College Textbook Affordability: Landscape, Evidence, and Policy Directions

SHANNA SMITH JAGGARS AND MARCOS D. RIVERA, THE OHIO STATE UNIVERSITY
BRIANA AKANI, UNIVERSITY OF MICHIGAN

POLICY REPORT
MARCH 2019

105 Fifth Avenue South, Suite 450
Minneapolis, MN 55401
612-677-2777 or 855-767-MHEC
MHEC.ORG | mhec@mhec.org

Midwestern Higher Education Compact (MHEC)

Legislatively created, the Midwestern Higher Education Compact's purpose is to provide greater higher education opportunities and services in the Midwestern region. Collectively the 12 member states work together to create solutions that build higher education's capacity to better serve individuals, institutions, and states by leveraging the region's resources, expertise, ideas, and experiences through multi-state: convening, programs, research, and contracts.

Compact Leadership, 2018-19

President
Ms. Susan Heegaard

Chair
Dr. Ken Sauer, Senior Associate Commissioner and Chief Academic Officer, Indiana Commission for Higher Education

Vice Chair
Ms. Olivia Madison, Professor Emerita and Dean Emerita of Library Services, Iowa State University

Treasurer
Dr. David Eisler, President, Ferris State University

Past Chair
Mr. Tim Flakoll, Provost, Tri-College University and North Dakota Governor's Designee

SCHOOL OF EDUCATION
NATIONAL FORUM
UNIVERSITY OF MICHIGAN

The National Forum exists to support higher education's role as a public good. In this pursuit, the Forum utilizes research and other tools to create and disseminate knowledge that addresses higher education issues of public importance. This mission is expressed in a wide range of programs and activities that focus on increasing opportunities for students to access and be successful in college, college's responsibility to engage with and serve their communities, institutional leadership roles and practices in promoting responsive policies and practices to address the student success and community engagement.

AUTHORS

Shanna Smith Jaggars
Assistant Vice Provost, The Ohio State University

Marcos D. Rivera
Graduate Research Associate, The Ohio State University

Briana Akani
Research Assistant
Univeristy of Michigan

EDITOR

Aaron S. Horn
Vice President of Policy Research, Midwestern Higher Education Compact
aaronh@mhec.org

About this Policy Brief Series

This brief examines a critical state policy issue identified through the College Affordability Research Initiative, a collaboration between the Midwestern Higher Education Compact and the National Forum on Higher Education for the Public Good at the University of Michigan.

EXECUTIVE SUMMARY

For decades, textbook price increases have outpaced the rise in other educational expenses. Prices have increased by almost 190% since 2006, and undergraduate students now budget over $1,200 for materials each academic year. Lower-income community college students are particularly affected, with textbook costs accounting for 80% of their total college attendance expenditures. Many commercial textbook publishers have shifted their focus to digital textbooks or online supplemental materials, while maintaining high prices and highly-restrictive terms of use.

In a challenge to the commercial publishers' dominance, a growing community of college faculty have begun to create and share Open Educational Resources (OER). These openly-licensed digital materials are available at no cost to any instructor or student, who in turn can use the materials without restriction – for example, instructors can edit or re-mix the materials, and students can print or save them to a personal device. Today, the array of available OER is overwhelming in its volume and variety of quality, which hampers instructors' ability to sift through, select, and adapt the most appropriate OER for their course. In addition, many instructors cannot switch to OER because they rely on the online ecosystem of their commercial textbook publisher, including automatically-graded homework assignments, quizzes, and exams. Between the two extremes of printed commercial textbooks and OER, there also exist a variety of alternative offerings which attempt to address cost concerns, including the increasingly popular "Inclusive Access" model. Under this approach, students pay for a digital textbook as part of their tuition or course fee; due to the large volume of purchases, the institution and student pay a deeply discounted price for the e-text.

Across the Midwest, colleges and universities are saving students millions of dollars through textbook affordability initiatives, primarily through OER creation and adoption programs and Inclusive Access bulk-purchase discount programs. Notable examples of textbook affordability initiatives include Indiana University's eTexts Initiative and Ohio's Open Ed Collaborative. The two initiatives take very different approaches to addressing textbooks costs, and each serves as a potential model for other states and institutions to adapt.

State legislation has played a role in bolstering textbook affordability initiatives, with states such as Illinois, Indiana, Michigan, North Dakota, and Ohio passing or introducing OER or Inclusive Access related legislation since 2013.

POLICY OPTIONS

- Create statewide infrastructures that support textbook quality and affordability.
- Set non-punitive goals and metrics regarding college textbook costs.
- Provide incentives and support for colleges to meet affordability goals.
- Support research and evaluation to assess current and future programs, identify and disseminate best practices, and share potential challenges, in order to optimize the financial and academic impact of textbook affordability and OER initiatives.
- Create clarity about permissible processes for implementing textbook affordability programs in order to reduce uncertainty for colleges.
- Consider the potential revenue loss and tax implications for rural areas and small towns where campus bookstores may be a major component of the local area's tax base.

College Textbook Affordability: Landscape, Evidence, and Policy Directions

The ever-increasing cost of college textbooks may have a negative impact on low- and moderate-income students' academic success and retention. To pay for textbooks and supplemental materials, students borrow more money or work more hours (ACSFA, 2007), although working additional hours seems to have a negative impact on students' GPA and credit accrual (Dadgar, 2012; Kalenkoski & Pabilonia, 2010; Scott-Clayton & Minaya, 2016; Stinebrickner & Stinebrickner, 2003). Students may also avoid textbook costs by registering for fewer courses, withdrawing from courses with expensive textbooks, or simply not purchasing a required textbook (Florida Virtual Campus, 2016; Griffiths et al., 2018; Senack, 2014). In a large-scale study (over 22,000 students) in Florida, 64% of respondents had (on at least one occasion) not purchased a required textbook due to high costs, with 23% doing so frequently; moreover, 33% had earned a poor grade because they couldn't afford to buy a textbook, and 17% had failed a course for that reason.

For policymakers and others who wish to support affordable alternatives to high-cost textbooks, it is helpful to understand the range of available alternatives, how these alternatives are typically implemented, and how policy might enable or incentivize that implementation. This report discusses the ongoing escalation of college textbook costs, the benefits and challenges of more affordable options, implementation examples for two key options, and policy recommendations for supporting textbook affordability at scale.

