



CMSI RESEARCH BRIEF

Using Open Educational Resources to Lower Student Cost of Attendance at Minority Serving Institutions

by Ervin James III, Paul Quinn College

Executive Summary

The purpose of this research brief is to share preliminary research results concerning the usage of open educational resources (OER) at Minority Serving Institutions (MSIs). The United Nations Educational, Scientific, and Cultural Organization (UNESCO) defines open educational resources as teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions.

Phase I of this research brief answers the following questions concerning the usage of OER at MSIs: Which MSI survey participants are using OER effectively to drive down student cost of attendance at their respective institutions? What is the range of OER commonly used by survey participants for their courses? How widespread is the usage of OER across the institutions of survey participants? What type of institutional barriers preclude and deter the widespread use of OER across academic disciplines on their campuses? What type of institutional support is available to survey participants in order to develop courses that utilize OER course material?

Phase I of this brief relies on both qualitative and quantitative survey data from a combination of twenty-nine members of faculty, administrators, and staff members employed by twenty-two different MSIs located throughout the United States. It is designed to promote the use of OERs at MSIs.



Phase II of this project will focus on developing a database that contains more diverse, culturally relevant OER material for student and faculty use in the classroom.

Overview

In 2016, Carl Straumsheim's *Inside Higher Education* article raised the question, "Where Open Textbooks Are Used?" Relying heavily on Babson Survey Research Group's comprehensive study "Opening the Textbook: Educational Resources in U.S. Higher Education, 2015-16," Straumsheim concluded most faculty members are still unaware of the utility of open educational resources (OER). Forty-nine percent of Babson's Survey Group's research study participants revealed they do not use open educational resources for course material because they are unaware of the range of open educational resources available in their academic disciplines. Recognizing how open educational resources often enhance student educational experiences in the classroom, this phase of this research study examined whether the use of open educational resources is becoming a more widely accepted best practice for reducing student cost of attendance at MSIs.

Ervin James III is a full-time faculty member at Paul Quinn College in Dallas, Texas. Erv teaches both humanities and social science courses. In addition to teaching, he also serves as the faculty advisor for the PQC Honda All-Star Challenge Team, Liberal Arts Club, and the Alpha Chi National Honor Society. Erv received his bachelor's degree in political science from Tuskegee University and his master's and doctorate degrees in history from Texas Southern University and Texas A&M University, respectively. Before becoming a college professor, Erv distinguished himself in public history and historic preservation. As a 1772 Foundation Fellow, he served as the Program Coordinator for African American Historic Sites at the National Trust for Historic Preservation. He also completed public history research projects for the Boston African American National Historic Site, the National Center for Preservation Training and Technology, and the Texas Historical Commission. Currently, Erv is participating in a World War II Oral History Project for the Friends of the National World War II Memorial in Washington, D.C. He also remains deeply committed to developing innovative andragogical teaching techniques as well as retention strategies for first-generation students enrolled in urban institutions that serve under-resourced communities.

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Due to the increasing cost of tuition at HBCUs, African American, Latino, and low-income students graduate from these institutions with considerable debt. The United Negro College Fund’s Patterson Research Institute determined 46 percent of HBCU students come from families with incomes lower than \$36,000 (Rhodan, 2013).

At least ninety percent of the student body are Pell Grant recipients at some HBCUs (Special Report: Pell Grants, 2009). Pell Grants are rarely enough to cover the full-cost MSI students incur in pursuit of a four-year college degree. HBCUs with relatively small endowments are also increasingly encountering difficulty filling in the financial gaps for students (Gasman, 2009). Four out of five HBCU students are compelled to take-out a student loan to complete a four-year undergraduate degree (Saunders, Williams, & Smith, 2016). Therefore, innovative individuals and institutions are now using a variety of cost-cutting open educational resources to reduce student expenses. The following results reflect how this emerging trend is increasingly becoming the norm at MSIs located across the nation.

Research Approach

The MSI OER Database Initiative is a project focused on identifying both MSI academicians and MSIs that use culturally relevant OER material for research and curriculum development. The goal is to develop both an online OER best practices manual and a corresponding internet database for culturally relevant OER course material for MSI students and faculty members to enhance MSI educational experiences free of charge. Phase I of this project is comprised of a twenty-three question survey soliciting a variety of information concerning OER familiarity and scholarly practitioner experiences with this innovative approach to education. Phase II will utilize the findings and conclusions of this study to enlist funding support and additional contributions from the academy needed to complete both an online best practices guide and open access database. This survey is merely one step toward the completion of a series of practical initiatives that will harness advancements in educational technology to save struggling MSI students thousands of dollars in course material fees during the twenty-first century.

