

Open Educational Resources (OER) Working Group
Final Report & Recommendations
Fall 2019

Advancing and deepening the utilization of open educational resources throughout Massachusetts public higher education

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Executive Summary

The Open Educational Resources (OER) Working Group was created by Commissioner of Higher Education Carlos E. Santiago in November 2018 to:

- a) address the growing legislative interest to identify lower cost educational resources for Massachusetts students;
- b) address public higher education “Big Three” goals of increasing access and affordability, closing achievement gaps, and increasing completion rates through broader utilization of OER;
- c) identify and address the issue of equity of access and participation in higher education for underserved, low-income, and first-generation students, especially students of color;
- d) foster instructional effectiveness while lowering costs for students.

Open educational resources (OER) are any public and free teaching, learning, and research materials in any medium, which exist with an open license and that allows for access, use, adaptation, and redistribution by others with no or limited restrictions. OER enables faculty to replace costly textbooks and supplemental materials, if they so choose, which saves students significant costs of attending public higher education while still providing a quality educational experience. OER is a growing national effort that is serving as a disruptor to the oligopoly of textbook publishers that have enabled the cost of textbooks to rise 88% over the last decade (*OER State Policy Playbook*, 2018). Given the Commissioner’s desire to increase access and affordability, OER can play a significant role in lowering student costs; especially for under-served students.

The OER Working Group was comprised of faculty, librarians, administrators, students and external representatives (i.e., campus bookstore manager, employer representative, and a union representative) from twelve institutions across the Commonwealth. It was important to have broad representation of people with expertise in OER, teaching, academic technology, academic support, and diversity as well as external stakeholders. The co-chairs were Marilyn Billings, Head, Office of Scholarly Communications, University of Massachusetts (UMass) Amherst and Susan Tashjian, Coordinator of Instructional Technology, Northern Essex Community College.

In preparation for the OER Working Group kickoff meeting, an OER prevalence survey was developed and conducted by the Massachusetts Department of Higher Education (DHE) and the UMass Amherst OER Consortium. There was a 100 percent response rate to the survey that provided important baseline information for the OER Working Group and the UMass OER Consortium. The survey results guided the development of regional OER training for faculty (see Appendix B for the detailed survey results) and documented the state of OER prevalence and practices in Massachusetts.

The OER Working Group met three times as a committee of the whole and created five sub-committees that met several times between November 2018 and April 2019 in order to identify key issues, to

conduct research, and to generate recommendations. The sub-committees were as follows: Faculty Development, Infrastructure, Marketing Communications, Policy & Legislative, and Stakeholders. We were also fortunate to have assistance from other experts in the field, most notably Nicole Allen, Director of Education for Scholarly Publishing and Academic Resources Coalition (SPARC), a national OER advocacy organization, and Matt Noyes, Director of Trustee & Government Relations at the DHE.

As a result of our work, we propose the following time-based strategies and recommendations for consideration by the Board of Higher Education as the ways and means to increase the adoption and utilization of OER across public higher education in Massachusetts.

RECOMMENDATIONS

Short-Term

Recommendation 1: Adopt a Statewide Definition and Guiding Principles for OER (see pp. 17-18 for details)

Given the proliferation of definitions and multiple interpretations of the term “OER,” it is critical to establish a common definition for OER in Massachusetts. This is especially true as many textbook publishers are offering low-cost solutions. Although low-cost is better than expensive options, it is not better than no cost of which there exists an abundance of quality alternatives. After clarifying what is meant by OER, the next step is to promulgate that definition across the Commonwealth so there is consistency across the system of public higher education.

Accordingly, the OER Working Group recommends the OER definition adopted by United Nations Educational, Scientific & Cultural Organization (UNESCO) that best defines what we believe is the best fit for Massachusetts:

Open Educational Resources (OER) are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.

While a comprehensive policy framework will eventually be required, it will need to be delivered over time. We advocate that such policies adhere to the following guiding principles:

- Ensure that policies are designed to encourage and support OER use, not mandate or pressure it;
- Consider speaking to faculty leaders in advance to communicate the intent to respect academic freedom; and
- Consider including language that recognizes that legislation should not be construed to infringe on academic freedom or the right of faculty to select course materials.

These guiding principles will ensure that policies developed will support the advancement of OER utilization and minimize barriers that could impede that increased utilization.

Recommendation 2: Establish Statewide Coordination and Support for OER (see pp. 19-22 for details)

- A. Establish a statewide advisory council comprised of a representative from each of the 28 institutions of public higher education which will serve to:
 - Advise and influence the development of subsequent OER public higher education policy;
 - Advocate at the statewide and campus-level for the use of OER;
 - Provide a forum for the sharing of best practices, knowledge and information;
 - Assist each of the other campuses with OER implementation;
 - Work with the designated office/person to develop and implement the mid-term and long-term recommendations; and
 - Develop a marketing and education plan for statewide utilization.

- B. Designate an office/person within DHE who will:
 - Convene the statewide OER advisory group to share best practices and provide education and training;
 - Influence the development of OER policy;
 - Identify funding sources (i.e., federal, corporations and foundations); and
 - Coordinate with other state, regional and national OER organizations

Recommendation 3: Designate OER Courses in Course Management Systems (see pp. 22-23 for details)

OER courses should be designated in the course management systems for all public higher education so that the use of OER may be encouraged by faculty and students, and tracked and reported.

Recommendation 4: Enable, Activate, and Support Student Advocacy for OER (see pp. 23-24 for details)

The DHE should continue to partner with students, especially the Student Advisory Council, to support student advocacy for OER.

Mid-Term

Recommendation 5: Share and Encourage Faculty Development Best Practices (see pp. 24-26 for details)

We have provided a range of recommendations (see p. 24) that will provide faculty with the resources and tools they need to encourage and support greater adoption of OER.

In addition, a consistent, diverse, unified, high-quality source of OER education led and funded by the state – in addition to resources allocated through the Performance Incentive Fund (PIF) - would result not only in increased awareness and expertise, but would also lead to greater collaboration and information sharing among all institutions of public higher education. The additional funding would also be used to design and deliver statewide training for faculty, policy development, national/regional/state coordination, and for campus-level course development through the use of one-time faculty grants.

Recommendation 6: Actively Promote the Use of OER in Graduate & Continuing Education to Meet Employers’ Workforce Development Needs (see p. 27 for details)

Provide OER solutions that are free and openly-licensed, which will keep the overall costs of delivering training and education lower, so that continuing education students (matriculating and workforce development) can have more of their tuition bill reimbursed by employers’ tuition reimbursement plans. That is, if the employer can spend less money reimbursing textbooks and supplemental learning materials, they will have more funds to spend on tuition reimbursement.

Recommendation 7: Promote Discoverability Best Practices and Expand a Unified Repository to Make the Discovery of Local Content Easier (see pp. 27-28 for details)

Findability and hosting issues will only be solved with a combination of faculty and staff education and outreach. Instead of creating another statewide OER database, this statewide OER initiative presents a perfect opportunity to foster cross-segment collaboration. Specifically, the Massachusetts Community Colleges have developed an OER Hub using federal Trade Adjustment Assistance Community College and Career Training grant funds (also known as TAACCCT) that is currently housed at Middlesex Community College and is only utilized by community colleges, but could also be utilized by four-year institutions.

Long-Term

Recommendation 8: Address Issues Related to Technology and Access (see pp. 28-30 for details)

We have provided several alternative solutions that could be employed to address the issue of students’ ability to access OER learning materials in hardcopy format.

In addition, the OER Working Group wishes to explore how the Executive Office of Education or the Massachusetts Legislature could provide institutions access to technology capital funds be it through bonds or through a quasi-governmental authority. This approach will allow institutions to increase their technology capability and capacity. Typically, increases in technology spending is reflected in increased technology fees to students. However, increasing technology fees to students would ultimately offset student savings from the utilization of OER. A good wireless network, high broadband connectivity, and a solution that provides students with regular access to a device is key to providing equitable access to OER.

Recommendation 9: Recognize and Advance Open Educational Resources in Faculty Tenure and Promotion (see pp. 30-31 for details)

In order to encourage more adoption and creation of OER, it is advisable for faculty to get formally recognized for engaging in OER activities in the tenure and promotion process. Faculty, not unlike any other professionals, focus on the work for which they are recognized and rewarded. If there is a long-term desire to get more faculty to adopt OER and to develop OER textbooks and ancillary learning materials, then this work must ultimately be formally recognized as scholarship or service valued by the institution. This currently occurs on a case-by-case and institution-by-institution basis. Of course, it is understood that it will take time to address institutional culture, policy, and collective bargaining agreements.

CLOSING

The OER Working Group Final Report provides several recommendations to address barriers to increasing the use of OER and opportunities to expand the use of these resources at our public institutions of higher education. Adoption and implementation of these ideas will provide the necessary underpinnings of and foundation for advancing and deepening the utilization of OER in the Commonwealth.

Final Report & Recommendations

What is OER?

The term “OER” holds many different meanings for different people and constituencies. Even the OER Working Group realized that members held different definitions of what this included from free and open to low cost to some cost. However, our objective is to utilize OER as a means to lower the cost of public higher education, which will increase accessibility; especially for underserved students. Thus, low-cost offerings by textbook publishers, while better than high-cost options, are not necessary given the existence of an abundance of quality no-cost alternatives. Therefore, the OER Working Group recommends the adoption of the definition of Open Educational Resources from the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Further, we endorse UNESCO’s rationale in support of OER. The following definition may also be found on UNESCO’s website:

<https://en.unesco.org/themes/building-knowledge-societies/oer>

Open Educational Resources (OER) are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.

This definition was chosen because it emphasizes the role of OER as “teaching, learning and research materials;” that it is utilized for all teaching domains, i.e., “in any medium – digital or otherwise;” that it must “reside in the public domain;” and that it has “no-cost access” with “no or limited restrictions.” There are low-cost alternatives being explored by many campuses. However, it is the desire of the OER Working Group, that the statewide initiative focus exclusively on no-cost access as that will provide the largest return to the most students across the state.

Why Did We Convene the Open Educational Resources Working Group?

Commissioner Santiago has long been focused on the “Big Three” goals of increasing access and affordability, closing achievement gaps, and increasing completion rates. In addition, these strategic objectives are now aligned with an even greater focus on an equity agenda that will influence all public higher education institutions to address thorny academic success challenges that are even more of an obstacle to under-served students; especially students of color. This clear vision aims to provide a return on the cost of public higher education for the taxpayers of the Commonwealth of Massachusetts by ensuring that undergraduate students graduate on time. In addition, successful achievement of this

mission will meet the needs of our knowledge-based workforce in Massachusetts and ensure students are ready to actively participate as engaged and informed citizens in our democracy.

Simply stated, the cost of textbooks and other ancillary course materials should not be a barrier to success in higher education. Adoption of OER provides all students access to necessary textbooks¹ that will enable them to be more successful in class, persist, and complete. In addition, OER closes equity gaps because it provides students who cannot afford textbooks access to the resources they need. Moreover, several studies affirm that OER use improves student success outcomes. For example, in a University of Georgia study, DFW (Drop, Fail, Withdrawal) rates decreased for students who were eligible for financial aid and had access to OER (Colvin, Watson, & Park, 2018). Students were able to use their textbooks on the first day of class rather than waiting to buy the textbooks – if they bought them at all - until they could afford them. Students learn and perform better academically when they have immediate access to their educational materials. Thus, the adoption of OER aligns with the Board of Higher Education’s Equity Strategic Framework to support under-represented student populations because OER positively impacts student success for low-income and under-represented students².

The use of OER also enhances faculty pedagogy and produces “significant benefits in instruction and student learning experience” according to a new study from Achieving the Dream (Ashford, 2018). According to the study, over 60 percent of students reported their overall learning experience was higher in an OER course than in courses using traditional materials (Ashford, 2018; Colvin, Watson, & Park, 2018; Hilton, 2016; Hilton et al., 2016).

OER will help to advance the Equity Strategic Framework agenda given the disparities in performance in our public system from early childhood education to postsecondary education. The growing gap between white students and Latinx students in terms of postsecondary enrollment and higher education completion is an issue that needs to be addressed. Research has shown the OER initiative will address and improve the performance of all students, but especially our most under-represented students in Massachusetts through increased affordability and by closing performance gaps.

Finally, the use of OER will not have any deleterious effect on faculty members’ principle of academic freedom. In fact, the utilization of OER enhances academic freedom by providing additional resources not available to faculty using traditionally published curricular materials. OERs published with Creative Commons licenses allow faculty to Retain, Reuse, Revise, Remix, and Redistribute (the “5 R’s”) course material in ways that would otherwise be impossible if using materials published under traditional copyright (Wiley, D., n.d.).

¹ Whenever the phrase textbooks only are used, it also includes textbooks and other ancillary course materials.

² The Board of Higher Education adopted an Equity Strategic Framework in December of 2018.

In order to further highlight the positive forces that are driving, supporting, and facilitating the widespread adoption of OER in higher education, the following four compelling points are provided:

1. Addressing Equity and Improving Student Learning

“In Massachusetts, 79 percent of Latino/a undergraduates and 72 percent of African American undergraduates attend a public college or university.”³ Yet, disparities in performance remain persistent. For example, there is a 43 percent gap between white females and Latinx male completion⁴. In addition, African Americans and Latinx completion rates are consistently nine basis points behind their White comparators⁵. Given the increase representation of students of color across public higher education, this disparity must be addressed using a multi-faceted approach. One element of a comprehensive response is the adoption and increased utilization of OER in order to increase affordability, and therefore enrollment, retention, and completion.

The Center for Teaching and Learning (CTL) at the University of Georgia (UGA) began to encourage the use of OER in the summer of 2013 (for additional information on Georgia’s OER initiative see Appendix E). A study of faculty who taught large enrollment courses and were currently using an expensive textbook or textbook/technology package was conducted. Ultimately, there were over 21,000 students involved in this study. Not only did the students enjoy significant savings using work mostly created by OpenStax, there was positive impact on student learning. The study at the University of Georgia also showed a significant and positive impact on under-represented students; a major focus of the Department of Higher Education (DHE):

When considering Federal Pell eligibility, we observed an increase in A through B+ letter grades and a decrease in B though DFW grades. A significant decrease in DFW rates for Pell-eligible students was found (a 4.43 percent change) when OER was adopted as the textbook for the class. This research [also] revealed significant differences in academic performance (average final grade) for both White and non-White students enrolled in OER courses. But the magnitude in which non-White students’ grades improved is very compelling (Colvard, Watson, & Park, 2018, p. 272).

These types of findings were echoed in the Achieving the Dream (ATD) community college study where 48 percent of Pell Grant recipients and 52 percent of under-represented minorities said OER courses had a significant impact on their ability to afford college compared to 41 percent for other students (Ashford, 2018). If students have access to course learning materials, it will positively affect their in-class performance leading to student success, persistence, and completion.

