

This report is based on an independent survey commissioned in 2021 by the Digital Higher Education Consortium of Texas (DigiTex), in collaboration with the Texas Higher Education Coordinating Board (THECB), and the Institute for the Study of Knowledge Management in Education (ISKME).

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Advancing an Ecosystem for Open Educational Resources

OER in Texas Higher Education

Biennial Report 2021

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EXECUTIVE SUMMARY

This report presents the results of a biennial independent survey commissioned by the Digital Higher Education Consortium of Texas (DigiTex), in collaboration with the Texas Higher Education Coordinating Board (THECB), to examine the landscape of Open Educational Resources (OER) programs, policies, and practices at higher education institutions in Texas.

Similar to the 2019 survey, the 2021 survey was administered to all 158 two- and four-year public and private institutions across the state. New for 2021, the survey was additionally administered to 11 independent health-related institutions across the state, for a total of 169 institutions. Responses from 111 institutions in 2021 show growth in commitment to OER across the state, with 45% of institutions having formal policies or programs in place to support OER, compared to 38% in 2019. The percentage of institutions with a formal definition of OER and with OER course markers in place also increased, alongside the availability of fully-OER based courses—especially at the state's two-year colleges.

Furthermore, about one-third of institutions across the state are beginning to provide comprehensive, systems-based supports for OER by engaging multiple offices and roles on campus, from students, to library staff, to Faculty Excellence Center staff, to Digital Learning staff. These institutions are demonstrating other, advanced OER practices, including implementing formal OER policies and programs, building out their catalogue of OER-based courses, participating in partnerships with external educational institutions on OER, collecting OER impact data, and working to foster student awareness of OER through targeted strategies.

At the same time, the survey findings also reveal insights into priority areas and challenges for some institutions as they work to advance OER adoption and use. While the large majority of institutions in 2021 identify the importance of increasing faculty buy-in in order to grow OER adoption, and are working to market OER on their campuses, there has been a decrease in the number of institutions that offer faculty incentives to encourage OER use since 2019. Additionally, OER professional learning has remained stagnant, with the large majority of institutions reporting in both 2019 and 2021 that less than 10% of their faculty have been trained on OER. Furthermore, the large majority of institutions in 2021 have not yet taken advantage of statewide OER support initiatives such as the OERTX Repository, Texas Learn OER, and THECB's OER Grant Programs, and none of the state's two-year colleges have taken part in the DigiTex OER Development Small Grant Program. Many institutions have plans to participate in these programs in the future, and would likely benefit from support in doing so.

The report concludes by outlining opportunities for addressing existing barriers to OER scale, and for advancing the work being done by the state's OER champions—including new collaboration, professional learning, funding, and curriculum development supports focused on building an OER ecosystem within and across institutions, toward equitable access to education and to lucrative employment for all Texas learners.

INTRODUCTION

Texas's institutions of higher education recognize open educational resources (OER) as a promising strategy for meeting the goals of 60x30TX. In 2019, 51% of the state's two- and four-year institutions had current or planned programs or policies in place in support of OER. As outlined in the preceding Open Educational Resources in Texas Higher Education (2019) landscape report, many of these institutions were also appointing dedicated committees to shepherd their OER work; a few bellwether institutions were collecting data on the impact of OER use on teaching and learning and articulating concrete open licensing policies in their intellectual property guidelines.

In an effort to advance these institutional efforts, the Texas Higher Education Coordinating Board (THECB) and the Digital Higher Education Consortium of Texas (DigiTex) implemented several new OER support initiatives in 2020 and 2021. These include the *OERTX Repository*, a public digital library to support institutions in accessing, curating and sharing high quality OER; *Texas Learn OER*, a self-paced OER professional learning course for faculty and staff about the basics of Open Education, and *OER Core Elements*, a professional learning academy that supports cohorts in exploring the fundamentals of OER and innovative instructional integration. Alongside these initiatives, new grant programs were rolled out. These include the THECB OER Implementation and Development Grants funded by the Governor's Emergency Education Relief Fund (GEER) for institutions to create OER for Texas Core Curriculum, co-requisite remediation, and workforce education courses, as well as the DigiTex OER Development Small Grant Program to fund Texas community college faculty and staff to create OER aligned to its Workforce Education Course Manual.

Another statewide support initiative, the Open Texas Conference, convened for the first time in March 2021 to foster knowledge sharing across institutions on the successes and challenges of OER implementation and scalability. Convening participants also pointed to showcased institutions and initiatives that are successfully integrating OER across disciplines, programs, and roles on



campus. At the same time, the convening surfaced learning materials gaps where the absence of openly licensed resources prevents institutions from offering OER-based courses and degrees that align to high demand careers. Convening participants also pointed to the need for OER in courses focused on Texas history and politics, and in courses where students are required to purchase multiple, expensive texts for one course.

Commissioned by DigiTex and THECB, this report presents the results of the state's second, biennial survey to further assess the status and growth in OER across Texas institutions since 2019. Administered in March 2021 to all 169 two- and four-year non-profit institutions across Texas, including 11 independent health-related institutions, the survey sought to answer the following key questions:

- How and to what extent institutions across Texas are using OER;
- What OER-related policies and practices are currently in place to advance OER; and
- What supports are needed to enable increased adoption and use of OER.

The report summarizes the survey findings, and concludes with a set of high level recommendations for how colleges and universities may be supported to more effectively utilize OER to meet the needs of the state's economic mobility and education equity priorities in line with the 60x30TX Refresh, and to address the challenges and impacts of the COVID-19 pandemic and future potential crises.

SURVEY APPROACH

The Texas OER Landscape Survey was administered in March 2021 to 169 two- and four-year non-profit, public and private institutions across the state, including 11 health-related institutions. A total of 111 institutions responded to a sufficient number of questions to be included in the analysis. The response rate of 66% was higher than anticipated, particularly in light of the COVID-19 pandemic and Texas's 2021 winter storm crisis, which were expected to impact participation.

As depicted in Figure 1 below, the 111 survey respondents represented the full range of Texas non-profit colleges and universities, although two-year institutions made up the largest respondent group.

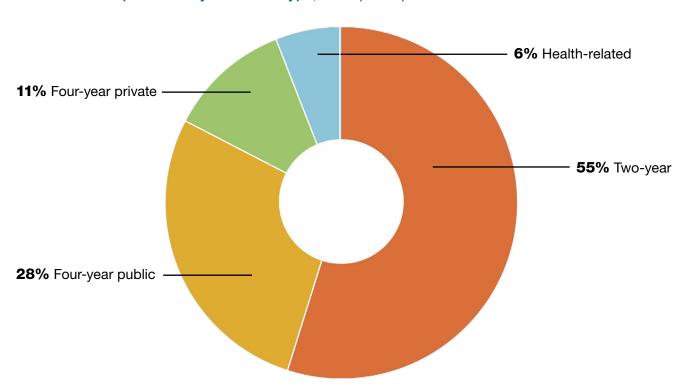


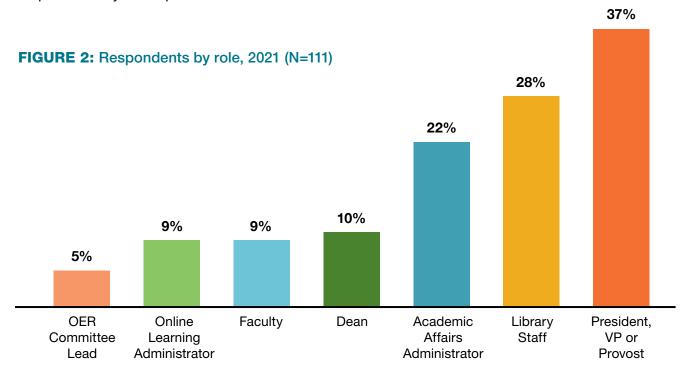
FIGURE 1: Respondents by institution type, 2021 (N=111)

When looking at the ratio of participants invited to participants responding by institution type, two-year institutions were slightly over-represented (55% in the survey sample compared to 48% in the population); four-year public institutions were also slightly over-represented (28% in the survey sample compared to 22% in the population); and four-year private institutions were under-represented (11% in the survey sample compared to 24% in the population). Independent health-related institutions were well-represented, at 6% in the survey sample compared to 7% in the population.

With the goal of targeting the most OER-knowledgeable individuals on each campus, the webbased survey was sent via email to Chief Academic Officers, who were asked to either complete the survey, or to forward the survey to the most appropriate individual for answering questions

Texas's 11 free-standing medical, cancer, and health science centers were invited to the survey. The state's four schools of medicine that are situated within a college campus did not receive invitations to the survey in order to collect an aggregated response for their institutions.

about OER. Respondents also were encouraged to consult with other subject matter experts on their campus if they did not know how to respond to a given survey question, or if they needed to collect additional information to answer an item. Figure 2 below provides a breakdown of survey respondents by self-reported role.²



Through a mix of open- and closed-ended questions, the survey sought to capture several dimensions of OER adoption and use across institutions, including OER policies and programs in place, OER leadership and advocacy, OER implementation challenges and supports, and OER impact. To norm the responses around a centralized conceptualization of OER, the Texas Education Code definition of OER was listed in the second question of the survey and was also repeated on each page of the survey instrument. The complete survey instrument is provided in <a href="https://example.com/appendix-based-ende

Descriptive analyses of the survey data were conducted, as well as comparative analysis for different subgroups including: a) two-year vs. four-year institutions, b) institutions with less than vs. more than 10,000 undergraduate students; and c) institutions with less than vs. more than 35% Pell Grant recipients. Within subgroup analyses were additionally conducted to assess common patterns in OER practices, supports, and challenges specifically for institutions that demonstrate advanced OER commitment. Institutions with advanced OER commitment were defined as those that have both OER programs and policies in place, those engaging multiple roles and offices in support of OER, and those leading the way in the number of fully OER-based courses being offered on their campuses. Finally, by-question comparisons were analyzed between the 2019 and 2021 survey data to assess growth over time in OER commitment, practices, and challenges across institutions; this analysis was facilitated by the fact that 70 percent of the institutions responding in 2021 also responded in 2019, and that a similar number of institutions responded both years (111 responses 2021 and 100 responses in 2019).

