

Pragmatism vs. Idealism and the Identity Crisis of OER Advocacy

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Abstract

The open education (OE) movement is in its adolescent years and experiencing an identity crisis as it is pulled towards both pragmatism (marked by an emphasis on cost savings, resources, and incremental change) and idealism (marked by an emphasis on permissions, practices, and radical change). In this article, I describe these tensions (free vs. freedom; evolution vs. revolution; and resources vs. practices) before going on to argue in favour of a nuanced resolution to this Eriksonian crisis that reflects the diverse needs and motivations of educators. The merits of an integrated approach and its implications for the future trajectory of the OE movement are discussed.

Keywords: Open educational resources; open educational practices; advocacy; pencil metaphor; psychology; Erikson

Introduction

At the opening of the 2016 Open Education conference its founder David Wiley remarked that this “annual family reunion” had entered its teenage years, an observation that carried greater significance than a casual comment about the longevity and growth of that meeting. Indeed, 2016 marked the 15-year anniversaries of the founding of Creative Commons (CC) and the launch of MIT Open Courseware (MIT OCW), both seminal events that marked the birth of the modern open education (OE) movement and undeniably influenced its trajectory (Bliss & Smith, 2017; Centre for Educational Research and Innovation, 2007). The development of the CC licenses provided a common tongue and a framework for an emerging culture of formalized sharing. MIT’s initiative (revolutionary at the time) was equally important and modeled institutional leadership and lent some prestige to the rapidly growing body of what UNESCO would go on in 2002 to name open educational resources (OER). Fifteen years later, CC licenses are the standard for open licensing within education, having been applied to more than a billion OERs (Creative Commons, 2015), while countless institutions have followed MIT’s lead in embracing a post-content identity by openly licensing their courseware.

The OE movement has made and continues to make great strides, with the creation, adaptation, and adoption of OER slowly becoming a mainstream practice (Allen & Seaman, 2014; Weller, de los Arcos, Farrow, Pitt & McAndrew, 2016). However, as the adolescent OE movement enters a growth spurt that may see its use as primary courseware triple within five years (Cengage Learning, 2016), some noticeable paradoxes have emerged that hint at an identity crisis within the OE movement and, in particular, within OER advocacy. Although these tensions are to some degree symptomatic of broader participation in a maturing movement, they cut to the core of the objectives and strategies of OER advocates and are consequently worthy of being openly described and debated. In what follows I will briefly introduce these tensions before interrogating them through a borrowed theoretical lens from developmental psychology.

Free vs. Freedom

Open education advocates customarily define OER as “beyond free” based on the permissions to reuse, revise, remix, retain, and redistribute these resources (Wiley, 2014). However, in practice, OER advocacy usually centers on the unaffordability of commercial textbooks and the cost savings associated with the adoption of open textbooks (i.e. merely “free”; Wiley, 2016). On the one hand, this appears appropriate, even pragmatic, given the significance of the burden of student loan debt in places such as North America and the impact of escalating textbook costs on students’ educational choices and outcomes (Florida Virtual Campus, 2016; Student PIRGs, 2016). Moreover, textbooks are a familiar entity to academics, and, unlike with tuition fees and costs of living, faculty control adoption decisions and consequently the cost of required course materials. At the same time, this narrow focus on cost savings is immediately less relevant in countries where faculty are less reliant on expensive textbooks. In fact, it may not even be pragmatic in North America, as recent research shows that the cost of resources is the least-considered factor for U.S. faculty when assigning required course materials (Allen & Seaman, 2014). Moreover, although a cost-savings framing appeals most directly to student groups, as pointed out it is faculty who control adoption decisions.

A final thought concerns whether framing OER in terms of free/zero cost (which is, after all, only one among several implications of open licensing) may unintentionally constrain the use of the freedom/permissions that come along with OER. In other words, focusing largely on the cost savings risks creating a community that predominantly consists of OER adopters who seek to replicate their current practice (e.g., designing courses around the table of contents of a textbook) using a new set of tools instead of taking advantage of the defining features of the new tools (the 5R permissions) to do something new (e.g., modifying instructional resources to serve pedagogical goals). Indeed, faculty who reuse, redistribute, and retain OER (themselves a minority) continue to greatly outnumber those who revise and remix OER (e.g., Jhangiani et al., 2016), a pattern that may be perpetuated through the best of intentions of OER advocates.

