



OER Degrees

Network of Open Orgs' Collaborative Project:
Case studies that demonstrate the success of Open Educational Resources

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Name of the initiative	OER Degrees
Categorization of impact (access to education/ learner outcomes/ costs/ continuous professional development)	Access to education Costs
Partners	<ul style="list-style-type: none"> • Achieving the Dream • Community and state college systems • The Community College Consortium for Open Educational Resources (CCCOER) • SRI • rpk Group • Lumen Learning • Institute for the Study of Knowledge Management in Education (ISKME) • BCcampus
Funding sources	<ul style="list-style-type: none"> • The William and Flora Hewlett Foundation • The Bill and Melinda Gates Foundation • U.S. state governments (New York, California, Idaho), • Canadian provincial governments (British Columbia)
Years it has been operational	2013 - present

Description, purpose, and aims of the initiative

An OER Degree, sometimes referred to as a Z Degree, a zero textbook cost degree (ZTC Degree), or a Zed Cred, is a complete pathway to a degree, certificate, or credential that has no or very low costs for instructional materials (typically less than US\$30 per course per student). All courses in these degree pathways use open educational resources (OER) or other instructional materials that are zero or very low cost to students. OER Degrees have been growing in the United States and Canada, particularly at community and technical colleges where textbook costs represent a significant percentage of student costs.

OER Degree pathways represent a commitment by an institution to significantly invest in open education as a tool for student success. The aims of this type of initiative go much further than just saving students money; they also seek to:

- **Increase student equity:** Research has shown¹ that the high cost of textbooks negatively impacts student access, success, and completion – particularly for lower income students. When textbook costs are high, students are often forced to take fewer courses, drop courses, or try to forgo the textbook and earn a poor grade.
- **Improve student completion:** Students taking OER courses have been shown to enrol in more credits during that semester and at least one subsequent semester, suggesting that they can complete their degrees or certificates more rapidly.

¹ Florida Virtual Campus. (2018). Student Textbook and Course Materials Survey. Available at: <https://dlss.flvc.org/documents/210036/1314923/2018+Student+Textbook+and+Course+Materials+Survey+Report+--+FINAL+VERSION+--+20190308.pdf/07478d85-89c2-3742-209a-9cc5df8cd7ea>

- **Enhance academic freedom:** The open licences on OER allow academics to regularly modify, update, etc. the learning resources for their courses. Academics no longer feel like they need to use every single chapter of an expensive publisher's textbook – they are free to use and remix many different OER to achieve their learning outcomes.
- **Encourage open pedagogy:** Academics may include students in the modification and revision of OER used in a course, including such activities as revising materials, creating test questions, and generating learning materials for future students. When students become content creators, they deepen their understanding which can lead to improved outcomes.
- **Grow open course repositories:** Many academics who have converted their courses to use OER and zero/very-low-cost materials are sharing them in open repositories making it possible for other colleges to adapt these materials.²

Successes and achievements

The first OER Degree was launched in 2013 by Tidewater Community College in Virginia, US, saving students majoring in business administration up to 25% on the cost of attendance.³

Achieving the Dream (ATD), a US-based national non-profit organization focused on educational reform at the community college level, received US\$8 million in 2016 from the Hewlett Foundation to support the development of OER Degrees at 30+ community colleges in the United States and Canada. The Gates Foundation and Ascendium provided an additional US\$1.5 million to support research of the academic and economic impacts of the initiative. A report in 2020 describes the achievements:

The [ATD Initiative] enabled 38 colleges nationwide to offer 6,600 OER course sections over two and a half years, reaching nearly 160,000 students. Approximately 2,000 instructors participated in the development and delivery of these courses, substantially expanding the number of [academics] with OER experience at participating colleges. Nearly 600 courses were redesigned and certified as OER, contributing to the availability of OER content. The initiative saved students at least US\$10.7 million in instructional material costs.

