

STATE FUNDING FOR OPEN EDUCATIONAL RESOURCES

By Nina Owolabi



Introduction

Open educational resources (OER) are teaching, learning, and research materials that are available under an open-source, or license agreement, that allows for “sharing, accessing, repurposing” for faculty and student needs (Atkins et al., 2007).

OER got its start as an international movement. The term was first coined in 2002 at a United Nations Educational, Scientific and Cultural Organization (UNESCO) Forum on the Impact of Open Courseware for Higher Education in Developing Countries. Since that time, UNESCO has embraced OER as part of its education for all missions, in partnership with the William and Flora Hewlett Foundation.

UNESCO believed these resources could be conduits for “universal access to high quality education” at a low financial cost and lead to improved futures for all (UNESCO, 2020). OER continues to be a burgeoning topic as more colleges and universities use electronic sources and question reliance on expensive textbooks. The higher education community has identified OER as an alternative to making students pay for pricey texts, proving to be more cost-conscious.

OER has been especially welcomed at community colleges, where some of the most underserved students are concentrated (Plotkin, 2010; Trainor, 2015). Due to COVID-19, students and faculty had little access to physical libraries for course reserves. However, electronic access to resources does not mean they are free and open to the public. Restrictive licenses

limit who might be able to check out an e-book at any time. Additionally, not all materials are available in a digital format. Librarians have battled with book publishers who still restrict electronic materials despite the current upheaval caused by the pandemic (SPARC, 2020). This period has proven the utility of a broad OER policy. Before COVID-19, some community colleges and institutions responded to students’ cost concerns by fully adopting OER: crafting curriculum and entire degree programs around them (Griffiths et al., 2020; Hilton, 2016; Hilton et al., 2016). Students have saved millions of dollars through these efforts.

Despite the significant benefits of using OER, implementation initiatives are not consistent primarily due to a lack of broad support. While OER comes at no financial cost to students, there is an inherent cost of time, energy, and human capital necessary to create high-quality content. Part of that process is ensuring accessibility for the multiple means of engagement, representation, and expression (Hashey & Stahl, 2014; *UDL On Campus: Accessibility and Open Educational Resources*, n.d.). Quality also requires the inclusion of culturally relevant content for students (Owolabi, 2020). OER advances discussions about what work is honored by institutions of higher education. How is OER creation acknowledged in the tenure and promotion process? What type of compensation structure is in place for faculty, staff, and students who work to develop OER? How can states like Illinois pool resources to form a database of vetted materials used across institutions in specific disciplines? OER can help facilitate an equitable pathway for students’ access to critical course materials.

This brief will explore these questions and explain why a dedicated funding stream will support streamlined OER adoption for Illinois community colleges. Without more generous state-level support through allocated funds, OER's potential to alleviate student financial pressures and open doors to equitable practices will be stunted.

OER Benefits to Community Colleges

Part of OER's allure is its capacity to support an equity and access agenda. Although publishers offer alternatives to decrease the prices of textbooks for students, such as e-books, rental books, used copies, and older editions, each option has limitations. Publishers release new editions and digital licenses expire, for instance. There is also a high demand for a short supply of used textbooks (Senack, 2014; United States Government Accountability Office, 2005).

According to the U.S. Government Accountability Office (GAO), textbook costs have increased at twice the rate of inflation during the last 20 years. The GAO (2005) estimates two-year college students spent on average of \$886 during the 2003-2004 school year. Students are likely paying much more today. Multiple studies approximate students can spend upward of \$1,200 per year in textbook costs alone. While many students qualify for financial aid, it may not be enough to finance their academic and personal needs.

Only more recently have studies centered on OER's ability to support historically excluded populations (DeBarger, 2020; Jenkins et al., 2018, 2020). Jenkins et al. (2020) studied 700 students attending a California four-year institution. The researchers found that textbook costs were an "additive burden" for the participants (Jenkins et al., 2020). When aggregated by race, first-generation status, and transfer status, their multivariate data demonstrated that "Latinx students were significantly more likely than white students to avoid taking classes due to textbook costs and three times more likely to report failing a class due to a textbook" (Jenkins et al., 2020, p. 8).

