

# Open Textbooks

»» the billion dollar solution

2nd  
edition



# Open Textbooks: The Billion Dollar Solution

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Second Edition

Written by Dan Xie

**Student**  
**PIRGs**

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The author bears responsibility for any factual errors. The views expressed in this report are those of the author and do not necessarily reflect the views of our funders or those who provided review.



Students have the right and the responsibility to shape the future we will inherit. Our chapters and clubs on more than a hundred campuses provide the training, professional support, and resources students need to tackle climate change, protect public health, revitalize our democracy, feed the hungry, and more. Students have been at the forefront of social change throughout history, from civil rights, to voting rights, to protecting the environment. For nearly 50 years we've helped our campus communities get organized, mobilized, and energized so they can continue to be on the cutting edge of positive change. For more information, please visit our website at [www.studentpirgs.org](http://www.studentpirgs.org).



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The cost of textbooks and course materials has increased at three times the rate of inflation since the 1970s. While the astronomical increase in textbook costs has plateaued in recent years, the student experience has remained the same. Students continue to skip buying assigned course materials due to cost at similar rates<sup>1</sup>. As a result, students now spend more than \$3 billion of financial aid dollars a year on course materials<sup>2</sup>.

In the past decade, faculty, colleges and universities, and university systems have embraced the cost-saving potential of free open educational resources (OER), teaching, learning, and research materials that are openly licensed for use, adaptation, or redistribution at no cost. The first edition of this report highlighted the success of five pioneering colleges and universities who invested early in grant programs for faculty to transition from traditional textbooks to OER, create new open course materials, or peer review existing open course materials<sup>3</sup>.

Since then, faculty awareness and adoption of OER has increased significantly. In 2015-16, only five percent of instructors and eight percent of those teaching introductory courses reported using OER as required course materials. By 2019-20, the figures had risen to 14 percent and 26 percent, respectively<sup>4</sup>.

This increase in faculty awareness of OER and faculty OER adoption rates did not happen by accident. Faculty who are aware of OER initiatives are three to four times more likely to have adopted an OER textbook than those who are not<sup>5</sup>. Hundreds of colleges and universities have invested in and expanded their OER grant initiatives, open pedagogy has developed significantly, and state governments and the Department of Education have funded the development and adoption of open textbooks.

Though hundreds of open textbook initiatives have launched, little has been done to document their impact or codify best practices. In the second edition of this report, the Student PIRGs undertook the first of its kind review of OER grant programs across the country to illuminate their successes and share recommendations from practitioners across the country. **This survey covers data from 61 grant programs in 32 U.S. states and British Columbia that have, to date, saved students more than \$310 million in textbook costs. Here are our key findings:**

# KEY FINDINGS

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**Key Finding 1: Every dollar invested in OER Grants can save students \$10 - \$20.** Faculty members often continue teaching with open course materials once they switch to them, so established grant programs can see long-term returns on their investments. One-time grants to faculty lead to year-over-year savings for students. The best cost-to-return ratio of programs we surveyed was \$51 dollars saved for every \$1 invested.

**Key Finding 2: Grant programs that started during the pandemic have already saved students more than \$2.5 million.** Eighteen new grant programs, 29% of those surveyed, were started between 2020 and 2022. Many distributed their first round of grants at the time of the survey and did not have data yet on the total savings for students.

**Key Finding 3: 57% of grant programs receive little to no institutional support outside of the staff responsible for the program.** While almost all respondents used a variety of tactics to reach departments and professors themselves, more than half received either no support from any other departments or support from only one other department in the university.

**Key Finding 4: Campuses use grant programs to fit their local needs.** While most grant programs fund OER adoption, writing, remixing, or adding to an existing

OER, more than a third of institutions offer more flexible funding for projects such as creating or remixing open homework assignments or supplemental course materials, taking OER workshops, or developing OER Pathways, which are degrees designed entirely with open educational resources.

**Key Finding 5: Respondents coalesced around these two best practices for implementing new grant programs and improving existing ones:**

- 1. Build a team to support the program.** Whether the program has dedicated staff or not, establishing an OER committee can help bring important stakeholders to the table to grow the program and engage departments that may not otherwise be engaged. Program managers engaged especially with the Centers for Teaching and Learning, Student Governments, Academic Departments and Deans, and Academic Affairs to help market their programs.
- 2. Establish a record keeping system and stick with it.** Establish clear metrics before the program launches for measurements like cost savings, students impacted, and courses impacted. Practitioners found that making it clear to faculty that they were expected to submit a final report and ongoing data helped with data collection.