As Weller and his colleagues put it,

if cost savings were the only goal, then OERs are not the only answer. Materials could be made free, or subsidized, which are not openly licensed. The intention behind the OER approach is that it has other benefits also, in that educators adapt their material, and it is also an efficient way to achieve the goal of cost savings, because others will adapt the material with the intention of improving its quality, relevance or currency. (Weller et al., 2016, pp. 84–85)

Evolution vs. Revolution

OER advocates routinely tout the transformational power of the Internet and the advantages of digital technologies as they enable the marginal cost of reproduction and distribution of educational resources to approach zero (Wiley, Green & Soares, 2012). However, the OER movement itself continues to grapple with questions from a pre-digital past, such as the production of updated editions of open textbooks and provision of professionally-bound print copies. This begs a broader question: If open educational practices are a game changer, why are OER advocates playing by the rules of the commercial textbook industry?

A partial answer to this question comes from the many educational contexts (e.g., sub-Saharan Africa) where access to the internet, the cost of data, and power cuts remain significant barriers (Agence Française de Développement, Agence universitaire de la Francophonie, Orange & UNESCO, 2015).

In contexts such as these it is far more practical to work with print textbooks instead of multimedia platforms and static textbook updates rather than dynamic wikis. Moreover, even within the context of higher education in North America, the absence of traditional ancillary materials such as question banks and adaptive learning platforms remain significant stumbling blocks that inhibit the widespread adoption of high quality open textbooks.

However, despite these realities, the question remains as to whether adopting the model of the commercial textbook industry runs the risk of dragging along a traditional mindset based on the top-down delivery of static and (falsely) scarce information? Framing OER as free, digital versions of expensive, print textbooks also risks playing directly into the hands of commercial textbook publishers who are in the midst of a pivot away from a business model based on peddling “new editions” of print textbooks every three years (content) to one based on leasing 180-day access to digital content delivery platforms (services; Feldstein, 2016; Kim, 2012). As post-secondary administrators begin to more seriously consider the social and fiscal consequences of high textbook costs, it will be tempting for them to capitulate to aggressive sales pitches from publishing coalitions that trade faculty choice and student agency for slightly discounted digital textbooks. In order to avoid the most effective arguments of OER advocates being further co-opted by commercial publishers (whose brochures for digital delivery already cite data on the impact of OER adoption on student outcomes; Pearson Education, 2016) and especially to realize the full potential of OER, the goal posts must be placed further than simply cheaper textbooks. As Robin DeRosa, an open educator who clearly favours revolution over evolution, puts it, “Fundamentally, I don’t want to be part of a movement that is focused on replacing static, over-priced textbooks with static, free textbooks” (2015, para 2).

Resources vs. Practices

The tensions between cost savings and textbooks on the one hand and the affordances of open licenses and digital technologies on the other are manifested by contrasting emphases on OER vs. open educational practices (OEP). The latter is a broader, superordinate category that encompasses the creation, adaptation, and adoption of OER and even open course design and development (Andrade et al., 2011; Ehlers, 2011; Murphy, 2013), but which places pedagogy (and therefore learners) at its core. OEP most often manifests in the form of “renewable” course assignments (Wiley, 2013) in which students update or adapt OER (e.g., with local examples or statistics), create OER (e.g., instructional videos or even test questions), or otherwise perform scaffolded public scholarship (e.g., writing op-ed pieces or annotating readings on the open web; Jhangiani, 2015b). Crucially, adopting OEP requires more of a shift of mindset than does adopting OER, more critical reflection about the roles of the teacher and the learner when education continues to be based on content consumption rather than critical digital literacy despite information (and misinformation) being abundant (Shaffer, 2016). As David Wiley writes in his blog (albeit with the byline “pragmatism over zeal”), “when faculty ask themselves ‘what else can I do because of these permissions?’, we’ve come within striking distance of realizing the full power of open (2016, para 16).”

Happily, advocating for OEP also avoids the problem of inadvertently striking a judgmental tone when describing non-OER users (who may have excellent reasons supporting their choice) because discussions about innovation are not driven by guilt or avoidance. Rather, OEP articulates a vision of education that is aspirational and driven by an “approach motivation” (Elliot & Covington, 2001). Within this broader vision, significant cost savings to students can be considered to be the *least* significant benefit of OER.