These challenges can be even more grave for community college students. In Illinois, the community college system serves over 500,000 students in credit-bearing programs, of which 46.7% are racially minoritized students (Wilson & Ferguson, 2020). During the 2018-2019 school year, 27% of community college students in Illinois received the Pell Grant (National Center for Education Statistics, 2020). This number is not inclusive of students who may be eligible for aid but unable to access the assistance for multiple reasons.

Achieving the Dream (ATD) launched a large-scale OER degree initiative with 38 two-year institutions nationwide. These colleges offered 6,600 OER course sections and reached 160,000 students through the initiative, which was projected to have saved at least \$10.7 million in textbook costs. In a survey of nearly 2,500 students, ATD found that 41% agreed "OER courses will have a significant impact on their ability to afford college" (Griffiths et al., 2020, p. 12). Among racially minoritized students and Pell Grant recipients, 52% and 48%, respectively, believed OER supported their capacity to pay for courses. The report suggests these students may "experience a greater benefit from OER courses" (Griffiths et al., 2020, p. 52).

Students in OER courses perform academically at least as well as or better than their peers who are not taking OER courses (Colvard et al., 2018; Hilton, 2020; Ikaiahifo et al., 2017). In Colvard et al.'s (2018) study of Pell versus non-Pell

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recipients who took courses that specifically used OER, both groups had an increased distribution of B+ to A grades and a lower number of students who received B to DFW grades. OER-based classrooms tended to see higher grades for "non-white" and part-time students as well as lower rates of Ds, Fs, and Ws. This effect could be influenced by instruction. Colvard et al.'s (2018) study is also constrained by inadequate race disaggregation and focuses on one four-year institution. Nonetheless, the findings are intriguing.

While institutions typically spent near \$576,000 for the program, the savings more than made up for the initial cost. Not only did students save, institutions did as well. The amount institutions recouped ranged between \$334,000 to \$628,000. ATD estimated that the average unit cost declined from \$70 to \$21 as enrollments in these courses increased (Griffiths et al., 2020). The Washington State Board of Community and Technical Colleges (WSBCTC) assessed students similarly

spent upward of \$1,030 on course expenses in addition to tuition. It is approximated that students taking open-resource courses saved \$96 per course, which amounts to nearly \$5 million over the life of the program.

WSBCTC's investment included ensuring that instructional design teams developed materials and assessments with accessibility for disabled students in mind (Chae & Jenkins, 2016). OER has the potential of also opening space for diverse voices who are not present in traditional mainstream textbooks (Prescott, 2019; Thomas, 2018; Owolabi, 2020). Specifically, OER offers the promise of three elements of social justice: redistribution of resources; recognition of sociocultural diversity in curriculum; and representation, speaking to the self-determination of groups to voice their stories (Lambert, 2018). In its early development outlined by UNESCO, OER was closely aligned to redistributive justice due to the emphasis on access for all people, principally those who are traditionally

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marginalized (Lambert, 2018). Scholars have furthered the implications of an equity agenda for institutions through OER. Jenkins et al. (2020) highlight the work of Tidewater Community College's OER associate degree program (Hilton et al., 2016), which illustrates "OER's ability to increase savings for associate's... degrees, while simultaneously realizing a more socially just college experience" for students (p. 9).

OER Challenges for the Community College

For all the reasons OER can be a powerful tool for equitable practices, it is simultaneously limited. Scholars raise several questions about quality, efficacy, and the replication of inequity. While initial reports demonstrate the effectiveness of OER in classrooms (Colvard et al., 2018; Hilton et al., 2016), no substantial data exists demonstrating its usage among various groups of students, particularly those with disabilities and those of Black, Indigenous, and overall BIPOC (people of color) populations (Jenkins et al., 2020; Zhang et al., 2020).

Much of OER data do not disaggregate by race, even studies with large sample sizes (Colvard et al., 2018; Ekowo, 2017; Jenkins et al., 2020). Using OER does not secure an equitable experience for students (DeBarger, 2020; Hodgkinson-Williams & Trotter, 2018; Lambert, 2018; Veletsianos, 2020; Wiley, 2015); scholars interrogate who is at the helm of OER creation (Veletsianos, 2020).