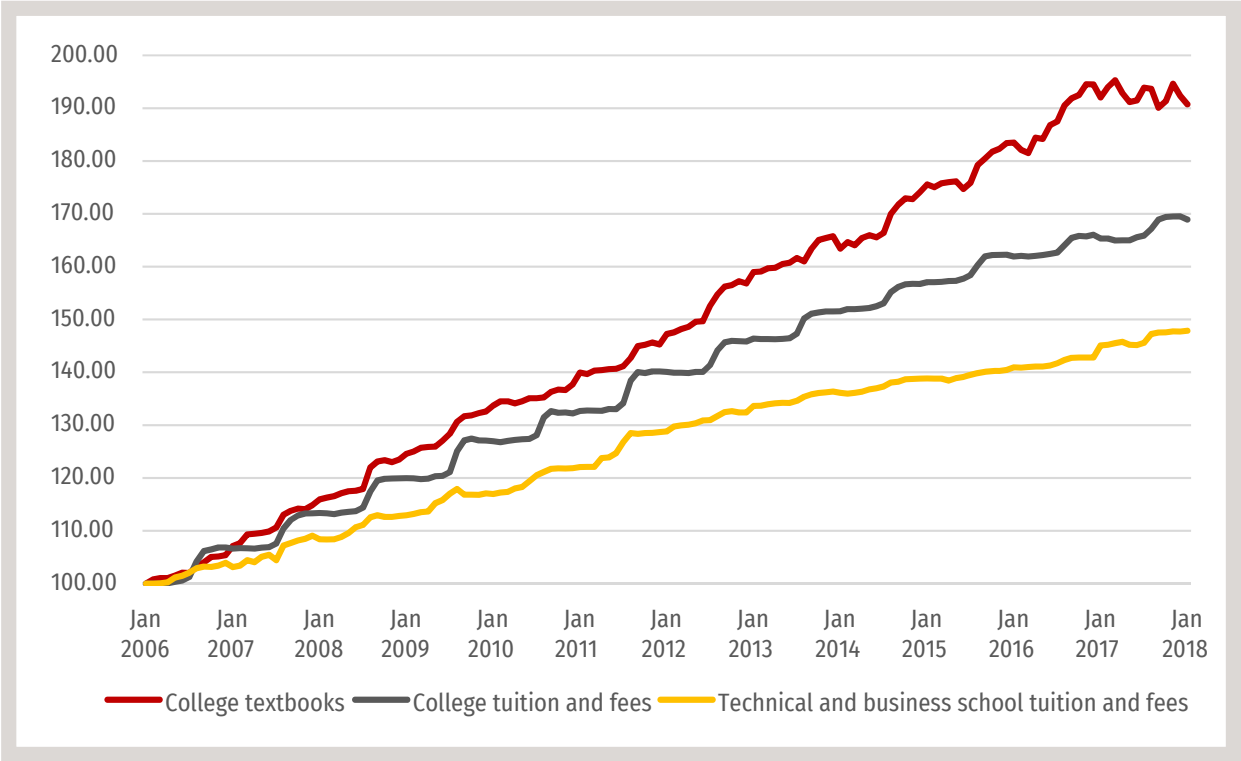
TEXTBOOK COSTS

College textbook costs for undergraduate students have risen rapidly across the past few decades, outpacing increases in other commodities (ACSFA, 2007).[1] Indeed, Figure 1 shows that the consumer price index of college textbooks increased by 190% from January 2006 to 2018 (Bureau of Labor Statistics, 2018), rising more steeply than college tuition and fees. The College Board (2018) estimates that full-time undergraduate students at public four-year institutions will spend $1,240 for textbooks and course supplies this academic year, or approximately 12% of in-state tuition. Costs are even more salient for public two-year college students, with an estimated cost of $1,440, or almost 40% of in-district tuition and fees.[2] Pell and other grant aid recipients at two-year colleges also report that textbook costs can make up 80% of their total expenditures for college attendance (Griffiths et al., 2018). Each year, college students spend more than $3 billion in state, federal, and other financial aid on textbooks, yet on average, financial aid is exhausted after covering 70% of textbook costs (Florida Virtual Campus, 2016; Senack & Donoghue, 2016).

A key driver of increased textbook costs is the use of supplementary materials, including automatically-graded online quizzes, adaptive learning platforms, and other web-based tools (U.S. GAO, 2005). In an attempt to address rising textbook costs, the Higher Education Opportunity Act (2008) required publishers to unbundle these materials from textbooks, and many states instituted related legislation regarding "textbook transparency." Yet textbook costs continued to rise (Nicholls, 2009). Many instructors need these web-based supplemental resources in order to effectively manage teaching and learning across the large volume and variety of students they now teach (Seaman & Seaman, 2019).

[1] The Bureau of Labor Statistics defines college textbooks as "any new or used textbooks which have been designated by a college or university, department, or instructor as a required text for a course that is offered by a college or university. Includes purchases of books on CD-ROM and downloadable e-books." Overall textbook costs include campus bookstore sales (approximately $484 per year, National Association of College Stores, 2018), online sales, and rentals (Foucault & Scheufele, 2002; McGowan & Stephens, 2015).
[2] This calculation uses in-state tuition rates for two-year institutions that do not have separate in-district tuition rates.

FIGURE 1. Consumer Price Indexes: College Textbooks, Tuition, and Fees (January 2006 - 2018)



Source: U.S. Bureau of Labor Statistics. (2018). Consumer price index.