Respondents were asked to select all that apply.

FINDINGS

The development of formal OER programs and policies has grown across the state, and nearly all institutions are using OER to some extent

A combined 62% (69) of institutions either have formal OER policies and/or programs in place, or are in the process of developing them in 2021—compared to 51% (51) in 2019. Another 29% (32) are interested in 2021 in implementing OER policies or programs in the future (Figure 3).

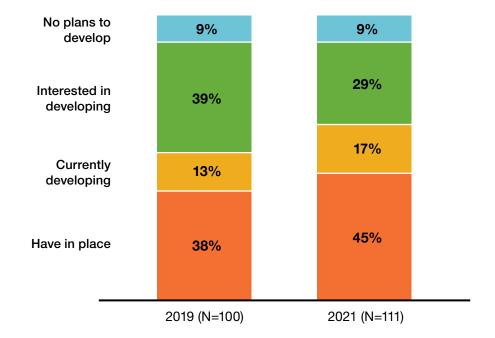
For the 9% (10) of institutions in 2021 that do not have plans to develop formal OER policies or programs, nearly all (8) report that faculty are using OER at the course level.

Taken together, these findings reveal that of the 111 institutions responding, only two institutions are not considering plans to support OER and do not have faculty that are using OER.

"I believe we are at a tipping point. Faculty are growing more informed about OER and [are] more motivated."

OER Coordinator

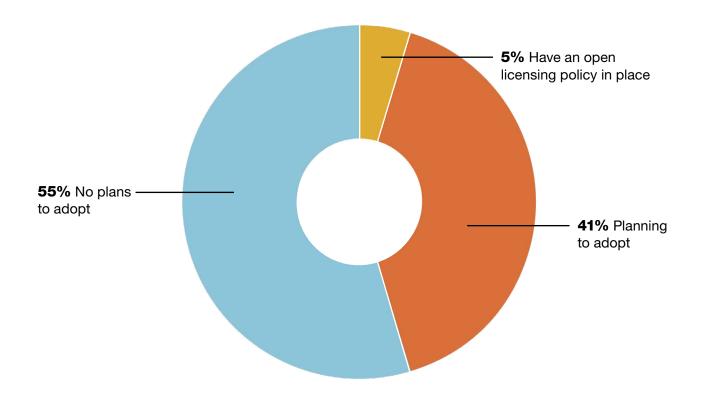
FIGURE 3: Institutions with policies or programs in place to support OER, 2019 and 2021



Similar to the 2019 findings, large institutions in 2021 are more likely to have OER policies or programs in place than small institutions (X²(1, N = 111) = 9.609, p <.002). This is likely due to the increased availability of resources needed to implement OER (e.g., funding, human resources) at large institutions.

When specifically asked about whether they have an open licensing policy or endorsement in place to support OER, only 5% (5) of institutions responded affirmatively (Figure 4). Given that this percentage did not increase from 2019, the adoption of open licensing policies remains stagnant, while also promising, since 41% of institutions plan to adopt such a policy or endorsement in the future.

FIGURE 4: Institutions that have an open licensing policy, 2021 (N=108)



Formalized definitions of OER gain prevalence, alongside course markers

The number of institutions with a formal, written definition of OER has increased since 2019. Sixty-three percent (70) of institutions in 2021 have a written definition of OER, compared to 39% (39) in 2019 (Figure 5). The majority of institutions in 2021 use the same or similar definition for OER as listed in the Texas Education Code, which delineates OER as "teaching, learning, or research resources that are in the public domain or that have been released under an intellectual property license that permits their free use, adaptation, and redistribution by any person."

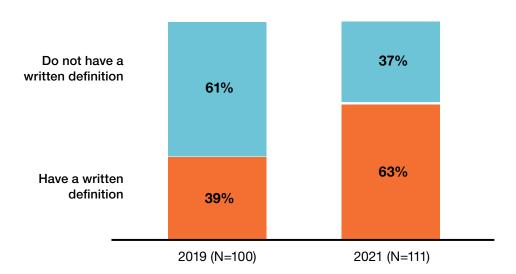


FIGURE 5: Institutions that have a written definition of OER, 2019 and 2021

Institutions were also asked if they had implemented the course marker requirement of SB 810, which stipulates that institutions share searchable information with students about courses that use OER. In total, 71% (78) of the institutions responding to the 2021 survey have course markers in place, compared to 61% (59) in 2019. The majority of institutions with course markers in place in 2021 reported that they typically include the marker under the individual course listing in their course list or catalogue (41% or 45), and/or through the campus bookstore listing (38% or 42).

Institutions with course markers in place in 2021 also reported on the specific terms used in their listings, and 72% (56) of these institutions use the term OER to mark their courses, which is an increase from the 66% (33) that used OER as a term to mark courses in 2019. Other terms used to mark courses across institutions in 2021 include low cost (24% or 19), zero cost (23% or 18), free (22% or 17), and affordable (13% or 10). One institution uses the term "OER+"—specifically to denote that OER has been curated and assembled by that institution for the given course.

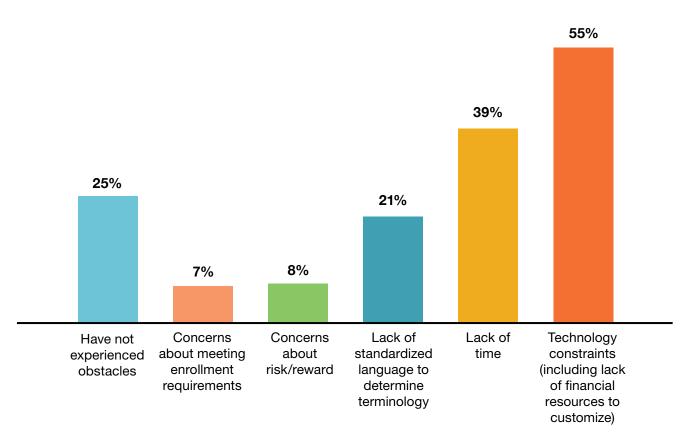
The 13 institutions that use the terms "low cost" or "affordable" to mark their courses were asked on a follow up question how they define these terms. Of the 12 institutions with formal definitions, six indicated they define low cost or affordable as materials that total less than \$50 for each student in a course, another four institutions set the limit at \$40, one institution at \$25 per course, and one at \$10 per course. The thirteenth institution defines affordable courses as those that make use of an Inclusive Access plan.

As revealed in Figure 6, challenges for institutions in implementing the OER course marking system have primarily centered on lack of time to focus on the course marking effort, and technology constraints—including a lack of financial resources to customize the technology needed to create the course markers. For a few institutions, obstacles include the perception on campus that OER course marking may be used to reward those who use open resources, or to punish those who do not, and concerns that traditional courses will not meet their minimum enrollment requirements because students will only select OER courses.

"Lack of thorough understanding of the requirements by those responsible for implementation, and lack of coordination with more knowledgeable entities on campus have been the main obstacles in implementing our OER course marking system."

Library Administrator

FIGURE 6: Obstacles to implementing the OER course marking system, 2021 (N=105)



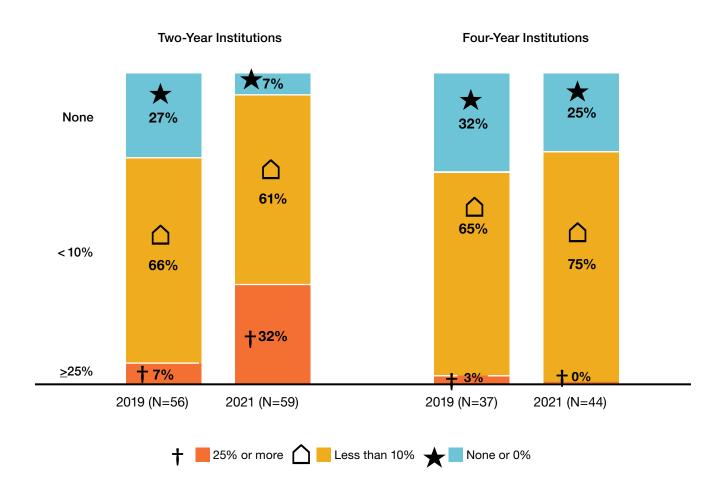
The availability of fully OER-based courses increases, especially for two-year institutions

The percentage of institutions offering at least one fully OER-based undergraduate course—where all of the required materials for the course are openly licensed—increased from 71% in 2019 to 85% in 2021.

5

Across institutions, OER-based undergraduate courses typically make up less than 10% of their overall undergraduate course offerings. However, as revealed in Figure 7, when examining this finding over time, the share of OER-based courses has increased, and more extensively for two-year colleges in comparison to their four-year counterparts.