In 2017, the state of California, US, allocated US\$5 million to public community colleges to support development of OER Degrees. Among the 23 colleges that applied for and received funding, 19 colleges developed 37 programmes consisting of 407 courses by 2019. These courses were in a variety of programme areas, including career technical education, the sciences, technology, engineering, and mathematics. In addition, 37,000 students enrolled in one or more courses in a ZTC Degree programme by 2019. In 2021, an additional US\$115 million was allocated, providing enough money for each community college in California to develop multiple ZTC Degrees.

Since 2017, the state of New York, US, has provided US\$8 million per year to the City University of New York (CUNY) and State University of New York systems to support OER efforts, including the development of OER Degrees. In the CUNY system, two campuses have developed OER Degrees so far using state funds (an additional three campuses have built OER Degrees using ATD funds won before the state allocated funding).

² Text in this section adapted from <https://www.ccoer.org/learn/oer-degree-benefits>

³ Wiley *et al.* (2016). The Tidewater Z-Degree and the INTRO Model for Sustaining OER Adoption. Education Policy Analysis Archives Vol. 24 No.41.

In autumn 2017, Houston Community College (HCC), in Texas, US, launched a ZTC Degree programme in the Associate of Arts degree plan in Business, as well as the Associate of Arts and Associate of Science general education transfer degrees.⁴ A research study found that HCC's ZTC Degree programme had a statistically significant positive effect on pass rates for all students, but no effect on completion. It also found that the ZTC Degree at HCC may improve success among Black and Asian students, and no interaction with Pell recipient status (a proxy for low socioeconomic status).

In 2017, BCcampus provided funding to three postsecondary institutions in British Columbia, Canada, to support development of OER Degrees (called Zed Creds). This effort has resulted in five Zed Creds across the three campuses so far, including the development of new OER for several courses within the programmes.

Evidence of impact

There are several reports that describe the evidence of impact of OER Degrees:

- A 2020 Report from Achieving the Dream provides the most robust and generalizable evidence of impact for OER Degrees in the US community college context.⁵
- A 2020 report from the California Community College Chancellor's Office to the California legislature provides evidence of impact for the US\$5 million investment made in 2017.⁶
- A 2020 research study of the Z Degree effort at Houston Community College (Texas, US) provides evidence of impact at this institution.⁷
- A 2020 study in Washington State (US) explored how OER Degrees impact student retention.⁸
- A 2019 research study of student perceptions of OER Degrees in the College University of New York system provides evidence of impact in this system.⁹
- A 2016 research study of the Z Degree effort at Tidewater Community College (Virginia, US) provides evidence of impact at this institution.¹⁰
- BCcampus provides a list of new OER that have been created as a result of the five OER Degrees developed so far.¹¹
- CCCOER created a set of case studies outlining the implementation and impacts of OER Degrees in several California community colleges.¹²

⁴ General education transfer degrees are frequently offered at US community colleges to students who want a broad experience and who intend to transfer to a four-year institution.

⁵ See <https://www.achievingthedream.org/resource/17993/oer-at-scale-the-academic-and-economic-outcomes-of-achieving-the-dream-s-oer-degree-initiative>

⁶ See <https://www.cccco.edu/-/media/CCCO-Website/Reports/ccco-report-zero-cost-textbook-rev041221-a11y.pdf?la=en&hash=168160F9653C3B1E707BF3E9F7DA90889314B0B7>

⁷ See <https://www.frontiersin.org/articles/10.3389/feduc.2020.579580/full>

⁸ See <https://doi.org/10.1108/RSR-03-2020-0015>

⁹ See <https://files.eric.ed.gov/fulltext/EJ1213655.pdf>

¹⁰ See

<https://epaa.asu.edu/ojs/index.php/epaa/article/view/1828/1763><https://epaa.asu.edu/ojs/index.php/epaa/article/view/1828/1763>

¹¹ See <https://bccampus.ca/projects/open-education/zed-cred-z-degrees/>

¹² See <https://www.cccoer.org/2020/06/18/california-case-studies/>

Challenges and perceived failures



Figure 1 Image courtesy of Kojo Kwarteng, [Unsplash](#) ([Unsplash licence](#))

A primary challenge for establishing OER Degrees is the availability of OER for all courses in a particular degree pathway. In these cases, faculty require additional support to develop new content (or adapt existing content), which increases the cost of implementation.