³ Massachusetts Department of Higher Education (2016, p. 9). *The Degree Gap: Honing in on college access, affordability & completion in Massachusetts*. Boston, MA.

⁴ Massachusetts Board of Higher Education (January 22, 2019). *Equity Strategic Framework*.

⁵ Massachusetts Department of Higher Education (2016, pp. 60-61). *The Degree Gap: Honing in on college access, affordability & completion in Massachusetts*. Boston, MA.

Additionally, the benefits for part-time students were equally compelling. Part-time students are often overlooked in higher education, and 71 percent are self-financed (Bombardieri, 2017). This population contains many of our under-represented students and tends to be concentrated at community colleges. The UGA study found a 53.12 percent increase in average course grade and a 29.54 percent decrease in DFW rates for part-time students (Colvard, Watson, & Park, 2018).

A common concern among faculty and administrators is the accessibility of digital resources. Disability Services professionals know that online websites and resources often are not as accessible as they should be, even if they pass basic “Web Content Accessibility Guidelines.” As Camille Thomas wrote in a piece for SPARC News, “We all benefit from good user experience and access that is comprehensive, beyond compliance at the bare minimum.”⁶ Thus, the use of OER offers an opportunity to promote an expansive definition of equity that addresses issues related to accessibility for all underserved students in higher education. In addition, in order to further facilitate disability access there are three resources that are particularly helpful for faculty to consider when choosing and/or creating OER that improve student access; especially students with disabilities: a) The *BC (British Columbia) Campus Open Education Accessibility Toolkit* (2nd Edition 2018)⁷ by Amanda Coolidge, Sue Doner, Tara Robertson, and Josie Gray; b) *The Floe Inclusive Design Learning Handbook*⁸ by the members of the Floe Project of the Inclusive Design Research Center at OCAD University; and c) the adoption of Universal Design for Learning principles⁹.

2. Increasing Interest by Stakeholders

Students

At the May 1, 2018 meeting of the Board of Higher Education (BHE), the Massachusetts Student Advisory Council (SAC) presented a resolution that had been voted unanimously by SAC at an April 4, 2018 meeting by a vote of 19-0. This resolution included the following elements:

- The SAC and the BHE recognize OER to bring cost savings to students, thereby advancing the mutual goals of increasing affordability, access and student success;
- That the SAC hereby commits to continued advocacy and support of the OER initiative at the campus level, by, among other things, encouraging faculty and staff interested in the

⁶ Thomas, Camille. OER and Accessibility: Working Toward Inclusive Learning Open Education SPARC NEWS. MONDAY, OCTOBER 8, 2018. <https://sparcopen.org/news/2018/oer-accessibility-working-toward-inclusive-learning/>

⁷ <https://opentextbc.ca/accessibilitytoolkit/>

⁸ <https://handbook.floeproject.org>

⁹ <https://www.inclusive.tki.org.nz/guides/universal-design-for-learning/>

implementation of OER to participate and working with the campus administration to further research, develop and implement OER on their campuses; and

- The SAC calls upon the BHE to work in conjunction with the SAC and all public higher education institutions to explore and identify opportunities for implementing OER on a broader scale in Massachusetts.

Faculty

In a survey of over 2,700 U.S. faculty conducted by Babson Survey Group, they found that 52 percent of faculty, “believe that cost is the primary reason that not all of their students have access to required course materials” (Seaman, J.E. and Seaman, J., 2019). Given the level of funding expended for curricular and co-curricular efforts within Massachusetts public higher education institutions on student success, this serves as a clarion call for action.

Public Higher Education Institutions

Twenty Massachusetts public higher education institutions (71%) have been involved in some level of OER efforts extending back as far as 2011. More recently, the community colleges led a successful OER initiative called #GoOpen utilizing federal Trade Adjustment Assistance Community College and Career Training (TAACCCT) Program grant funds that resulted in students saving \$1.2 million and the creation of a Massachusetts Community College Hub for the storage of open resources¹⁰. In AY 2019, a total of \$250,000 in PIF dollars were awarded to a consortium led by the UMass Amherst, Worcester State University, Northern Essex Community College, and Holyoke Community College for the *Massachusetts Open Education: Achieving Access for All*; and to Salem State University for their *Viking OER and Textbook Affordability Initiative*.

3. Responding to Rising Costs

Textbook costs have increased by 88% over the last decade (*OER State Policy Playbook*, 2018). “OER can save students millions of dollars and make attending and completing college a reality” (*OER State Policy Playbook*, 2018, p. 1). Data from the Bureau of Labor Statistics (2019) indicate that the cost of textbooks has increased almost four times the rate of change of the consumer price index. The College Board estimates that the books and supplies budget will be \$1,240 for the average public four-year undergraduate student for the 2018-2019 school year. The books and supplies budget will be \$1,440 for public two-year undergraduate students for 2018-2019 (<https://trends.collegeboard.org/sites/default/files/2018-trends-in-college-pricing.pdf>, 2018). It is important to note that these numbers could be even higher for some majors.

¹⁰ <https://www.oercommons.org/hubs/masscc>

The following are examples of how state investments in OER have provided enormous financial benefits and cost savings to students (See Appendix D-F for more details about OER activities in other states).

In Massachusetts, an existing, but limited statewide community college initiative called #GoOpen, involved 9,000 students and 115 faculty members resulted in saving students \$1.2 million (S. Tashjian, personal communication, February 5, 2018). Since 2011, the UMass Amherst's Open Education Initiative has provided over \$1.8 million in savings to students. This program has also been emulated around the country (M. Billings, personal communication, April 16, 2019).

In North Dakota, an investment of \$110,000 in open educational resources in at least 650 courses across the state's public institutions affecting 15,000 students saved students between \$1.1 million and \$2.4 million in textbook costs according to the state auditor's office (insidehighered.com, 2018).

In Georgia, by the end of fall 2017, it is estimated that 35,985 students had enrolled in University of Georgia courses that switched from traditional materials to OER, and UGA estimated that resulted in a savings of \$3,266,930 (Watson & Colvard, 2018).

These data demonstrate that a small investment in infrastructure, resources, and training generates significant savings for students at a time of rapidly rising textbook costs, rising tuition and fees, and a continuing diminution of public support both at the federal and state level for higher education.

4. Increasing Interest in the Massachusetts Legislature

The Massachusetts Legislature noted this trend of rising textbook costs and the possibility of OER being utilized as a mitigating solution when it considered and passed H4200 in 2016. Amendments #996, #1222, and #1249 were incorporated into and approved as part of the FY 2017 appropriations bill authorizing the Department of Higher Education (DHE) to establish suggested guidelines and protocols in accordance with 34 CFR 668.164(c)(2) to encourage and assist colleges and universities with the implementation of programs that reduce the cost of textbooks and other educational materials.

S. 714/Redrafted as S. 2169 (Senator Walter Timilty; reported favorably on October 2, 2017) proposed legislation intended to create a special commission to investigate and study the college textbook industry. This commission was to consider an examination of the costs of purchasing textbooks and study materials, reviewing information concerning offering a choice of lower cost texts, including digital texts, and exploring the effective use of E-textbooks.

S. 304 (Senator Marc Pacheco; sent to study on April 17, 2018) proposed a commission be established to study and report on how to maximize the use of digital and open textbooks for K-12 and public colleges and universities.

The increase in the numbers of under-represented students at public institution, and the dramatically rising cost of public higher education represent a compelling call to action for the DHE, the BHE, and for public higher education institutions across the Commonwealth. In addition, there continues to be significant movement across the country in legislatures to support OER (see Appendix D, p. 40). All of

these factors led the Commissioner of Higher Education to establish an OER Working Group to address these issues and to make recommendations to the BHE that will enable the advancement and deepening of the utilization of OER statewide.

OER Working Group Charge

The Open Educational Resources (OER) Working Group was established to convene, study, evaluate, and identify ways that the DHE can:

- Address the growing legislative interest to identify lower cost educational resources for Massachusetts students;
- More effectively address public higher education “Big Three” goals through broader utilization of OER;
- Address the issue of equity of access and participation in higher education for underserved, low-income, and first-generation students, especially students of color; and
- Foster instructional effectiveness while lowering costs for students.

As a result, the OER Working Group was expected to issue this report identifying options for increasing the utilization of Open Education, OER resources and pedagogy at public institutions of higher education, and make recommendations on the following topics:

- Examine and document the current climate for and the level of participation in OER across all three segments of public higher education in Massachusetts;
- Identify barriers that preclude or limit the ability to increase the utilization of OER resources and pedagogy across Massachusetts;
- Develop a statewide OER policy to advance the utilization of OER at our public institutions of higher education including how OER may enhance teaching and learning practices;
- Identify tools and approaches necessary to successfully implement the policy; and
- Recommend how the OER Working Group may serve as an ongoing resource for the DHE to expand and deepen the utilization of OER statewide.

OER Working Group Process

Potential OER Working Group members were identified by Commissioner Santiago and confirmed by their institutional president or chancellor. The membership was selected considering the need to balance faculty, librarians, administrators; external membership (e.g., campus bookstore, union leadership, employer representative); represent all three segments; provide for geographic representation; and ensure we had specific expertise in leadership of OER, diversity and inclusion, and disability and support services. The co-chairs Marilyn Billings, Head, Office of Scholarly Communications, UMass Amherst and Susan Tashjian, Coordinator of Instructional Technology, Northern Essex Community College were asked to co-chair because they had specific and broad

local/statewide/national OER expertise and they were both leaders of the UMass Amherst (UMass Amherst) Performance Incentive Fund OER Consortium.

The Working Group held its kickoff meeting on Monday, November 26 at Quinsigamond Community College. There were presentations by Patricia A. Marshall, Deputy Commissioner for Academic Affairs & Student Success; Keith Connors, Program Director for Academic Affairs & Student Success and Matt Noyes, Director of Trustee & Government Relations, Massachusetts Department of Higher Education; Susan Tashjian on the Go Open Initiative; Stephanie Teixeira, Chair of the Student Advisory Council; Marilyn Billings on the UMass Amherst PIF Consortium Project; Elizabeth McKeigue on the Salem State PIF Project; Jody Carson on the Competency-Based Pathways in Early Childhood Education PIF Project; and Nicole Allen, Director of Education for Scholarly Publishing and Academic Resources Coalition (SPARC), a national OER advocacy organization.

The OER Working Group was tasked to identify the existing prevalence of OER across the state, research best practices, and then identify strategies and make recommendations that will enable Massachusetts to more fully embrace and implement OER. In order to do that work, the OER Working Group needed to create a division of labor. Therefore, five sub-committees were created so that each could explore a particular area in depth. The following outlines each of the sub-committees, their charge, and their membership.

Faculty Development

Charge: Focus on how to gain faculty's interest and willingness to teach with and/or create OER, consider barriers faculty face in adopting OER, and make recommendations about best practices that would ensure a successful effort.

- Catherine Etter, Cape Cod Community College (Facilitator)
- Elizabeth McKeigue, Salem State University
- Apurva Mehta, University of Massachusetts Boston
- Margaret Wong, Massachusetts Community College Council

Infrastructure

Charge: Focus on what structures and processes need to be employed that will support and facilitate increasing the utilization of OER.

- Jody Carson, Northern Essex Community College
- George Hart, University of Massachusetts Lowell
- Jeremy Smith, University of Massachusetts Amherst (Facilitator)

Marketing and Communications

Charge: Focus on what marketing strategies would need to be employed to advance and deepen the utilization of OER, what constituencies must be addressed, what are the benefits and features, what barriers could forestall success, and what tools and resources could be brought to bear to better ensure success.

- Emily Alling, Massachusetts College of Liberal Arts
- LaDonna Bridges, Framingham State University
- Karen Hines, Holyoke Community College (Facilitator)

Policy and Legislative

Charge: Focus on what issues of concern need to be addressed by policy and/or legislative action that will enable greater utilization of OER.

- Matt Bejune, Worcester State University (Facilitator)
- Millie Gonzalez, Framingham State University
- Donna Maturi, Middlesex Community College
- Matt Noyes, Mass. DHE (*ex-officio*)
- Nick Papa, Student Advisory Council, Salem State University
- Arlene Rodriguez, Cape Cod Community College

Stakeholders

Charge: Consider the issues and concerns of key stakeholders (e.g., bookstores, employers, students, and faculty) that need to be addressed.

- Barry Brown, Follett Bookstore Manager, Middlesex Community College
- Cherie Comeau, Employer Representative, Consigli Construction
- Eileen Cusick, Springfield Technical Community College (Facilitator)
- Morgan Mayo, Student Advisory Council, Middlesex Community College

The sub-committee assignments were developed by members who identified their top three choices in rank order. Eighty-four percent received their first-choice assignment and the remaining sixteen percent their second choice while still ensuring balance on each sub-committee in terms of role, institutional segment and geography. In addition, Marilyn Billings and Susan Tashjian, as co-chairs, and Robert Awkward, DHE, served on all sub-committees as *ex-officio* members to ensure effective cross-communication.

Each of the sub-committees met many times from December 2018 to March 2019 to identify the issues of concern for their specific area of focus, conduct research, and develop recommendations to respond to the issue/challenge/problem they identified.

Another meeting of the full OER Working Group was convened on Friday, February 15 at Quinsigamond Community College. The purpose of this meeting was for each sub-committee to report on their findings they had identified at that point so every other sub-committee could hear what had been identified. These presentations were delivered by each sub-committee facilitator. In this way, areas of overlap could be focused on by one sub-committee, gaps could be addressed, and feedback from everyone could be gained to ensure a comprehensive report and outcomes. In addition, each sub-committee was able to discuss among its members where they were and what needed to be done to

complete their respective work output. Each sub-committee then provided their final report, which has been utilized to create this final report.

A final meeting was held on Tuesday, April 16 at Fitchburg State University to review and discuss the draft final report before it was submitted to Deputy Commissioner Patricia A. Marshall.

Who are the Stakeholders for OER?

In order to develop and successfully implement this new initiative, it is important to identify who are the institutional stakeholders who must embrace and promote the use of OER.

Students: Students are the main beneficiaries of OER. This is why the BHE was so moved when it heard from the Student Advisory Council. Students care about reducing textbook costs and can serve as valuable allies.

Faculty: Faculty also care about the cost of textbooks, student success, and want to ensure they have the course materials from which students will learn and persist.

Librarians: Librarians are often the go-to OER expert on campus as was demonstrated by how many completed the survey at many of the 28 institutions. They can also provide support for the discovery, use, creation, and preservation of OER.

Bookstore: The campus bookstore provides course materials to faculty and students and wants to meet the needs of their stakeholders. By doing this, the bookstore will meet its financial goals while providing students and faculty excellent service.

Disability Support Services: Making OER accessible to every student is mission-critical. Thus, it is important to maximize the benefits of OER as it enhances learning for all students, especially students with disabilities.