Without centering BIPOC voices, the opportunity for exclusion and bias increases (Owolabi, 2020). Those new to OER creation may choose to rely on premade material already lacking diverse content. Hodgkinson-Williams and Trotter (2018) believe OER "can be problematic if it ends up propagating hegemonic forms of knowledge and values, reinforcing the cultural power and prestige of the knowledge domain in which the OER was created rather than that in which it is used" (p. 213). Responsible for much of the advancement of OER domestically and internationally, the Hewlett Foundation recently advised that future programming must "advance racial equity and social justice" and be "deliberately anti-racist, inclusive and responsive in design and approach" (DeBarger, 2020). Practitioners have mostly implied OER's focus on redistribution of resources, but the discourse has lacked grounding in other elements of justice (Lambert, 2018). As racism and oppression are core tenants of the U.S. educational system, it likely will extend to a seemingly innocuous technology without a critical, anti-racism lens (Hodgkinson-Williams & Trotter, 2018; Veletsianos, 2020). Emphasizing OER without a push toward dismantling racist and ableist mechanisms that marginalize students and replicate inequity by ignoring the voices of historically excluded people only causes further harm (Abrica et al., 2020; DeBarger, 2020; Welton et al., 2018).

As defined by Hashey and Stahl (2014), accessibility also refers to the "extent to which materials are appropriate and usable for students with sensory, physical, learning, and cognitive disabilities" (p. 4). If not addressed at the outset of creation, educational materials are difficult to retrofit for accessibility later (Hashey & Stahl, 2014). Currently, few depositories include options to search for OER based on accessibility measures and categories. Limited research discusses the availability of authorship tools "to support accessible content, which might explain the reasons for having limited OER... for disabled students" (Zhang et al., 2020, p. 16). Researchers notice a dearth of scholarship focused on OER's ability to facilitate effective learning environments for disabled students (Moreno et al., 2018; Zhang et al., 2020).

Other issues are prominent within the OER movement. Even as conversations about OER continue to expand with a wealth of information available to practitioners, a sizable number of faculty and students have never heard about OER (Spilovoy et al., 2020). As mentioned, OER costs nothing for students to access, but the creative process is arduous. Faculty members who select or develop OER expend considerable hours learning about licensing, certifying accessibility of material, and addressing latent bias in the material. Currently, there are no uniform means of incentivizing OER production among faculty. Institutions may offer additional funding, release time, a combination of both, or nothing at all. Researchers and practitioners emphasize the promise of professional credit toward the tenure and promotion process as a likely motivator for greater participation (Cote, 2017; Delimont et al., 2016; Griffiths et al., 2020; Plotkin, 2010; Senack & Donoghue, 2016; Spilovoy et al., 2020), yet institutions have not responded in kind.

According to the ATD report, the largest cost driver for creating OER was in the course's actual development. Time and cost were determined by reviewing aggregated time logs every six months. Value for the time was calculated based on salary data combined with student course enrollment information (Griffiths et al., 2020). Much of the cost was in salary and benefits, averaging \$12,600 across five participating community colleges. The median cost was \$7,500. Expenses dramatically increased if institutions employed an open online learning technology (MyOpenMath or Lumen's WayMaker).

On average, it took 180 hours to develop one OER course. This work encompassed creating and revising content, assessing quality, working on course refinement, and other administrative tasks and meetings. On average, institutions directed \$250,000 per year in the first two years toward developing infrastructure, including fostering a team of instructional designers, librarians, and interested faculty. While "ongoing costs of supporting an OER degree pathway after the grant are difficult to determine, authors expect maintenance costs to include "course revisions, monitoring and reporting on OER activity, and possibly scaling the use of OER materials to other colleagues or departments" (Griffiths et al., 2020, p. 31).