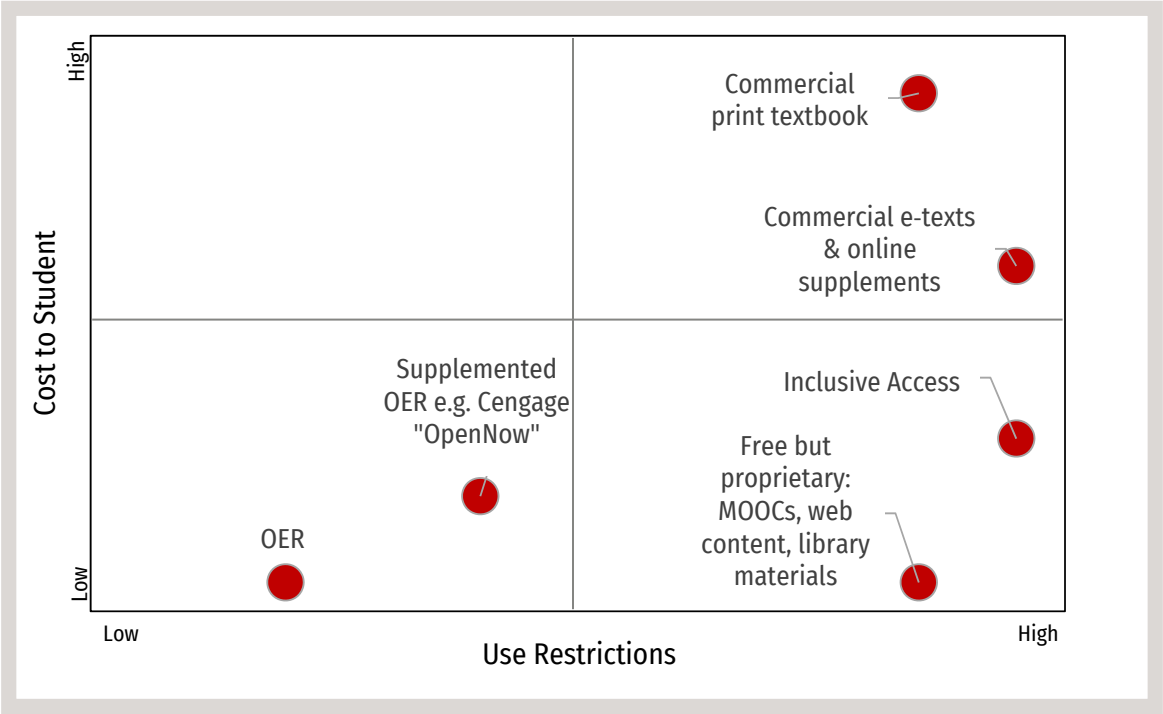
MAPPING TEXTBOOK OPTIONS BY COST AND USE RESTRICTION

The current landscape of college course materials is overwhelming in its variety: materials may be printed, online, or hybrid; published commercially or curated by an instructor; costless or steeply-priced; low-quality or excellent; openly-licensed or proprietary. Figure 2 maps the important varieties according to the two axes most relevant to policy: (1) Cost to the student, and (2) Level of use restrictions. Costs range from free to staggeringly expensive (e.g., $250 for a science textbook, with the potential of additional costs for digital access codes). Use restrictions vary from open-access (anyone may access, re-mix, or re-use the materials at any time) to proprietary copyrighted materials (which at the most extreme end of the axis expire after one semester of access). Here we review the most common types of materials and discuss where they are located in relation to these two axes.

Commercial print textbooks and online supplements

Traditional printed textbooks are high-cost and contain highly-restricted proprietary content. They provide general overview chapters in a set format; if the content or sequencing is not well-aligned to an individual instructor's learning goals, then instructors may ask students to skip chapters, read chapters out of order, or review supplemental materials to "fill in the gaps" (Seaman & Seaman, 2019). In rapidly-changing fields, publishers may find it difficult to update and re-release the textbook quickly enough; yet if the textbook is updated too frequently, students may purchase the wrong edition, resulting in frustration and confusion in the classroom. To support instructors and students, commercial print publishers also create online "walled gardens" containing proprietary materials such as PowerPoint slide decks, homework assignments, automatically-graded quizzes and exams, videos, and other supplemental materials which can be quickly updated as the field evolves. To access these

FIGURE 2. Textbook Options by Cost Versus Use Restriction



The OER approach combines low cost and few use restrictions for faculty and students.

online resources, students purchase a code which expires after one or two semesters, and may cost $100 or more (Senack et al., 2016). Many instructors of large-enrollment lecture-hall courses rely on these online resources for automated homework, quiz, or exam grading (Seaman & Seaman, 2019). Accordingly, while their students may avoid the cost of the printed textbook by borrowing it, purchasing a used (but outdated) edition, or getting by without a copy at all, students typically cannot complete class assignments without purchasing digital access codes.

Commercial E-Texts

Printed commercial textbooks often have an electronic version, which is typically available for a lower cost than the printed textbook. Rather than carrying a backpack full of heavy textbooks, students could carry hundreds of textbooks on their mobile device. Despite these advantages, students overwhelmingly prefer printed to online commercial textbooks (NACS, 2016), likely due to annotation, copyright, and device restrictions which hinder student use of e-texts. In particular, students are typically prohibited from printing the e-text or storing a copy on their device, which in turn makes it infeasible to take notes directly on the text. Some e-texts require active Internet connectivity in order to run Digital Rights Management (DRM) software, such that students can only access the text when inside a stable and high broadband Internet connection zone. E-text access codes typically expire after one or two semesters, such that students can neither reference the textbook if they need it in the future, nor sell the textbook to recoup their costs. Although e-text costs are lower, instructors often assign an accompanying print textbook, resulting in a higher overall cost for the course's materials (deNoyelles & Raible, 2017).

Inclusive Access Models

In an effort to reduce textbook costs and increase access for students, institutions and publishers have introduced

"Inclusive Access" or "Day-One Access" models, in which the institution designates a particular e-text for all sections of a given course. Students pay the textbook cost as part of their tuition or course fees, which ensures that all enrolled students have access to the text; and due to the large volume of enrollments, the institution pays a steeply discounted price for the e-text. Federal regulations permit institutions to add textbook costs directly to student tuition and fees as long as the costs are "below competitive market rates," a stipulation not defined by any minimum measures (LaGrone, 2015; Disbursing Funds, 2015).

Stakeholders have expressed four concerns about the Inclusive Access model. First, e-texts purchased under Inclusive Access may still have problematic restrictions in terms of annotation, printing, storage, offline access, and extended access after the semester ends. Institutions negotiate Inclusive Access pricing and terms directly with individual publishers and may address some of these usage problems through contractual agreements, including licenses for online learning tools and access extensions for course materials; but institutions (or consortia of institutions) which are savvier, larger, and more resource-rich are likely to create better packages for their students. Second, publishers may lure colleges into the Inclusive Access model using an initial contract with steep discounts and later increase prices after colleges shift their infrastructures to depend on the model (Cuillier, 2018). Third, Inclusive Access models may reduce competition by providing exclusive contracts to large publishers who already control the majority of the textbook market, thereby crowding out smaller but higher-quality competitors (McKenzie, 2017a). Finally, critics point out that the Inclusive Access model denies students the choice of how to spend their limited money (McKenzie, 2019). As long as the price point for these models remains low, the issue of choice may not be a strong concern. However, if commercial publishers begin to raise prices, students and parents are likely to become increasingly concerned.

Free but Proprietary Materials

Many instructors feel that no given commercial textbook is "perfect": it cannot address all of their course's unique learning goals. To supplement the textbook, instructors may ask students to check out specific materials from the college library, watch specific videos on YouTube, or review material on an external organization's website. For example, Art History textbooks would be prohibitively expensive if they included large full-color representations of more than a handful of artworks; but students can freely visit the Museum of Modern Art website (moma.org) to view nearly 80,000 works online. Classroom instructors have also experimented with using an external Massive Open Online Courses (MOOC) as a "textbook" by assigning students to review videos, assignments, or materials from the MOOC, and then discussing the MOOC materials in the classroom.