Administrators: Administrative support must exist in order to successfully implement a sustainable campus-wide initiative across all degrees and programs. In addition, administrators value the achievement of institutional goals, including student success and completion.

Instructional Designers: This is another key campus resource to partner with librarians to assist faculty in identifying and employing OER in their courses.

Finally, there are other secondary stakeholders including parents, library consortia, employers, publishing companies, unions, and education non-profits and advocates.

Detailed Findings & Recommendations of the OER Working Group

The succeeding pages present to the Board of Higher Education recommendations as a result of the problems/issues/challenges/opportunities that were identified and researched by the OER Working

Group. They are organized by each major finding and then the concomitant time-based recommendation(s) for action.

SHORT-TERM RECOMMENDATIONS

Finding 1: Need for Clear Definition and Guiding Principles Around the Creation/Implementation of OER

There were several definitions for OER reviewed and considered by the Working Group sub-committee, including from the Office of Educational Technology, U. S. Department of Education and the William and Flora Hewlett Foundation in addition to UNESCO. Each mirrored or were derivatives of the UNESCO definition. However, after much discussion, it was agreed that the most salient elements of an effective definition had to: a) include a clear definition of OER, b) address the issue of access or barriers to access, and c) address the issue of medium.

Beyond the definition of OER, the ongoing work is to develop policies that support the advancement of OER across Massachusetts public higher education. For example, Appendix A is a vision and mission for the increased use of OER that should be adopted by the DHE as a guide for its work in this area. Further, the ongoing development of statewide OER policies may be guided by the use of the following two studies: *An Action Plan for Building a Statewide Infrastructure to Support OER in Florida's Public Institutions of Higher Education*, and *A Qualitative Investigation of Faculty Open Educational Resource Usage in the Washington Community and Technical College System: Models for Support and Implementation*. Both of these studies suggest that clear policies be created regarding the creation and use of OER. These policies will be the groundwork for successful OER efforts throughout the state and will serve to allay the fears of administrators and faculty around copyright and departmental support for the use and creation of OER.

The following are guiding principles discerned from the research that will help the DHE develop and craft clear policies going forward around the creation of OER. These are sample templates, if you will, that could be shared with each institution.

Guiding Principle 1: Clarify ownership and copyright issues around OER

In Florida's action plan, which also included a faculty survey, they found 26.4 percent of respondents using OER materials and 20 percent of respondents using library materials in their classes reported uncertainty about copyright and licensing issues when doing so.¹¹ Many colleges have policies around ownership of material created for classroom use and are often considered "works for hire" that are owned by the institution. Any state OER initiative should include recommendations on policies that allow faculty to create OER for their classes and retain ownership of the materials with the understanding that it would be a non-exclusive license, such as Creative Commons. This policy would

¹¹ OATER Task Force. (2016). An action plan for building a statewide infrastructure to support OER in Florida's public institutions of higher education: the final report of the Open Access Textbook and Educational Resources (OATER) Task Force. Retrieved from <https://libraries.flvc.org/documents/181844/182705/Final+Report+of+the+Open+Access+Textbook+and+Educational+Resources+%28OATER%29+Task+Force/e6633ffe-c80b-4ea6-af25-a1488d021fa1>.

complement existing institutional policies around the creation of course materials while employed by the institution.

Guiding Principle 2: Endorse the use of OER by individual faculty

Each institution should create policies that endorse and support the use of OER by individual faculty, which may conflict with a college or department's choice of course materials. This could have a large impact on adjunct faculty of which there are many across Massachusetts. Presuming that the chosen OER aligns with the learning outcomes for a class, it should be endorsed at both the institution and department level.¹² The proposed state OER coordinator would work with institutional Deans and local OER coordinators to develop appropriate policies for each institution.

Recommendation 1: Adopt a Statewide Definition and Guiding Principles for OER

Again, the OER Working Group endorses the use of the UNESCO definition of OER and that use be promulgated across all public higher education in Massachusetts. The UNESCO definition is as follows:

Open Educational Resources (OER) are teaching, learning and research materials in any medium – digital or otherwise – that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.

Further, we endorse the following statement and recommendations from the SPARC *OER State Policy Playbook* (2018):

When advocating for OER state policies in higher education, it is important to respect the right of faculty to select materials most appropriate for their courses. Massachusetts can most effectively advance OER by encouraging and supporting faculty to adopt OER when it is appropriate for students; never impose mandates or pressure.

- Ensure that policies are designed to encourage and support OER use, not mandate or pressure it;
- Consider speaking to faculty leaders in advance to communicate the intent to respect academic freedom; and
- Consider including language that recognizes that legislation should not be construed to infringe on academic freedom or the right of faculty to select course materials (p. 8).

¹² Chae, B., Jenkins, M. (2015). *A qualitative investigation of faculty open educational resource usage in the Washington community and technical college system: Models for support and implementation*. Washington State Board for Community & Technical Colleges. Retrieved from <https://drive.google.com/file/d/0B4eZdZMtpULyZC1NRHMzOEhRRzg/view>.

Finding 2: Lack of Statewide Coordination and Support of OER Efforts

Support for OER adoption, adaption and creation across the 28¹³ public higher education institutions in Massachusetts varies widely. While most public colleges and universities (71 percent)¹⁴ have active OER initiatives and have committed some financial and institutional support, some have not dedicated a significant amount of local resources towards OER. The reasons for this vary by institution and include a lack of administrative, financial, or staff support combined with a lack of OER awareness among faculty and support staff. Without a coordinated statewide infrastructure to assist both faculty and staff in the development and usage of OER, there will continue to be sporadic efforts across Massachusetts public higher education institutions that vary in effectiveness and quality.

Currently, institutions that wish to engage in OER efforts have few opportunities to learn from peers and experts or tap into financial resources offered by the Commonwealth. As noted above, this has led to a wide disparity in OER activity across the state. One opportunity to address this gap will be to allow disparate state organizations to work together efficiently to provide adequate support for OER. Several state entities such as the Department of Higher Education (DHE), the Legislature, Massachusetts Library Systems (MLS), Massachusetts Board of Library Commissioners (MBLC), Massachusetts Higher Education Consortium (MHEC), Massachusetts Commonwealth Consortium of Libraries in Public Higher Education Institutions (MCCLPHE), the New England Board of Higher Education (NEBHE) and others all have a potential role to play in supporting OER development across Massachusetts public colleges and universities. How to ensure collaboration among this wide array of organizations with disparate or even overlapping missions will be a significant challenge, but presents an important opportunity.

Fortunately, many of the state entities that could play a potential role in a statewide OER infrastructure have expressed their interest to participate in a statewide OER initiative. Having these groups collaborate on a project that will impact thousands of students across the state could lead to new partnerships and collaborations that would have far-reaching positive impact into the future.

As a result of a review of other public higher education systems and the prioritization of the use of OER, in our research it was found that each successful system had established a standing committee of representatives from across the sectors of higher education, including faculty, administrators from academic and student affairs, librarians, technology specialists, and representatives from the central office that would focus on academic innovation and use of technology.

In New York, SUNY's Innovative Instruction Research Council includes 16 members. Through state funding, OpenSUNY Textbooks was developed, a site of openly-licensed textbooks and courses written and curated by SUNY Faculty¹⁵. Education officials in New Hampshire launched the Academic

¹³ Although there are 29 public institutions of higher education, this initiative is focused on the 28 undergraduate-serving institutions; thus it excludes UMass Medical School.

¹⁴ Massachusetts Collaborative OER Prevalence Survey conducted Fall 2018 (see Appendix B).

¹⁵ **Open SUNY** (formerly the SUNY Learning Network) is a series of online courses and online degree programs available through the State University of New York system. The program offers online education from SUNY's 64 campuses to

Technology Steering Committee, a group charged with expanding the use of OER and developing the capacity of each institution within the University System of New Hampshire (USNH) to undertake meaningful and complementary Open Education and digital technology projects that will make student learning more effective, including:

- Transition to Open Education Resources (OER) content in order to save money for students and for USNH;
- Exploration of Open Pedagogy to strengthen learner-directed learning at USNH; and
- Augmentation of Open Access structures and protocols across USNH.

The committee also organizes the state's Academic Technology Institute, a multi-day event where an interdisciplinary team from each of the four public institutions gathers to learn from keynote speakers and workshop leaders.

A review of grant programs in other states such as Florida, Georgia (see Appendix E), Michigan, New Hampshire, New York, and Oregon (see Appendix F) identified the following key features:

- Strong statements of support from Governor and state legislatures
- Programs are linked to larger state initiatives
 - New York initiative is tied to free tuition program
 - New Hampshire initiative is tied to broader online and expanded use of technology programs
- Consistent financial and staffing support from the state
 - Funding for faculty curriculum grants
 - Creation of an OER Office and/or designation of OER staff
 - Annual convenings
- Partnership with other programs
- Centralized list of courses using OER

Recommendation 2: Establish Statewide Coordination and Support for OER

Since our research found that successful systems had established a standing committee of representatives from across the sectors of higher education, including faculty, administrators from academic and student affairs, librarians, technology specialists, and representatives from the central office that would focus on academic innovation and use of technology, the OER Working Group also recommends that a statewide advisory council be established that includes one representative from each of the public higher education institutions. This may or may not be the on-campus coordinator.

students. Open SUNY offers thousands of online courses and more than 800 online associate, bachelor, and master degree programs. Certificate programs also are offered. This work was aided by the \$8 million invested by New York State in OER.

The findings above also clearly indicate that in order to advance the use of OER, the DHE should designate a staff person to support the development of OER across the state of Massachusetts and to coordinate the work of the statewide advisory council. This staff designation would support OER development through training, funding, referrals, best practices, policy templates, and the development of a knowledge base. This staff person would coordinate efforts with DHE and some, or all interested entities. This position would also be responsible for many tasks, including, but not limited to:

- Offering educational opportunities through in-person workshops, webinars, and conferences;
- Monitoring, advocating for and pursuing federal, corporate, and foundation funding to use for OER development;
- Creating and curating a knowledge base of resources such as memorandums of understanding, peer-to-peer OER users and creators across the state, links to course-specific material, available tools and technology, and training and marketing materials;
- Identifying and working with OER experts at local institutions, which may include librarians, technologists, or instructional designers, to administer funds at individual campuses, provide course design training around OER, accessibility and universal design for learning (UDL) training, and copyright and fair use training;
- Coordinating with other organizations within and without the state that are interested in and supportive of OER;
- Administering and releasing funds for institutions across the state to use for OER development;
- Assessing OER projects within the state by gathering and analyzing data from implemented projects; and
- Educating the Legislature regarding the status of this initiative and the benefits of OER.

The OER Working Group also would encourage the State Legislature to consider providing additional funding for campus-level OER initiatives in addition to funding previously designated through the Performance Incentive Fund program¹⁶. The Massachusetts grant program could be modeled after similar programs in California, Florida, New Hampshire, and New York. States across the country that have made limited investments in OER have reported significant savings in textbook costs for students and increased student success. This is especially important when considering the Board of Higher Education's equity agenda given that several studies show the use of OER improves the performance of our most under-represented students in higher education. This specific element of this recommendation will require legislative support for additional funding above and beyond current DHE funding, including the Performance Incentive Fund, that should continue to focus on a broad array of campus-level educational innovations.

All public institutions of higher education should designate at least one coordinator to serve as a point person for OER efforts on campus who view OER through an academic lens. This could either be faculty,

¹⁶ This recommendation for additional funding is in addition to the funding institutions will also need to allocate as with all grant programs.

librarian, or instructional designer. Although other states like New York and New Hampshire have had committees to lead this work, a committee cannot lead the work at a specific institution. There must be a point person to lead institutional efforts just like there needs to be a state-wide point person to lead state-wide efforts. This is both efficient and effective. Also, memberships in national organizations like the Scholarly Publishing and Academic Resources Coalition (SPARC), Open Textbook Network (OTN) and the Community College Consortium for Open Educational Resources (CCCOER) would provide important resources and opportunities to learn about national best practices.

Finding 3: Need to Designate OER Courses in the Course Schedule

Our review identified a variety of policies and procedures among higher education institutions within the Commonwealth; some inform students of OER content while others do not. Collective bargaining concerns have been a barrier to system-wide implementation, yet some institutions have successfully implemented course designations in their course registration system.

As we know, the Higher Education Opportunity Act (HEOA) of 2008 requires publishers to disclose certain information about textbooks and supplemental materials to faculty members as they decide what books to require. They must disclose: (1) the textbook's price, in all its available formats (i.e., paperback or unbound), (2) the copyright dates of the textbook's three previous editions, and (3) the substantial content revisions made between the book's current and previous editions. Publishers that sell textbooks bundled with supplemental material must also make them available as separately priced, unbundled items. Then, higher education institutions are required, to the maximum extent practicable, to list the prices and ISBN codes of the required and recommended textbooks for each course on their online course schedules used for preregistration and registration¹⁷. A logical extension of this federal requirement would be to designate OER courses in institutional course management systems that will serve the same purpose, which is to inform students of textbook costs before they enroll.

In an ideal world, the BHE would be able to recommend this change to campuses building on HEOA. However, if institutions are reluctant to implement this recommendation, which is a small change from what is already required by HEOA, the DHE may need to explore other options to address this barrier to change. Other states have used a legislative action as an approach. To the extent that this is the selected approach, the Massachusetts Legislature would be well-informed by statutes in Virginia, Washington and Texas.

Legislative action on this issue may be necessary to achieve the following:

- Resolve existing policy and operations conflicts amongst institutions;
- Assure the matter is settled with respect to collective bargaining; and

¹⁷ www.cga.ct.gov

- Affirm students' rights to open and transparent marketing in course selection, an important corollary to the principle of Academic Freedom.

Recommendation 3: Designate OER Courses in Course Management Systems

The BHE should promulgate policy that strongly encourages each institution of public higher education to identify conspicuously in their registration systems each course for which the instructor uses no-cost (OER) course materials in order to promote open and transparent marketing to all students no matter where they are situated.

Finding 4: The Importance of Student Advocacy for OER

It cannot be emphasized enough that the driving force behind the increased awareness of OER is a result of students across the state who have highlighted this issue to campus leaders, and ultimately to the BHE through the Student Advisory Council resolution. Student voices have been very compelling as they share their stories about the negative impact rising costs of textbook and other ancillary learning materials have had on students and their learning and success. And, students have continued to make their voices heard on an issue of high importance to them.

For example, OER Working Group members Morgan Mayo, a recent graduate of Middlesex Community College, and Nick Papa, a recent graduate of Salem State University, worked closely with Matt Noyes, Director of Trustee & Government Relations at the DHE. Morgan, Nick as well as other students from Massachusetts public higher education institutions, went to the Massachusetts State House to spread awareness of OER. They met with Representative Brad Hill, Senator Walter Timilty, Senator Bruce Tarr, Senator Jamie Eldridge, and Representative James Arciero. Stephanie Texiera, former chair of the Student Advisory Council, has passionately spoken on this topic at many forums including to the OER Working Group and the Northeast OER Conference at the University of Massachusetts Amherst.