Table 1: A List of Institutions Represented in the Phase I Survey

1. CSU Fresno (HSI)
2. Dillard University (HBCU)
3. John Jay College of Criminal Justice (HSI)
4. Langston University (HBCU)
5. Oakwood University (HBCU)
6. Paul Quinn College (HBCU)
7. Shaw University (HBCU)
8. Virginia State University (HBCU)
9. Bowie State University (HBCU)
10. California State University, Sacramento (HSI)
11. Florida A & M University (HBCU)
12. Harris-Stowe State University (HBCU)
13. Prairie View A & M University (HBCU)
14. San Diego State University (HSI)
15. Texas Southern University (HBCU)
16. The University of Texas at El Paso (HSI)
17. The University of Texas at San Antonio (HSI)
18. NYC College of Technology, CUNY (HSI)
19. Blackfeet Community College** (TCU)
20. Hostos Community College** (HSI)
21. Southwestern Community College**
22. St. Philip’s College (HSI)

**Hostos Community College, Blackfeet Community College, and Southwestern Community College are two-year institutions that participated in the survey.

Who's Who Among OER Practitioners at MSIs?

The survey respondents represent twenty-two institutions from across the country. This group of participants includes institutions that predominantly serve Asian, Pacific Islander, Native American, Hispanic, and African American student populations (see Table 1).

Fifty-nine percent (59%) of the respondents classified their institutions as an HBCU. Thirty-eight percent (38%) of the respondents classified their institution as an MSI. According to question number five survey responses, nearly the same amount of liberal arts colleges (12) are represented in the survey as research universities (11).

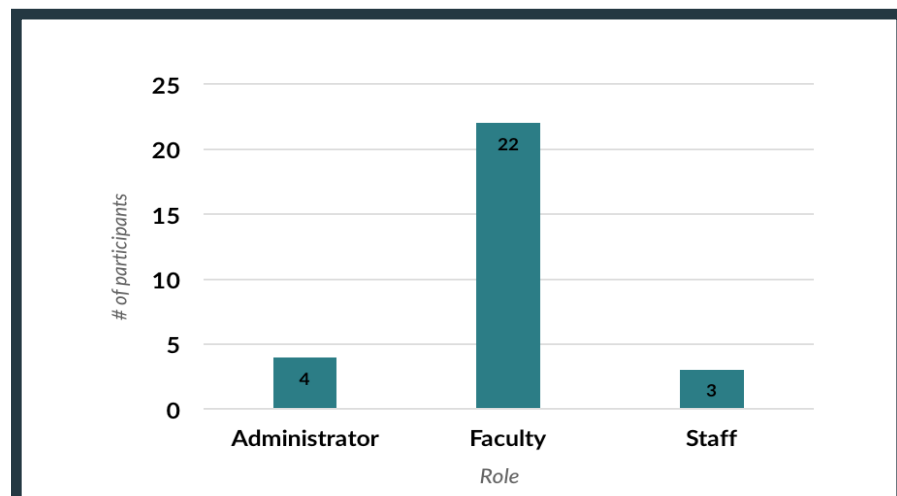


FIGURE 1: Which answer choice best describes your role at your institution?

Fig. 1. illustrates the participants' range of occupations in the survey. Fundamentally, participants belonged to three categories of employment in higher education. The majority of the participants were faculty members (75.9%). Both administrator (13.8%) and staff member (10.3%) survey participants were in the minority.

The largest group of participants are fairly new to higher education (34.5%). Twenty respondents have only one to four years of experience (see Fig. 2).

Responses to survey question number seven revealed eighty-six percent (86%) of the survey participants currently teach courses. Another 10 percent (10%) of respondents indicate they have classroom experience teaching students.

