

DIGITAL LEARNING IN ACTION

How Houston Community College Leverages Digital Learning and Open Educational Resources to Increase Access to Higher Education

Long History of Digital Learning at HCC

Houston Community College began offering online and blended courses in the 1990s to better serve its diverse learner population: 70 percent of HCC's undergraduate students are enrolled part-time and 44 percent are age 25 or above. The number of students enrolled in distance courses grew by 16 percent from 2012 to 2017. Over the same period, total HCC undergraduate enrollments declined in line with national trends, falling 2 percent. In 2018, HCC's investment in digital learning reached a new level with the launch of its own online college, called HCC Online. HCC Online currently offers 32 fully online degree and certificate programs, a number expected to triple by fall 2019. According to institutional leaders, the online college demonstrates HCC's commitment to serving the needs of online learners and is in line with HCC's mission to expand educational and workforce opportunities for its communities.¹

Building Open Educational Resources into HCC Strategy

Prior to 2015, students, administrators and faculty at HCC advocated for the use of OER to help reduce the cost of instructional materials to students. At the time, individual faculty lacked the highly organized institutional support and coordination required to take on a major OER initiative. This changed in 2015 and beyond with the help of a few catalysts:²

1. Fall 2015 creation of an OER capstone project to explore the development of an OER program, leading to the formation of an OER task force.
2. Spring 2016 presentation to the HCC Board of Trustees from a student group on campus regarding the burden of instructional materials costs and promoting the use of OER.
3. Spring 2016 application for an OER grant from Achieving the Dream. While this grant was not ultimately awarded to HCC, the application process helped focus and prioritize plans for OER use at the institution.
4. Summer 2016 discussion with the Kinder Foundation to support launch of a Z-degree (zero textbook cost) program through grant funding.

AT A GLANCE



- Among the largest institutions in the U.S.
- Total enrollment of nearly 115,000, with over 57,000 undergraduates and nearly 58,000 non-credential students
- HCC serves a diverse undergraduate student population:
 - 58% female, 42% male
 - 34% Hispanic
 - 28% black / African American
 - 13% white
 - 10% Asian
- 52% of first-time freshmen are Pell Grant eligible
- 36% of undergraduate students take at least some courses online, and 13% of undergraduates take all of their courses online

FALL 2017 STATISTICS

HCC's [2019 Strategic Plan](#), released in 2016, includes promoting the use of OER in support of two strategic objectives:

Objective: Increase Innovation in Teaching and Learning

Initiative: Develop and provide access to high quality shared instructional resources

Objective: Increase Student Completion of Degrees, Certificates and Other Awards

Initiative: Provide greater resources and access to supplemental learning

Inclusion of OER in HCC's strategic plan was important because it placed OER initiatives on the road map to the future and therefore positioned them for funding through the HCC budget process. In 2017, the Kinder Foundation provided a \$300,000 grant to the institution to support the development of HCC's first Z-degree program. In fall 2017, HCC introduced three complete Z-degree choices: an AA in business administration, an AA in general studies and an AS in general studies. During the 2017–18 academic year, HCC's [Z-degree program](#) reached about 1,900 students, saving them an estimated \$190,000 in instructional materials costs. Additionally, OER expansion at HCC has grown dramatically outside of the Z-degree program, now saving students approximately \$2 million per academic year. These savings will continue to grow in future years.

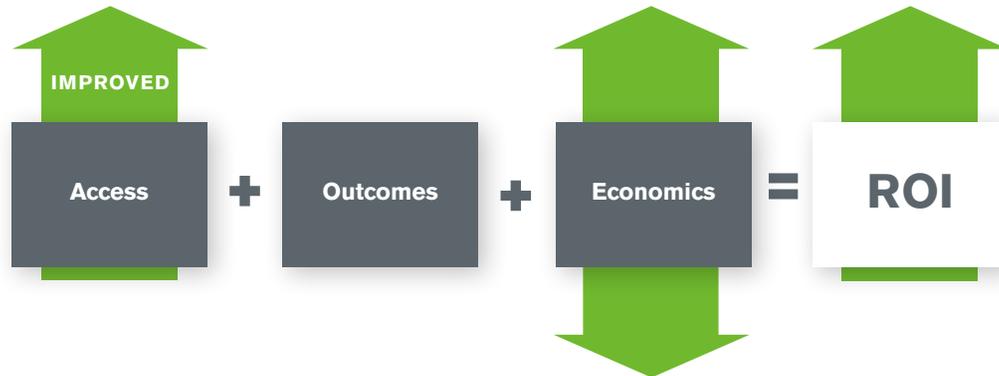
OER Can Boost Return on Investment in Digital Learning

In 2018, Arizona State University and Boston Consulting Group released “Making Digital Learning Work,” a report based on over two years of analysis on the return on investment from digital learning in six institutional contexts. The report identifies three components of the return realized from an institution's investments in digital learning: impacts on student access to higher education, impacts on student learning *outcomes*, and impacts on institutional and student *economics*.

Use of OER has the potential to impact these three components in many ways, including:

- **Negating some of the adverse impacts of instructional materials costs on course-taking practices.** A 2016 survey of over 22,000 students conducted by Florida Virtual Campus showed that 47.6 percent of students took fewer courses and 45.5 percent didn't register for a specific course due to the cost of textbooks.³ Courses using OER can have minimal or no instructional materials costs, helping to broaden student access to the courses they want or need to take to achieve their goals.
- **Maintaining learning outcomes in sections or courses using OER.** Several studies have shown that educational quality, as indicated by student success metrics, in courses using OER is at least equal to the educational quality in courses that use commercially available instructional materials.⁴ A recent study of outcomes at the University of Georgia also suggests that adopting OER may be a strategy to reduce the achievement gap.⁵ Further, faculty using OER ensure that textbooks and other instructional materials are available to students on the first day of class—another factor that can lead to student success.
- **Impacting the economics of digital learning by reducing cost of attendance to students.** 2018 survey data showed that, nationwide, students spent an average of \$484 on course materials during the 2017–18 academic year. This is down from \$579 the previous year, and a decrease of more than \$700 over the previous decade. The decline is attributed to increased use of free and lower-cost instructional materials.⁶ However, institutions should also consider the cost to the institution of OER implementation. For example, HCC's OER program expenses include faculty stipends for OER course development and training, a full-time OER coordinator, a contract with Lumen Learning and more. Such costs will be relevant and significant for many institutions taking on a new OER initiative.

At a high level, the use of OER may translate to a boost in return on investment for an institution implementing digital learning, as shown below.



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1. <https://www.hccs.edu/about-hcc/news/articles/hcc-launches-new-online-college-with-32-fully-online-degrees.html>
 2. <https://www.cccoer.org/casestudy/building-a-z-degree-foundation-business-administration-multi-disciplinary-studies/>
 3. <https://florida.theorange grove.org/og/file/3a65c507-2510-42d7-814c-ffdefd394b6c/1/2016%20Student%20Textbook%20Survey.pdf>
 4. <https://link.springer.com/article/10.1007/s11423-016-9434-9>
 5. <http://microblogging.infodocs.eu/wp-content/uploads/2018/07/IJTLHE3386.pdf>
 6. <https://www.nacs.org/advocacynewsmedia/pressreleases/tabid/1579/ArticleID/771/Course-Material-Spending-Declines-for-2017-18-Academic-Year.aspx>