Other examples include how students spread awareness of OER at Legislative Advocacy Day, at Higher Education Advocacy Day, and by launching a state-wide photo campaign featuring students holding up posters to display their associated costs of textbooks for the academic year, and a social media campaign during National Open Education Week.

Recommendation 4: Enable, Activate, and Support Student Advocacy for OER

The DHE should continue to partner with students, especially the Student Advisory Council, to support student advocacy for OER. Efforts to increase widespread adoption of OER must continue to include students who: 1) directly bear the costs of expensive course materials, and 2) can authentically

demonstrate the benefits of OER to fellow citizens and legislators who might not fully understand cost barriers to education.

MID-TERM RECOMMENDATIONS

The mid-term and long-term recommendations are provided as they represent the totality of the OER Working Group's efforts. However, it is intended that the mid-term and long-term recommendations will be addressed by the statewide advisory council as it works to advance and deepen the utilization of OER in Massachusetts.

Finding 5: Time, Capacity and Compensation for Labor

There is a lack of consistent awareness of, and expertise in OER across the state. This has resulted in a patchwork of open education competence that varies significantly across our public colleges and universities.

One challenge to create a statewide infrastructure for OER professional development will be institutional and individual buy-in. As evidenced by the recent workshops conducted by the MA Open Education (i.e., the UMass Amherst PIF Consortium), it is not always possible to get all institutions to participate. This is most likely due to many factors such as heavy workloads, lack of travel funds, and administrative ambivalence, among other considerations. Many faculty and staff are experiencing "initiative fatigue," as many colleges statewide struggle with declining enrollments. Faculty and staff do not always have time or are hesitant to participate in one more new project. Others may not see access to affordable textbooks or materials as a problem. Therefore, they may choose not to participate in professional development opportunities that are available to them.

In most faculty grant programs, faculty who get one-time stipends for OER course development have access to a team of support professionals including Instructional Designers, OER Coordinators, OER Librarians, Media Services, Disability Services, and other staff that help with training, accessibility checks, finding quality resources, etc.

Many universities also provide on-line self-help services for faculty to learn more about OER and to discover where to look for OER in the form of online guides. These are typically created by librarians in consultation with faculty and other academic professionals.

As illustrated by national and local surveys¹⁸, another major obstacle for faculty to reconfigure their classes around open or free resources is time. Faculty consistently support the concept of OER for their classes, but are often overworked and under-compensated for time spent outside their regular duties. One solution proposed by the OER community has been to offer one-time stipends to support creativity and innovation in the service of student success such as the development of on-line courses and service-learning curriculum.

¹⁸ Seaman, J., & Seaman, J. E. (2018). *Freeing the textbook: Educational resources in U. S. higher education, 2018*. Babson Survey Group. Retrieved from www.onlinelearningsurvey.com/oer.html.

Many institutions provide incentive programs that award one-time stipends to faculty upon completion of a designed or redesigned syllabus that incorporates OER. The amounts that institutions grant for this work can vary, but there is some consistency across institutions. For example, the University of Illinois at Chicago offers faculty one-time stipends of between \$500 and \$1,000 to support the process of adopting OER, \$2,000 for modifying/adapting OER, and up to \$5,000 for creating OER. The University of Connecticut provides one-time award of \$1,000 to adopt OER in courses and offers \$250 to faculty who review an open textbook relevant to their course. At UMass Amherst, faculty can apply for one-time stipends of \$500 to redesign their course to incorporate open content, \$1,500 to \$2,500 to combine or remix new or existing content, and \$2,500 + to create new OER, such as an openly licensed textbook. The *Massachusetts Go Open Project*¹⁹ offered stipends of \$300 to support the process of OER adoption to \$2,500 for full development of materials. Salem State University's *Viking OER & Affordability Initiative*,²⁰ funded by PIF in FY2019, offered a one-time stipend of \$1,000 for adoption and \$3,000 for creation of OER.

The use of one-time stipends is even more critical for community colleges where full-time faculty teach five courses per semester. The issue of time and workload will be even greater given their current teaching load, the level of resources to support OER use is less, and the number of underserved students for whom the use of OER can have the most significant impact is more concentrated. If one-time stipends to faculty are not provided in community colleges, it further perpetuates inequity among underserved students for whom there already is a paucity of resources being allocated.

Notwithstanding, the community colleges have long been leaders in OER, especially considering the landmark work done by the *Go Open* initiative led by Susan Tashjian and Jody Carson of Northern Essex Community College that resulted in students saving \$1.2 million and the creation of a Massachusetts Community College Hub for the storage of open resources.

And if this is true for full-time faculty, the impact would be even greater for part-time faculty to conduct research and adjust their courses to use OER when they are only paid to teach. For part-time staff, a majority of faculty at many institutions, it will not be possible to encourage their transition to using OER without compensation (Phillips, 2018). And the impact is magnified where part-time or adjunct faculty may teach many sections of high enrollment courses that form part of the general education curriculum.

Recommendation 5: Share and Encourage Faculty Development Best Practices

A consistent, diverse, unified, high-quality source of OER professional development led by the state would result not only in greater awareness and expertise and would also lead to greater collaboration and information sharing and cost-effectiveness among all institutions of public higher education. When

¹⁹ https://drive.google.com/file/d/1imUmoTUh_7hUln5_NPd_d-NBLpAdTqxJ/view?usp=sharing+

²⁰ <https://libguides.salemstate.edu/oer/about>

Northern Essex Community College was awarded a *Go Open* grant in 2016 to support OER development among Massachusetts community colleges, it led to fruitful collaborations with not only other community colleges, but also with the UMass Amherst and national leaders such as OpenStax and OER Commons. It also led to the inaugural Northeast OER Summit, a multi-state gathering of OER practitioners that was organized by Massachusetts colleges in collaboration with other states.

The following are other suggestions for how to encourage greater faculty participation in the development and use of OER:

- Offer incentives via one-time stipends to faculty for the additional labor of course redesign. Incentives (i.e., one-time stipends) are a way of compensating faculty for the time it takes to learn about OER, to research options, to review materials, and to transform their courses. This approach has been used to drive other educational innovations such as online and hybrid course development and the integration of civic engagement into courses;
- Provide in-person and online expert assistance with locating quality OER, adapting it, and integrating it into courses. Consultants are usually librarians, instructional technologists, teaching and learning staff who will meet with faculty one-on-one to advise on available resources;
- Identify, share, and/or develop rubrics to assist faculty with evaluating OER resources for quality and pedagogical appropriateness (such as <https://www.achieve.org/files/AchieveOERRubrics.pdf>);
- Offer expert assistance with understanding open licensing practices;
- Provide assistance with understanding accessibility requirements of creating and linking to online materials;
- Provide one-time stipends to attend and participate in campus-wide discussions and professional development opportunities designed to build capacity for the creation and use of OER;
- Provide institutional support via operational resources to prioritize the work (such as course reduction, stipends, and funding to hire support staff); and
- Communicate a campus understanding that teaching entirely with open materials is not necessarily the goal – faculty always retain academic freedom to assign course materials that are first and foremost pedagogically appropriate. If these materials are also Open Educational Resources, institutions should encourage the use of those resources. (See Appendix C for ideas on how to increase and improve communications on campus about OER.)
- Provide consultations and access to other faculty practitioners (champions) who can advise their colleagues about the process and outcomes for their redesigned courses and/or the OER resources they created
- Provide self-paced, do-it-yourself learning tools: Below are two online, self-paced tutorials that are good models for introducing faculty to OER:
 - **SUNY OER Community Course Experience (Online courses) Link:**
<http://commons.suny.edu/sunyoercommunitycourse/>
 - **Finding Free and Open Resources: Affordable Learning Georgia Link:**
<https://www.affordablelearninggeorgia.org/help/finding-1>

Finding 6: Employer Concerns

Employers are major users of continuing educational programs for training and education at our public institutions educating their existing workforce. Efforts by public higher educational institutions to contain costs are attractive to employers by reducing the cost of tuition reimbursement expense while increasing the yield and benefit for the employer. The use of OER will also provide flexible and more affordable professional development for employers and their employees.

Recommendation 6: Actively Promote the Use of OER in Graduate & Continuing Education to Meet Employers' Workforce Development Needs

Provide OER solutions that are free and openly-licensed, which will keep the overall costs lower so that continuing education students (matriculating and workforce development) can potentially have more of their tuition bill reimbursed by employers' tuition reimbursement plans. As a result, more employees can be served, which will generate more revenue for public higher education institutions and a more highly-skilled workforce for employers.

Finding 7: Challenges with Finding Existing or Locally-Created OER

There is a perception among many faculty and staff across the state that "OERs are hard to find." This belief is a major barrier to OER adoption. In fact, the 2017 national survey of faculty OER use and awareness by the Babson Research Group found that 50 percent of faculty do not know how to find OER²¹. Part of this lack of awareness is due to the plethora of OER aggregators and databases that have been established over the last 5-10 years. Statewide, institutional, and individual OER repositories have proliferated with a variety of interfaces that often differ in what they house and collect. For example, the Open Textbook Library only collects "open textbooks." In addition to these individual repositories, there are aggregated databases, such as SUNY's Openly Available Sources Integrated Search (OASIS) or George Mason's OER Metafinder, which attempt to search across multiple OER repositories. Both search engines have attempted to solve the findability problem. Although these aggregators are a welcome addition to the field, it is too soon to determine their effectiveness in changing perceptions among faculty about findability as a barrier to OER adoption.

In addition to the challenges with finding OER, there is a lack of awareness of where to store and present newly created open content. Some institutions have repositories that house locally created open scholarly content, while others do not. These repositories are either supported by commercial vendors or local institutional teams. The ability to find OER stored in these repositories is often based on the quality of metadata and whether it is indexed by a major search engine or one of the OER-based

²¹ Seaman, J., Seaman, J. E. (2018). *Freeing the textbook: Educational resources in U. S. higher education, 2018*. Babson Survey Group. Retrieved from www.onlinelearningsurvey.com/oer.html.

repositories. Advice on where to house a collection of OER materials can vary by institution. Both discoverability and hosting issues are related and must be considered together in developing solutions.

Recommendation 7: Promote Discoverability Best Practices and Expand a Unified Repository to Make the Discovery of Local Content Easier

To solve the discoverability and hosting issues related to OER, there must be a combination of faculty and staff education and outreach. It is unrealistic to expect every public higher education institution in Massachusetts to hire an OER expert who can educate faculty on how to find and house material. Therefore, this situation presents an excellent opportunity to unify OER efforts across Massachusetts by providing expertise and resources that only our state institutions can provide. This could also be an opportunity to link OER efforts with other existing initiatives such as MassTransfer A2B Pathways where OER could be applied to foundational courses and help to lower the cost of these courses for students and thus increasing their chance of persistence and completion.

Instead of creating yet another statewide OER database, this situation presents a perfect opportunity to foster collaboration. The Massachusetts Community College OER Hub that is currently housed at Middlesex Community College and is only utilized by community colleges at an annual cost of \$1,000. It could also be utilized by four-year institutions. Training is available through the third-party vendor.

LONG-TERM RECOMMENDATIONS

As was previously stated, the intent is for the long-term recommendations to be addressed by the statewide advisory council upon its inauguration.

Finding 8: Access to Technology and Printed Material as Barrier to Increasing the Use of OER

As we continue to increase the utilization of OER, we must recognize that it may require expanded technology infrastructure. The savings for students achieved through the use of digital content must not be offset by increases in campus technology fees to pay for additional technology capacity and capability needed to realize those savings. This issue is, of course, not unique to OER; it is true for any digital materials. It is vital to consider the net cost to students, including and potential campus technology fee increases, not just the upfront savings on textbook costs.

Access to OER depends heavily on technology infrastructure as most content is delivered electronically. Educational institutions have, by and large, a robust campus network allowing students to have a good experience in downloading and reading content online. However, if the use of OER were to increase significantly, there could be issues with adequate bandwidth. Another stumbling block might be the Wi-Fi network, which tends to slow down during peak usage if many students attempt to download the same content at the same time. A good wireless network, high broadband connectivity, and a solution that provides students with regular and equitable access to a device is key. This can be one-to-one, bring your own device, or a computer lab. The issue of concern is if institutions do not have adequate capital technology, the funds will be raised by increasing student technology fees. While some cost

sharing is reasonable, if the increase in the technology fee equals or exceeds the reduced cost of textbook savings, then this will undercut the efforts to increase OER utilization.

Faculty have also expressed concern that some students learn better with printed materials. Most OER content can be printed – in its entirety or a limited number of pages at a time – at a cost usually borne by the student. Students are generally allocated a certain number of free pages at their institutions to print; which would not cover an entire Open textbook.

The following are a sampling of alternative solutions that have been employed by other institutions to address the issue of students' ability to access OER learning materials in hardcopy format.

- Students might consider using a third-party printing company to print their materials. For instance, a Massachusetts-based office supply chain has a customizable service that allows for users to upload documents, arrange them, and print them at a store of the user's choosing or to be delivered for a reasonable cost. Students can investigate such printing options, especially if they are taking more than one course with OER content.
- Commercial Solutions: Students can use www.mimeo.com or www.lulu.com to print an e-book at a very reasonable price and have it delivered to their door.
- OpenStax textbooks are available through Amazon and the college bookstore. At college bookstores, students can use financial aid funding to purchase a print copy. OpenStax recommends that faculty ask their campus bookstore to order enough books for about 10% of their class enrollment. To place an individual order on Amazon.com, visit the book's page on OpenStax.org and click "Order a Print Copy" on the left side of the page. No text costs more than \$65 (The online versions are always free.).
- Conversations need to be held with OpenStax, Lumens, TopHat, and other open publishers to provide printed copies to Bookstores so that students can use their federal financial aid vouchers to purchase print editions. Additionally, enhanced support is needed for faculty members who select OER materials from "pay wall" sources (e.g., The New York Times, The Washington Post, The Boston Globe, etc.) to link these sources to library subscriptions so that students do not have to cover subscription costs to access required course materials.
- Tacoma Community College reports that they put print copies of texts on reserve at the library and work with faculty to provide printer-friendly file versions of OER texts in their courses, so that students can print the text on or off campus if they so choose. The OER Steering Group on their campus has also worked with the bookstore and their print shop to document the workflow of faculty requesting print copies of OER texts to be made available through the bookstore, as optional printed versions, and then share that process with faculty (who have to initiate that process).

Recommendation 8: Address Issues Related to Technology and Access

The BHE should request that the Massachusetts Legislature provide institutions access to technology capital funds through access to bonds or through a quasi-governmental authority so that institutions may increase their technology capability and capacity without passing the additional cost this will incur

directly to students with increased technology fees that will offset student savings from the utilization of OER.