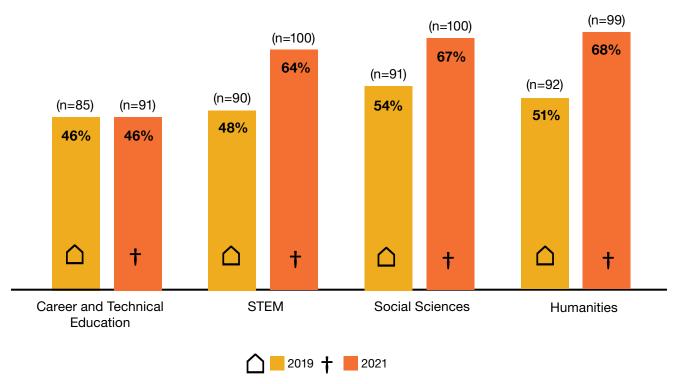
FIGURE 7: Percentage of fully OER-based undergraduate courses by institution type, 2019 and 2021



On the other hand, when looking at the development of full, zero textbook cost degree programs—which two-year colleges have typically taken the lead on in Texas—the numbers remain the same, with approximately 20% of institutions in both 2019 and 2021 reporting on efforts to develop Z-Degrees.

As depicted in Figure 8, the largest percentage of institutions in 2021 are offering these courses in the Humanities and Social Sciences, followed by STEM and Career and Technical Education (CTE) fields. The percentages for CTE remain consistent with the 2019 survey data, while for the other fields, the percentages increased.

Figure 8: Percentage of institutions that offer at least one fully OER-based undergraduate course by discipline, 2019 and 2021



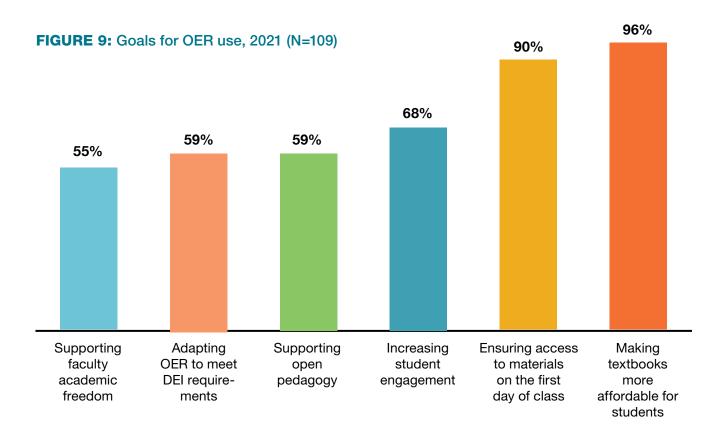
The survey analysis further revealed that graduate programs are also offering fully-OER based courses. Of the 49 four-year institutions with graduate programs responding, 39% (19) indicated that they offer graduate courses that are fully-OER based in 2021, and for all of these institutions, the OER-based courses make up less than 10% of their overall graduate course offerings.

On a separate survey question, a large majority of institutions reported that they are prioritizing OER development by aggregating (71% or 71) or adapting (68% or 68) existing OER; 50% (50) of responding institutions are developing new OER from scratch. Likely spurred by the COVID-19 pandemic, 69% (69) of institutions are working to provide supports for the use of OER for online and emergency remote learning, in particular.

Goals for OER use center on student access and engagement

Textbook affordability and student access to materials continue to drive OER adoption across Texas, with 96% (105) and 90% (98) of institutions reporting on these goals for OER use, respectively (Figure 9). The majority of institutions also continue to utilize OER as a mechanism to increase student engagement with course materials and to support open pedagogical practices. These percentages are consistent with the 2019 data on goals for OER use across Texas.

Although not tracked in 2019, the 2021 survey reveals that 59% (64) of institutions are using OER to meet diversity, equity, and inclusion (DEI) guidelines—including accessibility requirements, or as part of culturally relevant teaching—and 55% (60) are using OER to support faculty academic freedom in their curriculum decisions.



Other goals for OER use not depicted in Figure 9 include decreasing reliance on commercial publishers (49% of responding institutions or 53), providing materials that can be localized to meet learners' needs (48% or 52), reducing the cost of course development for the institution (36% or 39), and providing resources that can be integrated with learner analytics (16% or 17). These percentages also remain relatively consistent with the 2019 survey.

Institutions continue to centralize their OER work, while also leveraging internal and external partnerships

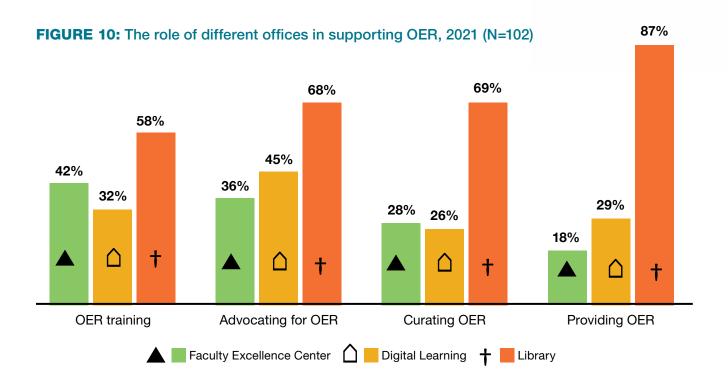
The 2021 survey data show that a growing number of institutions are centralizing their OER efforts. Fifty-five percent (60) of institutions in 2021 have a centralized office, committee, or role that leads their OER work, compared to 47% (46) of institutions in 2019. Similar to 2019, this leadership typically occurs through a library-led committee, the academic affairs office, or a dedicated OER task force.

The 2021 survey data also reveal the importance of cross-office support for OER. While library staff play key roles in providing and advocating for OER, Faculty Excellence Centers and Digital Learning staff also play a role in these activities, although to a lesser extent (Figure 10).

Digital Learning and Faculty Excellence Center staff also support additional activities, beyond those shown in Figure 10, including OER instructional design support, building communities of practice around OER, supporting copyright and open licensing policy development, and identifying OER grant opportunities.

" [Our institution leverages] library staff for coordinating the OER faculty mini-grant initiative; Teaching and Learning staff for providing instructional design support for faculty adopting OER [and] creating a Community of Practice for faculty who wish to discuss Open **Educational Practices:** Center for Faculty Excellence staff for presenting at conferences on the use and efficacy of OER, publishing articles on OER, and coordinating faculty collaboration with library staff."

OER Task Force Lead



In 2021, four-year institutions and large institutions are more likely to have a centralized office, committee, or role that oversees OER than their two-year institution (p < .000, Fisher's Exact Test) or small institution (p < .000, Fisher's Exact Test) counterparts. Additionally, institutions serving more than 35% Pell Grant recipients are also more likely to have a centralized office, committee or role that oversees OER than institutions serving less than 35% Pell Grant recipients (p < .046, Fisher's Exact Test).

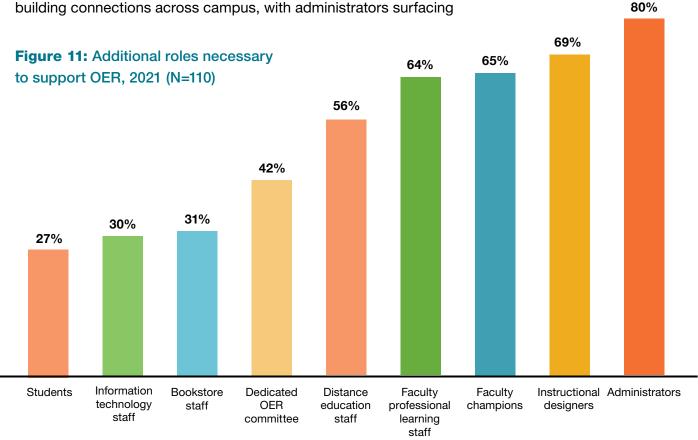
When looking at the 33 institutions in 2021 who engage *all three of these offices* in supporting OER on their campuses, the analysis showed a statistically significant relationship between this crossoffice engagement and OER leadership in the state. Specifically, these 33 institutions are more likely to have a greater share of fully OER-based courses compared to other institutions, have formal OER policies or programs in place, have allocated funding to OER, to collaborate with other educational institutions on OER, and to collect OER impact data. They were also more likely to be engaged in adapting OER to meet diversity, equity and inclusion requirements or guidelines on their campuses.

Institutions are reportedly working to train these staff members, with 76% (83) of institutions reporting that their library staff have been trained on OER, followed by Digital Learning staff and Faculty Excellence Center staff at 55% (60) and 42% (46) of institutions, respectively.

Furthermore, institutions were also asked to report on additional roles that currently support or are necessary to support OER use on their campuses. As shown in Figure 11, the findings reveal an emphasis on building connections across campus, with administrators surfacing

"With the creation of a new Open Education Librarian position and multiple departments working together to support OER, our institution has been able to facilitate more programs to support OER awareness and adoptions campus wide."

Administrator and OER Faculty Trainer



as core players in the advancement of OER. An analysis of the number of additional roles that institutions deem necessary to support OER revealed that 72% identified four or more roles as necessary, and the remaining 17% identified one to three roles. Twelve percent identified no additional roles.

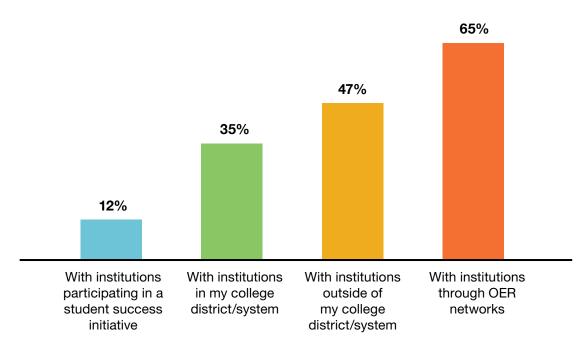
Although only 27% (30) of institutions included in Figure 11 identified students as central to OER adoption, on a separate survey item, 50% (50) of institutions indicated they are implementing strategies specifically to engage students in OER—from asking student champions to share their OER experiences or testimonials, to encouraging their student government to pass an official resolution to support OER.