All of these materials are costless for the student to access. Depending on the source, students may also be able to print, save, or annotate the materials. However, the materials are proprietary, which means that instructors and students cannot modify, re-package, or sell them. For example, if instructors package a selection of library materials into a printed "course packet," students must pay licensing fees to the materials' owners (e.g., by buying the course packet through the campus bookstore). As another example, if an instructor discovers an error in an otherwise excellent how-to video, the instructor cannot legally download and edit the video to fix the error. And instructors assigning external MOOC content are often frustrated by their inability to re-order or otherwise customize the content to their own class (e.g., see Bruff et al., 2013). Finally, the curation of online proprietary resources requires quite a bit of individual instructor effort, not only at the point of initial resource selection, but also in terms of maintenance: resources can disappear, move behind a paywall, or change their content with little or no warning, requiring instructors to re-check the resources every semester.

Open Educational Resources

Open Educational Resources (OER) are no- or very low-cost course materials that are openly-licensed according to the "5R" permissions: Retaining the right to copies of the content; Reusing the content in a variety of ways; Revising the content; Remixing the content with other materials; and Redistributing the content to others (Wiley, 2014). OER textbooks are typically created by college faculty and produced as e-texts in open-source digital platforms that, unlike commercial e-text platforms, allow faculty and students to customize, annotate, and share the materials with peers and institutions worldwide.

Some OER textbooks are similar to commercial textbooks in that they consist of a series of chapters containing original

explanatory text, images, and practice exercises with few or no links to external content. Other OER textbooks are akin to a curated course packet containing a small amount of original text that weaves together a series of links to a wide variety of external no-cost online resources (which may be open-access, proprietary, or library-held).

Faculty who use OER appreciate the ability to re-order, add, or delete content as appropriate to their own student population, teaching style, and desired learning outcomes (Baker et al., 2009; Bliss et al., 2013; Hilton, Wiley, & Bliss, 2012; Jaggars, Folk, & Rivera, 2017; Seaman & Seaman, 2019). Students also have positive attitudes toward OER, rating the materials equally or more positively than traditional printed textbooks (Jaggars, Folk, & Mullins, 2018; Hilton, 2016). However, many faculty are reluctant to adopt OER due to concerns regarding quality, curation effort, and course management (Seaman & Seaman, 2019).

First, because OER authors often create and maintain content as a self-supervised volunteer activity, the quality of OER materials vary (Jhangiani et al., 2016). For example, a textbook which was excellent when created ten years ago may now be hopelessly outdated. Instructors do not have time to review the many available OER in deep detail to determine whether each one is high-quality, up-to-date, and well-aligned to their own course's learning outcomes.

Second, even if an OER textbook is newly-created, high-quality, and perfectly-aligned, there is no guarantee that it will be continually maintained and updated by its creator. Thus, adopting instructors may feel burdened by the responsibility of contributing to the textbook's ongoing curation and improvement over time. To address these two interrelated concerns, some institutions and systems have sponsored large-scale Open Education Resources development and evaluation programs,[3] created OER quality guidelines and handbooks to support faculty development,[4] or created OER repositories with user-generated quality ratings.[5]

Third, in order to manage hundreds of students each semester, many instructors rely on their publisher's automatically-graded homework assignments, quizzes, and exams. OER platforms cannot provide these tools, which are expensive to create and maintain. To help address this challenge, some institutions and organizations are creating low-cost test banks (e.g., The Ohio State University's Content Camp Collaboration) and other course management resources (e.g., Lumen Online Homework Manager) for OER courses.

Supplemented OER

Commercial publishers are alert to the potential threat of OER to their business model and are exploring ways to participate in the OER space. For example, the commercial publisher Cengage recently introduced its "OpenNow" model. Under this model, the publisher begins with an existing openly-licensed, no- or very low-cost textbook (i.e., OER) and updates it or adds new content; users can freely download and re-mix that content. For a small fee (currently $30), students can have full access to the OpenNow platform, which includes assessments, videos, and integration with the institution's course management system (McKenzie, 2017b). This type of OER-commercial hybrid seems appealing due to its low cost, relatively loose restrictions, support of course management, and likelihood of formal content maintenance over time. However, it remains to be seen whether the model will fulfill its potential.

WHICH MODEL IS BEST?

Each type of textbook model reviewed above offers a trade-off of costs and benefits. In general, however, decision makers within institutions, state systems, and

[3] Examples include the Ohio Open Ed Collaborative (https://affordablelearning.ohiolink.edu/Guide/Consortium) and the North Dakota University System Open Educational Resources Initiative (http://blog.ndus.edu/category/open-educational-resources/)
[4] Examples include the University of Illinois (https://guides.library.illinois.edu/oer), University of Missouri (http://libraryguides.missouri.edu/OER), University of Kansas (https://guides.lib.ku.edu/oer)
[5] Examples include the OER Commons (https://www.oercommons.org/oer).
[6] See Kansas State University's Open/Alternative Textbook Initiative, https://www.lib.k-state.edu/open-textbook.
[7] See the University of Minnesota's Partnership for Affordable Content, https://www.lib.umn.edu/elearning/partnership.
[8] See The Ohio State University's Affordable Learning Exchange, https://affordablelearning.osu.edu.

state legislatures are particularly interested in Open Education Resources and Inclusive Access models.

Across the Midwest, OER and Inclusive Access models have saved students millions of dollars in recent years, including Kansas State University's savings of $5.5 million since 2013,[6] University of Minnesota's $3.5 million since Fall 2015,[7] and The Ohio State University's $3 million since 2016.[8] Both types of models can result in dramatic cost savings. Although Inclusive Access textbooks still cost money, the model is more easily scalable than OER initiatives, given that the latter requires more faculty buy-in and engagement. On the other hand, Inclusive Access models are still fairly new and raise the concern that publishers will ratchet up their prices after institutions become dependent on the model.

In addition to the cost savings, OER and Inclusive Access models may help increase faculty and student engagement and outcomes. Below we review related research for the two models (see the Implementation Examples section for details of the respective models currently in practice).

OER

While some OER textbooks are similar in "look and feel" to a commercial textbook, others are purposefully integrated into current online resources and feel more dynamic and engaging. Faculty who introduce the latter type of OER into their courses are often motivated by the desire to improve their students' critical thinking and application of content knowledge outside of the classroom (Jaggars et al., 2017). Thus, some OER instructors report that students are more likely to complete the assigned reading, come to class more prepared, progress through the course learning objectives faster, and ask more interesting questions. As a result, some instructors feel they can cover more material, delve more deeply into content, or include more activities, assignments, or assessments in an OER course (Bliss et al., 2013).