In addition, the statewide advisory council will incorporate faculty concerns about providing students with access to hardcopy material into OER training and the planned marketing and education program.

Finding 9: Current Impact of OER on Faculty Tenure and Promotion

Faculty may be reluctant to engage in OER creation due to the perception that it may have a negative impact on tenure. Faculty are generally rewarded and recognized for research and publishing in books, journals, and other scholarly material in their field. Producing online, open resources may not yet be recognized by institutions as a type of scholarship and service, which may make it harder for faculty to invest time in these activities.

The University of British Columbia (UBC) is an excellent example of an institution that is recognizing OER in their tenure and promotion activities:

The OER language applies to UBC’s Educational Leadership Stream for tenure and promotion, which evaluates candidates based on activity taken at UBC and elsewhere to advance innovation in teaching and learning with impact beyond one’s classroom. Open educational resources are now listed as a type of evidence that candidates in this stream could present for evaluation, which creates a way for faculty to get formally recognized for engaging in OER activities. Evidence of educational leadership is required for tenure/promotion in the Educational Leadership stream... It can include, but is not limited to....Contributions to the practice and theory of teaching and learning literature, including publications in peer-reviewed and professional journals, conference publications, book chapters, textbooks and open education repositories/resources.²²

In an article published in the EdSurge.com website, Professor James Skidmore, an associate professor and director for German Studies at Waterloo University, shares his views on why faculty do not adopt Open content in their course. Prof. Skidmore states that the lack of faculty thought leaders in open education might be partly due to the instructor already being focused on their current role. “People who are interested in the teaching aspect of the job certainly like the notion of sharing materials,” says Skidmore. But staying on top of innovative teaching methods and adopting new course materials is not at the center of every faculty member’s work. “In some cases,” Skidmore says, “research, publishing and other interests and professional duties presents obstacles to adopting OER—let alone advocate for it.” Skidmore explains, “For some people, it’s a question of how much time they want to put in their teaching. So, typically at a research institution, faculty are told to not overdo it on the teaching. [The notion is] do enough to be good, but don’t do more than that.” Joining a movement around open

²² Recognizing “Open” in Tenure and Promotion at UBC [Univ of British Columbia] – *SPARC Newsletter*, April 14, 2017.

<https://sparcopen.org/news/2017/recognizing-open-tenure-promotion-ubc/>

education, he adds, “won’t help in securing tenure” (<https://www.edsurge.com/news/2018-05-16-where-are-all-the-faculty-in-the-open-educationmovement>).

Dr. Clayton Funk, senior lecturer in the Department of Arts Administration, Education and Policy at The Ohio State University echoes this sentiment: “OER are not typically counted toward research requirements, because they are seen as lacking the vetting process that comes with, for example, peer reviewed articles” (<https://www.edsurge.com/news/2018-05-16-where-are-all-the-faculty-in-the-open-educationmovement>).

Continuing the same line, in an article published in *Inside Higher Ed.*, David Wiley, chief academic officer of Lumen Learning, a company that provides OER resources and tools, said “that many faculty members were incentivized to publish research rather than adopt pedagogical innovations like OER. At institutions where faculty are promoted and tenured primarily on their teaching, awareness and adoption of OER seems to be moving faster,” he said. Many non-faculty open education advocates are aware of this enormous barrier presented by systemic policies and the tenure and promotion process. A faculty member who is non-tenured or holds a teaching-intensive role might have an easier time to participate in critical open education discussions²³.

Recommendation 9: Recognize and Advance Open in Faculty Tenure and Promotion

Finding information regarding institutions that have created a formal process or developed a policy on integrating the use or creation of Open Education content as part of their tenure or evaluation process was challenging. The University of British Columbia (UBC) was probably the only one that had created a detailed document. What we know for sure is that if faculty do not receive formal recognition for OER creation (i.e., texts or ancillary learning tools), they are not going to spend time from the traditional duties of research, teaching, and service. This will impede our ability to get faculty to use and create OER tools. In addition, the OER advisory council will also explore this issue further with state unions to identify and to ameliorate collective bargaining barriers to increasing OER utilization.

At UBC, OER is now listed as a type of evidence that candidates in this stream could present for evaluation, which creates a way for faculty to get formally recognized for engaging in OER activities. The key is for open education scholarship to be viewed as in alignment with traditional research, teaching, and service that is already expected and that meets institutional goals. If open education is viewed as a new criterion, it will create a significantly higher hurdle to overcome. A detailed policy has been created by UBC and may be able to be modified to meet our needs to provide guidance for how to do this: [<http://www.hr.ubc.ca/faculty-relations/files/SAC-Guide.pdf>]. The advisory council should engage in conversation with faculty, unions, and administrators to address the feasibility of recognizing the creation and use of OER in promotions and tenure.

²³ Further information on this topic may be found at

<https://www.insidehighered.com/news/2017/12/19/more-faculty-members-are-using-oer-survey-finds>.

CONCLUSION

This report provides several time-based recommendations to address barriers to the use of OER and opportunities to expand their use. Adoption and implementation of these recommendations will provide the necessary underpinnings of and foundation for advancing and deepening the utilization of OER at our public colleges and universities. The need for increasing the utilization of OER is clear, compelling, and well-documented as are the benefits derived from increasing its utilization. Not only does OER utilization significantly reduce textbook costs, it also improves faculty pedagogy, increases student success and addresses issues of equity and inclusion; especially for under-represented students. Thus, state-wide support of OER is an idea whose time has arrived and should be vigorously supported by the DHE, the BHE, and the Massachusetts Legislature.

OER Working Group Membership List

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APPENDIX A

The following is the vision and mission for Open Educational Resources in Massachusetts as adopted by the OER Working Group on April 16, 2019 and will be posted on the DHE website.

Vision and Mission

The vision and mission for OER is broad, compelling, and engaging across multiple stakeholders that are dedicated to delivering quality higher education to our students.

Vision

- **Everyone** in the Massachusetts higher education community will share a basic understanding of the nature, purpose, and benefits of open educational resources.
- **Faculty** will understand the value of OER to their students and to their own pedagogy and know or will find out where to go to find support and resources at all stages of the OER adoption/creation process.
- **Faculty champions** on each campus will advocate for OER among their colleagues.
- **Students** will understand the advantages of OER materials in their education and initiate conversations with faculty about the benefits of OER.
- **Families will** consider the financial and educational benefits of OER when evaluating and choosing colleges.
- **Librarians and academic technologists** will be educated, supportive, and empowered to act as OER advocates and resources in their campus communities.
- **Provosts and academic affairs administrators** will articulate the value of OER to their faculty and students and will advocate for institutional support of OER, including support for faculty adopting or creating OER materials.
- **Legislators** will understand the value of OER to their constituents and for the Commonwealth to enable them to support legislation and funding for OER.

Mission: Inform, Educate, and Advocate

- Promote a shared understanding of the nature, purpose, and benefits of open educational resources across the Massachusetts public higher education landscape.
- Craft succinct, cogent messaging and talking points about the benefits of OER.
- Create promotional materials in a variety of formats and for a variety of audiences to expand awareness.
- Develop a network of OER champions who can act as resources for colleagues.
- Advertise workshops and professional development opportunities.

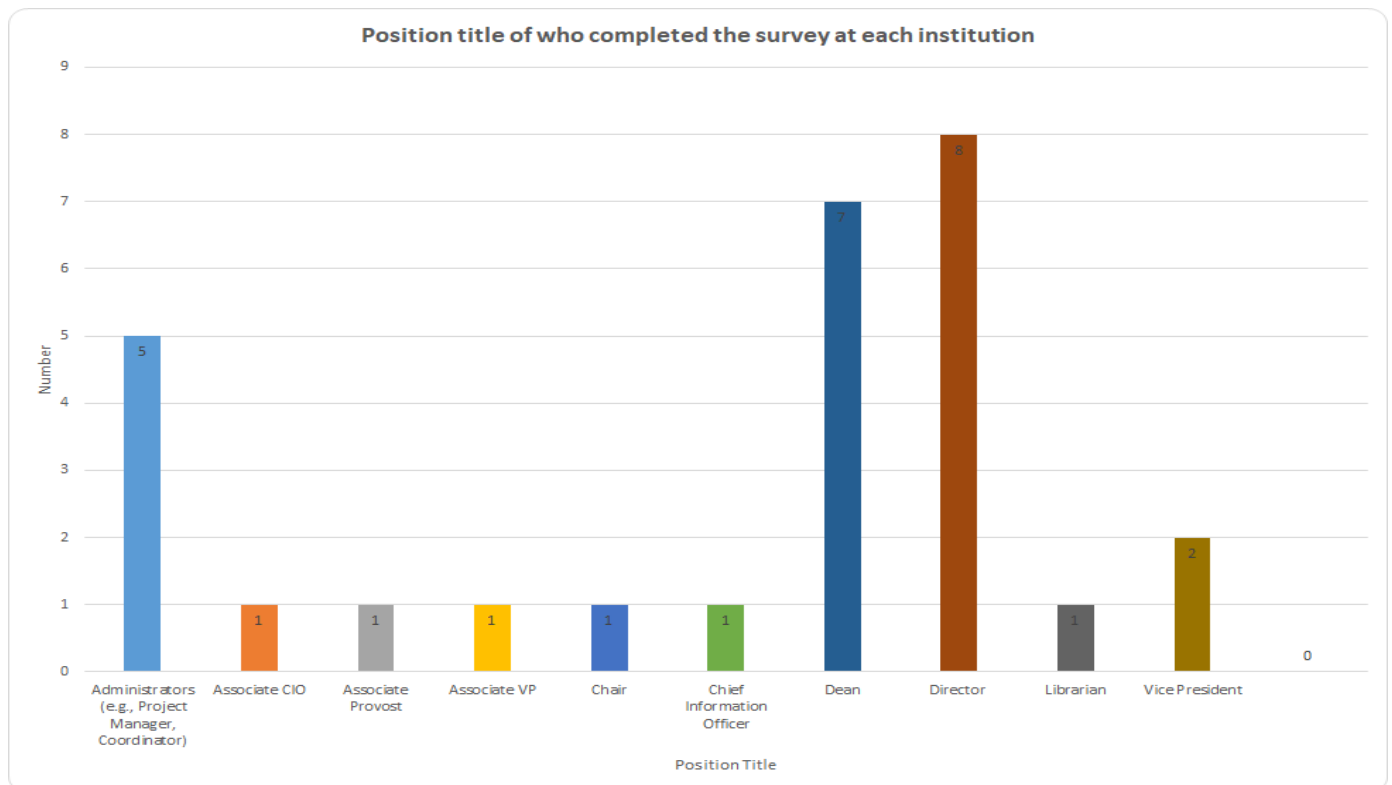
APPENDIX B

An OER Statewide Institutional Survey

In order to establish a baseline for our work in Massachusetts, we recognized that we needed to conduct a survey of public institutions across the Commonwealth. This survey would enable us to learn where every institution was at the beginning of the initiative so we could measure the impact of this work over time. The University of Massachusetts Amherst Consortium undertook the effort to conduct a survey of all public institutions of higher education. Survey Monkey was utilized and sent to the chief academic officers (CAOs) at the 28 undergraduate-serving public institutions of higher education. The CAOs were asked to distribute the survey link to the OER point person on their campus. This individual may have been an administrator, librarian, or faculty member.

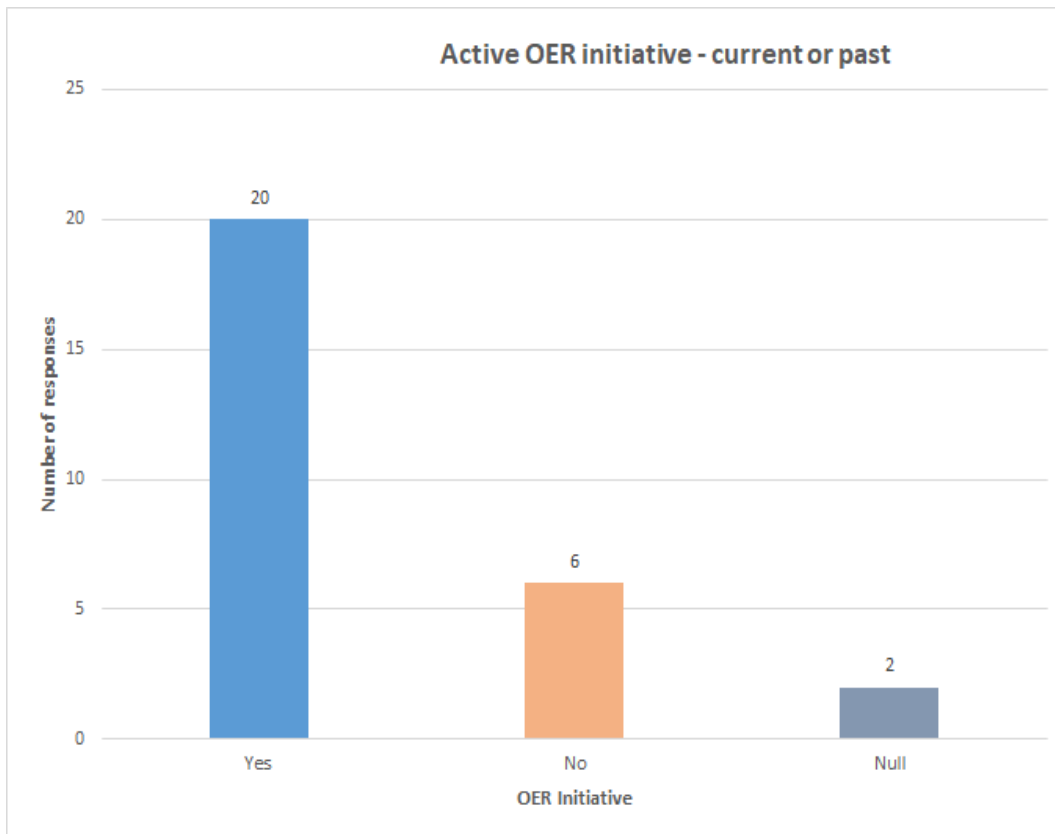
Thankfully, we enjoyed a 100 percent response rate. The outstanding response rate is extremely important because it means we now have a detailed sense of the state of the use of OER in Massachusetts public higher education. And the reality is that progress was uneven from institutions with virtually no tangible efforts to ones with longstanding and concrete actions. The survey was comprised of ten questions. Commentary will be provided for each of the survey questions.

Figure 1: Who at your Institution Completed the Survey?