In terms of external collaboration, an increasing percentage of institutions are also partnering with other institutions in support of their OER work—growing from 24% (23) of institutions in 2019 to 39% (43) in 2021. As shown in Figure 12, the most prevalent types of OER collaboration in 2021 include participation in national or international open education networks (e.g., OpenEd Global, Open Textbook Network), followed by collaboration with other Texas institutions within or outside of their own college system or district.

"We participate in a program through the Texas Digital Library that brings together librarians [across institutions] who are responsible for open education programs on their campus (OER Ambassadors). We share best practices, brainstorm ideas, and collaborate on professional development programs."

OER Coordinator

FIGURE 12: Types of cross-institutional collaborations around OER, 2021 (N=43)



Specific collaboration projects named by survey respondents include cross-institutional OER working groups, cross-library partnerships (e.g., Texas Digital Libraries OER Ambassadors program), participation in student success initiatives (e.g., Affordable Learning initiative), and projects to develop discipline-specific OER across institutions.

Awareness building and professional learning are key priorities

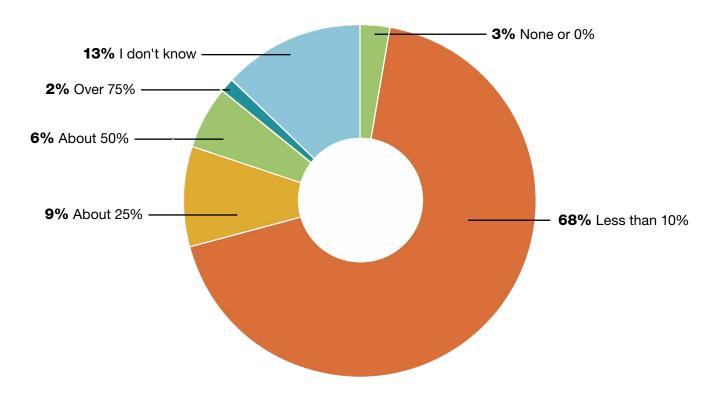
On a survey question about the focus of their current or planned OER efforts, the largest percentage of responding institutions reported a focus on promoting OER adoption and use (74% or 74), and on providing OER professional learning opportunities for faculty and staff (73% or 73).

Currently across the majority of institutions, only a small portion of their faculty—less than 10 percent—have received training on OER (Figure 13), and this number remains consistent with the 2019 survey findings.

"[Our institution] is building its foundation to scale the use and impact of OER. As we are building the foundation including our policies and processes, we are also training cohorts of faculty on the use of OER. We successfully supported 18-faculty in 2020. This cohort improved student outcomes and saved students a total of \$200K. We will launch a second faculty cohort in 2021."

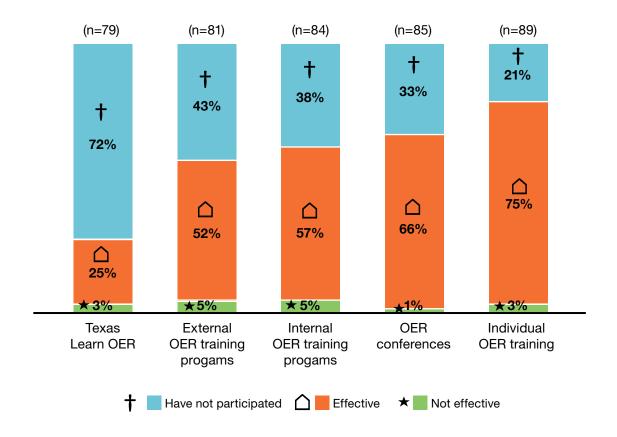
Dean of Academic Unit



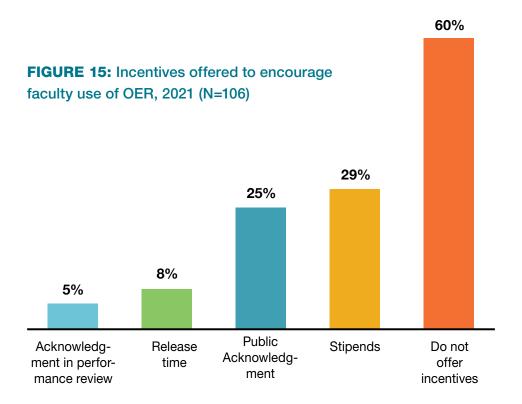


In assessing the perceived effectiveness of existing faculty training opportunities in 2021, the survey revealed a slight preference for individual, one-on-one OER training compared to other external or internal training programs (Figure 14).

FIGURE 14: Participation in and effectiveness of OER training opportunities for faculty, 2021



Institutions are also offering incentives to encourage OER use by faculty, although the percentage of institutions offering incentives has decreased over time—from 51% (49) in 2019 to 40% (42) in 2021. As revealed in Figure 15, for those that offer incentives in 2021, the focus is primarily on faculty stipends for, or public recognition of, faculty-led OER work.



" A lot of our current efforts are "grass roots," working to gain individual instructor buy-in, but that approach can feel stymied without explicit endorsement and incentives from academic leadership. Instructors need to be reassured that the time and energy they put into redeveloping courses with OER is recognized and valued. That means not just encouragement and incentives beforehand, but also validation afterwards, for instance by thoughtfully acknowledging and rewarding OER usage in annual faculty reviews."

Library Administrator

OER is still funded primarily through internal budgets, but state and federal funds gain prevalence

Forty-four percent (49) of institutions across Texas have allocated funding to OER in the past three years, which is consistent with the findings from the 2019 OER landscape survey, where 42% (42) had allocated funding to OER.

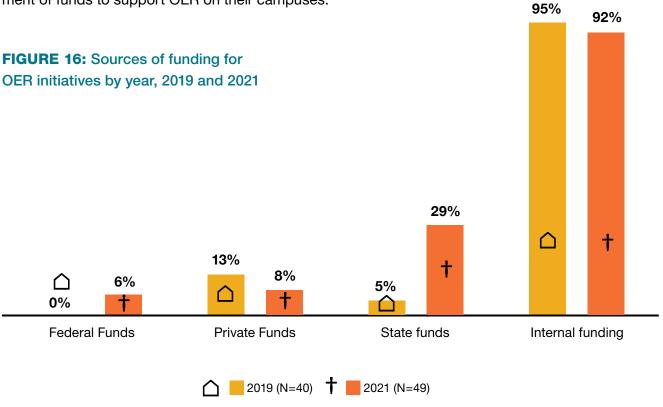
The 2021 analysis further revealed that four-year public institutions and large institutions are more likely to offer incentives to encourage faculty use of OER than their four-year private (p<.004, Fisher's Exact Test) or small institution (X² = (1, N = 97) = 11.369, p < .001) counterparts.

When asked to specify the source of their funding, the 49 responding institutions in 2021 indicated that their OER initiatives are funded primarily through internal budgets (Figure 16), and specifically through the library, departmental budgets, or funds from the teaching and innovation or instructional support office. A few institutions also fund their OER work through external sources, including private donors and foundations, or funds from initiatives like Achieving the Dream or specific philanthropic organizations.

The use of state funding in particular has increased from 5% of institutions in 2019 to 29% in 2021, with a few institutions beginning to take advantage of the THECB Governor's Emergency Education Relief Fund Grant Program and the THECB State OER Grant Program; although to date, no institutions have taken advantage of the DigiTex OER Development Small Grant Program. The use of federal funds also increased from 2019, with institutions pointing to, for example, the Higher Education Emergency Relief Fund and the HBCU Academic Librarians Textbook Transformation Grant as sources of OER funding in 2021. Not depicted in Figure 16 is the finding that 55% (55) of institutions surveyed in 2021 are prioritizing the procurement of funds to support OER on their campuses.

" [At our institution] state funds are allocated towards OER librarian salary [for] capacity building."

OER Coordinator



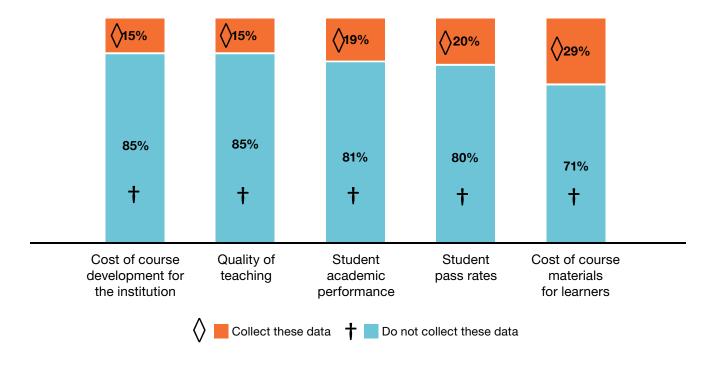
Data collection on the impact of OER remains nascent, yet promising

As shown in Figure 17, about 15-30% of institutions are collecting data on the impact of OER, and these numbers remain consistent with the 2019 survey findings. Types of data most commonly collected across institutions include data on cost of course materials, followed by student pass rates in OER courses and student academic performance.

When specifically asked about the results of their data analysis efforts, the small number of institutions responding to this question typically reported that student pass rates and student academic performance increased through the use of OER, while the cost of course materials for learners decreased.

A separate, within subgroup analysis of this survey finding revealed a relationship between the collection of OER impact data and other advanced OER practices. More specifically, institutions that collect OER impact data also typically offer incentives to encourage faculty use of OER, participate in partnerships with other educational institutions on OER, allocate funding for the development of OER and for OER training, and work to build student awareness of OER through targeted, student-facing strategies.



