


# OER Adoption and Assessment: A Success Story at Kingsborough Community College

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## Abstract

This is a vivid illustration of a success story of adoption of OER content at one of City University of New York (CUNY) Community Colleges, unraveling the cost savings to students, diligent work of faculty, and independent investigation of researchers to assess the efficacy of such implementation to ensure the quality of student learning. The article will share quantitative and qualitative data analyses conducted and published regarding the adoption of OER content, which has led to the increase of savings in students' costs, as well as the improvement of learning experience while ensuring no losses in the quality of material and student academic performance. The next question is the role of OER and open pedagogy would have in the future of Kingsborough and CUNY within the framework of CUNY Lifting New York and the 2023-2030 Strategic Roadmap.

## Keywords

OER, Open Pedagogy, Student-Centered Learning, CUNY Lifting New York

## 1. Introduction

This article will present a success story of the adoption of Open Educational Resources (OER) at Kingsborough Community College, a two-year college of the City University of New York (CUNY). CUNY is the nation's largest urban public university serving 243,000 degree-seeking students across twenty-five campuses spread over five boroughs in New York City, USA. Founded in 1847, it marks the first free public higher education institution in the nation with its mission to this day of providing "a public first-rate education to all students, regardless of means or background" (CUNY, 2024). This mission is in full alignment with the Excelsior Scholarship which was enacted in 2018 by Governor Andrew Cuomo. The NY 2018 State Budget incorporated funding to cover full tuition for families making an an-

nual salary of \$100,000 or below. In addition to this budget of about \$1 billion in tuition assistance, the budget included \$8 million in OER adoption initiation and assistance in city and state colleges, including CUNY and SUNY (CUNY, 2018). According to the CUNY OER Annual Report, the investment of \$8 million produced an initial saving of \$9.5 million in just the first year, affecting 76,000 students.

Out of the \$4 million awarded to CUNY, a portion of it was allocated also to Kingsborough Community College. This contribution of \$4 million towards CUNY OER continued for four consecutive years from 2018 through 2021 (CUNY, 2022). **Figure 1** shows CUNY's 25 colleges, including seven community colleges, one of which is Kingsborough Community College. The article will share quantitative and qualitative data analyses that have been conducted and published nationally and locally at Kingsborough concluding that the adoption of OER content has led to an increase in savings in textbook costs, and improvement in students' learning experience while ensuring no losses in quality of material and student academic performance. Having looked at the past success of OER in Kingsborough, the next question this article will investigate is the role of OER and open pedagogy in the future of Kingsborough and CUNY within the framework of the CUNY Lifting New York and 2023-2030 Strategic Roadmap (CUNY, 2023).

## 2. National OER Studies

OER is defined by several sources but eventually means freely accessible to students. In particular, the Hewlett Foundation defines OER as "teaching, learning, and research resources that reside in the public domain or have been released under the intellectual property license that permits their free use and re-purposing by others" (Hewlett Foundation, 2018), while UNESCO defines it 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" (2012 Paris OER Declaration, 2012). These freely accessible contents are now available to students in replacement of high-cost commercial textbooks, providing them with the opportunity of cost savings. The

### 1 University, 25 Colleges

The University spans 25 campuses across the city's five boroughs providing exceptional access for high school graduates, high academic quality, numerous programs to support student completion and deep connections with important industries for career success.

- > 11 SENIOR COLLEGES
- > 7 COMMUNITY COLLEGES
- > 7 GRADUATE, HONORS AND PROFESSIONAL SCHOOLS



**Figure 1.** CUNY comprises 25 Colleges across the Five Boroughs.

reason for searching cheaper alternatives was the exponentially increasing costs of textbooks. According to the College Board, students spend about \$1240 at public and private 4-year institutions and about \$1460 at public 2-year institutions for books and supplies (Ma et al., 2020: p. 10). These textbook costs cannot be ignored because they do affect students' decisions. According to a large-scale study of the Florida Virtual Campus Office of Distance Learning in 2016 (Florida Virtual Campus, 2016), 66% of about 22,000 respondents reported having not purchased a required textbook due to excessive costs. Therefore, these high textbook costs are creating barriers to entry and access to course information for a large number of students and preventing them from enjoying equal opportunities to access learning materials. As a result, a solution to decreasing such costs was imminent.