Policy Alternatives

In order for OER to live up to its capability of broadly supporting low-income students, financial backing from statewide governing boards is crucial. OER has grown tremendously from its initial progression but will continue to be incomplete in scope until "increased numbers of higher education policymakers understand and recognize the

importance of OER and take the steps necessary to provide more direct and sustained support to faculty (Plotkin, 2010, p. 30). According to an Educause report, "Open Education... can help define effective practices and guide more efficient development and scaling (Educause, 2018, p. 2). The funding policies ensure OER generation and sustainability. Institutions that created a system-wide strategy of OER implication did so because of provisions by the state boards and legislatures. Two policy alternatives could aid a comprehensive OER policy: instituting a grant program and implementing a statewide OER plan.

Policy Option 1: Build a Competition-based Funding Grant Model

Studies have demonstrated the need for financial support for OER creation (Butcher, 2012; Educause, 2018; Griffiths et al., 2020; Plotkin, 2010). Griffiths et al. (2020) outlined the initial costs to begin and maintain comprehensive OER programming through ATD. However, institutions capitalized on savings and ultimately decreased costs later. Part of the structure of this program should prioritize projects led by BIPOC. The accountability process should align with the William + Flora Hewlett Foundation, which requires institutions to identify how programs will ensure equitable practices and encourage greater numbers of content creators of color. A benefit to the competitive funding model is that it demonstrates support for OER but requires less concerted effort than more extensive systemic reform. It could be a viable first step. The grant should stipulate how institutions will address compensation, promotion, accessibility, and other OER issues. Because the competitive funding model does not dictate how institutions facilitate their OER initiatives, colleges can spearhead programming specific to their context.

Creation of this program also opens the opportunity by the Illinois Community College Board to apply to federal grants such as the Open Pilot Program (U.S. Department of Education Office of Postsecondary Education, 2020). Some of the most successful policies required all educational materials created as a result of the funding to have an open license under Creative Commons. A noticeable downside to this option is the question of whether a competitive grant will ensure that a broad base of students has access to OER in their classrooms.

Policy Option 2: Develop Statewide OER Adoption Model

Another policy option follows the WSBCTC model (Chae & Jenkins, 2015, 2016). Over several years, the WSBCTC developed a statewide agenda: writing policy that supports producing a library of vetted OER that are openly licensed and specific to 81 high-enrollment gateway courses at 34 community colleges within the system. The board first created

a strategic technology plan codifying a desire to cultivate a “culture and practice of using and contributing to open educational resources” (Chae & Jenkins, 2016; Washington State Board for Community & Technical Colleges, 2010; Washington State Board of Community and Technical Colleges, 2008). The plan was a formal response to an 18-month analysis conducted by the board to establish its technology goals; a special task force led it in 2007. WSBCTC received sizable grants of \$750,000 from the Washington State legislature to develop an open-course library. To support OER course expansion, the board hosted trainings and created a comprehensive step-by-step guide per faculty feedback. WSBCTC sought faculty feedback and the faculty shared concerns about properly attributing material, so the board sanctioned the creation of an “attribution builder” to help ease the process. The board learned “a big systemic change can be achieved from simply removing a small but critical obstacle” (Chae & Jenkins, 2016, p. 220).

Akin to Washington State, Illinois can follow a path similar in scope. Widespread adoption along with accompanying financial and training provision means more students can access OER. A statewide effort will be time-consuming and initially costly. It is noteworthy that policy does not guarantee a culture shift. Still, “development of open education policy can be hindered by a lack of consensus about OER...and a

lack of clarity around related rewards. Flexible policies that shift the default setting to “open” can raise awareness and nudge behavior without invoking concerns about academic freedom” (Educause, 2018, p. 2). Training can be useful for administrators and other stakeholders to learn about the opportunities OER offers.

Conclusion and Recommendations

Illinois can lay the groundwork for a more consistent adoption of OER statewide. Both approaches—a competitive grant program and systemwide investment in a standard OER resource library for general education courses—offer flexible options and communicate support that aligns with national interests (U.S. Department of Education Office of Postsecondary Education, 2020). Implementing a combination of both may be advantageous to Illinois. Starting by developing the grant program to gauge how institutions are using and encouraging OER’s development could be a foundation for a broader strategy that would take more time to implement appropriately. Either option sends a message that Illinois is invested in its community college system and its students’ well-being.

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