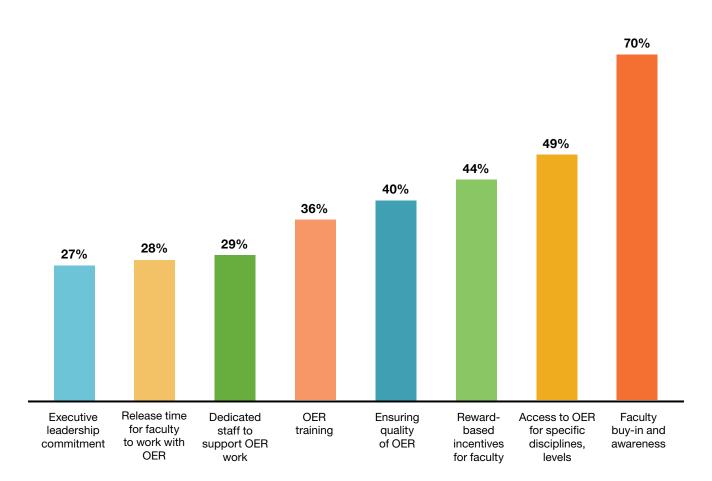


Also consistent with the 2019 survey findings, two-year institutions and small institutions were less likely to collect OER impact data than their four-year and large institution counterparts ($X^2 = (1, N = 94) = 3.923, p < .048)$, and ($X^2 = (1, N = 94) = 21.992, p < .000$), respectively.

Institutions call for increased faculty buy-in to support OER at scale

When asked on a separate question about the top supports or factors needed to advance OER adoption and use, the largest percentage of institutions (70% or 76) identified the need for increased buy-in and awareness by faculty. Close to half of all institutions additionally reported a need for access to OER in specific disciplines, and for reward-based incentives for faculty to use OER (Figure 18).

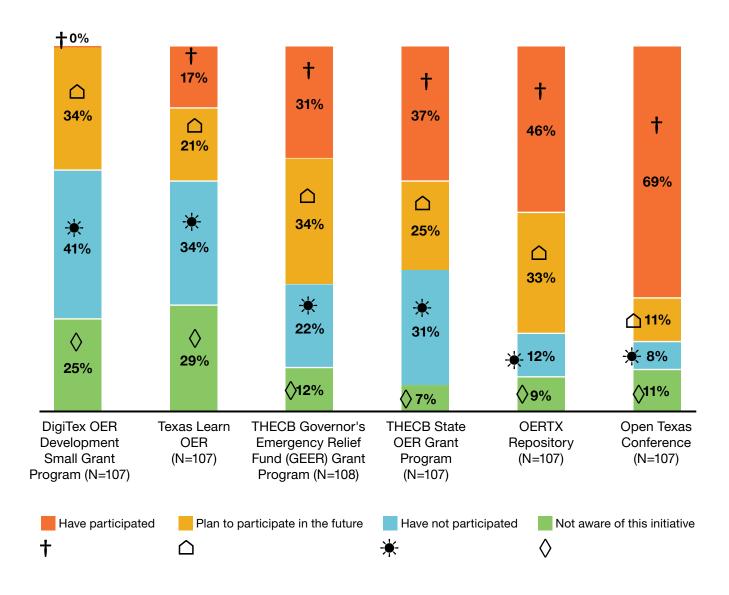
Figure 18: Supports needed to increase OER adoption and use at institutions, 2021 (N=109)



At the same time, less than half of responding institutions are taking advantage of statewide OER grant and training programs that are being offered in Texas to address these needs, with the exception of the Open Texas Conference, which 69% (74) of institutions have participated in (Figure 19). Several institutions are, however, planning to take advantage of these opportunities in the future.

Appendix A provides a description of each of the programs listed in Figure 19.





When looking at institutions by size, large institutions were more likely than small institutions to have participated in GEER ($X^2 = (2, N = 108) = 13.824, p < .001$), in the THECB State OER Grant Program ($X^2 = (2, N = 107) = 6.544, p < .038$), and in the OER Texas Conference ($X^2 = (2, N = 107) = 14.494, p < .001$). The analysis also showed that Institutions serving less than 35% Pell Grant recipients were more likely to have participated in the GEER Grant Program ($X^2 = (2, N = 100) = 7.917, p < .019$).

IMPLICATIONS AND CONCLUSIONS

The landscape of OER in Texas higher education is in transition. The large majority of the state's institutions are on their way to implementing formal policies or programs to support OER, and the share of fully OER-based courses as a percentage of all courses offered within and across institutions is increasing. Nearly 70% of the state's institutions are advancing the use of OER for online and emergency remote learning, likely spurred by the COVID-19 pandemic, the Texas 2021 winter storm upheaval, and considerations around future potential crises. Alongside these efforts, more than half of all institutions are prioritizing new and innovative use cases for OER, including the use of OER to meet diversity, equity, and inclusion (DEI) guidelines, accessibility requirements, or as part of culturally relevant teaching.

The 2021 survey data further reveal that those leading the way in the implementation of OER-based courses, policies, and programs appear to be taking a systems-based approach to OER by engaging multiple offices and roles across campus—from students, to Faculty Excellence Center staff, Digital Learning staff, and Library staff. Institutions that are engaging cross-office roles and staff around OER are also demonstrating other, advanced OER practices, including participating in partnerships with external educational institutions on OER, allocating funding for OER, collecting OER impact data, and working to build student awareness of OER through targeted strategies.

In an effort to continue to advance these efforts, the Texas Higher Education Coordinating Board and the Digital Higher Education Consortium of Texas plan to explore in 2021 and 2022 the feasibility of several new OER support initiatives, including:

 An OER playbook, or guidebook, to support institutions as they work to build capacity and drive systems change around OER. In line with the study's findings on the institutional practices that the state's OER champions are typically employing, the playbook would focus on resources to support institutions in building cross-office support for OER on campus, in engaging students



and faculty as advocates and agents of cultural change around OER, and in building external partnerships and collaborations around OER.

Furthermore, in light of the continued interest (and stagnation) on behalf of institutions in adopting open licensing policies, the playbook would offer considerations, processes, steps and timelines toward open licensing policy approval and implementation, as well as example policy language. The playbook would also provide resources to support the substantial number of institutions that have not yet taken advantage of existing OER programs and opportunities, such as OERTX, Texas Learn OER, and federal and state OER grant opportunities.

- Additional change management and implementation supports including, for example, new professional learning academies and grants focused on enabling institutional teams in implementing campus-wide OER adoption plans. Other supports will include case studies that highlight best practices and ways to address common challenges and concerns in meeting the state's course marker requirement, specifically to support the 29% of institutions that have not yet implemented course markers.
- OER curriculum development supports, including new grant funding to specifically address the stagnation in the development of fully OER-based courses for Career and Technical Education that emerged through the survey data. Such supports would align with the state's Reskilling and Upskilling through Education (TRUE) initiative, with the THECB's Workforce Initiatives, and with the general missions of Texas community and technical colleges. Curriculum development supports will also include academies for developing intermediate and advanced level "OER creation skills," and efforts to develop OER for online and emergency remote learning and for meeting diversity equity and inclusion requirements—the latter through case studies highlighting best practices in adopting OER for these innovative use cases across the state.

Through initiatives such as these, the Texas Higher Education Coordinating Board and Digital Higher Education Consortium of Texas will continue to support institutions in their efforts to advance an ecosystem for OER, toward more equitable learning outcomes for all students. We invite institutions across Texas—as they work to build out their OER programs—to share approaches and challenges with their peer institutions, and to contribute to OERTX, Texas Core Curriculum Courses, career and technical education courses, and other openly licensed resources being developed to support effective teaching and learning across the state.

APPENDIX A | DEFINITIONS

Governor's Emergency Education Relief Fund (GEER) Grant Program provides funding for institutions to create new or redesign existing OER for Texas Core Curriculum, Workforce Education Course Manual (WECM), and co-requisite courses.

OER Core Elements Academy is a professional learning academy that supports cohorts in exploring the fundamentals of OER and innovative instructional integration.

OER Course Markings were signed into law through Senate Bill 810 (SB810, now TEC 51.452), requiring that Texas colleges and universities share searchable information with students about courses that use OER. Examples of course markers include incorporating OER icons into print schedules, developing stand-alone lists of OER courses, and integrating OER labels into web pages.

OER Development Small Grant Program, DigiTex provides funding to faculty, librarians, and instructional designers at Texas community colleges for the creation and/or adaptation of resources to support courses in the Workforce Education Course Manual.

OERTX Creator Fest is a convening where participants will be able to explore the creation side of OER. The focus will be on creating and advancing content peer review and adoption through a workshop format.

OERTX Repository is a public digital library of open educational resources launched in 2020 for Texas higher education institutions. The repository was created in response to the September 2019 Texas House Bill 3652 authorizing the creation of a state repository for OER by the Texas Higher Education Coordinating Board.

Open Educational Resources (OER) are defined in Texas Education Code, Section 51.451, as teaching, learning, or research resources that are in the public domain or that have been released under an intellectual property license that permits their free use, adaptation, and redistribution by any person. The term may include full course curricula, course materials, modules, textbooks, media, assessments, software, and any other tools, materials, or techniques, whether digital or otherwise, used to support access to knowledge.

Open License is a copyright license that grants the public the ability to use a creative work according to a set of permissions and restrictions. The best-known open licenses are the Creative Commons Licenses. All six Creative Commons Licenses require that any uses include attribution to the original author; some permit only noncommercial uses; some do not allow the creation of derivative works.

