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Sherena Huntsman  
*Boise State University*

Avery C. Edenfield  
*Utah State University*

Erin L. Davis  
*Utah State University*

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# Open Access Textbooks in a Professional Communication Classroom: A Pilot Study

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*Sherena Huntsman, Ph.D.*  
*Boise State University*  
*Avery C. Edenfield, Ph.D.*  
*Utah State University*  
*Erin L. Davis*  
*Utah State University*

## Abstract

In this paper, we share our findings from a curricular innovation project: a small pilot study replacing a conventional professional communication textbook with an open access book. Results showed that students received the change favorably, and a final grade comparison showed no variation between similar courses that used conventional books and those that used open access books. While more research is needed, this study demonstrates the promise of open access books and open educational resources (OER), and that further study is needed in this area.

Keywords: open access, OER, textbook, professional communication, library, pedagogy

## Introduction

This paper shares findings from a pilot study conducted in 2017 in a mixed-majors Introduction to Technical and Professional Communication (TPC) classroom. The goal of the pilot was to better understand the results of replacing a conventional textbook with open educational resource (OER) books, “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” (“OER defined,” n.d.). Often published under a range of Creative Commons licenses, these materials are increasingly being adopted in classrooms in response in part to college initiatives seeking to increase reading in the classrooms, increase enrollment and retention, decrease time to graduation, and reduce costs for students.

This last point—reducing costs for students—could be one answer to the rising costs of textbooks. Some students are forced to go without these vital learning tools (Borchard & Magnuson, 2017; Davis, Cochran, Fagerheim, & Thoms, 2016; Goodsett, Loomis, & Miles, 2016; Okamoto, 2013). Borchard and Magnuson (2017) found that only 41% of the respondents always purchased the textbooks associated with their courses (p. 4). They also concluded that the majority of students (96% of respondents) felt lower textbook costs would have a positive impact on their ability to purchase food, transportation, and housing.

Nevertheless, OER adoption is not without challenges. For example, the high level of collaboration needed to develop and use an OER requires “a high level of buy-in” from all stakeholders (Borchard & Magnuson, 2017, p. 10). In addition, it takes patience and consideration to navigate the complexity of schedules and deadlines associated with textbook development (Goodsett et al., 2016). To add to these challenges, institutional policies, learning objectives, and access formats must all mesh to form effective use of an OER. Library staff frequently invest hours of labor and university resources curating OER content (see Davis et al., 2016; Okamoto, 2013; Salem, 2017). In short, it takes time and resources to develop “free” materials (Mishra, 2017; Borchard & Magnuson, 2017).

With these challenges and benefits in mind, and with critical support from the university library, we conducted a small pilot study to replace a traditional textbook with an OER in an introductory TPC course located in the English department at Utah State University. While it is difficult to compare courses and outcomes out of a range of factors including instructor technique, student population, and minor syllabus changes, and because studies of this kind require years of data to provide definitive findings, we only take early steps towards understanding possible implications of replacing a traditional textbook with an OER. In this limited study, we found students responded positively to the replacement.

In this paper, we briefly introduce TPC pedagogy and locate the use of OER materials within that literature. Second, we preview our pilot study design and share our early findings. Finally, we share our takeaways and suggestions for more research in this area.

## Technical and Professional Communication Pedagogy: History and New Directions

A short review of the history of TPC—and specifically *technical* communication—pedagogy illustrates a move from an instrumentalist perspective with a seemingly singular approach, to a vast array of topics and foci taught in a variety of settings. As academia continues to answer

the call to equip future practitioners to enter the workplace successfully, it faces a challenge of adapting curricula to meet the needs of a growing and changing workplace.

Textbooks are often where instructors turn to strengthen engagement with the overall goals of the course (Barker & Matveeva, 2006; Chong, 2016), and they can be a powerful tool in any classroom. As Barker and Matveeva (2006) stated, “textbooks give instructors various pedagogical tools and materials for classroom discussions and activities, and textbooks are essentially what students . . . use in learning” (p. 151). However, given the diverse professional needs of future students, it may be difficult to write a general use TPC textbook (Wolfe, 2009). To add to the difficulty, in mixed major courses, students may be from engineering, microbiology, accounting, or graphic design (Carnegie & Crane, 2018; Melonçon & Henschel, 2013).