Indeed, the solution was found in using OER, which did provide success stories in terms of students' textbook cost savings. According to Washtenaw Community College, the OER initiative helped in increasing students' savings to about \$10 million (Washtenaw, 2023). Another example is Follett (PR Newswire, 2019), which is considered the largest campus retailer operating in physical and virtual stores across the nation. It saved over \$4 million for students in textbook costs through its collaboration with Lumen (PR Newswire, 2019). While the benefits of OER in cost savings are not contestable, the major discussion is on the efficacy of OER material in providing similar quality learning experiences and outcomes to students.

Clinton and Khan (2019) conducted a meta-analysis covering about a dozen studies. They did not find any differences in learning between students enrolled in courses using commercial textbooks and students enrolled in courses that adopted OER content. Furthermore, other studies found a positive impact of OER content adoption either in terms of academic performance or lower withdrawal rates (Feldstein et al., 2012; Gil et al., 2013; Hilton & Laman, 2012; Wiley et al. 2017; Grewe & Davis, 2017). In addition to studies evaluating differences in academic performance, other studies have assessed students' perceptions of the quality of OER content. **Table 1** shows a summary of some studies conducted in the last decade. The converging finding is that over 80% of the student respondents believe that the OER content is the same or better quality when compared to commercial textbooks.

**Table 1.** Students' perception of OER quality being the same or better.

Studies	Student respondents (%)
Allen and Seaman (2014)	88%
Bliss et al. (2013)	90%
Illowsky, Hilton, Whiting and Ackerman (2016)	87%
Ikahihifo, Spring, Rosencrans and Watson (2017)	94%
Cooney (2017)	96%
Abramovich and McBride (2018)	86%

Therefore, using the general findings from quantitative studies and survey analysis, OER content appears to be of similar quality impacting students' learning the same, or even improving it in certain occasions. According to this group of studies, it is indisputable that cost savings exist while there are no efficiency losses in student learning and quality.

### 3. Kingsborough OER Studies, Methodology, and Findings

While the quantitative and qualitative studies across the nation have been in favor of OER adoption to ensure equitable access to course materials, the faculty members at Kingsborough have conducted their studies to assess the quality of course material and student learning as well as other benefits derived from the use of freely accessible sources. Highly increasing textbook costs have been an obstacle to students' access to course materials which hinders the students' learning and their equitable opportunities to education. For example, as shown by a Kingsborough Community College student state, "I can work as many jobs as I can but [the high cost of textbooks] is still going to affect me. If I'm able to pay the tuition, I won't be able to pay for the textbooks. If I pay for the textbooks, I won't have enough money for tuition" (CUNY, 2018: p. 4). Due to the high costs and obstacles, it creates for some students, the need for support and resolution of this issue has been paramount. Out of the \$4 million funds awarded to CUNY in 2018, a portion of it was allocated also to Kingsborough Community College to assist in the conversion of courses using commercially printed textbooks to freely accessible materials, either as OER or provided at a marginal cost of zero for students, such as books and articles provided by the institution's library.

The early pioneer in adopting and assessing student performance enrolled in Kingsborough courses that replaced commercially printed textbooks with OER was Shawna Brandle, a Professor of Political Science at Kingsborough Community College. In her initial task of searching for an appropriate American Government textbook, she explains the intellectual Odyssey she followed that eventually was finalized with an OER and individually curated material (Brandle, 2018). The benefits of this OER curated material were also the opportunity to customize it to the student population taking the course. As she explained, most Community College students enrolled in American Government courses at Kingsborough do so to fulfill the requirement criteria for graduation or transfer. Since this is a terminal course on this topic, the course content would be best focused on "specific content- and skills-based learning objectives that would be useful to all students and transferable to their other courses of study and their professional lives..." (Brandle, 2018: p. 540). She compiled a Sourcebook using the original sources, such as the Constitution, Laws, etc. and used multimedia freely available sources (e.g., Crash Course videos) to complete an OER-converted course. In addition to her experience and opinion on the benefits of using OER-adopted material, Brandle tested the efficiency of this adoption by comparing the two sections of the same course, taught by the same instructor, cov-