While it's still early, quantitative research on OER's impact on student outcomes tends to suggest positive or no significant difference when compared to courses using traditional texts. Some studies have shown increased course enrollments, higher final grades, or lower DFW rates for students in OER classes (Colvard, Watson, & Park, 2018; Feldstein et al., 2012; Fischer et al., 2015; Hilton et al., 2016) with greater impacts for Pell, part-time, and underrepresented minority students (Colvard et al., 2018). Other studies show no significant outcome differences between courses using OER materials and traditional textbooks (Croteau, 2017; Hilton et al., 2013; Lovett, Meyer, & Thille, 2008). However, most studies have not controlled for student, instructor, course, and textbook characteristics, and thus the body of results should be regarded as preliminary. For example, the positive effects observed in some studies could be based on the effects of having a more motivated and high-performing instructor, if these instructors tend to adopt OER at higher rates than disengaged instructors.

Inclusive Access

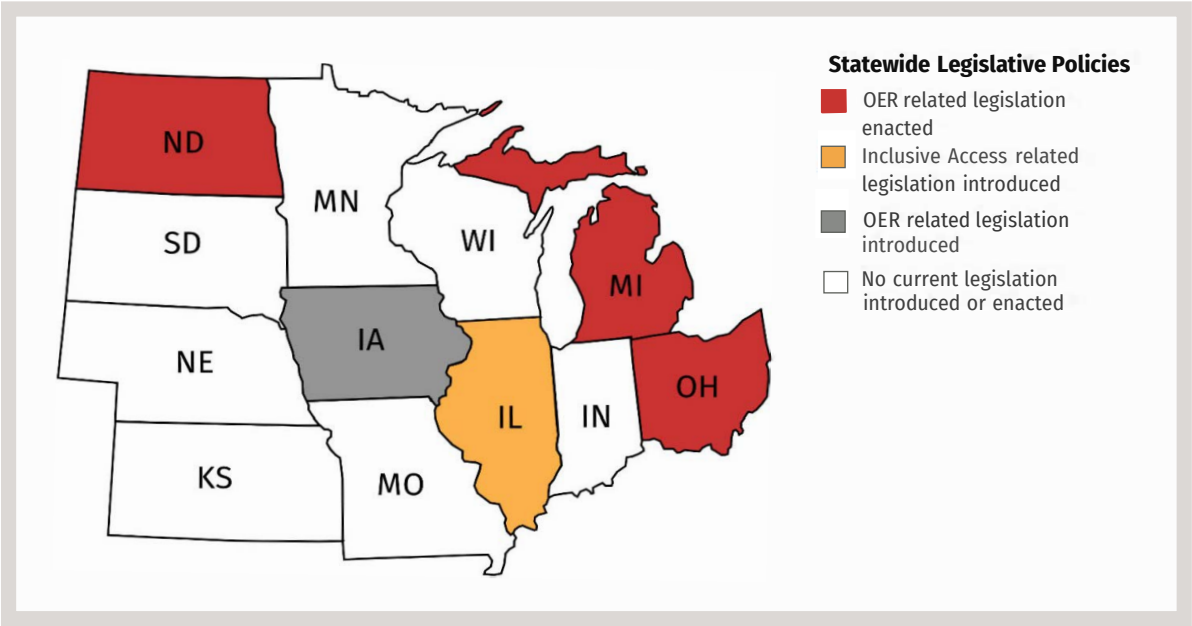
The Inclusive Access model is new, and there is little research on its impacts beyond cost. When instructors know that all their students have access to the textbook on Day One, they feel more comfortable about engaging students in the content immediately (Cuillier, 2018). Students at one Inclusive Access school also believed that the program benefited them academically and allowed them to get a higher course grade (Erhorn et al., 2017).

However, these "Day One" benefits are also true of OER, and one potential concern with Inclusive Access models is that they may dampen faculty interest in OER initiatives. Many faculty have a dual interest in OER in terms of both its cost savings and its potential for better alignment with "deeper learning" goals (Jaggars et al., 2017). If the cost issue is addressed through Inclusive Access, it is unclear whether instructors' interest in deeper learning will be strong enough to motivate their participation in time-consuming OER creation or adoption projects. Moreover, the Inclusive Access model has some vocal critics, as discussed previously.

RECENT LEGISLATION IN THE MIDWEST

In recent years, policymakers across the country have moved to address textbook costs and support affordability initiatives through legislation. The Scholarly Publishing and Academic Resources Coalition (SPARC; n.d) tracks the adoption of OER-related policies across the country. As

FIGURE 3. Legislation in the Midwest related to OER and Inclusive Access (2013-2018)



Source: Scholarly Publishing and Academic Resources Coalition (2018). *OER state policy tracker.*

Figure 3 shows, within the Midwest four states have either introduced or adopted legislation friendly to OER since 2013, and one has introduced legislation friendly to Inclusive Access:

- North Dakota enacted House Concurrent Resolutions (HCR) in 2013 urging the study and increased use of OER in the North Dakota University System (e.g., HCR 3009 and 3013). In 2015 and 2018, they also enacted House Bills 1003 and 1358 to provide funds for OER trainings in higher education and to study the impact of OER adoption in elementary and secondary education.
- In Michigan, House Bill 5579 (2018) provided funding for an online platform where educators can create and share OER materials and network with peers to encourage OER creation and adoption.
- In 2017, Ohio House Bill (HB 49) specifically mentioned OER as a potential curriculum delivery method for a statewide compact identifying, developing, and implementing shared curriculum resources to minimize time to degree at public institutions.
- Iowa's Senate File 2362 (formerly Study Bill 3179) would have required colleges and universities to label courses using OER in course catalogs and created a five-year plan to increase the number of courses using OER at regent universities. A Senate subcommittee recommended passage in March of 2018, but it has yet to be enacted.
- In terms of Inclusive Access legislation, Illinois introduced House Bill 3152 in 2017 to allow postsecondary institutions to establish digital discount programs and, in compliance with the Disbursing Funds (2015) federal regulation, add textbook costs directly to students' tuition and fees. The Illinois House re-referred the bill to the Rules Committee in March 2017, but no recommendations have been made.

In addition, in a 2017 proposed budget, Ohio considered requiring colleges to cover the cost of textbooks and allowing them to charge up to $300 per student per year to cover the expenses. This policy would have pushed most colleges to immediately embrace either Inclusive Access or OER models. The proposition ultimately failed due to a variety of factors which may have included concerns about the current quality or

availability of Inclusive Access/OER for a wide array of courses, and related impacts on faculty workload and student learning; the costs and complex logistics of implementing either model at scale very quickly, and the potential for administrative bloat; and the loss of tax revenue for small counties containing large college bookstores.

IMPLEMENTATION EXAMPLES

Below we provide two examples of solutions implemented in the Midwest and describe how they entwine with statewide policies and infrastructures.