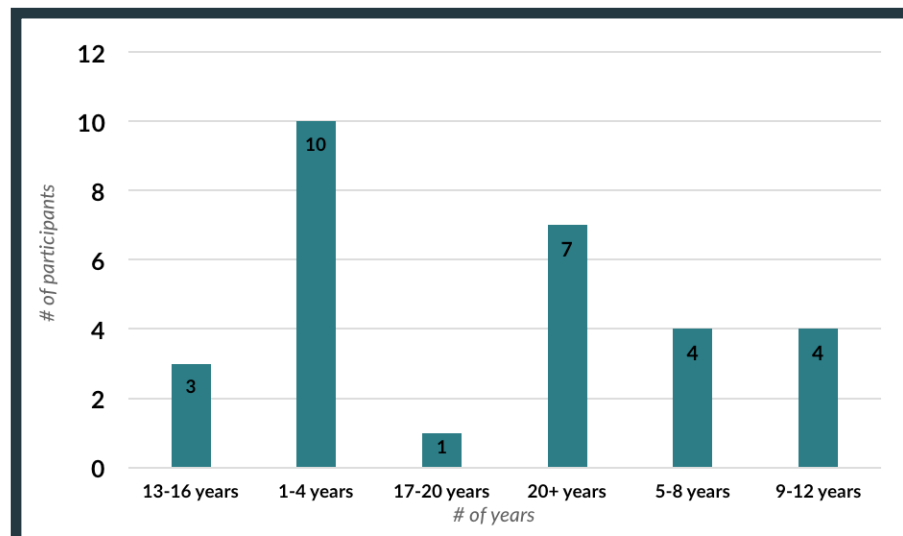


FIGURE 2: How long have you worked in higher education?

Although small in size, this survey sample is largely representative of both the range of MSI instructor experiences and MSI institutions currently committed to serving students of color. For instance, the University of Texas at El Paso is the largest MSI represented in this study, with an enrollment of an estimated Hispanic student population of 20,393 (85%). Conversely, Dillard University in New Orleans, Louisiana is among the smallest HBCUs represented in this research project, with 1,261 students surveyed. Founded in 1869, ninety percent (90%) of Dillard's student body remains African American at this private four-year liberal arts college.

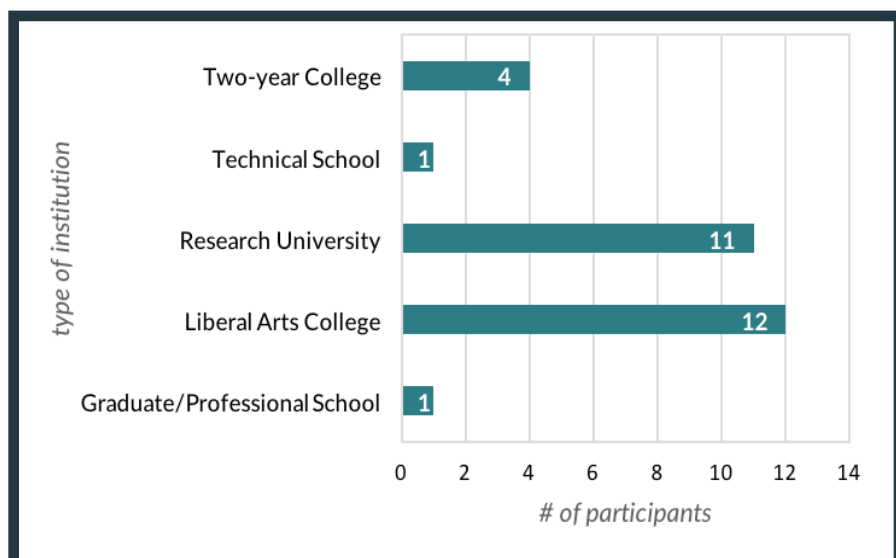


FIGURE 3: Which answer choice best describes your institution?

Which OER Course Materials Are Being Used At MSIs?

In addition to providing pertinent survey participant demographics, survey respondents also answered questions that delved deeply into their teaching experiences with educational technology. The survey also explored their knowledge of OER course material instruction at their respective institutions. Nearly half (41%) of all survey participants indicated they were familiar with the course material used by faculty members at their institutions. Another forty-five percent (45%) indicated that they were somewhat familiar with the course material used by faculty members at their institutions. Only four (4) survey respondents were unaware of what course material faculty members used at their institutions.

When asked, “Which type of course material do the faculty members use at the expense of students” at their respective institutions, eighty-two percent (82%) of survey respondents indicated students pay for

e-textbooks used for their courses. Additionally, respondents noted other institutional course material costs passed on to students include instructional websites, online periodicals, instructional videos and scholarly academic journal subscriptions. Only one survey respondent answered that students are not responsible for paying for learning resources.

How Prevalent is the Use of OER Material at MSIs?