Another challenge for OER Degree implementation involves philosophical differences among proponents. Some people take a philosophical approach that imposes the requirement of absolute zero cost. Other proponents take a more practical approach of zero or very low-cost. The state

of Idaho, US, has codified a definition of very low-cost as 'less than US\$30', for example, and the state's 2021 OER Degree programme allows for very low-cost materials in addition to zero cost OER (while making it clear that OER should be used if available or if they can be developed in a reasonable timeline). This philosophical difference has led to major players in the initial OER Degree effort, like Lumen Learning, being excluded from some more recent efforts because Lumen charges a fee (~US\$25) to students for full access to its content and learning platform.

The ATD Final Report (2020) noted several challenges to establishing OER Degrees. The primary challenge was the difficulty colleges faced in implementing full degree pathways. The report indicates that most students took fewer than four OER courses, even though more OER courses were available to them. In general, clear and easy-to-follow pathways were challenging for institutions to create and get students to complete during the term of the grant programme.

Lessons learned and practices that made a difference

Lessons from CCOER Case Studies¹³ including ATD's OER Degree initiative and the California Zero Textbook Cost Degree programme

Create a cross-functional team: As the planning and implementation of an OER Degree touches many departments beyond instruction, library, and the bookstore; a cross-functional team ensures effective decision-making, development, and rollout. Departments such as institutional research, student advisement, marketing communications, and information technology are important partners in measuring and communicating impact and availability to internal and external stakeholders including policy-makers, students, and trustee boards.

Offer ongoing professional development to faculty and staff: New and continuing faculty professional development should include OER awareness training and options to pursue deeper training with library and instructional design support. The transformation of all course materials

¹³ See <http://www.ccoer.org/case-studies>

in a pathway to OER provides an opportunity to improve overall course design and pedagogical practices, and increase departmental collaboration.

Engage students as partners: Students are key stakeholders and can be effective partners in the development and marketing of OER Degrees. Student leaders can promote awareness and availability of OER materials and courses on campus and in the community. Some institutions have hired and trained students to assist faculty with replacing proprietary materials with openly licensed ones and formatting materials to meet accessibility standards.

Maintain administrative support: Although faculty are the key players in OER adoption, administrative support is essential to infrastructure and policies to sustain and grow OER Degrees, particularly after grant programmes end. Provide administrators with regular updates on how student savings, completion, persistence, equity, and other campus priorities are being impacted. Find opportunities to highlight the institution as an OER leader through participation in regional and national programmes.

Lessons From a Minnesota Study

A 2021 article in the *Journal of Higher Education*¹⁴ provides several lessons learned and practices that made a difference in establishing an OER Degree in the Minnesota (US) higher education system. These are presented below.

Research Z Degrees, OER, and other ZTC related subjects. Campuses should conduct this research before taking on a Z Degree effort. In the spirit of openness, many consortia, systems, and colleges have shared their experiences with implementing full Z Degrees, including best practices, toolkits, and the benefits of ZTC in increasing college access and success. This information can be invaluable and can even allow for the replication of successful Z Degree implementations.

Define the terminology associated with the development of Z Degree courses. When developing Z Degrees, we often use the term 'open,' referring to textbooks and course materials within Z Degree courses. Terms include OER, open access, open pedagogy, open, repository, open textbooks, etc.

Invite labour organizations to the Z Degree discussions. We had heard from faculty and labour organizations that too much focus is on cost savings, and there are other reasons why faculty choose textbooks. While our research has demonstrated significant student success in the use of OER, we could have been more deliberate in linking Z Degrees to student equity and guided pathways.

Create a sustainability plan. While many faculty are willing to convert their course to a ZTC course, we have heard concerns about those courses' sustainability. Minnesota State is addressing these concerns by ensuring an infrastructure exists that allows faculty to locate OER, offer opportunities to have OER reviewed, and support open licensing questions.