# FIXING A BROKEN MARKETPLACE

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Textbooks are expensive - unnecessarily so. For students and families already struggling to afford college tuition, the hundreds of dollars they must spend on textbooks often comes out-of-pocket and can be a serious barrier to student success. In 2019-20, 65% of students skipped buying or renting a textbook and 21% reported that they skipped buying an access code<sup>6</sup>.

In the textbook marketplace, the usual rules of supply and demand do not apply. Students are held captive by three publishing companies who control 80% of the textbook market<sup>7</sup>. Publishers can get away with high prices and bad practices because students need to buy the course materials that they are assigned or it could potentially impact their grades. In this captive market, students pay a price that's dictated by publishers for a product picked by their professors.

Publishers have printed new editions of books to keep students from using cost-saving measures like textbook swaps, rentals, and used book buybacks. While new editions are sometimes necessary, new books may only have cosmetic changes. Students may be dissuaded from buying or renting an older used edition if they don't know the extent of the revisions from one edition to the next<sup>8</sup>.

The rise of access codes has limited students' ability to cut costs even more.

Some campuses have signed contracts with publishers to automatically bill students for course materials on their tuition bills. Under the guise of student savings, these contracts often fail to disclose their discount structures and include provisions allowing for annual uncapped price increases<sup>9</sup>. Book buybacks, library reserves, and book sharing are facing extinction. We cannot expect the companies that created this problem to solve it.

Faculty can and should be able to assign the material they think is best to fit their courses. The push by textbook companies to convince faculty and departments on campus to assign access codes is in direct response to the growth in faculty adoption of open textbooks, also known as open educational resources or OER.

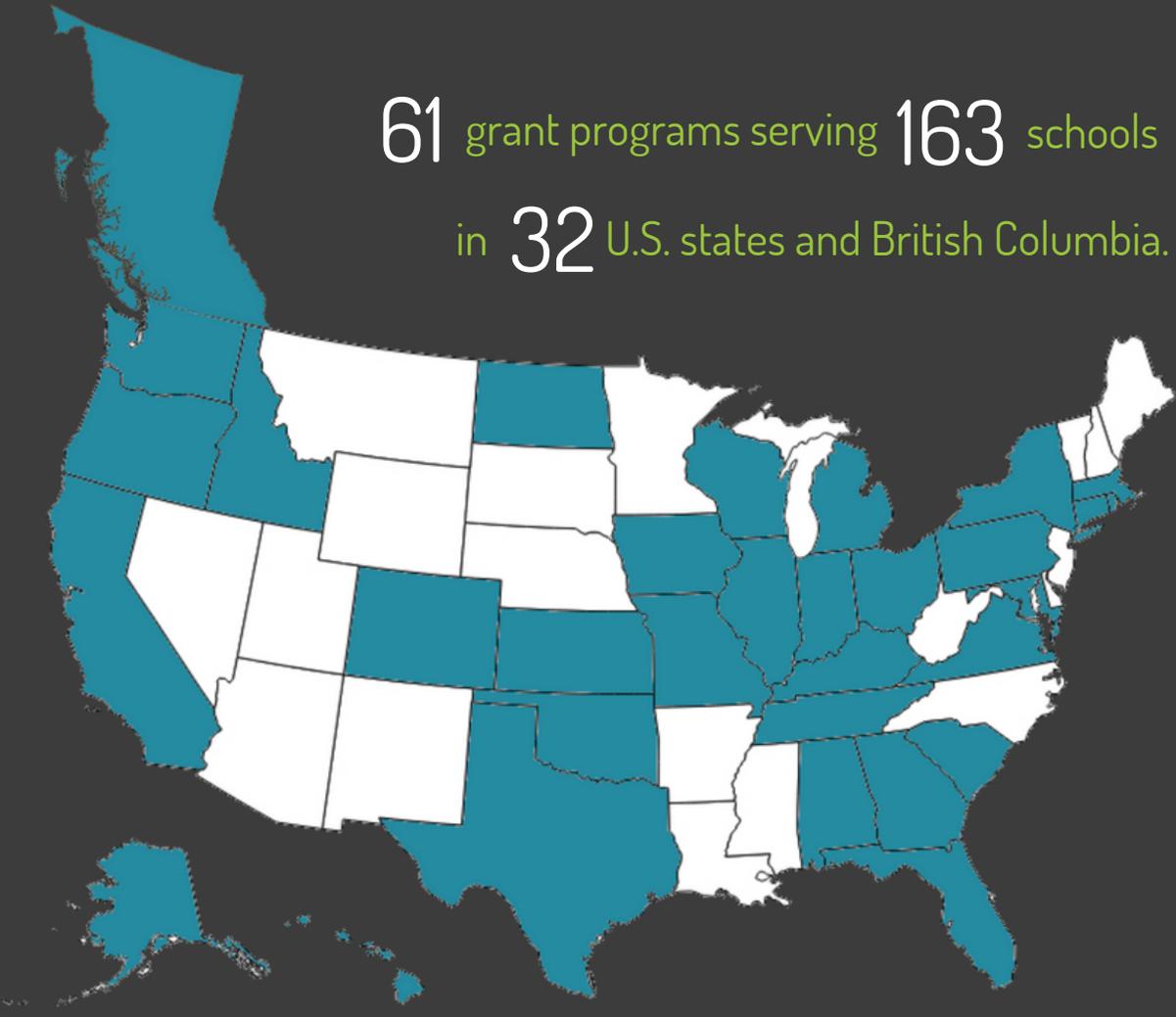
Open textbooks have turned the traditional publishing model on its head. In direct contrast to traditional publishers that strictly control every facet of access and use of their textbooks and materials, open textbooks are available online, are free to download, and are affordable in print. Open textbooks and all OER material are published under an "open" license, allowing free and unfettered public use.