Fifty-eight percent (58%) of the survey respondents use open educational resources for their courses. Seventeen of them also have colleagues within their institutions that do, too. Most notably, faculty members surveyed for this study rely heavily on OER scholarly journal articles (69%), online database periodicals (62%), instructional videos (72%) and instructional websites (72%) for both research and teaching purposes. Four respondents noted that they do not use open educational resource material at all.

Faculty members also provided considerable insight concerning how open educational resources are used across the curriculum. Eighty-two percent (82%) of respondents indicate humanities instructors use them in their courses. Sixty-five percent (65%) suggest OER course material is used in social science courses. Forty-four percent (44%) noted art professors use them to teach students. Forty-one percent (41%) noted science professors use them for their courses. According to the survey respondents, OER course material may also be used to a lesser extent in technology courses (27%).

Fig. 4 reveals sixty-two percent (62%) of respondents agreed that free open educational resources course material is ideal for colleges and universities. Another twenty-eight percent (28%) believed they may be beneficial to higher education institutions, while ten percent (10%) answered, no, that OER course material is less than ideal for classes at their institutions.

When asked whether faculty usage of open educational resources increased student success at their respective institutions relatively few

survey participants (24%) confidently answered, yes. Sixty-six percent (66%) of respondents did not know whether OER course material increased student success at their institutions (see Fig. 5).

Phase II online OER best practices guide will help address this issue. Meanwhile, institutions and instructors are encouraged to create their own assessment tools to gauge OER course material effectiveness regularly.

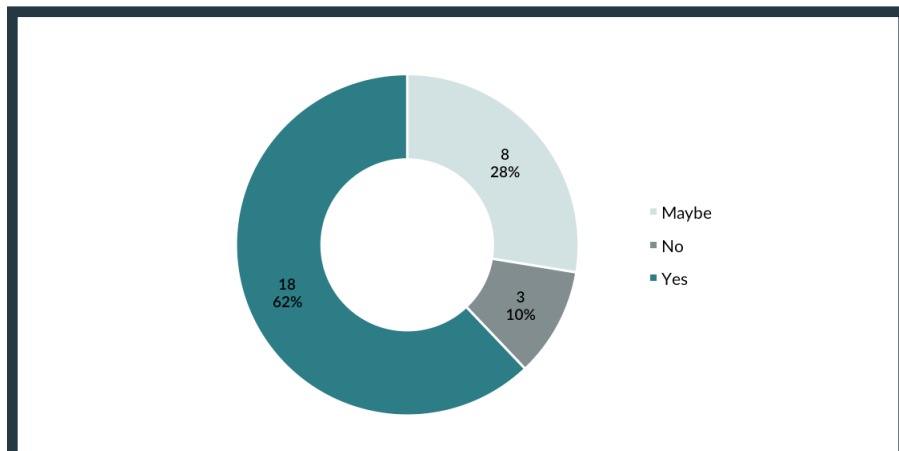


FIGURE 4: Do you believe that free, open-source educational resources are ideal for course instruction at colleges and universities?

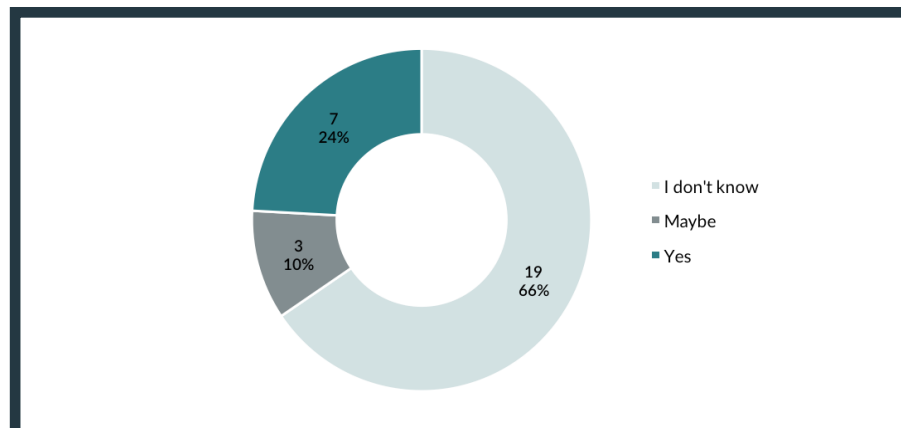


FIGURE 5: Has faculty usage of open educational resources increased student success at your institution?

