A Review on the Impact of Open Access Course Materials on Community Colleges: Student Success and Social Equity

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Introduction
There is an ongoing investigation into the rising cost of college textbooks from librarians, academics, and publishers across all disciplines (Kaushik et al. 2020; Pandey and Indrakanti 2018). Among other factors, these are due to the nature of the industry’s for-profit business model, the growing speed at which new knowledge is released, and the exigencies of academic assessment and accountability. The average price of college textbooks has risen four times faster than the inflation rate from 2008 to 2018 (Zheng et al. 2020: 43), as evidenced by students citing the cost of tuition and instructional materials as one of the greatest barriers to education. For community college students—and college students more generally—the prohibitive cost of textbooks results in many undergraduates attempting to take a course at a disadvantage as they forego this purchase and “make do” with what they find online (Bailey and Poo 2018). The dire need for accessible course materials in higher education has only been exacerbated this past academic year by the Covid-19 pandemic and ensuing economic downturn, which has spurred a renewal of efforts by faculty to adopt alternatives. Open access textbooks and course materials, as this document will evidence, have the potential to provide a solution to this educational barrier. However, reliable and free-of-charge academic materials are not always synonymous (Fyfe et al. 2017).

The original purpose of this brief research project was to explore the use of open access materials at community colleges with a focus—if possible—on global and area studies scholarship. The latter is too ambitious a task for the few weeks given to this effort and will conform a future addition to this work. Even though this report will no longer focus specifically on global studies and open access, it is important to note that the literature on the origins and use of open access efforts is closely linked to global scholarship. The exponential growth in the past two decades of publicly available materials has helped disseminate knowledge from and to academics between the Global North and the Global South and, some argue, to reduce the inequity between the two (Hodgkinson-Williams and Arinto 2017). The present document reviews how community colleges are attempting to benefit their students with open access...
materials, and the role these sources and institutional repositories could play in future student success. The following paragraphs provide a summary of the arguments on the advantages and pitfalls of adopting open access course materials, reflect on how these findings apply to community colleges, and point to future research needed to better understand how open access can support teaching at these two-year institutions and—more broadly—across the academy.

Open Access, Academic Rigor, and the Importance of Peer Review

A commonly accepted definition of open access resources (or OERs) is “any type of educational materials that are free and accessible for use and modification such as videos, lessons, quizzes, and articles” (Hilbert 2020:54). In other words, OERs are any instructional materials that are used instead of or to complement a traditional textbook. Open access materials began as an alternative to the publishing business for scholars wanting to make their work freely available through online platforms. The intention was to facilitate and create online spaces where researchers could disseminate their work at no cost and directly to the public. This goal gave rise to several models, with varied and mixed results. Some supported the publication of preprint manuscripts and conference papers, while others made available work with low licensing fees or work that was part of the public domain. It quickly became evident that the lack of formal organisms to curate and edit these materials, in contrast to the mechanisms of publishing houses and academic journals, made freely available scholarship less reliable and rigorous than that provided at a monetary cost (Kaushik et al. 2020).

Traditional college-level textbooks must undergo a process of double-blind peer review, which is the imprimatur that guarantees academic rigor. This process guarantees the identity of both the author and the reviewer are kept hidden to eliminate bias, thus ensuring that the reviewers will call any gaps or errors in methods, theory, and data (Zhou 2020: 153). Publishing OERs without the feedback and control provided by peer review and the editing and proofreading processes results in work of varying quality, much of which appears shoddy and unfinished in comparison to that of traditional textbooks (Scheufen 2018). Indeed, a lack of academic peer review is cited as the main reason why college instructors are wary of adopting sources outside the academic publishing business (Pollock and Michael 2019). This problem has created a push within open access efforts to replicate the peer review process by either requesting for volunteer reviewers or paying reviewers with fees collected from the authors of the texts. To better understand the difference between these two options, it’s important to note the nature of academic publishing. The sector is unique in its practice of setting high prices for access to intellectual production while paying nothing for the labor required in this knowledge, both in terms of the work by the original author as well as that expended by the peer reviewers who ensure the veracity of the research. Indeed, “it is hard to think of another extractive industry that enjoys [a] combination of free inputs and monopoly pricing power” (Koutras 2020: vii).