In addition to its cost saving potential, open textbooks allow faculty more flexibility in editing and remixing their course materials, resulting in the same or improved outcomes for students<sup>10</sup>.



In the first edition of this report we surmised that limited adoption of OER in introductory courses could save students \$1 billion in course materials. To date, OpenStax - Rice University's educational technology initiative - has alone saved students \$1.2 billion<sup>11</sup>.

61 grant programs serving 163 schools  
in 32 U.S. states and British Columbia.



Grant programs surveyed serve ...

85 State colleges and universities

32 Historically Black colleges and universities

28 Community colleges

12 Private institutions

# OER GRANT PROGRAMS ARE COST-EFFECTIVE

The average debt for a four-year Bachelor's degree is now a whopping \$34,100<sup>12</sup>, and overall student loan debt in the United States now tops \$1.75 trillion<sup>13</sup>. Attending college is one of the most costly endeavors in a student's entire lifetime. Investing in open textbooks is one of the most cost-effective ways to combat the rising cost of higher education.

The cost-to-savings ratio varied greatly in the grant programs we surveyed, but all of the programs we surveyed have saved students more on course materials than the cost of grants themselves.

- On average, respondents reported saving their students \$14 per dollar spent on their grant programs.
- The most cost-effective program reported saving students \$51 on course materials for every \$1 spent.
- Programs that primarily funded faculty to switch their large introductory courses to OER were the most cost-effective.

Of the 61 programs surveyed, 10 were started during the pandemic and did not have data on student savings yet. Three additional campuses did not report data on the estimated savings to students.

*There have been times when students have had to wait for several weeks into the semester to buy books because of delays in receiving financial aid. That issue is eliminated by OER materials.*

Dr. Anthony DeFulio, Department of Psychology, Western Michigan University<sup>14</sup>

*I believe students shouldn't have to choose between food and textbooks. This is especially true when the textbook is only minimally useful in the course and doesn't represent how I would present the material. When I use material created by myself or my colleagues, it more closely matches our learning objectives and the way we want to present the materials.*

Tammy Nezol, Department of Mathematics, University of Oregon

*Textbooks are just one more giant financial obstacle for students pursuing education, especially in the STEM fields. My students are already paying to be at my institution. I want to minimize as many other costs to my students as I can. This is an equity and justice issue as well as an education issue to me.*

Dr. Miranda Andrews, Department of Chemistry, University of Illinois at Springfield

# NEW GRANT PROGRAMS CONTINUE TO MAKE AN IMPACT

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The COVID-19 pandemic demanded drastic changes from educators across the country as classes moved from in-person to remote learning to save lives and slow the spread of the virus. Faculty had to retool lesson plans in the new online learning environment. At the beginning of the crisis, publishers provided free webinars and access to online platforms to help faculty transition their classes<sup>15</sup>. While these measures provided a temporary solution in an emergency situation, the long-term target of this opportunistic marketing seemed to be to create more paying customers.