Additionally, when asked whether faculty usage of open educational resources improved student educational experiences at their respective institutions, the majority of survey participants were uncertain (48%), while thirty-five percent (35%) answered, yes, that OER courses improve their students' educational experiences at their institutions.

Lastly, when asked whether the faculty usage of open educational resources increased the institutional effectiveness of their institutions, again, the majority of survey participants were uncertain (62%), while twenty percent (20%) answered, yes, that OER courses increased institutional effectiveness at their institutions.

As a matter of best practices, responses to the three preceding questions make it clear that a standard assessment method should be created to measure how effective OER course material is in the classroom. The

Does Institutional Support for OER Course Development Exist at MSIs?

In some instances, the use of OER course development may depend heavily on both the type and amount of support faculty members receive from their institutions. The traditional nature of the academy, as well as the longevity of academicians, means there are a number of faculty members that must be encouraged to embrace new educational technology and modern methods of instruction. Normally, this requires investment in new technology around campus. It also requires investment in professional development opportunities that will introduce faculty members to new teaching methods that utilize OER course material.

Eighty-three percent (83%) of MSI survey respondents confirmed their respective institutions provide teaching with technology professional training and development opportunities for faculty members. Only ten percent (10%) of respondents indicated their schools did not, while seven percent (7%) were uncertain (see Fig. 6).

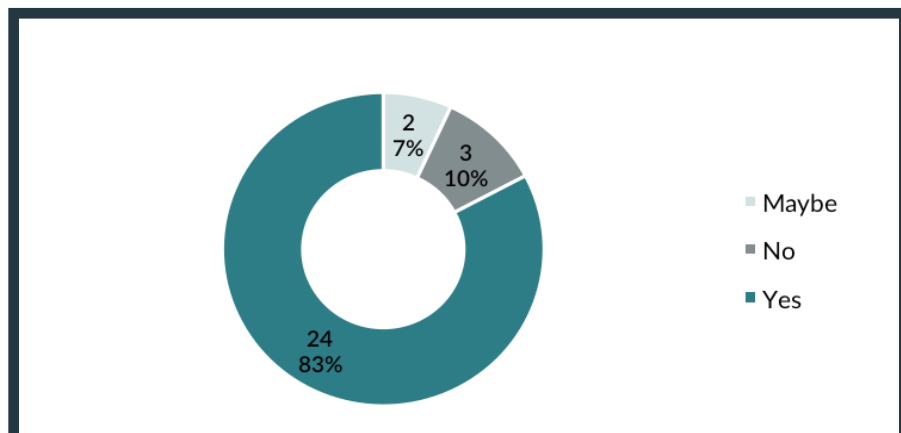


FIGURE 6: Does your institution provide professional training and development opportunities for faculty members?

When asked whether their institutions provided faculty members with funding opportunities for OER teaching with technology research projects and OER course development initiatives, sixty-six (66%) of survey respondents answered, yes. A relatively small number of respondents (7%) answered, no. Curiously, twenty-seven percent (27%) of survey respondents were uncertain whether their institutions provide funding opportunities for individual OER research and course development (see Fig. 7).

Identifying a Variety of Useful OER Material at MSIs

The survey’s open question responses also provided a considerable amount of information concerning OER usage at MSIs. Specifically, OER faculty members shared a variety of open educational resource references for consideration. What follows is an abridged transcription

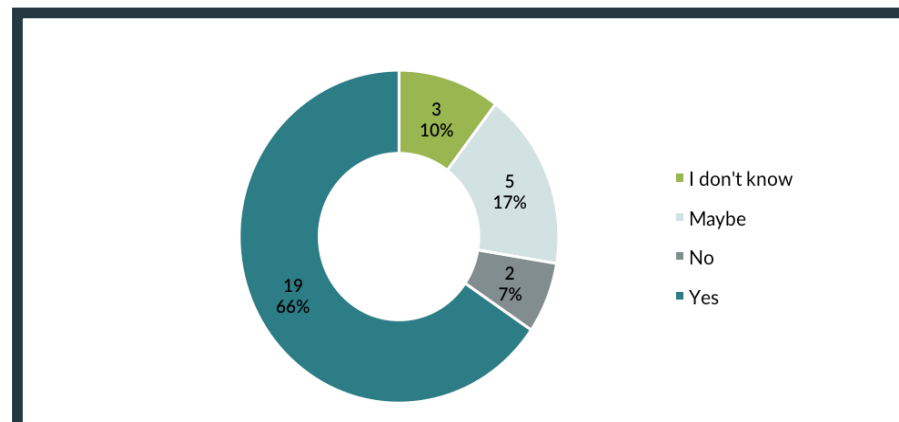


FIGURE 7: Does your institution provide faculty with funding opportunities or OER teaching with technology research projects and course development initiatives?

of a list of useful open educational resources for public consideration. Phase II of this project will also include the development of an online database of diverse, culturally relevant open educational resources readily available to the public for research and curriculum development. The list below is a sample of what will be included in the database.