Pragmatism vs. Idealism: A Psychosocial Crisis?

The psychologist Erik Erikson articulated an eight-stage theory of psychosocial development that centers on an adolescent crisis between identity and role confusion (1956; see Table 1). During this stage, which persists through the college years, the adolescent begins to struggle with questions about who they really are and what they hope to achieve. According to Marcia (1966), although wrestling with these questions (“moratorium”) is itself important, this struggle is ultimately resolved successfully by those who develop a strong and clear sense of identity (“identity achievement”), something that equips them to remain true to their self and their course in the face of serious obstacles. This is in direct contrast to those who either adopt an identity as a result of expectations or some other external pressure (“foreclosure”) or do not wrestle with these questions at all (“identity diffusion”).

Table 1: Erikson’s stages of psychosocial development

Stage	Psychosocial crisis	Basic virtue	Age
1	Trust vs. mistrust	Hope	Infancy
2	Autonomy vs. shame	Will	Early childhood
3	Initiative vs. guilt	Purpose	Play age
4	Industry vs. inferiority	Competency	School age
5	Identity vs. role confusion	Fidelity	Adolescence
6	Intimacy vs. isolation	Love	Young adulthood
7	Generativity vs. stagnation	Care	Middle adulthood
8	Integrity vs. despair	Wisdom	Maturity

Note. Adapted from Erikson (1959).

Although Erikson developed his theory to better understand lifespan development within individuals and not social movements, it is difficult to ignore the parallels between the tensions of an adolescent OE movement and the adolescent identity crisis that he described. Specifically, I believe that the frictions described above between “merely free” and “beyond free,” resources and practices, and evolution and revolution are each symptomatic of a psychosocial crisis within the OE movement that pits pragmatism against idealism.

Although OER advocates may understand and even experience both impulses, their goals and strategies often reflect one or the other. For example, whereas idealists push for radical change that questions the status quo, pragmatists seek to build incrementally on the status quo. Whereas idealists might work through collaborative networks such as faculty learning communities, pragmatists might work to create grant programs for individual faculty to create, adapt, or adopt OER. And whereas idealists emphasize learner-centered, personalized solutions that foreground process and agency, pragmatists emphasize instructor-centered turnkey solutions that foreground content and efficiency.

Outlined like this, it is easy to recognize the merits of both strategies. Indeed, idealists would do well to recognize that open textbook adoption tangibly benefits students and faculty in material and educational terms that are not insignificant. On the other hand, pragmatists might recognize that the idealistic approach is appealing to those for whom the construct of a traditional textbook is a dinosaur best served by a meteor strike (and can therefore be pragmatic).

An Integrative Resolution to the Crisis

Given that Erikson believed that the individual could not be understood in terms that were separate from his or her social context (1959), I believe the key to resolving this crisis lies with an integrated approach that is sensitive to the diversity across and within the audiences whom we seek to serve. While this is a departure from the traditional one-sided resolution of the Eriksonian crises, it does reflect what Erikson described as the strong influence of the peer group in shaping the adolescent's emerging identity. Moreover, a nuanced and inclusive approach is more likely to foster the development of the virtue of fidelity, which Erikson described as the ability to associate with and relate to different others.

McKeown's "pencil metaphor" (n.d.) is an especially useful model that helps shed light on the "different others" within the population of potential OER users (see Figure 1). Indeed, shortly after this model was first applied to OER advocacy at the 2015 Open Textbook Summit in Vancouver, Canada (Jhangiani, 2015a), the William and Flora Hewlett Foundation (among the biggest funders of OER initiatives, including MIT OCW and CC) embedded it within its revised strategy for investing in OER (Bliss, 2015).

An echo of Rogers' (1962) innovation adoption lifecycle, this model maps potential adopters of new educational technologies (grouped into six categories) onto the structure of a pencil. It includes "leaders" (innovators who will experiment in the absence of support and occasionally in the face of opposition and share their experiences with others), "sharp ones" (early adopters who notice and draw on the work of the innovators), the "wood" (those who *would* adopt the new technology if it was handed to them in a fashion that made it easy to implement and was well supported), "ferrules" (who doggedly cling to familiar practices), and "erasers" (who actively work to undo the work done by the leaders).