Indiana University's eTexts Initiative

In 2010, Indiana University was one of the first universities to negotiate with publishers to implement an Inclusive Access model. Their model, the "eTexts Initiative," was designed to fulfill four objectives: (1) reduce the cost of digital materials, (2) give faculty access to high-quality materials of their choice, (3) develop new tools for teaching and learning, and (4) shape the terms of commercial e-textbook models. The initiative has grown strongly within the institution across the past few years. The university now has eText contracts in place with over 30 higher education publishers, with 27,000 students participating in Fall 2016, and the growth is expected to continue as more courses opt-in to the model.

Costs and Benefits. The primary cost of the eText Initiative is the salary of the program's business analyst, who also recruits and engages faculty and other stakeholders in the program. The biggest benefit of the program is its cost savings for students, which have totaled more than $14.5 million since the summer of 2011. The program requires publishers to offer eText materials at 35% or less of the price of the textbook's printed version (e.g., $35 rather than $100), and at least 25% off the publisher's adaptive platform list price (e.g., $75 rather than $100). The institution also negotiated student access to eText materials before the start of courses and for the duration of their enrollment at the university, meaning that students can access important course materials even after courses have ended.

In order to address students' need to take notes directly on the material, the university leveraged its membership in the UNIZIN consortium to pilot UNIZIN's e-reading platform, which integrates with publisher eTexts, supports annotation and highlighting, and helps facilitate study group collaboration. As such, university stakeholders believe the eText initiative increases student engagement with course materials. In addition, the university anticipates that the data and analytics generated by eText platforms will allow faculty and administrators to gain greater insight into how students are actually using the materials, enabling them to customize future academic success initiatives.

Challenges. Indiana does not have a statewide policy or blueprint regarding the use of Inclusive Access, OER, or other affordable resources. Accordingly, the university had to break new ground and decide how to weigh a variety of potential risks and benefits in an environment of uncertainty. The program also faces the ongoing challenge of recruiting faculty and academic departments to adopt the program for their courses. In addition, there is a natural tension between the eText initiative and the campus bookstore, which sells its own electronic textbooks. Accordingly, the program must navigate a fine line of communicating the overall benefits of its own program, differentiating itself from the bookstore's digital texts, and maintaining a positive relationship with the bookstore.

Broader challenges for Inclusive Access agreements – at Indiana University and nationwide – include the administrative effort involved in ongoing negotiations with multiple publishers; the fact that savings agreements based on percentages do not assure dollar savings in the future if the base prices of materials are increased; and the fact that the selection of courses and textbooks available is relatively limited.

The Ohio Open Ed Collaborative

The Ohio Open Ed Collaborative was founded in June of 2017 to support the development and adoption of college-level OER materials across Ohio. Supported by an Ohio Department of Higher Education Innovation Grant, the Collaborative consists of 18 community colleges and universities, led by North Central State College, The Ohio State University, and Ohio Dominican University, with support from the Ohio Association of Community Colleges and the statewide library consortium, OhioLINK.

By 2020, the Collaborative plans to create and support the

TABLE 1. Ohio Open Ed Collaborative Courses

Cohort 1 (now available)	Cohort 2 (available 2019)	Cohort 3 (available 2020)	
Intro to Psychology Intro to Sociology American Government 1st Writing Course 2nd Writing Course Statistics Linear Algebra	Calculus I Calculus II Ordinary Diff Eq Macroeconomics	College Algebra Pre-Calculus Intro to Ethics Public Speaking Abstract Algebra American History I	Manufacturing Biology I Biology II Elementary Math Ed Secondary Math Ed Microeconomics

Source: Ohio Open Ed Collaborative. (2018). Cohorts 1-3.

adoption of OER materials for 23 courses (see Table 1). Each selected course enrolls thousands (in many cases, tens of thousands) of students across the state each year, and each course is highly transferrable across Ohio colleges under the state's Articulation and Transfer Policy (ODHE, 2017).

Process Management. The Collaborative is led by a cross-institutional steering committee, which recruits, manages, and compensates each course team. A given course's "content team" typically consists of 3 to 4 community college and university faculty who currently teach the course, as well as a university librarian with expertise in the subject area; the team includes a "lead" member who receives a higher level of compensation. The course's "peer review team" consists of additional community college and university faculty who are qualified to provide constructive feedback, with attention to both content quality and ease of instructor adoption and usage. Content teams begin the process with a full-day kick-off meeting, which provides training on OER in general, copyright issues, accessibility issues, and other key technical concerns. Over the next year, a professional project manager works with each team's lead to develop the project plan and timeline, facilitate the review process, and help keep the team on track to timely completion.

Most of the Collaborative's target courses already have common statewide learning objectives defined under Ohio's Transfer Assurance Guides (ODHE, 2017). Accordingly, the team's first task is to review the required statewide objectives, determine whether they should add any optional objectives for the course, and search for existing high-quality OER which meet the objectives. After mapping the landscape of existing OER and identifying any gaps, the team proposes its supplemental project plan to the steering committee. For example, the Statistics team identified an existing OER textbook which was high-quality and well-aligned to the state's objectives. Their project plan included mapping the learning objectives to the text, creating digital spreadsheets with open-source software to reduce the need for students to purchase commercial statistical packages, and creating an Adoption Guide for instructors.

In another example, the First- and Second-Year Writing teams identified several different OER which each had some, but not all, of the desired content. Thus, their plan included mapping learning objectives to the appropriate portions of four different resources; they also supplemented those materials with modules on finding and evaluating online media sources to identify credible news and information. Other teams worked to create banks of quiz and exam items for their course. When completed, each course's OER materials are posted to the Collaborative's microsite on OER Commons.[9]

[9] See https://ohiolink.oercommons.org/hubs/OOEC#groups.

Costs and Benefits. The initiative received $1.3 million for a 2.5-year award, which supports a salaried administrative coordinator, a professional project manager, training and compensation for content team members and reviewers, and an evaluation focusing on OER quality and adoption processes (anticipated completion in 2020). Additional future costs include adoption and sustainability projects to support widespread usage and maintain the quality of materials over time.

The Collaborative expects to save students over $4 million by reducing the cost of current textbooks for some of the state's highest-enrollment courses by 70%. Students will have access to materials on or before the first day of class, and will be able to print, save copies, and have ongoing online access to the materials. Faculty interested in adopting OER are assured that colleagues from across the state have curated and scrutinized the materials, eliminating concerns regarding quality, alignment, and maintenance.