Some of the OER survey respondents cited within their open question responses included the following recommendations:

- Open Stax Textbooks
- Library of Congress Digital Archival Material
- EBSCO Online scholarly Journal Database
- Historic Site Webpages
- Google Scholar Search Engine
- Khan Academy Videos
- MIT Open Courseware
- Online Textbooks
- E-Textbooks
- I-Tunes University
- TEDex Videos

- The Center for Open Educational Resources & Language Learning (COERLL)
- Lumen Learning
- The Teaching Channel
- Academia.edu
- Teaching Tolerance Website

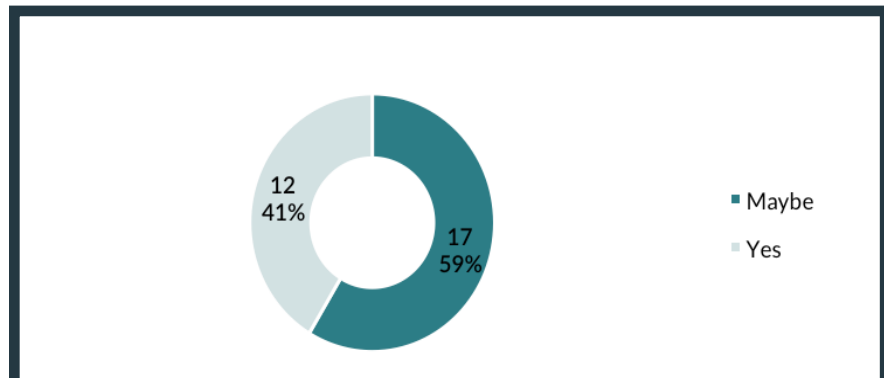


FIGURE 8: Do you believe you or your institution would be interested in participating in the creation of an open resource education database?

MSI Collaboration to Identify Culturally Relevant OER Material

Survey respondents recognized the utility of working together to form partnerships between MSI academicians and MSI institutions that will result in more information sharing opportunities concerning the availability of new OER course material, innovative teaching methods, and curriculum design.

None of the survey respondents were disinterested in the creation of an OER database for their use at their institutions (see Fig. 8). Twenty-six of twenty-nine respondents may also have colleagues that may also be interested in participating in the creation of an OER database for their use at their institutions (see Fig. 9).

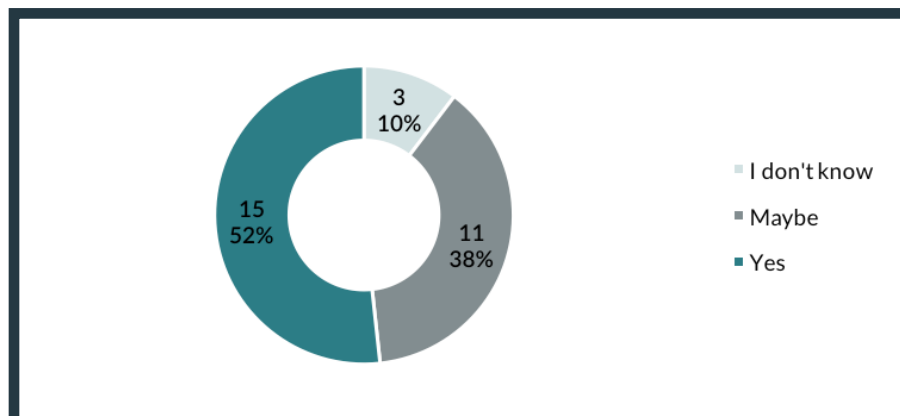


FIGURE 9: Do you believe you or your colleague would be interested in participating in the creation of an open resource education database?