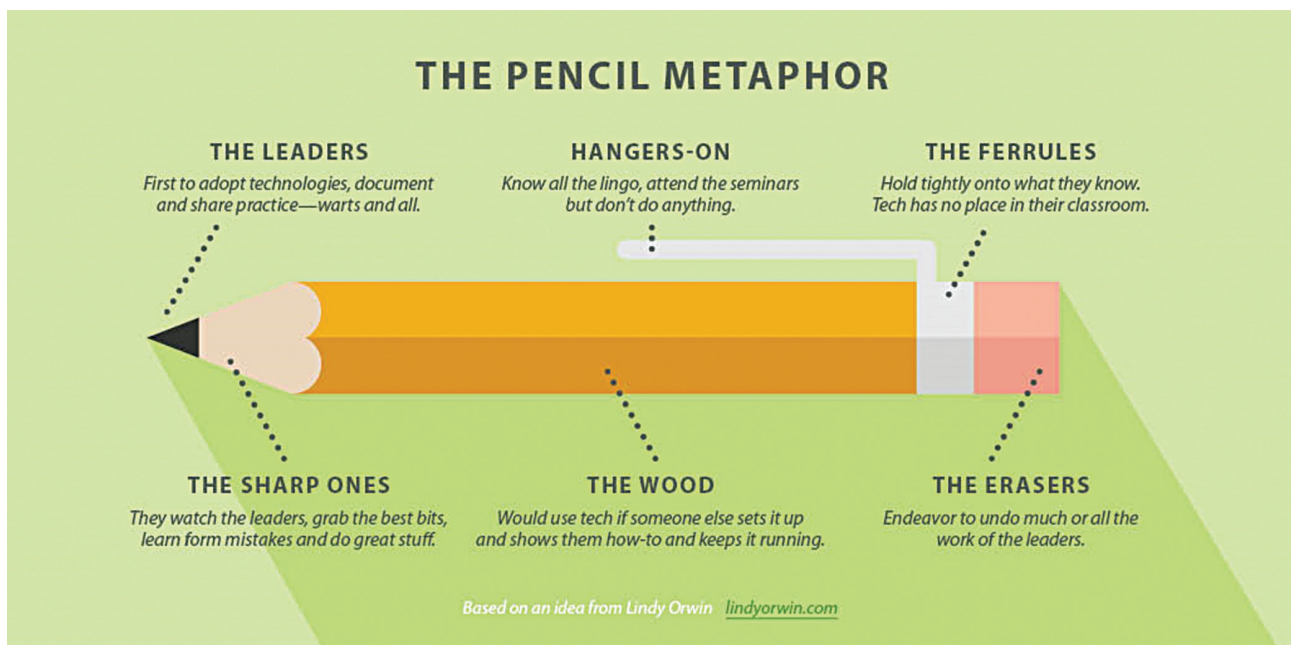


Figure 1: "The pencil metaphor" by The William and Flora Hewlett Foundation is licensed under CC BY 4.0

As I have written elsewhere when applying this model to potential OER users:

For faculty who enjoy experimenting and innovating [leaders and sharp ones], open textbook adoption does feel like a meagre position to advocate. These are instructors who care deeply about authentic and open pedagogy, who may take full advantage of the permissions to revise and remix, and who understand that adopting OEP is really just about good pedagogy and in that sense is not at all radical . . . Scrutinizing the wood, I observe faculty who currently adopt high-priced, static textbooks but care enough about their students to feel guilty about this decision (principled agents in a principal-agent dilemma?). In at least some of these cases, the ensuing guilt leads them to bend the course to map onto the textbook, which, while not an example of great pedagogy, could be construed as an empathic response that ameliorates both their guilt and their students' resentment. This is the region of the wood where the social justice case for open textbooks may resonate particularly well. (Jhangiani, 2017b)

An alternative, data-driven approach to understanding different types of potential OER users comes from the work of Weller and his colleagues (2016), whose research at the Open Education Research Hub reveals three categories of OER users:

- 1) The OER active are engaged with issues around open education, are aware of open licenses, and are often advocates for OERs . . . An example of this type of user might be the community college teacher who adopts an openly licensed textbook, adapts it and contributes to open textbooks. (pp. 80-81)
- 2) OER as facilitator may have some awareness of OER, or open licenses, but they have a pragmatic approach toward them. OERs are of secondary interest to their primary task, which is usually teaching . . . Their interest is in innovation in their own area, and therefore OERs are only of interest to the extent that they facilitate innovation or efficiency in this. An example would be a teacher who uses Khan Academy, TED talks and some OER in their teaching. (p. 82)
- 3) Finally, OER consumers will use OER amongst a mix of other media and often not differentiate between them. Awareness of licences is low and not a priority. OERs are a "nice to have" option but not essential, and users are often largely consuming rather than creating and sharing. An example might be students studying at university who use iTunes U materials to supplement their taught material. For this type of user, the main features of OERs are their free use, reliability and quality. (p. 85)

Similar to the pencil metaphor, this taxonomy also serves as a useful guide to OER advocates seeking to diversify or tailor their outreach strategy. For instance, OER consumers may be most interested in open textbooks and related ancillary resources that can be deployed with little or no effort. For this group, unfettered access for their students is highly desirable, with cost savings a nice bonus. On the other hand, the OER active group will be more sensitive to the impact of cost savings while also keen to learn more about the permissions to revise and remix OER. Finally, those in the OER as facilitator group will be excited by the potential to involve students in the creation or adaptation of OER via renewable assignments.

The benefits of an integrated approach truly come to the fore when advocates begin to consider the exciting synergies afforded by the diversity within our movement. For example, the OER active (those at the leading edge of the pencil) or even the OER-as-facilitator group may be tapped to produce secondary learning resources (such as question banks) that are required by the OER consumers (the wood of the pencil). A concrete example of this is when Jhangiani (2017a) designed a course assignment wherein students enrolled in his Social Psychology course wrote and peer reviewed

multiple-choice questions during every week of the semester. Appropriated scaffolded along the way, this small class of 35 students wrote and reviewed 870 questions by the end of the semester. Although this student-produced question bank required some polishing before it could be considered ready for use by other instructors, it reveals a viable pathway towards the creation of open ancillary resources, one that primarily serves deeper learning while secondarily serving the commons.

Caveats

No matter what theoretical lens one applies to describing OER users, it is important to understand that in practice these individuals may evolve over time and move into a different category. For instance, an instructor who begins by simply adopting an open textbook (an OER consumer) may over time gain the familiarity, efficacy, and the necessary skills to modify the open textbook to better suit their pedagogical context (becoming OER active), perhaps later even developing and sharing activities and presentation slides to accompany the different chapters. As David Wiley puts it, “the overwhelming majority of people begin as evolutionaries and, given time and opportunity, go on to become revolutionaries. They “come for the cost savings and stay for the pedagogy” (2017, para 6).

Despite its merits, it would be naïve to believe that adopting an integrated approach would eradicate all tension within the OE movement. Idealists may still insist that OER creators apply CC licenses that meet the definition of “free cultural works” (Freedom Defined, 2015). Pragmatists, on the other hand, will acknowledge that OER creators may have reasonable grounds for attaching a Noncommercial (NC) or even a NoDerivatives (ND) clause, even though an Attribution-only license (CC-BY) facilitates the maximum impact and reuse of OER. Pragmatists may also wish to first ensure basic access for all before emphasizing the innovative potential of open pedagogy (a kind of Maslowian hierarchy of pedagogical needs) whereas idealists may think it arrogant to insist that students first need access to required resources before partnering in pedagogical innovation. Although these tensions will not disappear overnight, I believe it essential that we recognize both drives and have a deliberate, nuanced conversation about how to flexibly harness both idealism and pragmatism in service of the goals of the OE movement. If we don’t, we risk achieving maladaptive outcomes of adolescence such as fanaticism (rigidity and self-importance) or repudiation (social disconnection).

Conclusion

The adolescent OE movement is in the midst of an identity crisis as it is pulled towards both pragmatism (marked by an emphasis on cost savings, resources, and incremental change) and idealism (marked by an emphasis on permissions, practices, and radical change). In this article I argue in favour of a nuanced resolution to this psychosocial crisis that reflects the diverse needs and motivations of the educators that comprise the bulk of the audience of OER advocates.