Challenges. A challenge to faculty interest in OER and program recruitment – both for the Collaborative and for other similar initiatives nationwide – is the limited availability of ancillary materials, including automatically-graded online quizzes and homework assignments. Instructors of high-enrollment courses – which are also the courses with the highest potential cost-savings – rely on courseware and test banks to manage the hundreds of students they teach each semester. As mentioned above, there are institutions and organizations working to address these concerns within the OER environment. But until these solutions are ready for implementation, recruitment of faculty may continue to be a challenge for the Collaborative and other OER initiatives. Finally, the purpose of the Collaborative's initial grant was to curate and support the adoption of high-quality OER. In order to continually maintain the materials' quality, some ongoing investment will be required.

CONCLUSION

States and institutions have attempted to address the burden of high textbook costs with a variety of textbook affordability initiatives, including OER and Inclusive Access programs. Overall, there is no single approach which will fit all colleges, courses, and students; rather, a mix of approaches may be most effective. For example, Inclusive Access programs may be an important component of an overall textbook affordability approach, but they should be complemented with OER programs in order to: (1) exert competitive pressure on commercial publishers to maintain quality and keep costs low; and (2) provide options for instructors who teach courses or have teaching goals which are poorly served by textbooks available through Inclusive Access.

State system and legislative support can sustain and enhance these programs to reduce student costs and improve learning outcomes. The following points of policy are important to consider:

- **Create statewide infrastructures** that support textbook quality and affordability. For example, Ohio's statewide affordability initiatives are made possible by the infrastructures of the state's Transfer Assurance Guides, the Ohio Association of Community Colleges, and OhioLINK. Such infrastructures are necessary to bring a diverse set of institutions and stakeholders together around common goals, manage large-scale initiatives across multiple colleges, negotiate bulk agreements on behalf of small colleges who otherwise could not do so, and create other economies of scale.
- **Set non-punitive goals and metrics** regarding college textbook costs. Examples include goals focused on maintaining or lowering the average student's course-specific costs (e.g., course fees and out-of-pocket textbook and software costs) over time, and reporting requirements for each college in terms of average textbook costs for each course taught in a given academic year and the proportion of course sections participating in affordable alternatives to the traditional textbook model.
- **Provide incentives and support** for colleges to meet affordability goals. Examples include providing bonus funding to institutions that take the lead in textbook affordability and providing seed funding to state systems and individual colleges to support pilot initiatives.
- **Support research and evaluation** to assess current and future programs, identify and disseminate best practices, and share potential challenges, in order to optimize the financial and academic impact of textbook affordability and OER initiatives.

- **Create clarity** about permissible processes for implementing textbook affordability programs in order to reduce uncertainty for colleges. Examples include transparent guidelines and definitions regarding the "below competitive market rates" language in the Student Assistance General Provisions, and guidelines regarding the negotiation of Inclusive Access and bulk-purchase agreements (e.g., to what extent, and using what methods, may a college purchase materials on behalf of students and recover those costs from students?).
- **Consider the potential revenue loss and tax implications** for rural areas and small towns where campus bookstores may be a major component of the local area's tax base. Policies supporting textbook affordability should consider how to soften or compensate for this revenue loss in order to maintain the local community's support for the policy.

REFERENCES

Advisory Committee on Student Financial Assistance (ACSFA). (2007). *Turn the page: Making college textbooks more affordable.* Retrieved from https://files.eric.ed.gov/fulltext/ED497026.pdf

Baker, J., Thierstein, J., Fletcher, K., Kaur, M., & Emmons, J. (2009). Open textbook proof-of-concept via Connexions. *The International Review of Research in Open and Distance Learning, 10*(5).

Bliss, T., Robinson, T. J., Hilton, J., & Wiley, D. (2013). An OER COUP: College teacher and student perceptions of open educational resources. *Journal of Interactive Media in Education, 17*(1), 1–25. doi: 10.5334/2013-04

Bruff, D. O., Fisher, D. H., McEwen, K. E., & Smith, B. E. (2013). Wrapping a MOOC: Student perceptions of an experiment in blended learning. *Journal of Online Learning and Teaching, 9*(2), 187.

Bureau of Labor Statistics. (2018). *Consumer price index - all urban consumers, Current series* [Time series]. Retrieved from http://www.bls.gov/data

College Board. (2018). Trends in college pricing. Trends in Higher Education Series. Retrieved from https://trends.collegeboard.org/college-pricing

Colvard, N. B., Watson, C. E., & Park, H. (2018). The impact of open educational resources on various student success metrics. *International Journal of Teaching and Learning in Higher Education, 30*(2), 262-276.

Croteau, E. (2017). Measures of student success with textbook transformations: The Affordable Learning Georgia Initiative. *Open Praxis, 9*(1), 93-108. doi:10.5944/openpraxis.9.1.505

Cuillier, C. (2018). Chapter 16 - Inclusive Access: Who, what, when, where, how, and why?. In K. Jensen and S. Nackerud (Eds.), *The evolution of affordable content efforts in the higher education environment: Programs, case studies and examples.* Retrieved from https://open.lib.umn.edu/affordablecontent/chapter/inclusive-access-who-what-when-where-how-and-why/

Dadgar, M. (2012). The academic consequences of employment for students enrolled in community college. Retrieved from http://ccrc.tc.columbia.edu/media/k2/attachments/academic-consequencesemployment.pdf

deNoyelles & Raible (2017). Exploring the use of e-textbooks in higher education: A multiyear study. Educause Review. Retrieved from https://er.educause.edu/articles/2017/10/exploring-the-use-of-e-textbooks-in-higher-education-a-multiyear-study

Disbursing Funds, 34 e-C.F.R. §668.164 (2015). Retrieved from https://www.ecfr.gov/cgi-bin/text-idx?SID=016750875f0fc7e6935b58c86338ef61&mc=true&node=se34.3.668_1164&rgn=div8

Erhorn, S., Frazee, J., Summer, T., Pastor, M., Brown, K., & Cirina-Chiu, C. (2017). *SDSU's immediate access program: Providing affordable solutions* [PowerPoint slides]. Retrieved from http://www.csuaoa.org/conference/docs/2017/commercial_services/AOA_Presentation%20Slide%20Deck%20Immediate%20Access.pptx

Feldstein, A., Martin, M., Hudson, A., Warren, K., Hilton III, J., & Wiley, D. (2012). Open textbooks and increased student access and outcomes. *European Journal of Open, Distance, and E-Learning, 15*(2). Retrieved from http://www.eurodl.org/materials/contrib/2012/Feldsteint_et_al.pdf

Fischer, L., Hilton, J., Robinson, T. J., & Wiley, D. A. (2015). A multi-institutional study of the impact of open textbook adoption on the learning outcomes of post-secondary students. *Journal of Computing in Higher Education, 27*(3), 159–172. doi:10.1007/s12528-015-9101-x

Florida Virtual Campus. (2016). *2016 student textbook and course materials survey*. Retrieved from http://www.openaccesstextbooks.org/pdf/2016_Florida_Student_Textbook_Survey.pdf

Foucault, B. E., & Scheufele, D. A. (2002). Web vs campus store? Why students buy textbooks online. *Journal of Consumer Marketing, 19*(5), 409-423. doi: 10.1108/07363760210437632

Griffiths, R., Gardner, S., Lundh, P., Shear, L., Ball, A., Mislevy, J., Wang, S., Desrochers, D., Staisloff, R. (2018). *Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream's OER Degree Initiative.* Menlo Park, CA: SRI International.