While instructors find themselves choosing texts or are given texts by their programs that come close to fitting their individual strengths and teaching methods, they may need to add supplemental materials to make the textbook support the course goals. These materials, such as website links, are used to “make up (in some ways) for weaknesses in the textbooks” (Barker & Matveeva, 2006, p. 207).

## Open Access and Open Educational Resources

OER and open access books could play a role in re-envisioning of technical communication curriculum. Goodsett et al. (2016) found that OER gives the instructor the potential to have more adaptive control over which course materials will enhance these outcomes (see also Borchard & Magnuson, 2017; Davis et al., 2016; Okamoto, 2013).

In brief, OER use developed alongside digital technologies. Digital innovations motivated the collection of art and histories in an effort to make interconnected materials available to a larger population with easier access for research and instruction (Bailey, 2017). University initiatives and digital projects categorized and compiled connected information into collections of digital knowledge in spaces such as Digital Commons and other institutional repositories. These initial movements worked to provide access to already curated materials, leading to the development of open courseware, open course materials, and other techniques used to develop and support access to information and knowledge, including the development of openly licensed textbooks (Davis et al., 2016).

Crucially, scholarship demonstrates that for an OER to be effective, instructors must have institutional support through policy and funding, instructor participation in content development to meet learning objectives, and student willingness to engage in new

information delivery formats. University libraries are often the institutional resource for OER development and design and have traditionally provided access to learning materials through course reserves and institutional repositories (Okamoto, 2017). Librarians have also worked with faculty to blend an OER with content from library-licensed databases and previously constructed course materials (Borchard & Magnuson, 2017; Davis et al., 2016; Okamoto, 2017).

## The Pilot Course: Introduction to Technical and Professional Communication

The goal of the pilot study was to take the first steps toward understanding the effects of using an OER in one regularly taught, well-attended course. The Introduction to Technical and Professional Communication course was chosen for several reasons.

- This course has a high demand and is expected to remain so in the future.
- At the time of this study, over half of the students were not English majors.
- Many (though certainly not all) textbooks for this course are expensive.
- Even with inexpensive textbooks, students were still unable to buy the required book because of the cost.

With the oversight and approval of our institution's IRB office (#8746), we surveyed four sections taught in the same year (2017), selected because they had a similar, recently redesigned syllabus, similar student demographics, and similar learning outcomes.

We designed and distributed two anonymous, 10-question surveys to understand students' perceptions of the course's OER (see Appendix A and B). We distributed the first survey in the first week of class, prior to an introduction and tutorial on how to access and use the OER. Students were read an IRB-approved recruitment pitch based on the letter of information, and then the surveys were distributed.

These surveys were designed for students to self-report their perceptions and anticipated use of OER and open access books, and to learn more about how their overall reading habits compared to their reading in this course. Based on previous studies demonstrating the benefits and challenges of using OER (Borchard & Magnuson, 2017; Davis et al., 2016; Goodsett et al., 2016; Okamoto, 2013), the questions included:

- If students had previously used an OER
- How they planned on accessing course material

- What (if any) their concerns were about using an OER
- How much of a course reading they typically completed
- If the cost of a textbook had ever influenced their decision to take a course.

We distributed a second survey with similar questions to see if they reported a change. Importantly, the surveys were distributed by one of the authors of the study who was not an instructor of this course and who did not have control over, or access to, student grades. The instructor of record did not have access to the surveys until the end of the semester and after grades had been recorded. We are aware that some students completed one and not the other, based on attendance. Additionally, some students dropped the course or were added after the initial survey.

## Library Help

In Fall 2016, the library launched Utah State University's College of Humanities and Social Science's grant program to support faculty in adopting, adapting, and creating an OER in their courses. As grant recipients, we used this opportunity to form the basis of our research. Librarians worked intensively with instructors, including the authors of this study, to encourage instructor experimentation and innovation in using an OER. Librarians were on hand throughout the implementation process to help locate and implement suitable materials. They also conducted classroom training with students on how to access OER materials. Overall, their support was critical to our success.

## Pilot Study Results

The purpose of our surveys was to understand student self-reported perspectives on the new free, open-access textbook. Because this was their first technical TPC class, students would be unable to compare taking the TPC course with a traditional textbook to taking a course with the open access book. We asked them instead to *compare the experience of using a traditional textbook in other courses* to the OER in this course. In both surveys, participants had space to add personal comments about their experiences and opinions because we wanted to hear about their experiences in their own words. Our survey results are organized below in two sections: general student *perceptions* of the class's OER and student *experiences* with it.

## **Student Perceptions: Positive Perception of OER Regarding Cost**

We asked students about prior knowledge and encounters with OER use. They overwhelmingly indicated they had little to no experience with this type of textbook:

- 56% indicated they had not heard of OER materials before taking our course
- 25% indicated they had one prior class using OER materials.

Regardless of previous exposure, students indicated the no-cost option offered a strong appeal. 85% indicated that the cost of the textbook had some level of influence on their decision to take a course.

The cost of textbooks was a common theme among students who chose to add supplemental comments to their survey responses. One student wrote, "I appreciate not having to spend a lot of money for a book I'll only use half the time," which resonated with student complaints in the past about justifying the textbook cost. 97% of the students indicated they would take another course with little to no reservation.

## **Experiences: Reading Habits, Challenges with the Digital Format, and Challenges with Access**

We also wanted to learn more about their reading habits and any challenges they had faced with the digital format or with accessing course material. In the entrance survey, we asked students how much reading they typically do in other courses. We wanted to know if using an OER would change the amount of course materials students would read. We anticipated there would be no change between classes. We were surprised, however, that the survey responses indicated a decrease in reading. In the entry survey, students self-reported the amount of reading they completed in previous courses:

- 60% indicated they read most of the course materials
- 23% reported reading all of the course materials.

After students completed the course, the exit survey asked them to self-report the amount of assigned material they felt they actually read during the course. Although the highest percentage of students (42%) indicated they read most of the course materials, there is a marked decrease from the students who reported reading most of the materials from other classes: from 60% to 52% indicated reading half or less than half of the OER used in the

course. The decline in reading could be the result of several factors, some not made aware to us in student reports. We know, however, that the delivery format was new and could be unfamiliar to students. If this factor continues to ring true in future research into OER classroom use, these results could be indicative of the need to revisit the way we introduce and model OER in the classroom.

Students were also asked about their method of access. We anticipated students would indicate using their laptops to access the course OER. In fact, students unanimously reported they anticipated using a computer to access the OER. After completing the course, students were asked what methods they had used throughout the class to access the material. Overwhelmingly, students chose to access materials on their laptops (93%). 23% of students also accessed the OER materials at some point during the semester on a mobile device, but only a small population (3%) chose to print any of the materials. There may be a link between the decline in reading and the large percentage of students who accessed the book on a mobile device.

## Student Concerns

In the open comment sections, some students articulated a few concerns such as the layout of the OER text, the efficacy of textbook integration in the Learning Management System (LMS), and the manner in which readings were assigned.

- “I prefer to use OER over having a textbook [;], it is extremely convenient for me.”
- “I appreciate not having to purchase a textbook I would use for four months before tabling it almost indefinitely. It makes me more confident in selecting more credit hours and exploring different areas of study.”

Students highlighted the ability to take the course without the added burden of purchasing a text they felt they might not use again. Our survey comparison indicates that students use the OER, can access the OER, and appreciate the ability to take an introductory course without a significant financial burden.

## Conclusion

Though the pilot study was limited, and more research is needed on using an OER in TPC courses, the research leaves us motivated to move forward. As we look to the future, we see the opportunity to broaden our use of open access and OER texts and meet the challenges we discovered. To address reported challenges such as the difficulty of using a digital format and

the decline in materials read, we will devote instruction time to modeling the use of OER materials. For example, we plan to encourage the use of electronic devices in the classroom to motivate students to access the OER textbook throughout the discussion and workshops. As instructors, we will use individual conferences and office hours to ask students individually about how they are accessing the OER materials and their level of engagement with the assigned readings.

Our experience with an OER in the TPC classroom also motivates us to embrace innovative pedagogy. Using an OER may allow for the integration of more content than textbook materials such as reading logs, interactive web sites, and video tutorials.

We also plan to continue taking advantage of the flexibility of the OER format to adapt course materials to fit student needs. Embracing the dynamic nature of OER and open access texts may also lead to an overall more student-centered classroom. We can access and evaluate course materials and design *alongside* our students in an ongoing dialogue. As we continue to use an OER, we anticipate building a growing depository of resources from which to pull from each semester.

Will the use of an OER in these classes significantly impact time-to-graduation rates? Will the adoption of an OER lead to an increase in enrollment in our TPC major? As we consider adopting an OER in these future classes, more studies will need to be conducted to test these questions. At the time of writing, open access and OER texts in TPC is broadly untested, and we want to take the next steps with caution and purpose. We remain optimistic about an openly accessible future for students.

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## Appendix A. OER Student Entrance Survey

Q1 - Before this class, what has been your experience with Open Educational Resources (OER)?

1. I have used OER many times before
2. I have used OER at least once before
3. I have heard of OER, but I have never used them
4. I have never heard of or used OER before

Q2 - How do you plan on accessing and reading course materials?

1. Online using my laptop or a campus computer
2. Using my mobile device(s)
3. Downloading materials onto a digital device or flash drive
4. Printing out physical copies
5. Other (please specify):

Q3 - What concerns you the most about using OER instead of a traditional textbook?

1. Using and navigating the technology required to access the OER
2. Having access to the internet and/or a computer to be able to complete readings
3. Having to read and study off of a computer screen—I prefer reading from a book
4. Quality of the OER and getting the same education I would with a textbook
5. Other (please specify):

Q4 - How much of the readings do you typically complete for your courses?

1. All
2. Most
3. About half
4. Less than half
5. None at all

Q5 - How much of the OER course readings do you anticipate you will be able to complete?

1. All
2. Most
3. About half
4. Less than Half
5. None at all

Q6 - What do you think will be the most challenging aspect of completing the OER course readings?

1. Not having enough time
2. Not being interested in the subject
3. Not having a traditional textbook/using online materials
4. Other

Q8 – Has the cost of a textbook influenced your decision to take a course?

1. Not at all
2. Somewhat
3. It is always a contributing factor

Q7 - Do you have any comments or concerns about using OER for this course?

## Appendix B. OER Student Exit Survey

Q1 - How did you access and read the course materials?

1. Online using my laptop or a campus computer
2. Using my mobile device(s)
3. Downloading materials onto a digital device or flash drive
4. Printing out physical copies
5. Other

Q2 - What concerns you the most about using OER (open educational resource) instead of a traditional textbook?

1. Using and navigating the technology required to access the OER
2. Having access to the internet and/or a computer to be able to complete readings
3. Having to read and study off of a computer screen—I prefer reading from a book
4. Quality of the OER and getting the same education I would with a textbook
5. Other (please specify):

Q3 - How much of the OER course readings did you complete?

1. All
2. Most
3. About half
4. Less than Half
5. None at all

Q4 - What do you think was the most challenging aspect of completing the OER course readings?

1. Not having enough time
2. Not being interested in the subject
3. Not having a traditional textbook/using online materials
4. Other (please specify):

Q5 - Would you consider taking a course that uses an OER in the future?

1. Without reservations
2. With some reservations
3. I would not take a course using an OER in the future

Q6- If you answered the previous question with an answer other than "without reservations," please tell us why. (Short answer)

Q7- Overall how easy was it to use the OER?

1. Very Easy
2. Somewhat easy
3. Somewhat difficult
4. Very difficult

Q8- Which accessibility tool(s) do you use when accessing the OER? Check all that apply.

1. Screen reader
2. Color contrast tool
3. Translation tool
4. I do not use an accessibility tool
5. Other (please specify):

Q9- Other than the course OER and other provided readings and resources, what outside resources did you use for classwork? (short answer)

Q10 - Do you have any comments or concerns about using OER for this course?