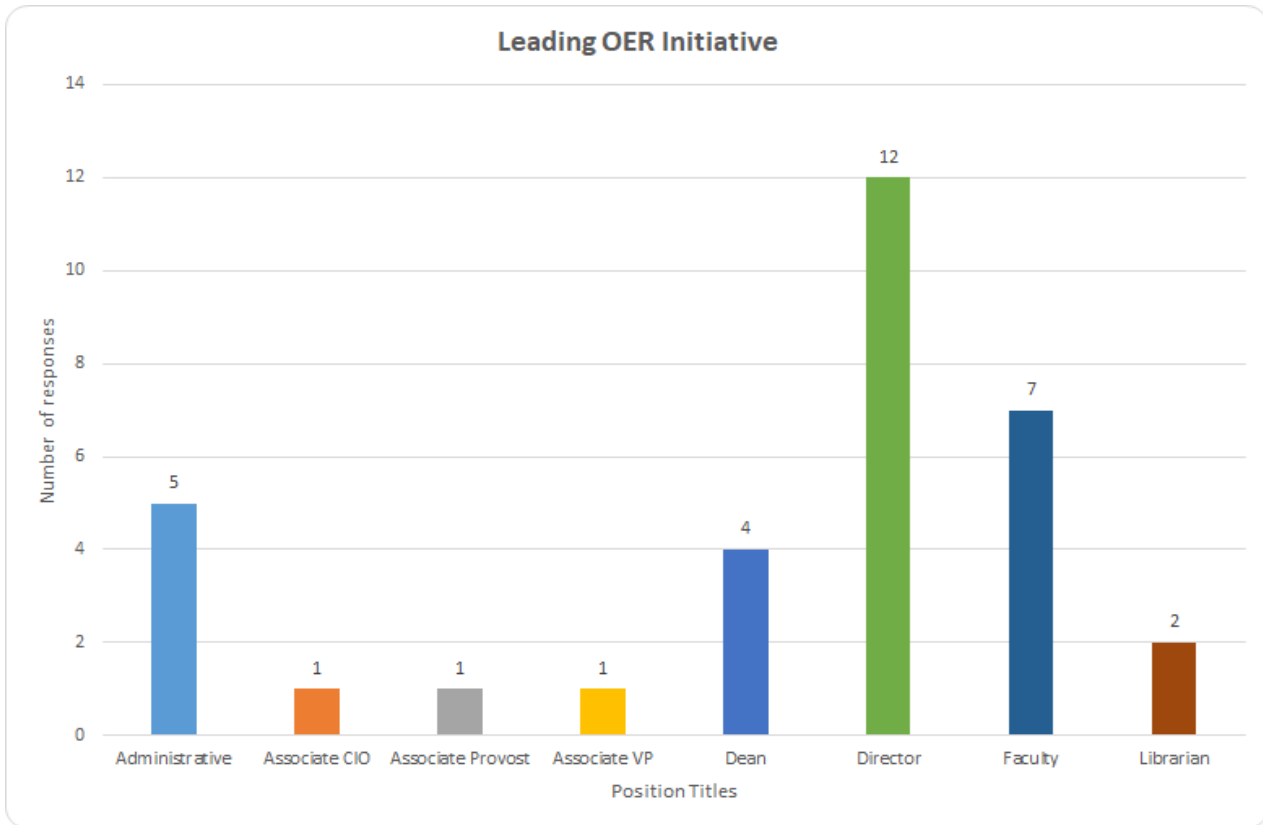
As can be gleaned, most (20 out of 28 or 71%) of the survey completers were directors, deans and administrators.

Figure 2: Do You Currently Have an OER Initiative at Your Institution or Have You Had One in the Past?



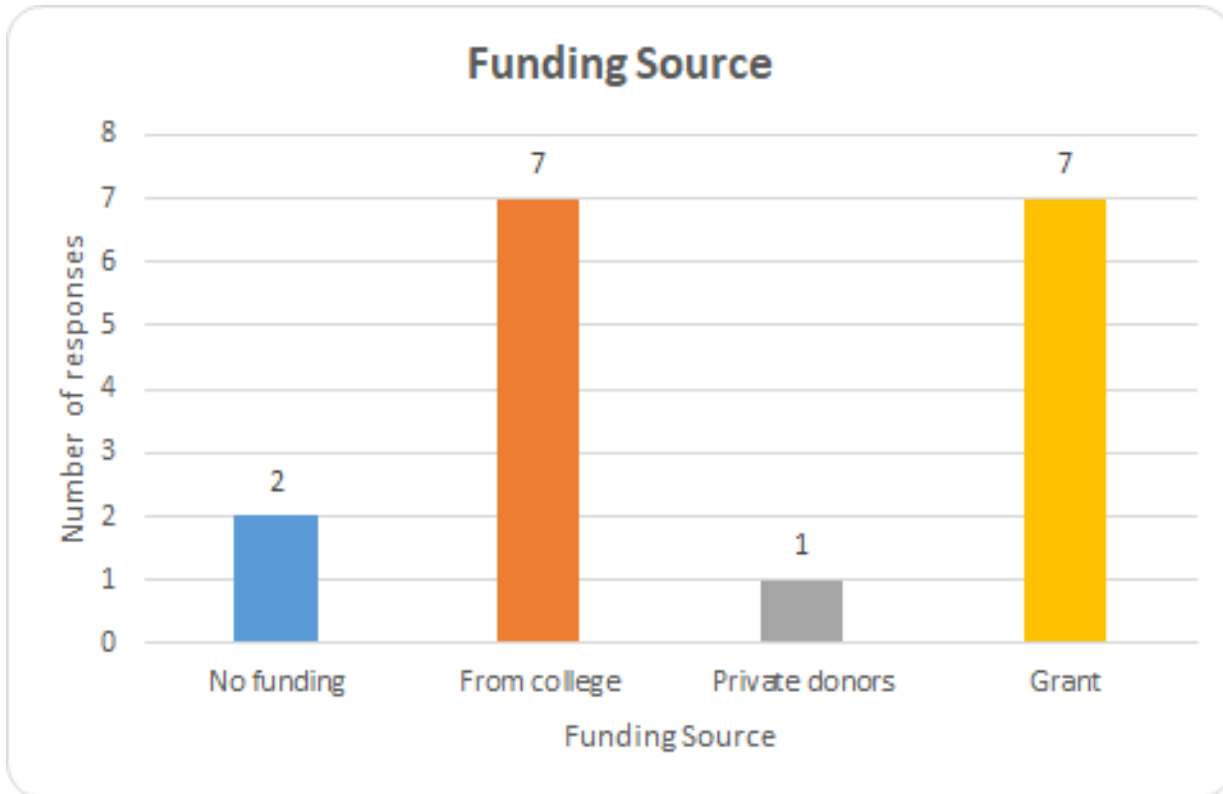
Again, 20 out of 28 (71%) institutions reported that they had some level of OER activity. Of course, this question does not make clear what level of activity; just that there was some. Six institutions had no activity and two did not answer the question (Null). The OER activity that was occurring extended from 2011 to Fall 2018.

Figure 3: Who is Leading the OER Initiative at Your Institution?



The most prevalent leaders of OER on our campuses include directors. Within that category, six of the directors are library directors, four are directors of academic innovation/distance education/academic technology/online education and the rest vary.

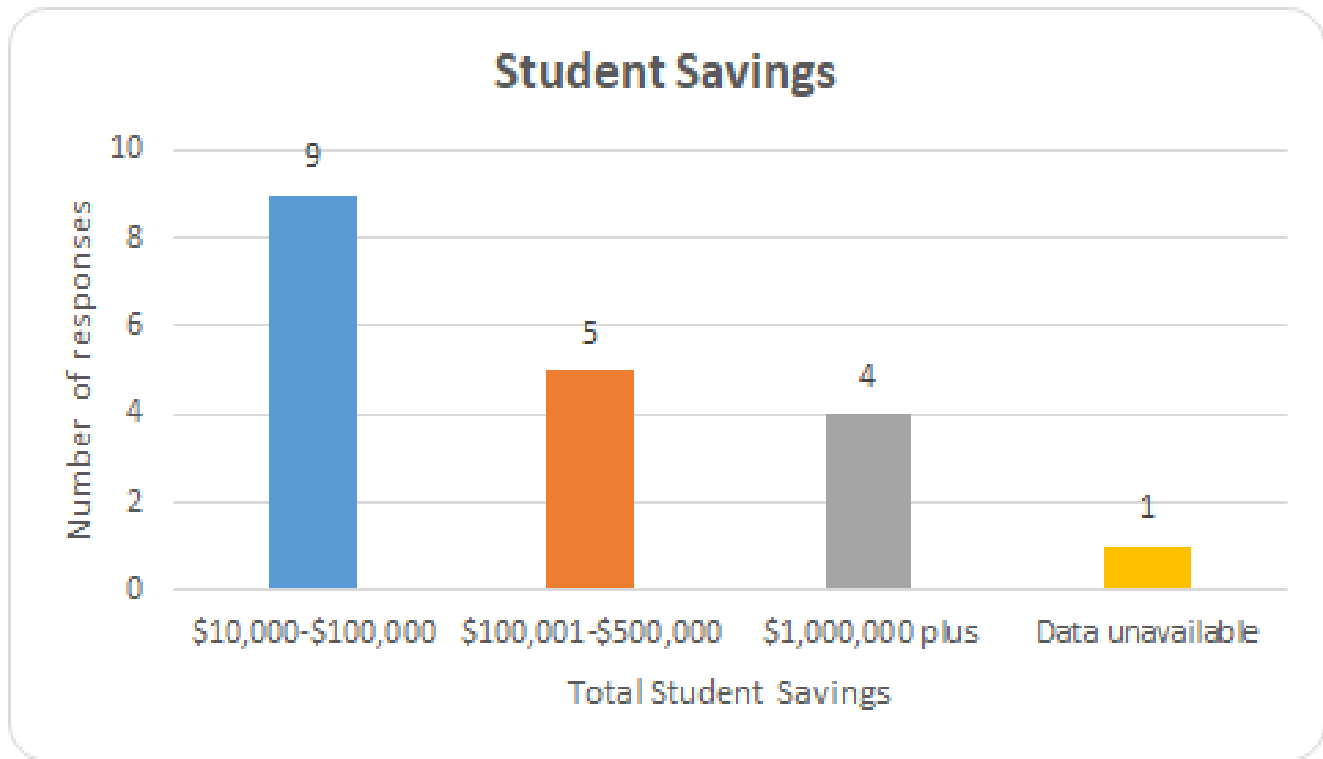
Figure 4: Provide Us a Narrative Summary about OER at Your Institution Including: Funding Sources



Half of the institutions stated that the most prevalent sources of funds for OER initiatives came from the institution itself, TAACCCT grant, the DHE's Performance Improvement Fund (PIF) or a host of other grant sources.

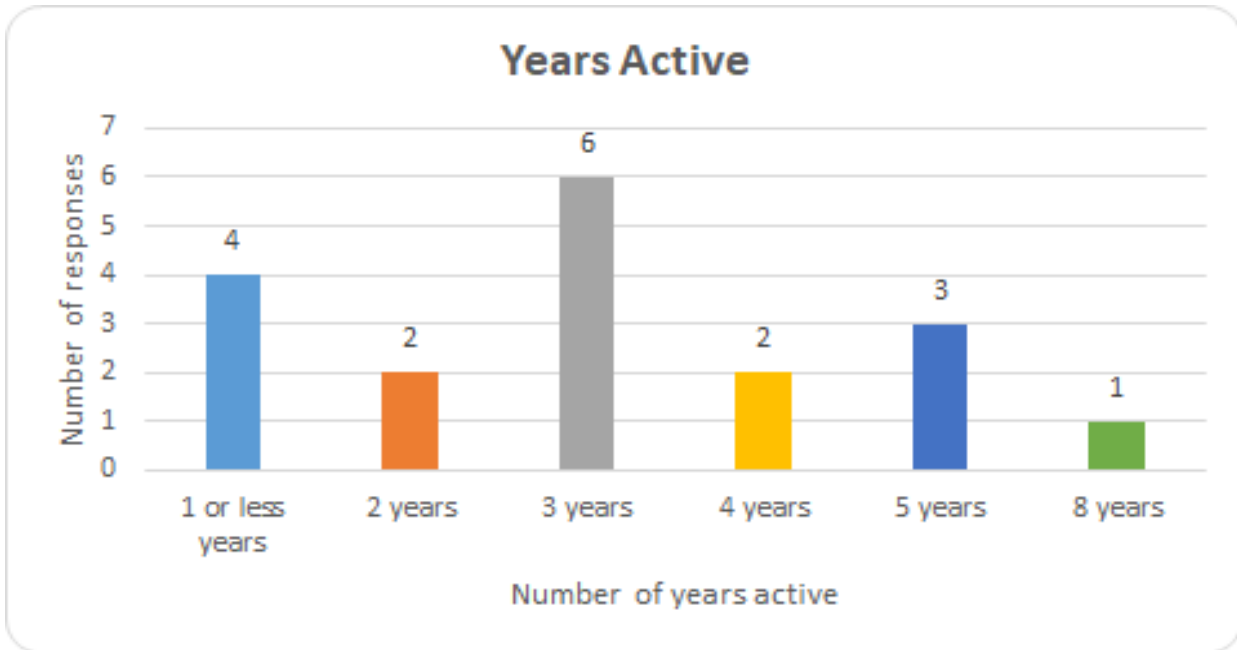
The next three questions were asked to gain a sense of the breadth and depth of institutional OER programs versus simply knowing they had an initiative.