Open Pedagogical Practices are a set of collaborative teaching and learning practices that help educators to advance a culture of sharing and active learning through OER. Examples of open pedagogical practices include faculty collaboration on curriculum development, openness to peer review and critique of each others' resources, and partnership on instruction and learning with students. ¹⁰

Definition of open pedagogical practices adapted from the OER Toolkit, by Colleges Libraries Ontario, the Ontario Colleges Library Service, and the Institute for the Study of Knowledge Management in Education, originally licensed under CC BY-NC 4.0 International License.

Open Texas Conference is an annual convening of librarians, faculty, administrators, and other open education practitioners and advocates in Texas co-organized by DigiTex, THECB, and the Texas Digital Library.

60x30TX is a higher education strategic plan that contains four broad goals designed to ensure that a competitive and prosperous future remains for Texas students seeking to better their lives and the lives of their families. The first goal in the plan, the 60x30 goal, aims to increase the percentage of 25- to 34-year-olds in Texas who hold a certificate or degree.

60x30TX Refresh is a revised strategic plan that is built on the focus of the original 60x30TX plan to increase postsecondary attainment by developing clear goals that expand the educated workforce and drive economic prosperity.

Texas Learn OER is a self-paced online course comprised of 10 peer-reviewed modules about OER and open education practices. Completing the course can count towards professional development hours or continuing education units.

Texas Reskilling and Upskilling through Education (TRUE) is an initiative to close the skills gaps through new credential programs that ensure students can develop the skills and abilities Texas employers need.

THECB State OER Grant Program is a competitive program that provides grants to selected individuals or teams of faculty at Texas public institutions of higher education to adopt, modify, redesign, or develop courses using only OER. The THECB awards two categories of grant awards: development grants for up to \$25,000 for the creation of new OER or improved existing OER for one or more high-enrollment Texas Core Curriculum (TCC) courses, and implementation grants for up to \$5,000 to faculty or teams of faculty to support the substantial redesign of one or more TCC courses to incorporate OER.

Z-Degree Program, or zero textbook cost degree program, is a set of courses in a specific program area that allows a student to earn a credential, such as an associates degree or certificate program, with zero textbook costs, by way of using open educational resources and/or materials provided to students free of charge, e.g., via the library.

APPENDIX B | SURVEY INSTRUMENT

This survey instrument includes original questions, as well as questions adapted from pre-existing OER surveys and resources. Please see footnotes throughout the survey for the attribution of derived or reused survey items. Note that because the survey was web-based, the questions below do not reflect the web-based formatting or the skip logic.

S	ECTION I OER Policies and Programs
1.	Please select your institution from the list below: List
2.	Texas Education Code, Section 51.451, defines OER as "teaching, learning, or research resource that is in the public domain or has been released under an intellectual property license that permits the free use, adaptation, and redistribution of the resource by any person." The term may include full course curricula, course materials, modules, textbooks, media, assessments, software, and any other tools, materials, or techniques, whether digital or otherwise, used to support access to knowledge.
	Does your institution have a written definition of Open Educational Resources? Yes, and we use the same or almost the same definition as in the Texas Education Code listed above
	Yes, and we use our own definition that we have developed No, we do not have a written definition of Open Educational Resources
3.	How does your institution define Open Educational Resources? Please provide a link to the definition, or paste the definition in below.
4.	Has your institution implemented policies, resolutions, or programs that support OER? Select all that apply. 11
	Yes, we have policies in place that support OER use (e.g., an open licensing policy, or a policy that allocates funding to OER)
	Yes, we have OER resolutions in place (e.g., from the Academic Senate, Student Government or Board of Trustees)
	Yes, we have programs in place that support OER use (e.g., a training program to support faculty use of OER, or an OER content development initiative)
	No, but we are currently in the process of creating OER policies, resolutions and/or programs

Survey item adapted with permission from an unpublished survey developed for the "OER Indicators for National Adoption and Impact" initiative, under UNESCO's ICT in Education Unit.

	No, but we are interested in developing OER policies, resolutions and/or programs in the future
	No, and we do not have plans to develop or implement OER policies, resolutions and/or programs
	Please provide any links or comments that add detail to the items you selected above.
	(For example, a link to your OER resolution if you have one in place.)
5.	To your knowledge, is anyone using OER at your institution?
	I do not know/not certain
	□ No
	Yes, please specify:
6.	
	Less than 1 year ago
	1 to 2 years ago
	3 to 5 years ago
	More than 5 years ago
7.	What has been (or will be) the focus of the OER work and/or programs at your institution? Select all that apply.
	Developing new OER (e.g., developing courses and textbooks from scratch and licensing them as OER)
	Curating existing OER (e.g., building courses, collections, or lists of resources from existing OER)
	Adapting, revising, or remixing existing OER
	Developing/offering a zero cost degree program that uses OER (e.g., Z Degree or zero text-book cost degree)
	Contributing to the state OER repository, OERTX
	☐ Integrating OER into our institution's Learning Management System
	Developing/offering an institutional repository or technologies for accessing and/or sharing of OER by faculty and staff
	Developing the institution's administrative framework to support OER development (e.g., developing an OER governance council or identifying the OER lead)
	Developing/offering internal OER trainings or OER professional learning resources for faculty and staff
	Securing funding for OER
	Marketing or promoting OER adoption and use (either externally or internally)
12	lbid.

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	☐ Supporting the use of OER for online and/or emergency remote learning☐ Other, please specify:
	Please provide any links or comments that add detail to the items you selected above.
8.	What are the goals for the use of OER at your institution? Select all that apply. 13 Making textbooks more affordable for students
	☐ Ensuring students have access to course materials on the first day of class
	☐ Increasing student engagement with course materials
	Providing materials that can be localized to meet learners' needs
	Decreasing the cost of course development for the institution (e.g., by remixing and adapting materials that already exist)
	Decreasing reliance on commercial publishers
	Supporting open pedagogy (e.g., faculty collaboration, peer review, resource sharing, iterative curriculum improvement)
	Supporting faculty academic freedom in their curriculum decisions
	Adapting OER to meet diversity, equity and inclusion requirements or guidelines (e.g., accessibility requirements or as part of culturally relevant teaching
	Providing materials that can be integrated with predictive analytics or learner analytics
	Other, please state:
9.	Across the country, some institutions are revising their intellectual property policies and guidelines to include open licensing. Open licensing helps public institutions better meet their missions of disseminating resources—breaking down the barriers associated with traditional copyright by granting permission to use and adapt the materials in advance. For example, an institution might require that all materials created by its employees within the scope of employment be licensed as a OER under a Creative Commons License.
	Does your institution have an open licensing policy or endorsement?
	Yes, we have an open licensing policy
	Yes, we have an open licensing endorsement
	No, we do not have anything in place, but we are planning to
	No, we do not have anything in place, and we do not have plans to

Survey item adapted with permission from question 15 of the "Questionnaire on the Use and Production of Open Educational Resources," in Giving Knowledge for Free: The Emergence of Open Educational Resources (2007), OECD Publishing.

Text from "Open Licensing Policy" by Creative Commons, originally licensed under CC BY 4.0 International License.

- 10. What is your open licensing policy or endorsement? Please describe and/or provide any links to information about the policy or endorsement.
- 11. To your knowledge, has your institution participated in the following statewide OER initiatives?

	Yes, we have participated	No, we have not participated	No, we have not participated, but plan to in the future	I wasn't aware of this initiative
OERTX An OER repository designed to facilitate the aggregation of openly licensed e-textbooks and other OER materials used by Texas institutions of higher education. OERTX also supports its users in the creation and customization of resources to meet the needs of Texas students and faculty. OERTX is a THECB ordinated initiative.				
Texas Learn OER A self-paced online course comprised of 10 peer-reviewed modules about OER and open education practices. Completing the course can count towards professional development hours or continuing education units.				
THECB State OER Grant Program A program that provides funding for faculty projects to adopt, modify, redesign, or develop courses that use only open educational resources.				
THECB Governor's Emergency Education Relief Fund (GEER) Grant Program A program that provides funding for institutions to create new or redesign existing OER for Texas Core Curriculum, Workforce Education Course Manual (WECM), and co-requisite courses.				
DigiTex OER Development Small Grant Program provides funding to faculty, librarians, and instructional designers at Texas community colleges for the creation and/or adaptation of resources to support courses in the Workforce Education Course Manual.				

2. Which of the following best describes your institution?
Two year public institution
Four year public institution
Two year private/independent institution
Four year private/independent institution
SECTION II OER Courses and Certificates

Definition of OER used in this survey:

OER are defined as teaching, learning, or research resources that are in the public domain or that have been released under an intellectual property license that permits the free use, adaptation, and redistribution of the resource by any person. Note that OER does not include freely available, proprietary resources, such as your institution's subscription-based digital course materials, that are provided to students on the first day of class through a publisher's "inclusive access program".

- 13. For the fall semester/term(s) 2020, please estimate the percentage of undergraduate courses that:
 - a. were fully OER-based (i.e., all of the required materials for the course were openly licensed)
 - b. were not fully OER-based, but used OER as a supplement to commercial/proprietary resources

	None, or 0%	Less than 10%	About 25%	About 50%	About 75%	All, or almost 100%	l don't know
Estimate percentage of undergraduate courses that were fully OER based							
Estimate percentage of undergraduate courses that used OER as a supplement to commercial/proprietary resources							

14.	For the fall semester/term(s) 2020, please list any undergraduate certificates and degrees that
	were fully OER-based (i.e., all of the required materials for the certificate or degree were
	openly licensed).

15. For the fall semester/term(s) 2020, please estimate to what extent the following disciplines offered undergraduate courses that were fully OER based?