Our survey found that campuses across the country saw the potential for OER course materials to provide students with immediate economic relief for students during the pandemic. Eighteen new grant programs, 29% of those surveyed, were started between 2020 and the summer of 2022.

Some of the colleges and universities we surveyed leveraged assets from their Higher Education Emergency Relief Fund (HEERF) and Governor's Emergency Education Relief Fund (GEER) to fund their OER grant programs.

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Grant Programs from our survey that were started during the pandemic have already saved students more than \$2.5 million.

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The programs started during the pandemic spanned institution types.

- o 55% serve public colleges and universities
- o 22% serve private colleges
- o 11% serve community colleges

These programs were more likely to limit their funding pools to faculty who were adopting an OER, writing an OER book, or remixing or adding to an existing OER.

Ten programs did not have data yet on the total savings for students.

# GRANT PROGRAMS NEED MORE INSTITUTIONAL SUPPORT

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Respondents to the survey made it clear that the success of their OER programs was made possible by the support of important stakeholders in the campus community. One respondent said it most clearly: “*DO NOT ghettoize the program by housing it exclusively in the Library.*” While some programs have deep institutional support, many staff are operating their initiatives out of their back pockets.

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More than half (57%) of programs surveyed reported receiving support for OER development from only one other department (42%) or no other departments.



31% of programs surveyed reported receiving no institutional support for marketing their OER grant programs to faculty and departments. 26% reported receiving marketing support from only one other department.

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When asked what type of support they needed:

- 33% said they need more funding and/or more dedicated funding for their programs.
- 30% said they needed more support from departments outside of their own for marketing and communications, accessibility support, instructional design support, and impact research support. 15% of all respondents said they needed more support from the campus administration.
- 26% said they need additional staff or full-time dedicated staff.



*"Even if you can't offer much funding, having support set aside specifically for grant recipients can be a huge boon. For example, a faculty member adopting OER may feel like they can do it themselves with \$1,000 in funding, but they may be better off with the support and attention of an instructional designer who can help them implement their OER in a course, even if they do not have additional funding to do this work."*



*"A few years ago, we didn't think we'd be likely to offer an OER grant any time soon, but a great ally in the Center for Teaching and Learning made it possible. Having the right allies has made all the difference"*



*"Don't reinvent the wheel. Join the Open Education Network. They have a ton of resources, templates, etc. for teaching faculty how to use and teach with OER."*



*"We have a suite of services that we provide our faculty OER creators to support them in the publishing of their OER. We have a full-time copy editor, accessibility support coordinator, publishing services for print on demand and also publishing in Pressbooks. We also provide training on OER, Creative Commons licensing, and open pedagogy."*

# CAMPUSES USE GRANT PROGRAMS TO FIT THEIR LOCAL NEEDS

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Cost-to-savings is only one measure of success for OER grant programs. Survey respondents, especially those with more established programs, have been able to evolve to meet the changing needs of their community by expanding the scope of their grant programs.

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The initiatives surveyed reported more than a dozen applications for their OER grant programs, including:

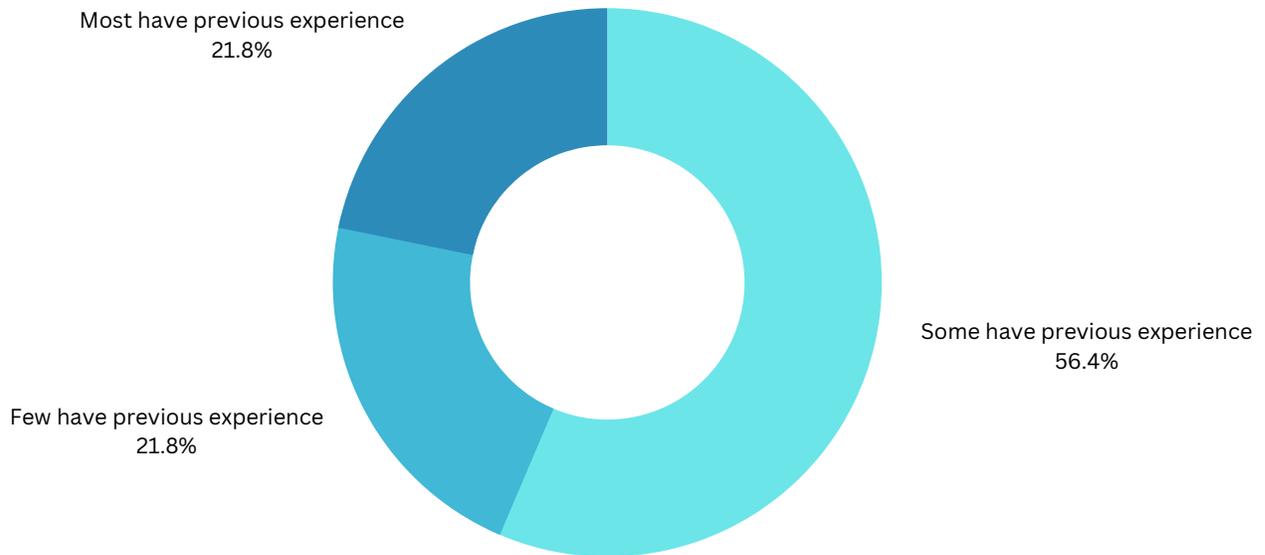
- Adopting an OER for a course
- Writing an OER
- Remixing or adding to an existing OER
- Peer reviewing an existing OER
- Creating an OER Pathway
- Contributing to OER pedagogy
- Creating or remixing OER homework
- Creating or remixing OER supplemental materials
- Taking an OER professional development workshop
- Promoting or marketing OER materials
- Contributing to OER accessibility
- Contributing to HBCU Cultural Collections<sup>16</sup>