Modeling Success: Paul Quinn College’s OER Initiative Across the Curriculum

In January 2015, both Paul Quinn College (PQC) President Michael J. Sorrell and Vice President of Academic Affairs Kizuwanda Grant challenged PQC faculty to use innovative teaching methods to deliver course content more cost-effectively. President Sorrell’s full-time teaching staff all embraced the challenge. They agreed to identify and incorporate open educational resources course material in their respective fields during the 2015-2016 school year. In furtherance of this initiative, Vice President Grant provided considerable support for this initiative. She routinely identified and provided funding for faculty professional development opportunities off-campus. She often held “brown bag” teaching with technology workshops on campus for faculty and staff. She invested heavily in modern twenty-first century educational technology upgrades to improve the quality of student educational experiences around campus. To date, more than ninety percent (90%) of the full-time faculty is now actively using various forms of open source course material with remarkable success.

Consequently, each student enrolled in PQC is saving hundreds of dollars in textbook expenses every semester. The savings many struggling Pell Grant recipients accumulate from using open educational resources contributes to their individual success at PQC. In turn, it also contributes to the overall student success rate at Paul Quinn College. The innovative use of open educational resources course material also engages students and faculty in unprecedented ways. Overall, the faculty, institution, and student body all benefit from embracing a more cost-effective course material policy.

PQC General Core Textbook Expenses before PQC OER Initiative

Course Name	Textbook Name	Retail Price
U.S. History	<i>The American Nation: A History of the United States, Combined Volume, 14th ed.</i>	\$211.00
U.S. Government	<i>Politics in America, Texas Edition, 9th ed.</i>	\$177.00
World Geography	<i>Contemporary World Regional Geography, 4th ed.</i>	\$204.00
Biology	<i>Biology in Mastering Biology, 8th ed.</i>	\$162.00
College Algebra I	<i>Pre-algebra and Introductory Algebra: An Applied Approach, 2nd ed.</i>	\$226.00
	Total:	\$980.00

PQC General Core Textbook Expense after PQC OER Initiative

On average, Paul Quinn College students' textbook expenses for General Core courses were reduced from \$980.00 to \$0.00. During the fall 2016 semester alone, a freshman class of 167 new students saved a total of \$163,660 in textbook costs. Paul Quinn College's recent success represents a small HBCU using education technology

and free OER course material to generate substantial savings for students of color who struggled to meet the cost of attendance. Other MSIs may achieve similar results by instituting a campus-wide OER initiative by encouraging innovative OER course curriculum design in some, if not all, classes.

Course Name	OER Textbook Source	Retail Price
U.S. History	Open Stax	\$0.00
U.S. Government	The Orange Grove	\$0.00
World Geography	Open Textbook Library	\$0.00
Biology	Boundless.com	\$0.00
College Algebra I	Open Stax	\$0.00
	Total:	\$0.00

Policy Considerations for a MSI Campus OER Initiative

The use of OER course material eliminates the following challenges associated with traditional textbook material:

- Students are unable to afford the rising cost of textbooks
- Students choose not to purchase expensive textbooks
- Bookstores often have textbook purchase surpluses each semester
- Exorbitant rental fees for second-hand textbooks are not cost-effective
- Older textbook editions are frequently replaced with expensive newer versions
- The academic student success rate is often lower for students that go without course material
- Faculty members must adhere to using a standard approach to teaching exclusively from the textbook
- Higher education institutions pass on the increasing cost of instructional materials to students

Conclusion

A college-wide open educational resource initiative helps MSIs reduce the cost of attendance for students struggling to meet college expenses. Some individual MSI academicians already use them in various academic disciplines with great success. Faculty members are empowered to select their course material without being bound to traditional textbook publisher course content. Faculty members are also able to keep course content relevant from one semester to the next by using frequently modified and updated open educational resources. A considerable number of open educational resources are readily available online. However, it may be useful for institutions to provide both funding and professional development to train instructors how to design and implement OER course material effectively across the curriculum. Moving forward, MSIs are encouraged to explore this cost-effective approach to reducing students' cost of attendance by working together collectively through partnerships and collaboration between MSIs.