According to the epigenetic principle of Erikson’s maturation timetable, each stage builds on the previous one. Accordingly, the crises that follow adolescence pit intimacy against isolation (young adulthood), generativity against stagnation (middle adulthood), and, finally, integrity against despair (later adulthood). If these at all suggest a trajectory for the OE movement beyond its current adolescence, its advocates should aim for the next phase to involve a lot more collaboration among faculty and students, both across institutions and cohorts. This shift will require tools that support radically transparent collaboration (e.g., see the Rebus Community for Open Textbook Creation; <https://forum.rebus.community/>) but especially a break from traditional (opaque, territorial, top-down) approaches to curriculum design and development. As the proverb says, “if you want to go quickly, go alone. If you want to go far, go together.”

Greater collaboration and a true democratization of the process of OER development will in turn engender a move away from philanthropic, government, and other unsustainable funding models in favour of a grassroots-based, community-driven, self-sustaining approach that resembles a bazaar in its connectivity and generativity far more than it does a cathedral (Raymond, 1999).

Achieving this, while neither easy nor assured, is a necessary step for the OE movement on its path to becoming more critical, more self-aware, and more inclusive of a diversity of voices. In other words, a movement characterized by integrity, not despair.

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References

- Agence Française de Développement, Agence universitaire de la Francophonie, Orange & UNESCO (2015). *Digital services for education in Africa*. Retrieved from <http://unesdoc.unesco.org/images/0023/002318/231867e.pdf>
- Andrade, A., Ehlers, U. D., Caine, A., Carneiro, R., Conole, G., Kairamo, A. K., ... Holmberg, C. (2011). *Beyond OER: Shifting focus to open educational practices*. Open educational quality initiative. Retrieved from <http://duepublico.uni-duisburg-essen.de/servlets/DerivateServlet/Derivate-25907/OPALReport2011-Beyond-OER.pdf>
- Allen, I. E., & Seaman, J. (2014). *Opening the curriculum: Open educational resources in U.S. higher education*. Babson Survey Research Group. Retrieved from <http://www.onlinelearningsurvey.com/reports/openingthecurriculum2014.pdf>
- Bliss, T. J. (2015). *Why we fund open textbooks (and plan to do more)*. William and Flora Hewlett Foundation. Retrieved from <http://www.hewlett.org/why-we-fund-open-textbooks-and-plan-to-do-more/>
- Bliss, T. J. & Smith, M. (2017). A brief history of open educational resources. In R. S. Jhangiani and R. Biswas-Diener (Eds.). *Open: The philosophy and practices that are revolutionizing education and science* (pp. 9–27). London: Ubiquity Press.
- Cengage Learning (2016). *Open educational resources (OER) and the evolving higher education landscape*. Retrieved from http://assets.cengage.com/pdf/wp_oer-evolving-higher-ed-landscape.pdf
- Centre for Educational Research and Innovation (2007). *Giving knowledge for free: The emergence of open educational resources*. OCDE. Retrieved from <http://www.oecd.org/edu/ceeri/givingknowledgeforfreetheemergenceofopeneducationalresources.htm>
- Creative Commons (2015). *State of the commons*. Retrieved from <https://stateof.creativecommons.org/2015/>
- DeRosa, R. (2015, November 20). *Open textbooks? UGH* [Blog post]. Retrieved from <http://robinderosa.net/uncategorized/open-textbooks-ugh/>
- Ehlers, U. D. (2011). From open educational resources to open educational practices. *eLearning Papers*, 23, 1–8.
- Elliot, A. J. & Covington, M. V. (2001). Approach and avoidance motivation. *Educational Psychology Review*, 13(2), 73–92. <https://doi.org/10.1023/A:1009009018235>