ering the same topics, but using a commercially printed textbook (control group) and OER content (experimental group) during Fall 2015 and Spring 2016. While the differences in student performance did not seem material, the important finding is the faculty's experience and benefits in providing encouragement and ideas in redesigning the course, including content, sequence of content, and assessment of student performance as stated "Adopting OERs can be about developing a better course than you taught before, by allowing yourself to look beyond traditional publishers' textbook offerings to find the best mix of resources to teach your specific students exactly what you want them to learn in your specific course." (Brandle, 2018: p. 553).

Similarly, Dawn Levy and Dorina Tila, Associate Professors with the Business Department at Kingsborough Community College redesigned certain courses while adopting OER materials. The first courses targeted for conversion into OER-adopting courses, also known as zero-textbook costs (ZTC), were the high-enrollment general education courses. Some of these ZTC-converted courses were the Principles of Economics (ECO 1200) and the Fundamentals of Business (BA 1100). Other KCC faculty members were interested in evaluating the efficacy of such freely accessible material. For example, Tila and Levy (2022) assessed the academic performance of over two hundred students enrolled in two of the core curriculum courses for most of the Associate in Applied Science (AAS) program degrees in Kingsborough Department of Business, specifically BA 1100 and ECO 1200, offered during Fall 2016 and Fall 2018. Using course grades as a measure of students' performance, the findings showed that students enrolled in sections adopting OER content, known as experimental group, performed equally well as the students in the same subject area using commercial textbooks, known as the control group. Hence, such freely accessible OER materials alleviated the high costs associated with commercial textbooks without sacrificing student performance (Tila & Levy, 2022). As this research showed, cost-saving and freely accessible OER materials have been encouraged to be used not only in the Political Science courses by Bradley but also in the Business and Economics courses. This multidisciplinary research provides data-informed recommendations for increasing free access to course materials and in adopting OER materials (Brandle, 2022). Besides the academic performance being the same or better when using OER content, the student opinions of OER courses have been positive as shown before COVID during a CUNY-wide survey in 2018 and 2019 (Brandle et al. 2019; Bliss et al., 2013) and during COVID through Kingsborough wide survey in 2020 (Tila, 2023; Levy & Tila, 2022). In addition to conducting quantitative analysis, faculty has continuously explored venues to improve student learning while catering freely accessible material, sometimes even customizing and curating on themselves or through students in so nurturing open pedagogy. For example, Levy and Tila (2022) discovered that students' attitudes and engagement with the subject increased when faculty shared the efforts of redesigning the course and customizing the OER material because they

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cared for students. The acknowledgment of care towards students humanized the relation student-faculty, which improved student engagement and interest in the subject.

#### 4. Discussion and Conclusion

This article presents a success story of the adoption of OER content at one of the City University of New York (CUNY) Community Colleges, unraveling the cost savings to students, diligent work of faculty, and independent investigation of researchers to assess the efficacy of such implementation to ensure the quality of student learning. While CUNY established itself as a leader in being one of the first free public colleges, and a leader in providing equal opportunities for students to access learning materials required in their education, CUNY also showed that its faculty was leading in continuously conducting research and assessing the efficacy of OER content adoption and implementation, in so making data-informed decisions. Among the plethora of examples are cases from OER adoption, OER materials customized and curated to fit the demand of students, to redesigning of courses. Throughout this process, faculty embraced an assessment approach by measuring how students' performance was affected by these changes to ensure that learning objectives were still met, and quality was not jeopardized. While this article shares the published work that has been shared with the community at large, it is important to note that this is only the tip of the iceberg of the extensive work and care input by the CUNY faculty and the institution.

What is next on hold for OER at CUNY? OER and open pedagogy might continue to be an integral part of CUNY, specifically within the strategic plan known as "CUNY Lifting New York," which aims at transforming CUNY into the nation's leaders of student-centered and equity-driven university by 2030.

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#### Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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