

ER Embraced

As California's [community colleges](#) implement degree pathways with no textbook costs, what -- if anything -- can be gleaned from their data?



By Lilah Burke September 19, 2019

<https://www.mtsac.edu/governance/orgcharts/>

An ambitious, Legislature-funded effort by nearly two dozen California community colleges to create degree and certificate pathways with no textbook costs is scaling up this year, and early -- if imperfect -- data suggest that the program is saving students money and improving their educational outcomes.

"We want, in the most transparent and affordable way possible, to provide our students with [a] coherent and cohesive educational experience," said James Glapa-Grossklag, a dean at College of the Canyons and a co-coordinator for the program. "That includes removing the barrier to costly instructional materials, which have the effect of telling students without financial wherewithal that they don't belong in the classroom."

A \$5 million grant the state Legislature authorized in 2016 aimed to do just that, by moving all course materials for these pathways to online educational resources, also called OER. These resources, which are often but not always online, are free to students and openly licensed. The initiative, referred to as the zero-textbook-costs (or ZTC) program, awarded grants to 23 community colleges to create 23 associate-degree pathways and 14 certificate pathways. While some were rolled out in the fall of 2018, most are being implemented this academic year.

Textbook prices are a barrier for many students, but they can be particularly nettlesome for those students -- highlighted in a study released last March -- who are homeless or food insecure. A well-implemented zero-textbook-cost pathway is a "green light" for such students, Glapa-Grossklag said. "If we fail to provide those students with a predictable way to select classes and keep going in a predictable manner to the same physical location or the same online location, we run the risk of them encountering that surprise \$200 textbook, which would be life changing to a student who is living in his or her car," he said.

Community college grantees say they expect to save students a total of almost \$43 million over the course of three years. That number is an aggregate of the estimates each college provided in its grant application, so it is hard to judge its reliability.

In general, there are several different approaches to arriving at a cost-saving estimate from OER adoption. Some analysts will simply multiply the price of a new original textbook by the number of students in the course. Others will try to incorporate some understanding that many students buy used books, rent books or don't buy them at all. In this case, each college potentially took its own approach to the estimate. Methodology for the calculations was not included in the grant applications, Glapa-Grossklag said.

In the same vein, colleges and departments took varied approaches to making their materials freely available, often informed by the content they were managing. In a water technology course at College of the Canyons, for example, no commercial textbook had been used in the past, and faculty collaborated with industry experts to create materials. In other cases instructors were granted materials from state authorities for courses such as early childhood education. Finally, some colleges embraced existing OER from providers such as OpenStax and Libretexts.

The early data, from those colleges that implemented their programs last year, show increases in student success. Grades achieved in ZTC courses were 3 percent higher than those achieved in traditional courses. Grades of F were 11 percent less prevalent in ZTC courses, while grades of A were 7 percent more prevalent. Pell Grant recipients did markedly better in ZTC classes, with their grades in those classes 7.6 percent higher than their grades in other classes.

But the data, while encouraging, lacked some important experimental controls. Colleges compared the grade distribution of their ZTC course with the grade distribution of a section of that same course taught with

traditional materials, either in the past or concurrently. There was no opportunity to control for changes in the faculty or the assessment type.

This was primarily due to the state of resources at the colleges, Glapa-Grossklag said. "The student success data that was requested from colleges is data that colleges already have access to and have already collected, thereby increasing the likelihood that colleges would be responsive to such requests," he said. "Some of our colleges have no institutional researchers [on staff]." Twenty-one percent of the data came from ZTC courses, and 79 percent was collected from traditional courses.

Regan Gurung, interim director of the Center for Teaching and Learning at Oregon State University and a professor of psychology who has done research on open educational resources, said that while California's commitment to helping underrepresented students is laudable, generally data collected without important experimental controls should be viewed cautiously.

"The moment you change the exams, the moment you change the course work, we're talking about something slightly different," Gurung said. "We don't know if [students are] doing better because of the OER or because your course design and teaching is better."

Gurung, who teaches general psychology and is exploring implementing OER in the future, said that with OER and commercial textbooks alike, there can be some diversity in quality. "Undoubtedly, OERs can benefit [students] tremendously," he said. "But what I'm seeing a lot of is this march to adopt OERs without putting enough safeguards in place to ensure that students are getting quality OERs."

Different studies have suggested different conclusions on whether OER or traditional materials lead to better student outcomes.

Gurung also advised that OER materials that aren't implemented with teacher support and training might not be beneficial at all. "In higher education there's this assumption that, especially if you have a Ph.D., well, you know your content. But teaching is not an impromptu act. Teaching takes reflection. Teaching takes training. Teaching takes support," he said. "OERs have to be accompanied by teacher training and student training on how to use them."

In the California colleges, support came in the form of monthly webinars, boot camps and five statewide summits. Support for faculty focused on issues such as searching for OER, formatting faculty-created OER, getting buy-in from a department and making materials accessible for students with disabilities.

Mindy Boland, director of OER services at the Institute for the Study of Knowledge Management in Education, which launched an OER Commons Hub for California community colleges in March, said that it's notable to see OER implemented through entire degree or certificate pathways. "For so long it's really been the focus on the [general education] courses and kind of that horizontal approach," she said. "Going up an entire vertical for a discipline or for a degree, I think, is really the next step."

Boland also suggested that students might be more successful with OER, not only because they have better access to materials, but because materials have been designed for them specifically. "Often what happens is faculty using OER in their courses have a much deeper connection with the content they're using," she said. "They've actually really taken the time to develop a course specifically for their learners."

Glapa-Grossklag said that the feedback from faculty members and students had so far echoed this prediction. "We hear again and again and again from our grantee colleges that their instructors are thrilled to be able to select, revise and share instructional materials freely and legally," he said. "Feedback from their students about these materials is not only that they're grateful for the price barrier to have been removed but also that they feel that the course materials have been designed specifically for them."

Tanya Spilovoy, director of open policy at the WICHE Cooperative for Educational Technologies, said that a zero-textbook-cost degree pathway is the "unicorn" of OER efforts. "That is one of the highest and loftiest goals of any open educational resources champion. So it's really exciting to see a high-level endorsement," she said. "It will take tremendous effort and a lot of people helping."