H.B. 1003. 64th Legislative Assemb. 2014-2015. (N.D. 2015)

H.B. 1358. 65th Legislative Assemb. 2016-2017. (N.D. 2017)

H.B. 3152. 100th General Assemb., 2017-2018. (I.L. 2017)

H.B. 49. General Assemb., 2018-2019. (O.H. 2018)

H.B. 5579. 99th Legislature Reg. Session, 2017-2018 (M.I. 2018)

H.C.R. 3009. 63rd Legislative Assemb., 2012-2013 (N.D. 2013)

H.C.R. 3013. 63rd Legislative Assemb., 2012-2013 (N.D. 2013)

Higher Education Opportunity Act, 20 U.S.C. 1015 §§ 133 (2008).

Hilton, J. (2016). Open educational resources and college textbook choices: a review of research on efficacy and perceptions. *Educational Technology Research and Development, 64*(4), 573–590. doi:10.1007/s11423-016-9434-9

Hilton, J. L., Fischer, L., Wiley, D., & William, L. (2016). Maintaining momentum toward graduation: OER and the course throughput rate. *The International Review of Research in Open and Distributed Learning, 17*(6). doi:10.19173/irrodl.v17i6.2686

Hilton, J., Gaudet, D., Clark, P., Robinson, J., & Wiley, D. (2013). The adoption of open educational resources by one community college math department. *The International Review of Research in Open and Distance Learning, 14*(4), 37–50. doi:10.19173/irrodl.v14i4.1523

Hilton, J., Wiley, D. and Bliss, T.J. (2012), "Cost savings, learning impacts, and user perceptions of open textbooks", in OCW Consortium and SCORE Team (Ed.), Proceedings of Cambridge 2012: Innovation and Impact – Openly Collaborating to Enhance Education, The Open University, Milton Keynes, pp. 86-95.

Jaggars, S. S., Folk, A. L., & Mullins, D. (2018). Understanding students' satisfaction with OERs as course materials. *Performance Measurement and Metrics, 19*(1), 66-74. doi: 10.1108/PMM-12-2017-0059

Jaggars, S. S., Folk, A. L., & Rivera M. D. (2017). *How does OER adoption impact classroom teaching & learning?.* Session presented at the 14th Annual Open Education Conference, Anaheim, CA.

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 https://bccampus.ca/files/2016/01/BCFacultyUseOfOER_final.pdf

Kalenkoski, C. M., & Pabilonia, S. W. (2010). Parental transfers, student achievement, and the labor supply of college students. *Journal of Population Economics, 23*(2), 469–496.

LaGrone, D. (2015). Upcoming changes to books and supplies provisions expand access to credit balances. *National Association of Student Financial Aid Administrators.* Retrieved from https://www.nasfaa.org/news-item/6981/Upcoming_Changes_to_Books_and_Supplies_Provisions

Lovett, M., Meyer, O., & Thille, C. (2008). The open learning initiative: Measuring the effectiveness of the OLI statistics course in accelerating student learning. *Journal of Interactive Media in Education.* doi: 10.5334/2008-14

McGowan, M. K., & Stephens, P. R. (2015). College student textbook acquisition: An exploratory study. *Journal of Learning in Higher Education, 11*(1), 85-90.

McKenzie, L. (2019). The True Cost of Inclusive Access. *Inside Higher Ed.* Retrieved from https://www.insidehighered.com/news/2019/02/05/college-hot-water-over-inclusive-access-programs-and-student-choice

McKenzie, L. (2017a). 'Inclusive Access' takes off. *Inside Higher Ed.* Retrieved from https://www.insidehighered.com/news/2017/11/07/inclusive-access-takes-model-college-textbook-sales

McKenzie, L. (2017b). A big publisher embraces OER. *Inside Higher Ed.* Retrieved from https://www.insidehighered.com/news/2017/10/10/cengage-offers-new-oer-based-product-general-education-courses

National Association of College Stores. (2018). *Highlights from student watch attitude & behaviors toward course materials 2017-18.* Retrieved from https://www.nacs.org/research/studentwatchfindings.aspx

Ohio Department of Higher Education (ODHE). (2017). *The Ohio articulation and transfer policy.* Columbus, OH: Ohio

Department of Higher Education. Retrieved from https://www.ohiohighered.org/transfer/policy

Scholarly Publishing and Academic Resources Coalition (SPARC). (n.d.). OER state policy tracker. Retrieved from https://sparcopen.org/our-work/state-policy-tracking/

Scott-Clayton, J., & Minaya, V. (2016). Should student employment be subsidized? Conditional counterfactuals and the outcomes of work-study participation. *Economics of Education Review, 52*, 1-18.

Seaman, J. E., & Seaman, J. (2019). *Freeing the textbook: Educational resources in U.S. higher education,* 2018. Oakland, CA: Babson Survey Research Group.

Senack, E. (2014). *Fixing the broken textbook market: How students respond to high textbook costs and demand alternatives.* Washington, DC: Student PIRGs. Retrieved from http://www.uspirg.org/reports/usp/fixing-broken-textbook-market

Senack, E. & Donaghue, R. (2016). *Covering the cost.* Washington, DC: Student PIRGs. Retrieved from http://studentpirgs.org/reports/sp/covering-cost

Senack, E., Donoghue, R., O'Connor-Grant, K., & Steen, K. (2016). *Access denied: The new face of the textbook monopoly.* Washington, DC: Student PIRGs. Retrieved from https://uspirg.org/reports/usp/access-denied-new-face-textbook-monopoly.

S.F. 2362. 87th General Assemb., 2017-2018 (I.A. 2018)

Stinebrickner, R., & Stinebrickner, T. R. (2003). Working during school and academic performance. *Journal of Labor Economics, 21*(2), 473–491.

U.S. Government Accountability Office (GAO). (2005). College textbooks: Enhanced offerings appear to drive recent price increases. (Publication No. GAO-05-806). Retrieved from https://www.gao.gov/products/GAO-05-806

Wiley, D. (2014). The access compromise and the 5th R [Blog post]. Iterating Toward Openness. Retrieved from https://opencontent.org/blog/archives/3221