Figure 5: Provide Us a Narrative Summary about OER at Your Institution Including: Student Savings



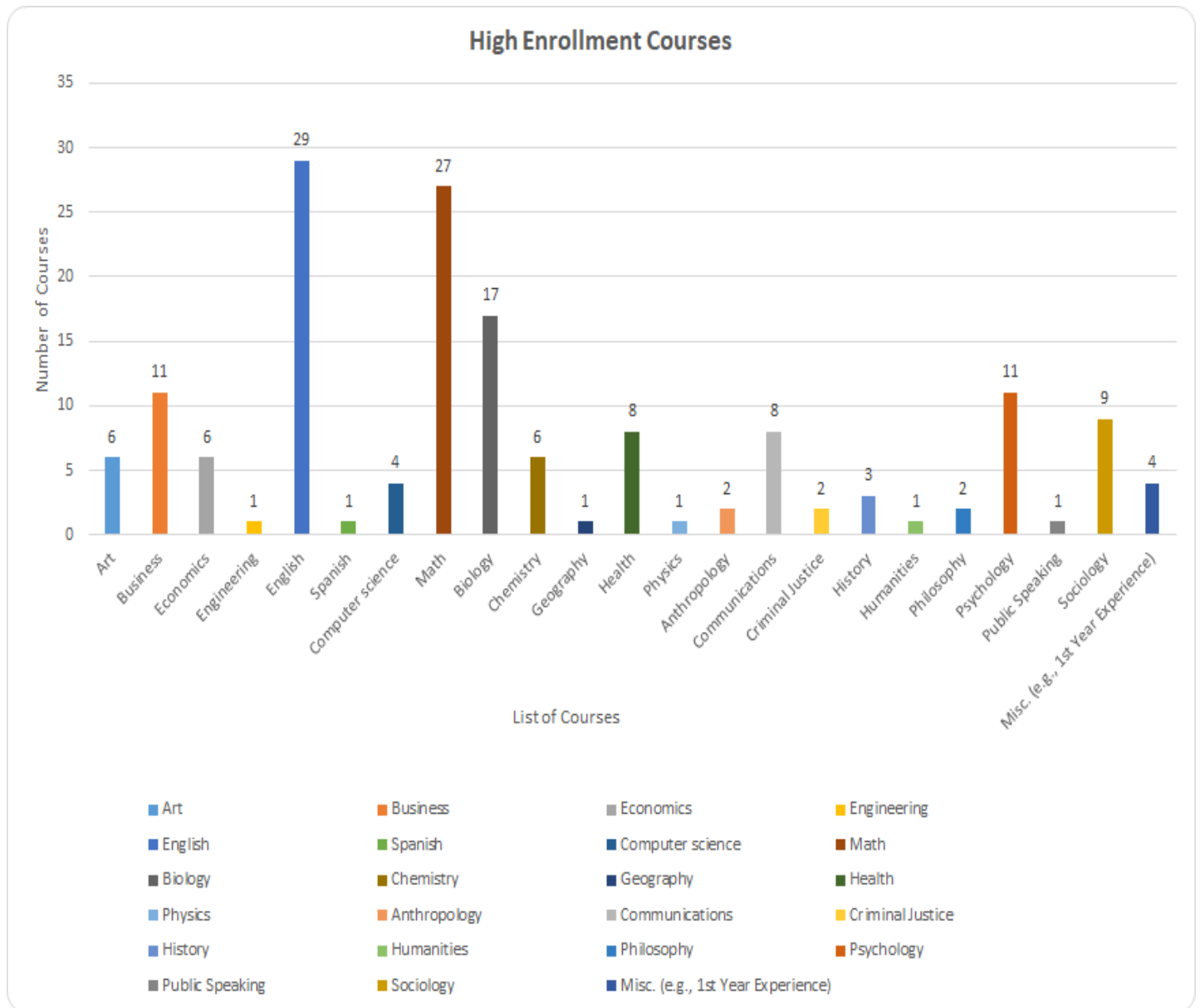
Of the 19 respondents, almost half (47%) have seen a savings of \$10,000 to \$100,000 and an additional 26% have had student savings of \$100,000 to \$500,000. Only 21% have had student savings over \$1,000,000. The savings reported reflect all student textbook savings tracked from when each institution began its OER initiative. Each institution used different methods to determine cost savings, e.g., the average method, the actual cost method, and other approaches. In addition, these variations could also reflect the number of courses using OER and the size of student course enrollment, which would impact the number of students served. As this work continues to advance, we will provide a standard metric for measuring savings and ask institutions to apply it retrospectively for correct comparisons.

Figure 6: Provide Us a Narrative Summary about OER at Your Institution Including: The Number of Courses Utilizing OER



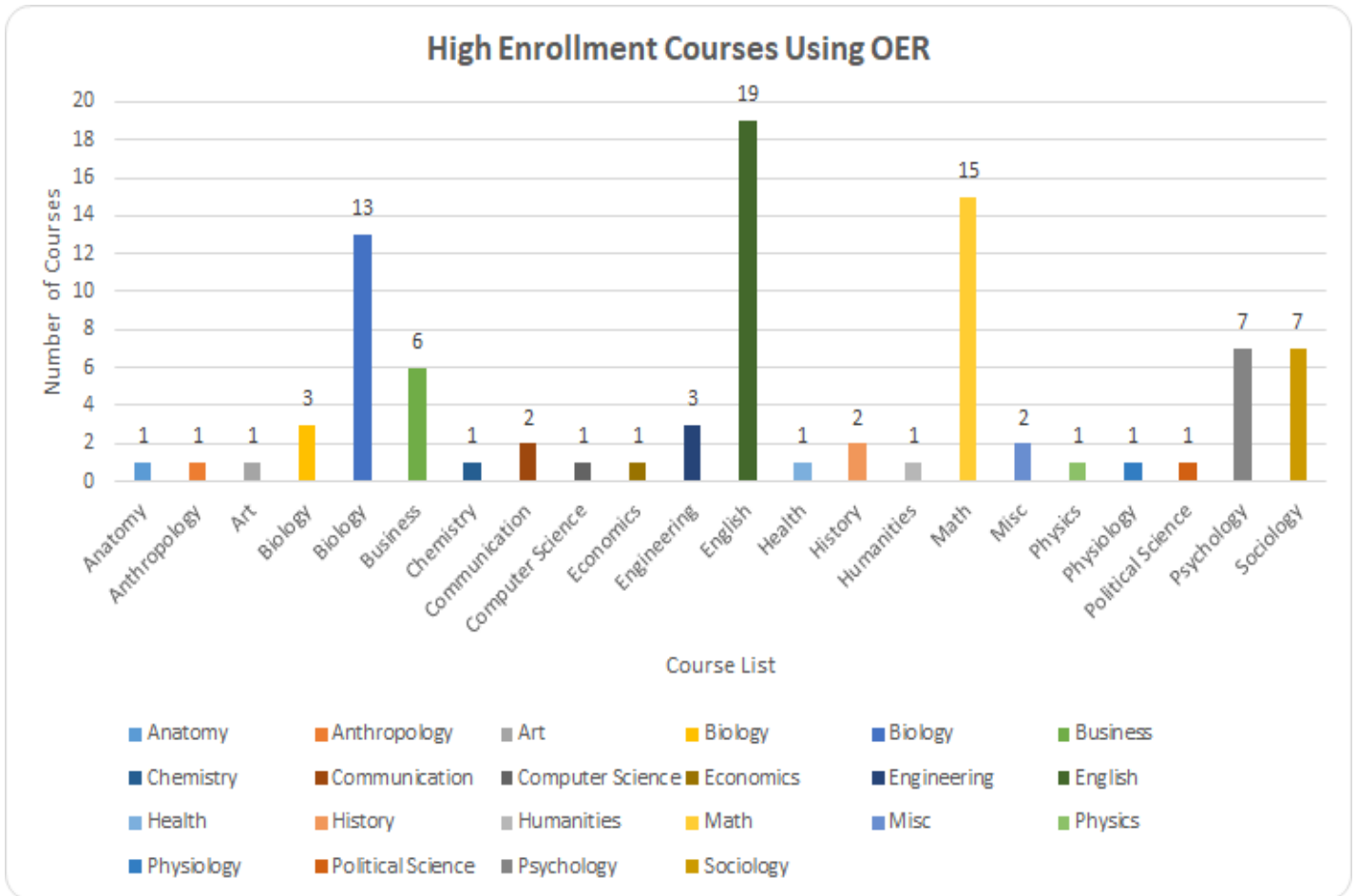
The most prevalent number of courses using OER was 11-20 courses at four institutions followed by 91 or more courses at two institutions and 1-10 courses at two institutions.

Figure 7: What are the High Enrollment Courses at Your Institution?



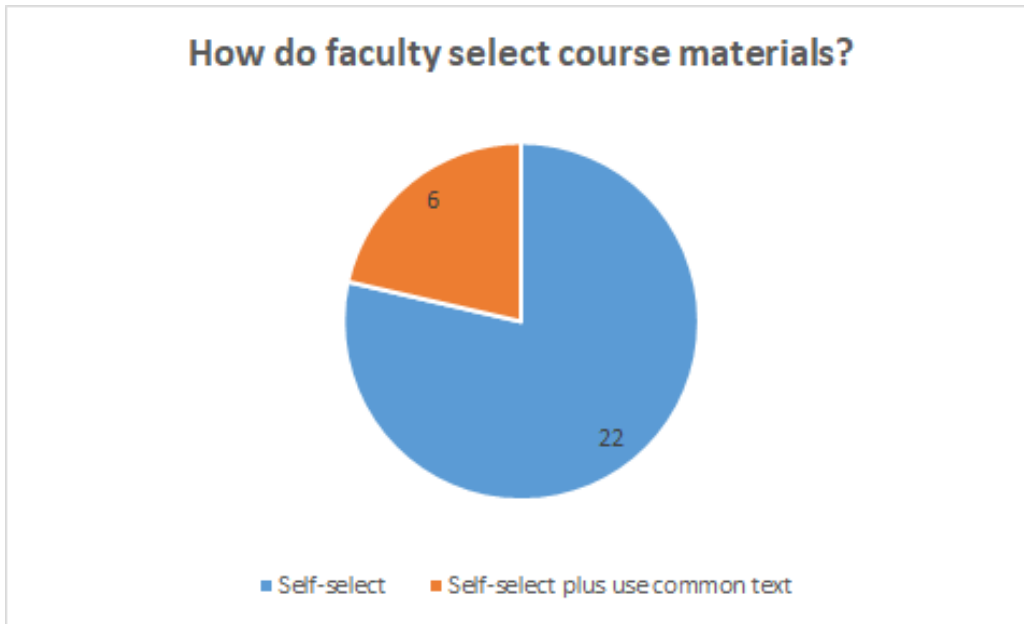
In this figure, we were assessing what are the high enrollment courses at public institutions over the last two years. This is the number of courses (not sections) reported by each institution aggregated. As can be seen, the most prevalent courses are in English (29), Math (27), and Biology (17). The second-tier courses included Business, Health, Communications, Psychology and Sociology. This provides a sense of what courses to target for OER utilization as these will generate the largest student savings.

Figure 8: Which of the High Enrollment Courses at Your Institution Use OER?



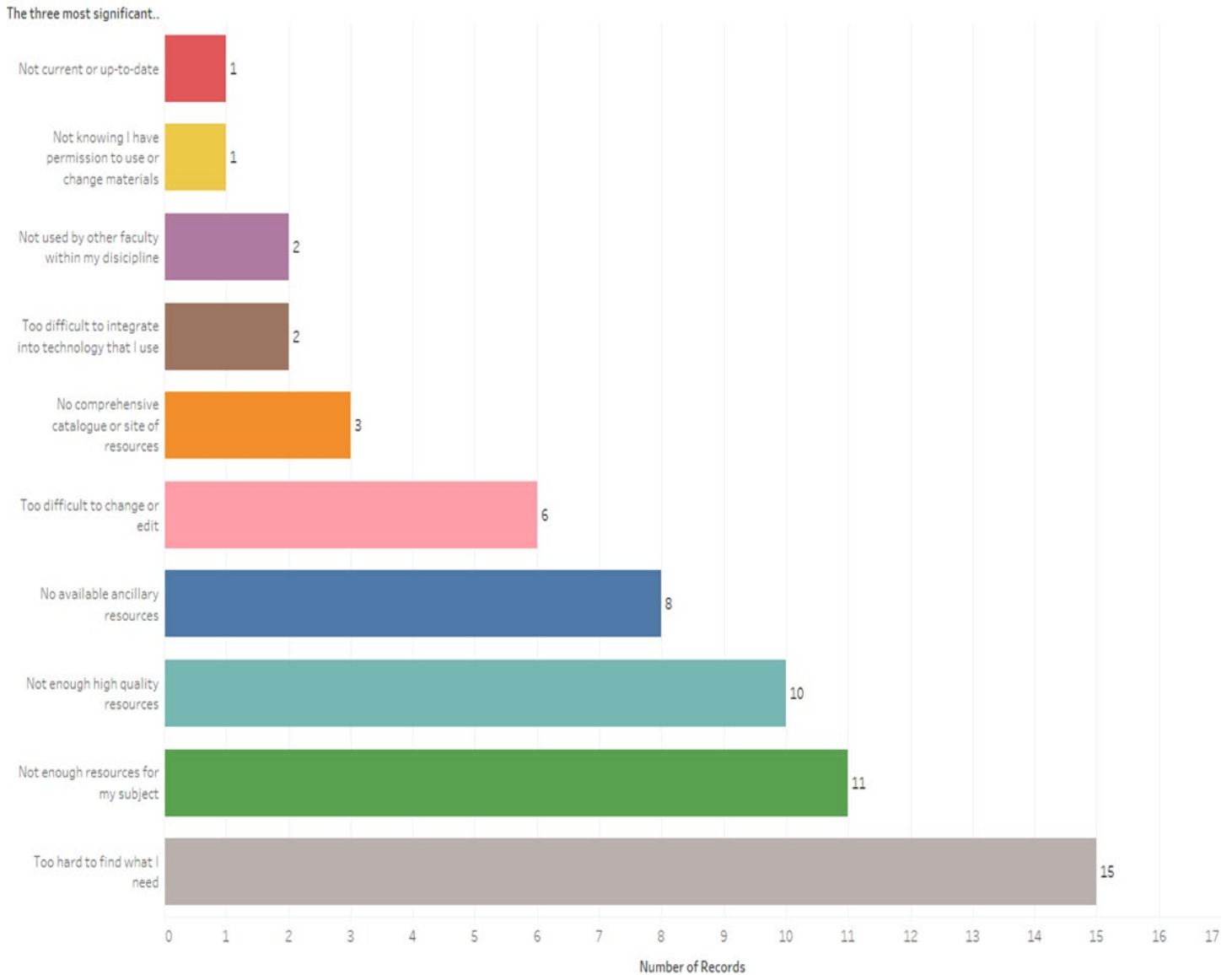
This figure shows which of the high enrollment courses are currently using OER. Again, the most prevalent are English (19), Math (15), and Biology (16). The second tier included Business, Psychology and Sociology. The same comment applies about the reporting, i.e., the total number of courses (not sections) per institution aggregated.

Figure 9: How Do Faculty Select Course Materials?