¹⁴ Anderson, T., Lynch, K. and Kelly, S. (2021). Z-Degrees: Four Colleges in 12 Months The Journal of Higher Education 21(5):131-142.

Provide appropriate technologies. Z Degrees require faculty to move away from publisher supported platforms. Ensure technologies exist to support the storage and management of ZTC resources.

Invite bookstore representation. It is essential to understand bookstore governance and how they can and cannot support Z Degree resources. For those bookstores where governance allows, they can play a critical role in Z Degree initiatives, including:

- Maintain textbooks lists, including those that are zero-cost;
- Offer valuable information for campus- or system-wide OER and Z Degree initiatives; and
- Offer on-demand printing services for OER textbooks.

Resources and publications

Achieving the Dream. (2017). Launching OER Degree Pathways: An Early Snapshot of Achieving the Dream's OER Degree Initiative and Emerging Lessons. Available at: https://www.achievingthedream.org/sites/default/files/initiatives/launching_oer_degree_pathways.pdf

Achieving the Dream. (2018). Participant Experiences and Financial Impacts: Findings from Year 2 of Achieving the Dream's OER Degree Initiative. Available at: https://www.achievingthedream.org/sites/default/files/initiatives/participant_experiences_and_financial_impacts_oer_2018.pdf

Achieving the Dream (2020). OER at Scale. The Academic and Economic Outcomes of Achieving the Dream's OER Degree Initiative. Available at: <https://www.achievingthedream.org/resource/17993/oer-at-scale-the-academic-and-economic-outcomes-of-achieving-the-dream-s-oer-degree-initiative>

Anderson, T., Lynch, K. and Kelly, S. (2021). Z-Degrees: Four Colleges in 12 Months *The Journal of Higher Education* 21(5):131-142. Available at: https://www.researchgate.net/publication/354254102_Z-Degrees_Four_Colleges_in_12_Months

Brandle, S., Katz, S., Hays, A., Beth, A., Cooney, C., DiSanto, J., Miles, L., . (2019), But what do the students think? Results of the CUNY cross-campus zero-textbook cost student survey. *Open Praxis*, vol. 11 issue 1, January–March 2019, pp. 85–101. Available at: <https://files.eric.ed.gov/fulltext/EJ1213655.pdf>

City University of New York (2020) New York State Open Educational Resources Funds CUNY Two Year Report. Available at: https://www.cuny.edu/wp-content/uploads/sites/4/page-assets/libraries/open-educational-resources/CUNY-OER-Report-Year2_SinglePage.pdf

Valentino, M. and Hopkins, G. (2020). No textbook cost general education pathway: an effort to increase retention at Central Washington University, *Reference Services Review*, Vol. 48 No. 3, pp. 503-522. Available at: <https://doi.org/10.1108/RSR-03-2020-0015>