As noted above, looking to provide peer review for OERs, some open access journals and repositories attempted to gain the cooperation of volunteer reviewers. The effort has yielded varying levels of success, but it has been stymied by the same factors that have troubled the peer review system of academic publishers for the past several decades. The cycle of editing
and corrections in peer review rests on the efforts of scholars, many of whom simply cannot
take the time to contribute their expertise. In addition, widespread cuts in higher education,
along with the systemic proportionate growth of contingent labor compared to full time and
tenured instructors, have whittled away the time that faculty and researchers can dedicate to
reviewing work in their fields (Green 2019). In sum, volunteer activities are too costly a
proposition in a world where faculty are being asked to carry more of the administrative and
accountability burden in higher education. Because unpaid peer review is an untenable system,
some initiatives are exploring paying for this labor, as well as compensating professionals to
proofread and copyedit the work. A setup that has been in use for some time is that of open
access platforms where authors pay a fee to publish their work and cover these costs (Fyfe et
al. 2017). Although not as profitable as the traditional academic journals, this alternative model
preys on authors, many of whom require publications for promotion or advancement in their
field and cannot wait the years it often takes to publish a paper in more traditional venues. In
addition, placing the onus of publishing on fledging authors is not a sustainable solution,
particularly after the Covid-19 economic downturn. Indeed, the pandemic prompted several
academic journals to offer their content openly; as this material emerged from behind paywalls,
it sparked conversations where the purpose of making a profit out of intellectual work was
questioned (Grove 2020).

The Covid-19 pandemic has laid bare many of society’s inequalities, including the gatekeeping
created by academic publishers for knowledge that should be accessible to all. These
circumstances have energized the push to increase open access to educational materials, given
the role of these publications as equalizing barriers of class and economic status (Collyer 2016).
At the same time, a movement has also begun to organize and standardize open access work.
As we have seen in this section, when it comes to adopting OERs for classroom use, instructors
are faced with a baffling and discouraging array of resources, not all of which follow the high
standards of academic rigor provided by peer review. As academia emerges from the pandemic
and more attention is paid to social equity, further studies are needed to better understand the
role of open access in higher education. Community colleges are the ideal setting for this work,
as they serve a majority of first generation and economically disadvantaged students and can
best provide metrics for the benefits and disadvantages of these initiatives. The section
following this one provides a brief review of studies conducted in community college campuses
to ascertain the benefits of adopting open access resources to students, as well as the obstacles
faced by faculty willing to adopt OERs for their courses.

**Open Access Resources in Community Colleges: Student Success and the Cost of Faculty Labor**
Both faculty and administration at community colleges nationwide have been concerned for
some time about supporting more equitable student access to resources and instructional
materials. Surveys of community college faculty show how the high cost of textbooks led some
faculty to adopt various mechanisms to help students access course materials, including placing
books on library reserve, uploading electronic scans of key readings to their course learning
management systems, loaning out personal desk copies of a text, and connecting classmates to
share books (Zhou 2020). Other strategies included curating and printing a collection of
readings for specific courses through the college print shop or adopting open-access textbooks

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that students can read free-of-charge. The literature on OER use at community colleges shows two facts in constant tension with one another: student success increases dramatically with access to course instructional materials, and faculty who adopt open educational resources for their courses find they need to invest much more time in curriculum design than that allotted to regular course preparation. How these two competing factors in open access use play out is explored in the following paragraphs.

Some of the challenges noted by community college instructors on the adoption of open access material include that these texts need to be complemented with articles and other ancillary materials that faculty are required to search and make available to students by curating, scanning, and uploading before the work of guiding students to critically think about the topics in the materials can even begin. Stephanie Medley-Rath carried out a study on the adoption of OERs in five parallel sections of an Introduction to Sociology course in a community college; she had trouble finding one text that could replace the for-profit textbooks used in the course. Her protracted hunt yielded good results, but even the most complete open access text with the better-quality materials still lacked a chapter on the sociology of education. She notes that missing sections or topics appears to be a common trend in open access resources, likely because when books are written by volunteers, it might be hard to find a scholar with the expertise in a particular topic willing to work for no pay (2018: 909). Faculty surveyed in a different study in the Oregon community college system noted that, even when open educational resources in their field were found, not all those available met specific course needs. In many cases, instructors would place the need to adhere to the course curriculum over cost and go back to the traditional for-profit textbooks, as complementing an open access text with an equal amount of additional readings was impractical. It is important to note here that introductory courses in various disciplines fare better with open access, as they tend to have stable content compared to upper-level classes, where updating case studies and theories is more critical to the curriculum (Lantrip and Ray 2020: 2).