- Erikson, E. H. (1956). The problem of ego identity. *Journal of the American Psychoanalytic Association*, 4, 56–121.
- Erikson, E. H. (1959). Identity and the life cycle: Selected papers. *Psychological Issues*, 1, 1–171.
- Feldstein, M. (2016, October 22). *The great unbundling of textbook publishers* [Blog post]. Retrieved from <http://mfeldstein.com/the-great-unbundling-of-textbook-publishers/>
- Florida Virtual Campus (2016). *2016 student textbook and course materials survey*. Retrieved from <https://florida.theorange grove.org/og/file/3a65c507-2510-42d7-814c-ffdefd394b6c/1/2016%20Student%20Textbook%20Survey.pdf>
- Freedom Defined (2015). *Definition of free cultural works*. Retrieved from <http://freedomdefined.org/Definition>
- Jhangiani, R. S. (2015a, May). An openness to openness: The terrifying and liberating process of disrupting higher education. Keynote address at the *2015 Open Textbook Summit*, Vancouver, Canada.
- Jhangiani, R. S. (2015b, August 23). *Pilot testing open pedagogy* [Blog post]. Retrieved from <http://thatpsychprof.com/pilot-testing-open-pedagogy/>
- Jhangiani, R. S. (2017a, January 12). *Why have students answer questions when they can write them?* [Blog post]. Retrieved from <http://thatpsychprof.com/why-have-students-answer-questions-when-they-can-write-them/>
- Jhangiani, R. S. (2017b). Open as default: The future of education and scholarship. In R. S. Jhangiani & R. Biswas-Diener (Eds.). *Open: The philosophy and practices that are revolutionizing education and science* (pp. 267–279). Ubiquity Press. <https://doi.org/10.5334/bbc.v>
- Jhangiani, R. S., Pitt, R., Hendricks, C., Key, J., & Lalonde, C. (2016). *Exploring faculty use of open educational resources at British Columbia post-secondary institutions*. BCcampus Research Report. Victoria, BC: BCcampus. Retrieved from http://bccampus.ca/files/2016/01/BCFacultyUseOER_final.pdf
- Kim, J. (2012, October 21). 7 questions for McGraw-Hill's Brian Kibby. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/blogs/technology-and-learning/7-questions-mcgraw-hills-brian-kibby>
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3(5), 551–558.
- McKeown, L. (n.d.). *The pencil metaphor*. Retrieved from <http://www.teachthought.com/uncategorized/pencil-metaphor-how-teachers-respond-to-education-technology/>
- Murphy, A. (2013). Open educational practices in higher education: Institutional adoption and challenges. *Distance Education*, 34(2), 201–217. <http://dx.doi.org/10.1080/01587919.2013.793641>
- Pearson Education (2016). *Textbook costs and opportunity lost: What price-driven decisions are costing students*. Retrieved from <https://www.pearsoned.com/wp-content/uploads/INSTR13104-DDAinfoGraphic-V4.pdf>
- Raymond, E. S. (1999). *The cathedral and the bazaar: Musings on Linux and open source by an accidental revolutionary*. Sebastopol, CA: O'Reilly Media.
- Rogers, E. M. (1962). *Diffusion of innovations* (1st ed.). New York: Free Press of Glencoe.
- Shaffer, K. (2016). Truthy lies and surreal truths: A plea for critical digital literacies. *Hybrid Pedagogy*. Retrieved from <http://www.digitalpedagogylab.com/hybridped/truthy-lies-surreal-truths/>
- Student PIRGs (2016). *Covering the cost: Why we can no longer afford to ignore high textbook prices*. Retrieved from <http://www.studentpirgs.org/textbooks>
- Weller, M., de los Arcos, B., Farrow, R., Pitt, R., & McAndrew, P. (2016). Identifying categories of open educational resource users. In P. Blessinger & T. J. Bliss (Eds.). *Open education: International perspectives in higher education* (pp. 73–91). Cambridge, UK: Open Book Publishers.
- Wiley, D. (2013, October 21). *What is open pedagogy?* [Blog post]. Retrieved from <https://opencontent.org/blog/archives/2975>
- Wiley, D. (2017, February 16). *Evolution vs revolution* [Blog post]. Retrieved from <https://opencontent.org/blog/archives/4910>

- Wiley, D. (2016, October 27). *Underselling open: The problem with cost framing* [Blog post]. Retrieved from <https://opencontent.org/blog/archives/4774>
- Wiley, D. (2014). *The access compromise and the 5th R* [Blog post]. Retrieved from <http://opencontent.org/blog/archives/3221>
- Wiley, D., Green, C., & Soares, L. (2012). *Dramatically bringing down the cost of education with OER*. Center for American Progress: Educause. Retrieved from https://cdn.americanprogress.org/wp-content/uploads/issues/2012/02/pdf/open_education_resources.pdf

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