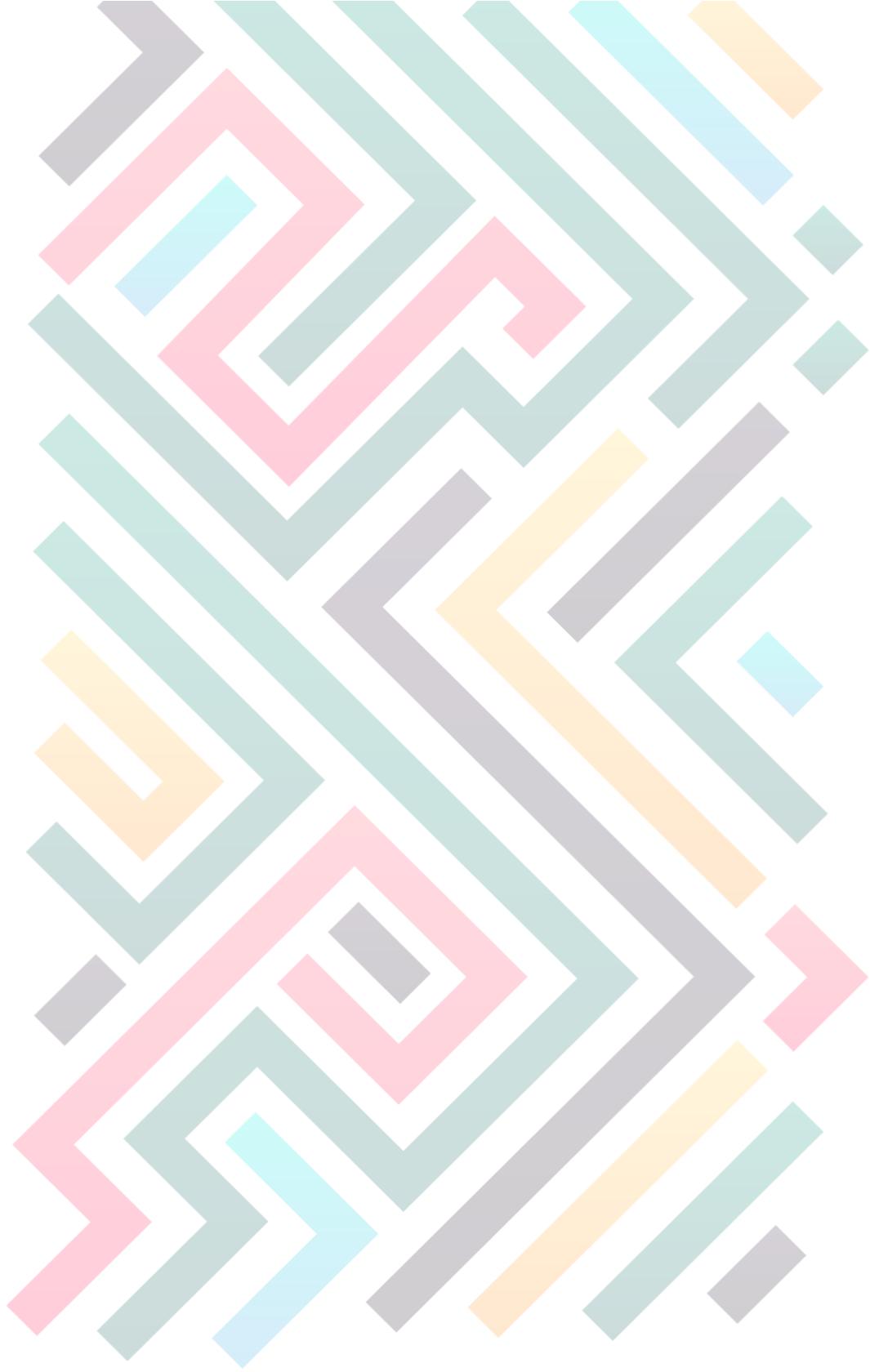
Wiley, D., Williams, L., deMarte, D. and Hilton, J. (2016), The Tidewater Z-Degree and the INTRO Model for Sustaining OER Adoption. *Education Policy Analysis Archives* Vol. 24 No.41. Available at: <https://epaa.asu.edu/ojs/index.php/epaa/article/view/1828/1763https://epaa.asu.edu/ojs/index.php/epaa/article/view/1828/1763>

Translating local insights into an international context

In general, insights and evidence of impact about OER Degrees are applicable in any context where college students are expected to pay for instructional materials. However, cost savings are not the only benefits of OER Degree efforts. As noted above, there are many purported benefits of OER Degree initiatives. The evidence so far indicates that many of these benefits are realized when such initiatives are undertaken. These benefits would apply even in contexts where the cost of instructional materials is not borne by students. Hence, OER Degrees could be considered in all postsecondary education contexts throughout the world. In fact, in contexts where cost is not the driving factor, the benefits of focusing on OER adoption in entire degree programmes may be even more pronounced.

Recommended citation

Bliss, T.J. (2022). OER Degrees. Network of Open Orgs' Collaborative Project: Case studies that demonstrate the success of Open Educational Resources. Available at: <https://www.oerafrica.org/node/13635/materials>



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