	None or 0% offered undergraduate courses that were fully OER based	Less than 10%	About 25%	About 50%	About 75%	All, or almost 100%	l don't know
STEM							
Humanites							
Social Studies							
Career and Technical Subjects							

- 16. [For four year institutions only] For the fall semester/term(s) 2020, please estimate the percentage of graduate courses that:
 - a. were fully OER-based (i.e., all of the required materials for the course were openly licensed)
 - b. were not fully OER-based, but used OER as a supplement to commercial/proprietary resources

	None, or 0%	Less than 10%	About 25%	About 50%	About 75%	All, or almost 100%	l don't know
a) Estimated percentage of graduate courses that were fully OER based							
b) Estimated percentage of graduate courses that used OER as a supple- ment to commercial/ proprietary resources							

17.	In June 2017, Texas signed into law Senate Bill 810 (SB810, now TEC 51.452), which requires that Texas higher education institutions share searchable information with students about courses that use OER. Which of the following best describes how your institution has implemented the OER course marking (or identifier) requirements of SB810? Select all that apply.
	Links to all courses that use OER are offered on the landing page of our course schedule/listing
	There is a search field for OER on the landing page of our course schedule/listing
	☐ There is a search field for OER on subsequent pages of our website, but not on the landing page of our course schedule/listing
	Under the individual course listing, there is a description or notation indicating if a course uses OER
	The course is listed as OER through the campus bookstore
	Have not yet implemented OER course markers
	Other, please state:
18.	What are the obstacles or challenges, if any, that your institution has experienced in implementing the OER course marking system? Select all that apply.
	Technology or platform constraints (e.g., challenges customizing the various systems used)
	Lack of financial resources to customize technology needed to create the course markers
	Lack of standardized language needed for OER in order to determine appropriate course marker terminology
	Lack of time to focus on the course marking effort
	Perception on campus that OER course marking may be used as a reward for those who use open resources, or to punish those who do not
	Concerns that students will only select OER courses, and that as a result non-OER courses won't meet their minimum enrollment requirements
	Have not experience any obstacles or challenges in implementing the OER course marking system
	Other, please state:
19.	Which of the following are used at your institution to mark/identify these courses in your course schedule or listing? Select all that apply. 15
	☐ OER ☐ Low cost
	Free Affordable
	Zero cost Other (please specify)

Survey item adapted from question 13 of the "Milestones Reporting Form: OER Course Marking Solutions," University of Texas, Arlington, reused with permission under a CC BY 4.0 International License.

as such in your course schedule or listing?

19a. How does your institution define low cost or affordable courses when identifying them

SECTION III OER Leadership and Collaboration

Definition of OER used in this survey:

OER are defined as teaching, learning, or research resources that are in the public domain or that have been released under an intellectual property license that permits the free use, adaptation, and redistribution of the resource by any person. Note that OER does not include freely available, proprietary resources, such as your institution's subscription-based digital course materials, that are provided to students on the first day of class through a publisher's "inclusive access program".

	Is there a centralized office, commi at your institution? Select all that ap	*	ersees (or will overs	ee) the OER work				
	Yes, a library-led committee							
	Yes, a committee within the Academic Affairs Office							
Yes, a committee within the online teaching or distance education team								
Yes, a faculty-led committee								
	Yes, an OER Task Force or a ded	icated OER commit	tee					
	No, OER work is not centralized a	at our institution						
	Not relevant - There is no OER w	ork planned or in pla	ace at our institution					
	Other (please specify):							
	What role(s) do each of the followin institution? Select all that apply.	g stakeholder grou	ps play in supportin	g OER at your				
	ш э ншион: Зелестал тагарргу.							
	пі з ицион: Зелестал татарріу.	Library Staff	Faculty Excellence Centers	Digital Learning Staff				
	Providing OER as part of library resources or institutional resources							
	Providing OER as part of library							
	Providing OER as part of library resources or institutional resources Curating OER to meet targeted							
	Providing OER as part of library resources or institutional resources Curating OER to meet targeted teaching and learning needs and gaps							

If you selected "other role/activity" for any of the stakeholder groups above, please specify:

22. What other roles at your institution currently support, or are necessary to support, OER
adoption and use among faculty? Select all that apply.
Institutional leaders/administrators
Instructional designers and curriculum experts
Faculty professional development staff
Students (e.g., student PIRGs, student-led social media campaigns, students creating OER)
Bookstore staff
Faculty champions
Distance education, online education
☐ Information Technology staff
Dedicated OER Task force/committee
None of the above, or not relevant
Other (please specify):
23. What strategies, if any, has your institution used to build OER awareness specifically among students? Select all that apply.
Asking individual student champions to speak or share about their OER experiences (e.g.,
through social media, or at meetings or forums)
Encouraging student government to pass an official resolution in support of OER
Running OER awareness campaigns to engage students
Asking faculty and staff to advocate for OER with their students
We have not used any strategies to build OER awareness among students
Other, please specify:
24. Is your institution involved in any collaboration with other educational institutions or organizations on OER? Select all that apply.
Yes, with other institutions in the same college district/system
Yes, with other institutions outside my college district/system
Yes, through participation in a national or international open education organization (e.g., OpenEd Global, CCCOER, Open Textbook Network)
Yes, through participation in a student success initiative (e.g., Every Learner Everywhere, Achieving the Dream Collaborative)
No, but we are planning a collaboration in the future
No, not currently, and no such collaborations are planned
Other (please specify):

24a. Please describe one of your institution's OER collaboration projects. What are the main goals of the collaboration?

SECTION IV OER Enablers and Barriers

Definition of OER used in this survey:

OER are defined as teaching, learning, or research resources that are in the public domain or that have been released under an intellectual property license that permits the free use, adaptation, and redistribution of the resource by any person. Note that OER does not include freely available, proprietary resources, such as your institution's subscription-based digital course materials, that are provided to students on the first day of class through a publisher's "inclusive access program".

25. In the past 3 years, has your institution allocated funding to any of the following OER-related initiatives? <i>Select all that apply.</i> 16
Yes, funding to create awareness for OER
Yes, funding for OER capacity building/training
Yes, funding for the creation of new OER
Yes, funding for the curation of existing OER
Yes, funding for the use of OER by faculty
No, we have not allocated funding to OER-related initiatives in the past 3 years
Other, please specify:
26. Currently, how is your institution funding its OER work? Select all that apply.
Internal funding
State funds
Federal funds
Private funding
Other
Pease name the specific source of the funding for each item selected above.
27. Approximately what proportion of faculty at your institution have attended internal or external trainings specifically on OER? <i>Please estimate to the best of your knowledge</i> . 17
☐ None, or 0%
Less than 10%
About 25%
About 50%
About 75%
All, or almost 100%
I don't know

Survey item adapted with permission from an unpublished survey developed for the "OER Indicators for National Adoption and Impact" initiative, under UNESCO's ICT in Education Unit.

17 Ibid.

29.	Which of the following stake specifically on OER? Select Library staff Digital Learning staff Faculty Excellence Center None of the aforemention Other, please specify: Which of the following types in terms of enabling OER acceptance of the specific of the following types in terms of enabling OER acceptance of the specific of the sp	all that ap	aining opport	unities hav	e worked l	pest at your institution,
		Very Effective	Moderately Effective	Not Effective	Not Certain	Our institution has not participated in this
	OER conferences					
	External OER trainings/ programs					
	Internal OER trainings/programs					
	Individual OER training and support for faculty (e.g., from library staff, distance ed staff, or instructional design staff)					
	Texas Learn OER (self directed OER course consisting of 10 modules)					
	Other self-directed trainings or courses					
	Other type of training (please specify):					