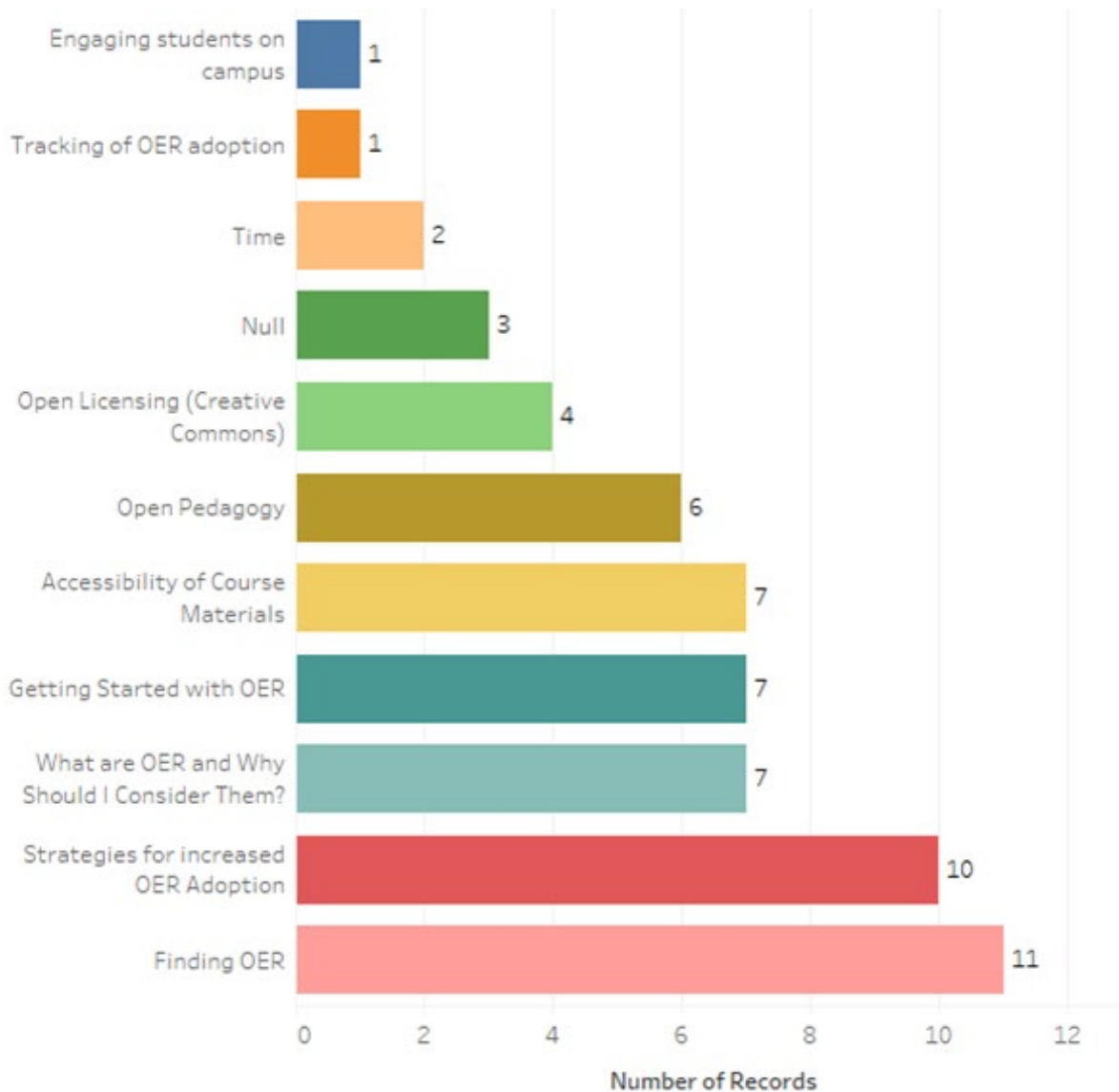
As would be expected, faculty make the decision about course materials, whether it be them solely (about 80%) or them using a common text across multiple sections for the same course.

Figure 10: What are the Three Most Significant Deterrents to Faculty Use of OER at Your Institution?



The three most significant deterrents to faculty’s use of OER at their institution are: a) too hard to find what I need, b) not enough resources for my subject, and c) not enough high-quality resources. This information provided very useful insight for the development of faculty training. In addition, it also validates the research that was found and utilized as the basis for recommendation no. 2.

Figure 11: What Types of OER Training Would be Most Useful to Your Institution?



Respondents provided very clear feedback as to what areas OER training needed to be addressed to be useful and effective. Since faculty are on the front line of this work, it is critical they are armed with the necessary tools and resources to enable them to adopt and continue to utilize OER. Finding OER and strategies for increasing the adoption of OER were far and away the most prevalent. Those two categories were followed by what are OER and why should I consider them, getting started with OER, and accessibility of course materials. Again, this survey result also validates recommendation number 2.

APPENDIX C

Institutional Marketing

Context:

The OER advisory council will undertake the development of a statewide marketing and education plan. Each institution will also need to create a plan to advance OER at their own campus. One way for campuses to approach this task is to conduct a strengths, weaknesses, opportunities, and threats (S.W.O.T.) analysis (see below). Additionally, campuses are encouraged to connect with other institutions that are promoting OER. Finally, suggestions are provided for the elements to use in an effective marketing campaign.

Elements of a S.W.O.T. Analysis:

- Identify champions (Strengths - internal)
- Identify barriers (Weaknesses - internal)
- Identify areas for growth (Opportunities - external)
- Identify areas that could impede growth (Threats - external)

Customize the messages for each group of stakeholders and include the OER definition, value, and offerings (Dali, 2018). Audiences to consider in planning include:

- Institutional leadership
- Academic Affairs
- Faculty
- Students
- Librarians
- Academic Technology/Centers for Teaching
- Legislators/Public
- Bookstore
- Employers

Tools for Support:

- DHE OER Toolkit
 - Fact Sheet (use existing sites)
- Resource on website
- Develop stories to share:

- What is a “fair” price for a textbook?
<https://docs.google.com/presentation/d/1RsJ1A9GkdIpx849ii1tzXXI4rXNfELk1E21Gy0YldMU/edit?usp=sharing>
- Identify champions at each institution and use them to reach stakeholders campus-wide (Dali, 2018)
- Market the benefits of OER to faculty (Stansbury, 2015)
- Develop press releases
- Conduct a Twitter campaign
- Develop a 30 second elevator pitch
- Strong statements from governor and state legislators

Suggested sites to reference:

- Open Oregon <http://faq.openoregon.org/>
- Affordable Learning Georgia <https://www.affordablelearninggeorgia.org/>
- OER Champion Playbook <https://lumenlearning.com/champion-playbook/>
- SPARC: Open Education <https://sparcopen.org/open-education/>

Marketing OER on Your Campus and Beyond

Traditional Media

- Student Newspaper
- Student Radio Station / PSA
- Press releases
- Letters to editor / local newspapers
- Reach out to local radio/TV programmers
- Have one or more campus OER champions register with your school’s communications office as an expert source for media

Face-to-Face

- Faculty meetings
- Department meetings
- Relevant faculty governance committee meetings
- Department chairs meetings
- Senior staff meetings
- Board of Trustees
- Student government meeting
- Relevant student organization meetings (e.g. PIRG)
- One-on-one meetings with faculty
- Create community of practice on campus
- Offer workshops, group webinar viewings

Social Media

- Campus Marketing/Communications Office
- Library Social Media/Announcements
- Center for Teaching Social Media/Announcements
- OER champions' personal social media accounts

Signage & Web Presence

- Flyers/Postering
- Slides on digital signage around campus
- Website
- LibGuide

Graphic Identity

- Logo
- Co-branding

Coalition Building

- Faculty early adopters
- Academic technologists
- Center for Teaching Staff
- Librarians
- Student Affairs

APPENDIX D

NATIONAL LANDSCAPE

The following is a current update on what is happening legislatively in other states to advance the work of OER.

In **Hawaii**, the state House has proposed asking the University of Hawaii to conduct an OER feasibility study in HR72.

In **Iowa**, SF433 requires universities to explore open education.

Legislators in **Texas** introduced HB3650 and HB3652, which would encourage OER use in dual credit programs and would establish a statewide OER repository, respectively.

The Governor of **Virginia** signed HB2380 into law, requiring public institutions of higher education to clearly designate in the course catalog which courses are using no- or low- cost materials.

In **West Virginia**, HB 2853 (creating a program to encourage OER use in both higher ed and K-12) passed the Senate and will be sent to their Governor.

APPENDIX E

Affordable Learning Georgia

Affordable Learning Georgia (ALG) began in 2013 out of discussions between Executive Director of Georgia Library Learning Online (GALILEO) and the Chief Academic Officer of the University System of Georgia (USG) as well as the Board of Regents' Academic Committee on Libraries (RACL). These entities were interested in having libraries take a leadership role in OER. A brainstorming session was held with stakeholders and a strategy for statewide support was created. Initially, the project began as an initiative between the California State University, COOL4Ed and MERLOT²⁴. The California system was brought in to help formulate strategy and some of the early support systems.

In 2014 a symposium was held at the University of Georgia with national figures. That same year the program was funded by the legislature, through the Board of Regents, for \$2.5 million in one-time funds. The Director of GALILEO Support Services led the initiative and appointed a Visiting Program Officer for day-to-day tasks.

A pilot round was held in the fall of 2014 and implemented in 2015. GALILEO was responsible for creating an infrastructure used by all institutions throughout the state. This consisted of creating RFPs, an application process, a service level agreement, rubrics, a peer review process, a kickoff meeting, and report templates.

OER advocates were selected for each institution (31, now 26). These advocates would consult GALILEO on ways to support OER development at their local institutions. Faculty champions were selected as well. Meetings between ALG and campus contacts would happen regularly.

Overall, the initiative is run by GALILEO under the auspices of the University System of Georgia with an ALG team. It is funded by the legislature with an overarching goal to help reduce costs for students. Also, there are several additional stakeholders such as the Board of Regents, institutional administrators, bookstores, librarians, instructional designers, and centers for teaching and learning. Additionally, there is the Center for Inclusive Design, which supports accessibility issues for the entire USG system. They mainly work to make inaccessible texts and ancillaries accessible to students who report a disability to their Disability Services office. Soon they will be working to make accessible versions of all USG-created open textbooks, along with ancillary materials upon request, with the potential for grantees to submit their materials before the end of their projects for an accessibility check.

Textbook transformation grants have several different funding models. At the beginning, the grants were adoption-focused but soon turned towards being creation-focused. ALG hosts and provides access to created material on a DigitalCommons repository [<https://oer.galileo.usg.edu/>].

Library materials are often used as supplementary materials but are not the focus of the grants.

²⁴ MERLOT is an open education project from the California State University system started in 1997.

From its inception, a key strategy of ALG's has been to provide grant-supported opportunities for USG faculty, libraries, and institutions to transform their use of textbooks and other learning materials into the use of open, no-cost, and low-cost materials. The grants strive to pilot different approaches in USG courses for textbook transformation including:

- Adoption, adaptation, and creation of OER and/or identification and adoption of materials already available in GALILEO and USG libraries.
- Provide support to faculty, libraries, and their institutions to implement these approaches.
- Lower the cost of college for students and contribute to their retention, progression, and graduation.

A panel of reviewers from various institutions across the state review all submitted proposals. Once accepted, a Service Level Agreement (SLA) and Statement of Work are signed by both institutions and then disbursed from the system office. 50% of the funds are given up front with the remaining 50% disbursed once the final report is submitted. There are occasionally issues with local policies, but these are worked out. GALILEO already had a system to disburse funds throughout the state for webinars. ALG uses a similar model.

There are three grant levels available: Large-Scale (\$30,000 max.), Standard-Scale (\$10,800 max.) and Mini-Grants (\$4,800 max). About \$900,000 is distributed each year.

The program offers several professional development opportunities for faculty and support staff through online trainings, webinars, symposiums and the like. Due to a decline in viewership for virtual events, they are moving more towards in-person trainings and local and regional conferences. A list of any current and past events can be found here:

<https://www.affordablelearninggeorgia.org/events/training>.

Legislative Funding: The USG office works closely with the legislature to secure these funds. Funds are given to the institution for work to be done by a local team and are based on a standard Service Level Agreement. The institutions apply the grants differently. Some offer release time, overload pay, summer pay, faculty development funding, etc.

The initiative is funded with \$2.5 million per year from the state legislature. This includes grants, staffing, library subscriptions to eBooks, the Digital Commons repository, travel, library service contracts, the USG partnerships, faculty development, and meetings. Funding is renewed on an annual basis by the Legislature and is part of the larger GALILEO budget. Occasionally, there are questions from legislature staff on how things are going, so keeping statistics is very important. ALG works with the budget office to present hard data on how much students save and how they are affected by the projects.

As of February 2018, \$25.2 million has been saved by 167,979 students.

Barriers & Successes

Successful strategies are institution specific. Many different methods have been successful, mostly due to the flexibility of the System Office and how they work with local contacts.

There are several barriers that the program has faced and attempted to overcome that are typical of other OER initiatives. These barriers can include things like faculty education, assumption of a "mandate", or subject areas that OER. As a state agency that is accountable to the state legislature, there is also a limit to the type of OER that can be produced or found. Since they are answerable to the legislature, there needs to be a proven cost-benefit analysis on any project. Therefore, large amounts of money cannot be spent on creating OER for small upper-level courses that may only impact 20-40 students, which leads to most material being created for larger introductory classes.

Additional Links

- https://www.affordablelearninggeorgia.org/about/textbook_transformation_grants
<https://www.affordablelearninggeorgia.org/>
- <https://www.affordablelearninggeorgia.org/about/reports>
https://www.affordablelearninggeorgia.org/about/course_catalog_designators
<https://ung.edu/university-press/books/textbooks-and-oers.php>
- <https://pressbooks.bccampus.ca/>
- <https://research.cehd.umn.edu/otn/>

Recent OpenStax Presentation

- <https://docs.google.com/d/1ld1VsnHAIVSNKsCHsSwMjwKRZw1zhNIOWU2GNt1Doik/edit#slide=id.p1>

APPENDIX F

Open Oregon Educational Resources

Open Oregon Educational Resources is a statewide OER initiative which began in 2015. It began as two separate initiatives, which started at the same time. One was a result of the Oregon state college system disbanding and looking for support. The second was a result of a legislative bill. After the first year, the two initiatives were merged.

Open Oregon began with one staff member, Amy Hofer, who is the Coordinator of Statewide Open Education Library Services. In addition, she now has one full-time assistant and is seeking a third staff member in the new fiscal year. Amy works out of Linn-Benton Community College but serves all 24 of Oregon's public community colleges and universities. Each college she works with has at least one person in an OER coordinator role; most serve in this role as part of another full-time job on campus.

The mission of Open Oregon is to promote textbook affordability for community college and university students, and to facilitate widespread adoption of open, low-cost, low-cost, high-quality materials.

Open Oregon has many roles, which include the following:

- Showcase successes
- Track student savings
- Offer grants and faculty incentives
- Provide trainings and conferences
- Conduct cost and impact research
- Publish and share open materials
- Promote sustainable efforts
- Statewide coordination, including inter-institutional logistics

Open Oregon uses a portion of its budget every year to fund OER projects. The grants involve a Call for Proposals, which seeks proposals that implement high-impact, culturally relevant/inclusive, collaborative projects in support of open education and reduced textbook costs in lower-division courses.

Applications are due in the spring, with notifications going out in June. Applications for course redesign are invited for six categories: 1) As is: Adopt existing OER (\$750 per person, capped at \$3,750 per course), 2) Maintenance: Update existing OER that requires minor edits (\$1000 per person, capped at \$5000 per course, 3) Interactives: Adopt existing OER and develop missing ancillaries (\$1500 per person, capped at \$7,500 per course, 4) Revise/Remix: Update existing OER with major revisions (\$2,000 per person, capped at \$10,000 per course), 5) Author: Create a substantially new open textbook or open course where existing quality resources are not currently available (\$6,000 per person, capped at \$30,000 per course), and 6) Other: Propose a different kind of project not previously covered (up to \$30,000).