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If faculty are largely unaware of where open textbooks are available and how to adopt them, initiatives can start by providing grants to take OER workshops or review existing OER, since faculty engagement with open content has resulted in a higher adoption rate<sup>17</sup>. When programs mature, grants can expand to funding faculty for higher level engagement with OER like contributing to open pedagogy and supporting OER Pathways.

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*Does your base of applications commonly have previous experience with Open Educational Resources?*



“ Plan for the next phases of what you will want to be supporting faculty in while implementing your current phase - be ready to support their next steps when they get there! ”

“ In its first year, the grant was very popular. In the second year, not so much, since many of our OER enthusiasts had already applied. This coming year, we plan to do more to scaffold the way to adoption for instructors new to OER. For example, we'll be running the Open Textbook Network's textbook review program this fall in preparation for the grant cycle in the Spring. ”

# BEST PRACTICES

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Respondents coalesced around these two best practices for implementing new grant programs and improving existing ones:

## 1. Build a team to support the program.

Whether the program has dedicated staff or not, establishing an OER Committee can help bring important stakeholders to the table to grow the program and engage departments that may not otherwise be engaged. Program managers engaged especially with the Centers for Teaching and Learning, Student Governments, Academic Departments and Deans, and Academic Affairs to help market their programs.

Respondents found that identifying champions from other parts of their institution helped them not only expand the reach of the existing grant program, but it also helped build support for OER in other ways such as:

- Getting opt-in from faculty members, department chairs, and deans
- Getting marketing support and stories of the impact of OER from student leaders
- Embedding OER into instructional design for new courses and courses with high DFWI rates<sup>18</sup>
- Recognizing OER efforts in tenure and promotion criteria
- Including OER in course marking
- Securing more funding for the program
- Getting assistance in web development, impact research, accessibility support, and more

*“With the support of the Vice Provost of Academic Affairs, an OER task force was established with members from the Faculty Commons, the [hub for online teaching and learning], and the Library. [The] OER proposal was prepared, [and] several presentations have been conducted with increasing attendance. Further practices are underway to promote the awareness as well as to seek possibilities for the university-wide policy and funding.”*

*“I have some departments that are OER-resistant since they rely on homework platforms that are baked into the Pearson/Cengage/Mcgraw Hill "inclusive access" products. This past year the executive director of Educational Technology Services made it a requirement that I am embedded in all new course development - his instructional design team includes me in the first meeting with faculty so that we can start the course build with a search for OER to replace costly course materials. This has been incredibly beneficial to getting the word out about what we do and has had a significant impact on OER use.”*

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2. Establish a record keeping system and stick with it. Establish clear metrics before the program launches for measurements like cost savings, students impacted, and courses impacted. Practitioners found that making it clear to faculty that they were expected to submit a final report and ongoing data helped with data collection.

