating and adopting open textbooks, educators and learners have an ability to tailor the text to their own unique needs and pedagogical concerns. The open textbook approach offers a means to tackle issues of academic honesty. The growth of essay-writing services has generated policies on and the policing of plagiarism. This absorbs time, effort and money which in turn has led professors to either drop or substantially change the writing components of courses. The open textbook presents an alternative paradigm in that it can be *added to*. Getting students to consider and articulate contrasting approaches can generate original thinking that can contribute to textbooks and to their own learning community. It is one thing to say that students learn how to write by writing essays; it is another to be able to demonstrate the quality of writing and analysis that a course generates by pointing to student-created textbook content.

A third theme is finding a counterbalance to the lack of academic incentives to create an open textbook. The authors of this chapter each

note challenges regarding workload, time and lack of disciplinary recognition of open textbooks — which impact obtaining employment and tenure. The role of external factors in overcoming these challenges cannot be underestimated. In one way or another, all of the open textbooks described here have benefitted from governmental, institutional and foundational support. Without agencies like BCcampus and the OERu, without a political mandate and funding allocation, and without foundations like the Hewlett Foundation, the external factors mentioned by the authors are often enough to stymie creation, adaptation and distribution of OERs.

A fourth common theme is the importance of collaboration. The basis of participating in OER is understanding your work is part of a chain of collaborations. Indeed, an open textbook may be best conceptualized as an invitation to co-create rather than an object to consume. The importance of collaboration was emphasized in the case of Arthur Green's book sprint with a diversity of geographers, the case of John Belshaw's approach to collaboratively building a history textbook and the cases of Rajiv Jhangiani's psychology test bank sprint and approach to choosing collaborators for revising open textbooks. Beyond the benefits collaboration has for creation, having many collaborators leads to more adoptions and more positive impacts for students. If we as authors do not collaborate, our contributions — already weakened by the limits of individual expertise — will likely be lost.

Conclusion

The separate and distinct trajectories each of us followed in this contribution reflect our respective teaching philosophies. Comparing these approaches to the creation of open textbooks reveals the many layers at which creation occurs and the multitude of purposes served by these educational tools. Yet, despite our different approaches to writing an open textbook, we found many common components of success. For example, we found that making OER allowed us to fulfil our need for course materials that can be dynamically adapted to our unique teaching contexts and pedagogies. We found that, while textbook cost is a common and formidable barrier, working on open textbooks unleashes a creativity that exposes many less-evident but critical barriers to teaching and learning with conventional textbooks. We each

encountered challenges to getting professional recognition for our work on OER, as our disciplines have similar limitations to recognizing open textbooks. Strategies for overcoming biases against these innovations had to be devised. We identified that at the heart of each of our open textbook processes is collaboration and an understanding that academic freedom is not enclosing our knowledge in proprietary packages but opening our work to the commons. Indeed, part of the commons and of showing people that OER is subject to quality control is the peer review of other open education materials. Finally, we recognized that public and private funding that supports OER was a key trigger for solving logistical constraints for our own production of OER. These investments continue to be critical and are direct paths to making education more accessible. We arrived, then, at the same conclusions. The promise of the open textbook model, even when focused solely on improving access, is enormous. But when the approach to open textbook development reflects dynamism, respects agency and relishes collaboration it becomes a truly liberating form of pedagogy.

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