institution? Select three from the list below or add your own. [Question open to all.] OER training Faculty buy-in and awareness Reward-based incentives for faculty (e.g., stipends, recognition) Release time for faculty to work with OER Access to OER for specific disciplines, levels, and/or types of teaching materials Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) Dedicated staff to support OER work Executive leadership commitment to OER adoption and use Other (please specify):							
Reassigned time or release time for planning or collaboration on OER Public acknowledgment or recognition when faculty use OER Embedding OER within faculty performance review and appraisal processes Certification or badge system tied to OER use We do not offer incentives Other, please specify: 31. What top three factors or supports are needed to increase OER adoption and use at your institution? Select three from the list below or add your own. [Question open to all.] OER training Faculty buy-in and awareness Reward-based incentives for faculty (e.g., stipends, recognition) Release time for faculty to work with OER Access to OER for specific disciplines, levels, and/or types of teaching materials Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) Dedicated staff to support OER work Executive leadership commitment to OER adoption and use Other (please specify):		•	does your in	stitution offe	er, if any, to	encourage f	aculty use
 □ Public acknowledgment or recognition when faculty use OER □ Embedding OER within faculty performance review and appraisal processes □ Certification or badge system tied to OER use □ We do not offer incentives □ Other, please specify: 31. What top three factors or supports are needed to increase OER adoption and use at your institution? Select three from the list below or add your own. [Question open to all.] □ OER training □ Faculty buy-in and awareness □ Reward-based incentives for faculty (e.g., stipends, recognition) □ Release time for faculty to work with OER □ Access to OER for specific disciplines, levels, and/or types of teaching materials □ Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) □ Dedicated staff to support OER work □ Executive leadership commitment to OER adoption and use □ Other (please specify): 32. The OER research literature points to specific collaborative structures that support the 		Stipends to encourage OER pro	jects				
 ☐ Embedding OER within faculty performance review and appraisal processes ☐ Certification or badge system tied to OER use ☐ We do not offer incentives ☐ Other, please specify: 31. What top three factors or supports are needed to increase OER adoption and use at your institution? Select three from the list below or add your own. [Question open to all.] ☐ OER training ☐ Faculty buy-in and awareness ☐ Reward-based incentives for faculty (e.g., stipends, recognition) ☐ Release time for faculty to work with OER ☐ Access to OER for specific disciplines, levels, and/or types of teaching materials ☐ Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) ☐ Dedicated staff to support OER work ☐ Executive leadership commitment to OER adoption and use ☐ Other (please specify): 32. The OER research literature points to specific collaborative structures that support the 		Reassigned time or release time	for planning	or collabora	ation on OEF	?	
Certification or badge system tied to OER use We do not offer incentives Other, please specify: 31. What top three factors or supports are needed to increase OER adoption and use at your institution? Select three from the list below or add your own. [Question open to all.] OER training Faculty buy-in and awareness Reward-based incentives for faculty (e.g., stipends, recognition) Release time for faculty to work with OER Access to OER for specific disciplines, levels, and/or types of teaching materials Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) Dedicated staff to support OER work Executive leadership commitment to OER adoption and use Other (please specify):		Public acknowledgment or reco	gnition when	faculty use	OER		
 ☐ We do not offer incentives ☐ Other, please specify: 31. What top three factors or supports are needed to increase OER adoption and use at your institution? Select three from the list below or add your own. [Question open to all.] ☐ OER training ☐ Faculty buy-in and awareness ☐ Reward-based incentives for faculty (e.g., stipends, recognition) ☐ Release time for faculty to work with OER ☐ Access to OER for specific disciplines, levels, and/or types of teaching materials ☐ Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) ☐ Dedicated staff to support OER work ☐ Executive leadership commitment to OER adoption and use ☐ Other (please specify): 32. The OER research literature points to specific collaborative structures that support the 		Embedding OER within faculty p	erformance	review and a	appraisal pro	cesses	
Other, please specify: 31. What top three factors or supports are needed to increase OER adoption and use at your institution? Select three from the list below or add your own. [Question open to all.] OER training Faculty buy-in and awareness Reward-based incentives for faculty (e.g., stipends, recognition) Release time for faculty to work with OER Access to OER for specific disciplines, levels, and/or types of teaching materials Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) Dedicated staff to support OER work Executive leadership commitment to OER adoption and use Other (please specify):		Certification or badge system tie	ed to OER us	se			
31. What top three factors or supports are needed to increase OER adoption and use at your institution? Select three from the list below or add your own. [Question open to all.] OER training Faculty buy-in and awareness Reward-based incentives for faculty (e.g., stipends, recognition) Release time for faculty to work with OER Access to OER for specific disciplines, levels, and/or types of teaching materials Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) Dedicated staff to support OER work Executive leadership commitment to OER adoption and use Other (please specify):		We do not offer incentives					
institution? Select three from the list below or add your own. [Question open to all.] OER training Faculty buy-in and awareness Reward-based incentives for faculty (e.g., stipends, recognition) Release time for faculty to work with OER Access to OER for specific disciplines, levels, and/or types of teaching materials Ensuring quality of OER (e.g., through quality review rubrics or evaluation processes in place) Dedicated staff to support OER work Executive leadership commitment to OER adoption and use Other (please specify):		Other, please specify:					
	32.	oER training Faculty buy-in and awareness Reward-based incentives for face Release time for faculty to work Access to OER for specific disci Ensuring quality of OER (e.g., the Dedicated staff to support OER Executive leadership commitme Other (please specify):	culty (e.g., sti with OER plines, levels rough quality work nt to OER ac	add your ow pends, recor s, and/or typ review rubr doption and collaborativ	yn. [Question] gnition) es of teachir ics or evalua	n open to all.	ses in place)
		At our institution	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
At our institution Jisagree Neutral Agree		Faculty are encouraged and supported to share their course materials with one another.					
Faculty are encouraged and supported to share their course materials with		Faculty are encouraged and supported to customize and adapt learning materials to meet local student needs.					
Faculty are encouraged and supported to share their course materials with one another. Faculty are encouraged and supported to customize and adapt learning		Collaborative course design is encouraged. For example, library staff, instructional designers, faculty and others work together on course design.					

SECTION V Impact of OER

Definition of OER used in this survey:

OER are defined as teaching, learning, or research resources that are in the public domain or that have been released under an intellectual property license that permits the free use, adaptation, and redistribution of the resource by any person. Note that OER does not include freely available, proprietary resources, such as your institution's subscription-based digital course materials, that are provided to students on the first day of class through a publisher's "inclusive access program".

33. If your institution collects data on the impact of OER, please indicate whether the use of OER has increased, decreased or maintained each of the outcomes listed below. If needed, check with your Institutional Research Office to help you answer this question. (Question open to all.)¹⁸

	Decreased based on our OER impact data	Stayed the Same based on our OER impact data	Increased based on our OER impact data	We collect these OER impact data, but results are not yet available	We don't collect these OER impact data
Quality of teaching					
Student access to course materials					
Student academic performance					
Student per- sistence to next semester					
Student pass rates for the course					
Student engagement in courses or materials					

Survey item adapted with permission from an unpublished survey developed for the "OER Indicators for National Adoption and Impact" initiative, UNESCO's ICT in Education Unit.

Availability of high quality materials			
Cost of course development for the institution			
Cost of course materials for learners			

34. For each type of OER impact data you collect, please list the sources of the data below.

	Data Source
Quality of teaching	
Student access to course materials	
Student academic performance	
Student persistence to next semester	
Student pass rates for the course	
Student engagement in courses or materials	
Availability of high quality materials	
Cost of course development for the institution	
Cost of course materials for learners	

35. Please list any final thoughts or comments related to the use of OER at your institution.

SECTION VI Respondent Information

Demographic information is used only to classify the survey responses. No individual-level data will be released, and your responses will remain anonymous in any synthesis of survey findings.

36.	Which of the following best describe(s) your job title? Select all that apply.	
	☐ Faculty	
	Dean of Academic Unit	
	Library Administrator or Library Staff	
	Online Learning, Academic or Learning Technology, or Distance Learning Administrator	
	☐ Information Technology Staff	
	Institutional Research Office Administrator	
	OER Committee Lead or OER Task Force Lead	
	President	
	Academic Affairs/Instruction Administrator	
	Other (please specify):	
	Other (please specify):	
37.	Other (please specify): What role, if any, do you play in the support of OER at your institution? Select all that apply.	
37.		
37.	What role, if any, do you play in the support of OER at your institution? Select all that apply.	
37.	What role, if any, do you play in the support of OER at your institution? Select all that apply. Advocate for OER	
37.	What role, if any, do you play in the support of OER at your institution? Select all that apply. Advocate for OER Coordinate OER or lead OER task force	_
37.	What role, if any, do you play in the support of OER at your institution? Select all that apply. Advocate for OER Coordinate OER or lead OER task force Train and support faculty on OER	_
37.	What role, if any, do you play in the support of OER at your institution? Select all that apply. Advocate for OER Coordinate OER or lead OER task force Train and support faculty on OER Administer or secure funding for OER projects on campus	_
37.	What role, if any, do you play in the support of OER at your institution? Select all that apply. Advocate for OER Coordinate OER or lead OER task force Train and support faculty on OER Administer or secure funding for OER projects on campus Support OER data collection and research	_
37.	What role, if any, do you play in the support of OER at your institution? Select all that apply. Advocate for OER Coordinate OER or lead OER task force Train and support faculty on OER Administer or secure funding for OER projects on campus Support OER data collection and research Provide OER technology support	

APPENDIX C | TEXAS HIGHER EDUCATION COORDINATING BOARD

Agency Mission

The mission of the Texas Higher Education Coordinating Board (THECB) is to provide leadership and coordination for Texas higher education and to promote access, affordability, quality, success, and cost efficiency through 60x30TX, resulting in a globally competitive workforce that positions Texas as an international leader.

Agency Vision

The THECB will be recognized as an international leader in developing and implementing innovative higher education policy to accomplish our mission.

Agency Philosophy

The THECB will promote access to and success in quality higher education across the state with the conviction that access and success without quality is mediocrity and that quality without access and success is unacceptable.

Founded in 2001, the Texas Higher Education Foundation proudly serves as the nonprofit fundraising arm for the Texas Higher Education Coordinating Board. Since 2001, the Foundation has been a leader in developing new programs, conducting quality research, and mobilizing partnerships around the state to promote higher education access, affordability, quality, and success. The Foundation's founding principles of collaboration, equity, and accountability continue to guide trustees and staff as they partner with ISDs, postsecondary institutions, businesses, foundations, and non-profit organizations to ensure the success of the state's higher education strategic plan, 60x30TX.

Division of Digital Learning

The newest division of the THECB, established November 2020, provides leadership and advocacy for digital learning in higher education and promotes, sustains, and advances a quality digital learner experience positioning Texas as a world leader and resulting in globally competitive digitally proficient citizens. The goals of the division are to increase awareness of, build capacity for, and recognize digital excellence in higher education across the state. The division will partner with institutions to expand established success in digital learning and foster creativity that emerged during the monumental shift to remote learning as a result of the pandemic.

The digital learning portfolio includes grant programs for digital learning and open education resources (OER), institutional framework and capacity building grants, landscape surveys for OER and digital learning, Open Texas Conference and OERTX Creator Fest, OERTX repository, and the Learning Technology Advisory Committee (LTAC). In addition, the division is actively designing the digital learning clearinghouse, DLTX, which will bring the digital learning community together by creating a collaborative interactive resource space where participants recognize that through digital learning we educate, learn, drive change, innovate, advocate, and lead.