REFERENCES

- Aydin, Selami. "A Review of Research on Facebook as an Educational Environment." *Educational Technology Research and Development*, vol. 60, no. 6, 2012, pp. 1093–1106.
- Bates, Tony, and Albert Sangrà. *Managing Technology In Higher Education: Strategies for Transforming Teaching and Learning*. San Francisco, CA: Jossey-Bass, 2011.
- Bowen, José Antonio. *Teaching Naked : How Moving Technology Out of Your College Classroom Will Improve Student Learning*. First edition. San Francisco: Jossey-Bass, a Wiley imprint, 2012.
- Council, National Research, Division of Behavioral and Social Sciences and Education, and Center for Education. *Education for Life and Work: Developing Transferable Knowledge and Skills In the 21st Century*. Washington, D.C.: National Academies Press, 2012.
- Douglas-Gabriel, Danielle. "United Negro College Fund: Historically black colleges and universities students are shouldering heavy debt burdens." *Washington Post*, 15 Dec. 2016. *Infotrac Newsstand*.
- Ehrmann, Stephen C. "Asking the Right Questions: What Does Research Tell Us about Technology and Higher Learning?" *Change*, vol. 27, no. 2, 1995, pp. 20–27.
- Fryer, Roland G., and Michael Greenstone. "The Changing Consequences of Attending Historically Black Colleges and Universities." *American Economic Journal: Applied Economics*, vol. 2, no. 1, 2010, pp. 116–148.
- Gasman, Marybeth. *Historically Black Colleges and Universities in a Time of Economic Crisis*. vol. 95, American Association of University Professors, Washington, 2009.
- Glazer, Francine S. *Blended Learning: Across the Disciplines, Across the Academy*. Sterling: Stylus Publishing, 2011.
- Hannon, John and Bretag, Tracey. "Negotiating Contested Discourses of Learning Technologies in Higher Education." *Journal of Educational Technology & Society*, vol. 13, no. 1, 2010, pp. 106–120.
- Hussin, Sufean. "Higher Education." *Higher Education*, vol. 63, no. 1, 2012, pp. 157–159.
- Kinash, Shelley, Knight, Diana, and McLean, Matthew. "Does Digital Scholarship through Online Lectures Affect Student Learning?" *Journal of Educational Technology & Society* / 18.2 (2015): n. pag. Print.
- Koc, Selma. *Assessment in Online and Blended Learning Environments*, et al., Information Age Publishing, 2015. ProQuest Ebook Central.
- Marek, Kate. "Learning to Teach Online: Creating a Culture of Support for Faculty." *Journal of Education for Library and Information Science*, vol. 50, no. 4, 2009, pp. 275–292.

McClure, Randall, and James P Purdy. *The New Digital Scholar : Exploring and Enriching the Research and Writing Practices of Nextgen Students*, 2013.

McHaney, Roger. *The New Digital Shoreline: How Web 2.0 and Millennials Are Revolutionizing Higher Education*. Sterling: Stylus Publishing, 2011.

Mullin, Christopher M. "Past, Present, and Possibilities for the Future of the Pell Grant Program." *Journal of Education Finance*, vol. 39, no. 1, 2013, pp. 3–14.

Parker, Kim, Lenhart, Amanda and Moore, Kathleen . "The Digital Revolution and Higher Education College Presidents, Public Differ on Value of Online Learning. *The Catalyst*. 40.3 n. pag. Print.

Rhodan, Maya. Pell Grant Changes Will Slow Black Graduation Rates. *New York Beacon*, 2013.

Saunders, K.M., Williams, K.L., & Smith, C. L. (2016). *Fewer Resources More Debt: Loan Debt Burdens Students at Historically Black Colleges & Universities*. Washington, DC: UNCF Frederick D. Patterson Research Institute

Sinn, John W. "Online Course Best Practices as Precision Teaching: Case Study of Quality Systems Courses." *The Journal of Technology Studies*, vol. 33, no. 1/2, 2007, pp. 87–98.

"Special Report: Pell Grants: The Cornerstone of African-American Higher Education." *The Journal of Blacks in Higher Education*, no. 65, 2009, pp. 70–79. JSTOR, JSTOR, www.jstor.org/stable/40407550.

Thaler, Valerie S. "Teaching Historical Research Skills to Generation Y: One Instructor's Approach." *The History Teacher*, vol. 46, no. 2, 2013, pp. 267–281.

Twigg, Carol A. Improving Learning and Reducing Costs: Fifteen Years of Course Description." Change 47.6 n. pag. Print.

Wankel, Laura A, and Patrick Blessinger. *Increasing Student Engagement and Retention Using Mobile Applications: Smartphones, Skype and Texting Technologies*. Bradford: Emerald Group Publishing Limited, 2013.

Weller, Martin, et al. "Identifying Categories of Open Educational Resource Users." *Open Education: International Perspectives in Higher Education*, edited by Patrick Blessinger and TJ Bliss, 1st ed., Open Book Publishers, Cambridge, UK, 2016, pp. 73–92.