“

*It was really helpful to our adopters to provide a framework for assessment - in our case, an example survey they could use with students at the end of each semester they used the open book. This took a lot of the work off the instructors and allowed our team to set some of our own priorities for what we wanted to assess.*

” “

*Develop a rubric for reviewing each proposal for an award; include a past award winner on your current selection group; have an award range not just a single amount; include assessment, inclusion and accessibility as award criteria; make it a requirement that award winners agree to complete OER usage survey up to three years after winning award.*

“

*I face a lot of challenges with continued data collection. I don't know how many students have enrolled in classes since the implementation, and the entire program was put into play before I came on board. A lot of my time is spent trying to solve puzzles in data from years ago. I would have appreciated a data collection and reporting plan, and I will prioritize that in the future.*

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# RECOMMENDATIONS

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## **Message to Librarians and OER**

### **Coordinators:**

We hope this report provides you with ideas for how to establish or improve your own programs. We've found the open education community to be a wonderful group of people. Please let us know how we can continue to support your work. We thank you for all you do to make education accessible. And an extra thank you to those who filled out our survey!

### **Recommendations to Student Leaders:**

Student voices are an indispensable part of OER advocacy. If your school has a grant program, meet with your librarian or OER staff person to help them improve and expand your school's program. These OER initiatives are often understaffed, and showing student support for the program to academic deans, provosts, department heads, and individual faculty goes a long way. Students can work to expand the use of OER by helping to educate faculty about the grants program and the deadlines for applying, and by showing support and appreciation to faculty who create or adopt OER for their courses.

### **Recommendations to Campus Presidents and Administrators:**

OER grants programs help serve the mission of colleges and universities everywhere by empowering students to access education in novel ways and by fostering a community of open scholarship and collaboration.

Campus administrators should continue to support and expand OER grant programs. The impact of these programs can be increased by helping the staff who lead the programs to connect to other parts of the institution.

Administrators can also enhance the efficacy of the programs by building OER infrastructure: Hire additional OER librarians and staff, reward faculty and staff who use OER by keeping their use of OER in mind when considering them for tenure or promotions, and make OER more accessible to students by marking OER courses in catalogs and course schedules.

Additionally, remember that not all digital textbooks bear the same benefits. Avoid "Inclusive Access" content. Inclusive Access content, or automatic textbook billing for digital course content, appears to lower the cost of textbooks, but it actually is an anti-student tool that publishing companies use to make a bigger profit. Although Inclusive Access content is generally cheaper than buying a new print textbook, it prevents students from taking advantage of used textbook markets or borrowed materials. Furthermore, students generally lose access to these materials at the end of the course, meaning that it is harder for students to continue to learn and engage with the course content after the class is over.

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### **Recommendations for Faculty:**

Faculty should continue to innovate and take an active role in expanding the OER space through OER adoption and creation. Additionally, faculty can support their campus's OER staff and multiply their impact by spreading the use of OER. Faculty who have created or adopted OER can continue to expand OER by educating their peers and department heads about the benefits of OER, the process for applying for an OER grant, and the opportunities afforded by their local grants program.

Faculty should also remember to avoid materials that take unfair advantage of students. Think twice before assigning materials with access codes, or other course content behind a paywall.

### **Recommendations to Legislators & Education Agencies:**

Legislators and education agencies should start, fund, and expand OER grant programs. These programs save students money, increase equity, and bolster access to education for everyone. OER grants programs should include funding to expand staff, so that librarians and course designers can help faculty make the transition to open course content.

# METHODOLOGY

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Data was collected from July 2022 to January 2023 using a Google form survey. PIRG students and staff built a list of more than 200 existing grant programs by searching “OER Grant Program” along with the name of a state. PIRG students and staff then emailed the survey to staff listed on grant program websites, and also called and dropped into staff offices where possible. Additional OER programs were found through higher education listservs and through a question on the survey, which asked respondents to suggest other schools to reach out to.

66 librarians, university administrators and other OER staff responded to the survey. Our analysis is based on the 61 responses that remain after removing duplicates, campuses that did not have grant programs, and campuses covered by a regional or state program. Of the 61 respondents in question, 51 were directly emailed by PIRG students or staff, and 10 received the survey from a colleague.

Our analysis should not be seen as a comprehensive review of the hundreds of OER grant programs that serve higher education institutions in the United States. Data was limited by non-responses, and by the fact that different initiatives use different methods and metrics to track their impact. For example, only 46 of 61 respondents provided an estimated total savings for students.

# END NOTES

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<https://studentpirgs.org/2015/02/24/open-textbooks-billion-dollar-solution/>
- 18 The percentage of students in a course or program who get a D or F grade, withdraw ("W") from a course, or whose progress in the course is recorded as incomplete ("I").