Some definite benefits of open access work are that multiple studies and surveys have found an increase in successful student learning outcomes when the materials required for a course had no monetary cost, as this guaranteed that all students would have access to the instructional resources from day one. Furthermore, there seemed to be little to no difference between electronic and printed material, which is notable because past objections to the use of OERs included that they were not available in print form and that students performed better with a physical text (Medley-Rath 2018). Indeed, not only was there little difference between format, but close to 79% of community faculty surveyed in several institutions in the Oregon community college system found that the quality of open access and for-profits texts was the same (Lantrip and Ray 2020). In addition, over 75% of faculty in a study in community colleges in California, and more than 80% of faculty in a survey in the community college system in Colorado, noted that their teaching practices changed for the better when using OERs (Hilbert 2020: 89). As noted before, both studies found that community college faculty often needed to modify OERs. However, this shift prompted them to change their instructional practices to adopt more hands-on and participatory teaching activities—including technologically creative assignments—which, in turn, increased student engagement. Both the Colorado and California
community college system studies also surveyed students on the adoption and use of OERs in their classes. The results concluded that students regarded instructors who adopted OERs as more engaged, noting that the use of the open access textbook would be coupled with hands-on and student-centered assignments that helped their understanding by scaffolding the course material (ibid: 32). These same studies also evidenced that students who took OER-adapted classes overwhelmingly perceived their instructors as caring for student success. This is because the instructors saved the students money, making a difference in a system that had them struggling to pay for their degrees. Introductory courses comprise the majority of classes taught at community colleges, and textbooks in these classes are known to be more expensive than the books assigned to upper-level courses. Oftentimes, upper-level courses will use trade books or a reader containing journal articles. Thus, some of the students who struggle the most to pay for college would benefit the most from the economic relief provided by adopting free course materials in courses with the most expensive texts (Lantrip and Ray 2020).

An argument mentioned by most of the authors in this literature review is that the additional work put in by faculty to redesign the syllabi, rubrics, assignments, and activities involved in adopting open educational resources is a burden that should merit release time or adequate monetary compensation. If administrators wish for community college faculty to adopt these free resources that benefit students, then faculty must be compensated for their labor. The cost of this release time or funding will be more than worth it, as studies on 14 different states with community colleges show higher student engagement and higher scoring in assessments of general learning outcomes when OERs are adopted (Hilbert 2020; Zhou 2020). Faculty labor, which is the driving force behind OER adoption, must be taken into consideration for the adoption of open access materials to succeed. The growing demands on the labor of tenure-track, tenured, and contingent faculty are well-documented. Compensating them for the adoption of OERs and making this part of the tenure process, as well as providing stipends as part of professional development, is an investment in higher quality education, student success, and the way of the future (Coolidge and McKinney 2021). In this light, open access resources can be seen as one of many paths to help erase the barriers that keep lower income students from taking full advantage of existing educational opportunities. The following and last section concludes with the contribution of OERs to greater equity within academia.

**Conclusion: Open Access as Catalyst for Global Scholarship and Social Equity**

Open access textbooks are not only catalysts for equal access despite class barriers, but also for overcoming the geographic barriers that have historically divided scholarship in the Global North from that of the Global South (Hodgkinson-Williams and Arinto 2017). The exchange of intellectual production and cross-pollination between the two has long been noted as an unequal relationship—scholarship in the developed world, with access to better resources and funding, disproportionately influenced research trends and directions. An initial review of the literature on open access resources shows that—peer review and other checks and balances notwithstanding—open access materials have changed, if not leveled, the international scholarship playing field, issuing an open invitation to explore a world of available data and ideas (Collyer 2016).
Community colleges are cognizant that, to best prepare their students to transfer into four-year institutions and enter the workplace, they need to expose students to other cultures and internationalize their curriculum and materials. As faculty teaching at a community college, I co-authored a piece with the director of our library demonstrating the benefits accrued from providing access to current scholarly work on global studies and from around the globe. This piece was written for a previous iteration of the International Studies Research Lab (see Scarborough and Quilty 2020). It is evident from the review of the literature presented in the present white paper that the role of libraries in promoting global scholarship must include the most recent work on global studies from not only our own academia, but from scholars in other parts of the globe. Towards this effort, open access materials cannot be ignored; they represent a wealth of material, and function as a tool to increase student engagement and success. Institutional repositories, managed by academic libraries, carry out much of the work of the curating and licensing of open access materials either produced by the institution’s faculty and students, or pulled from other open access sites (Bashir et al. 2021). As open access becomes more prevalent in academia, the role of institutional repositories and collections in helping organize these materials is a topic that will merit further research.

This brief report demonstrated that open access materials struggle to conform to standards of academic rigor while continuing their commitment to provide knowledge to all at little or no cost. Community colleges are a good laboratory to explore the reach and effective use of open access resources by some of our society’s most disadvantaged students, as studies show that student success and retention increase dramatically when these freely available resources are adopted. Despite the success of open access materials, there is little funding for community college faculty to obtain release time to carry out the tasks required to adopt these materials, which take much greater preparation to adopt than do traditional textbooks. Advocating for the need for community college faculty to adapt their courses to these resources with adequate funding and resources is an important step toward educational equity and social justice, which are issues whose importance will undoubtedly continue to grow in academia.

Works Cited:


