
Wide Open Voices: Experiences of OER Course Developers

Brittany Dudek

Colorado Community Colleges Online

brittany.dudek@cccs.edu

Darci Duran

Colorado Community Colleges Online

darci.duran@cccs.edu

Tina Parscal

Colorado Community Colleges Online

tina.parscal@cccs.edu

Abstract

As the affordability of higher education dominates the spotlight, open educational resources (OER), low cost, and free-to-student materials are widely offered as a solution. This paper outlines the experiences of course developers who contributed to a large-scale OER initiative, including training, knowledge, effort, and satisfaction of course development support services.

Introduction

The high cost of textbooks is significantly affecting college access to students and jeopardizing their overall potential for academic success (Griffiths, et al., 2017). This is particularly true for underserved populations such as first generation, low-income, immigrant, and minority students. According to the National Center for Education Statistics (2018), students paid \$2,833 for two years of “books and supplies” which is approximately 29.44% of the total Cost of Attendance for two-year institutions in the United States during the 2014-2015 and 2016-2017 academic years (p. 5). Further, a recent study conducted at University of Georgia, Atlanta found that rates of grades of D, F, or Withdraw (DFW rate) went down by one-third among minority and Pell-eligible students in gateway courses which switched from commercial textbooks to OER (Colvard, et al., 2018).

Founded in 1998, Colorado Community Colleges Online (CCCOOnline) is the online consortium of the thirteen colleges in the Colorado Community College System (CCCS). CCCOOnline offers online courses on behalf of CCCS colleges. CCCS, and CCCOOnline, in particular, have been on the cutting edge of initiating and implementing course developments that include a range of OER resources in order to address higher education affordability and access. CCCOOnline currently offers more than 70 OER courses, with more in development. CCCOOnline’s goal is to create high quality OERs to eliminate the burden of costly textbooks while improving curriculum and andragogy. By eliminating the textbook costs, providing immediate access to course materials, and aligning the course content to course competencies, the OER courses have the potential to reach more students including rural, women, and students from under-represented populations. In Academic Year 2018, 14,740 students enrolled in a CCCOOnline OER course and the OER initiative saved students \$770,203 in textbook or digital material fees.

Course Design Model

All courses developed by CCCOOnline align to the Colorado Community College System’s Common Course Numbering System (CCNS) for consistency of courses across CCCS colleges and CCCOOnline. Courses with common content carry the same prefix, number, title, credits, description, outcomes, and outline. CCCOOnline courses use a Master Course Template, which enhances the student experience through ease of navigation, accessibility, and provides a standardized format across courses. The Master Course Template uses Quality Matters(TM) methodology to align course content to competencies. CCCOOnline uses Universal Design for Learning (UDL) principles by offering multiple options for learning to support the varied learning preferences of the students. Further, the course design process integrates interactive learning objects, readings, videos, case studies, discussion forums, authentic assessments, intentional peer-to-peer learning, and active learning experiences.

CCCOOnline SMEs possess expert knowledge and practical experience in their chosen disciplines. This unique combination is instrumental to the implementation of the OER initiative. To prepare for OER course development, CCCOnline employs an issue-tracking platform, which triggers an alert for the Librarian about the desire to utilize OER materials in the course development. The Librarian uses the CCNS as a guide to curate OER content, which the SME reviews for currency and appropriateness of topics and competencies covered by the course. The SME ultimately creates the course content by selecting from existing OER, adapting and remixing OER, and by writing their own content. The SME also creates the narrative voice, which connects concepts of the various OER resources to create a complete picture for the students as they are learning from a variety of resources. Instructional Designers work with SMEs to design courses that are relevant, contemporary, and innovative.

Institutionally, there is a SME Orientation course designed specifically to address best practices and challenges to OER development. As most SMEs are also CCCOnline instructors, they receive additional training, which includes: Getting Started at CCCOnline, Teaching with D2L, Managing Discussions, and Applying the Quality Matters(TM) Rubric.

Methodology

This study addressed the following research questions:

1. What are the experiences of subject matter experts who develop online open educational resource and zero textbook courses?
2. What perceptions about the level of effort needed to develop OER courses do subject matter experts report after developing open educational resource and zero textbook courses?
3. What level of satisfaction with the design process do subject matter experts report after developing open educational resource and zero textbook courses?
4. What additional training do subject matter experts who develop online open educational resource and zero textbook courses want?

The authors administered a survey to 65 SMEs to determine the experiences of the subject matter experts who developed online open educational resource and zero textbook cost courses for CCCOnline between 2011 and 2018. The number of study participants differs from the total number of open educational resource offered at CCCOnline for three reasons: (1) two SMEs are no longer employed by CCCS; (2) seven courses were redeveloped more than once between 2011-2018, and (3) several SMEs developed multiple courses. The survey included multiple choice and one open-ended question and had a 38% response rate (n=25).

Quantitative Findings: Course Development

Of the 25 respondents, 92% reported that they were “very familiar” or “extremely familiar” with online course development. 68% (n=17) had previous experience developing a non-OER course using traditional publisher materials for CCCOnline. In terms of experience with OER materials, 44% reported being “very experienced” or “extremely experienced” working with OER, 48% reported being “moderately experienced,” 8% reported being “slightly experienced,” and zero reported having no experience working with OER.

All CCCOnline courses are based on the Master Course Template, which is designed to support Quality Matters(TM) standards thou. When asked if they perceived that the course that they designed meets Quality Matters(TM) standards, 58.33% responded “yes,” 25% responded “mostly,” 4.17% responded “somewhat,” 4.17% responded “no,” and 8.33% responded “I have not taken any Quality Matters(TM) training.”

Respondents reported that a variety of OER content was used in the courses: curated (linked) content 60%, open textbook 60%, adapted OER content 56%, and SME-created OER content 56%. Most (92%) of the respondents reported that they created their own assessments for the course. Those who created their own assessments reported a varying level of difficulty: 17% reported that writing the assessments was “somewhat difficult,” 48% reported that writing the assessments was “moderately difficult,” 13% reported that writing the assessments was “very difficult” and 22% reported that writing the assessments was “not difficult.”

Quantitative Findings: Time Investment

Most of the respondents (n=20) reported that the amount of time spent on the OER course exceeded their expectations for time it would take to develop an OER course: 48% reported it took “more time” and 32% reported it took “much more time” than expected. No respondents reported that it took less time than anticipated.

Quantitative Findings: Knowledge and Level Support of Course Development Team

When asked about the perception of OER knowledge and level of support, 76% of respondents perceived their instructional designer possessed “moderate” or “expert” levels of knowledge and was “very supportive” or “extremely supportive” of OER during the course design process. While 68% of respondents perceive their program chair as knowledgeable about OER, 92% expressed their program chair as “very” or “extremely supportive” of OER. Similar trends exist regarding the perception of knowledge and level of support for OER of the associate deans, where 60% of respondents felt their associate dean was knowledgeable of OER, and 76% indicate their associate dean was “very” or “extremely” supportive of OER efforts (Figures 1 and 2).

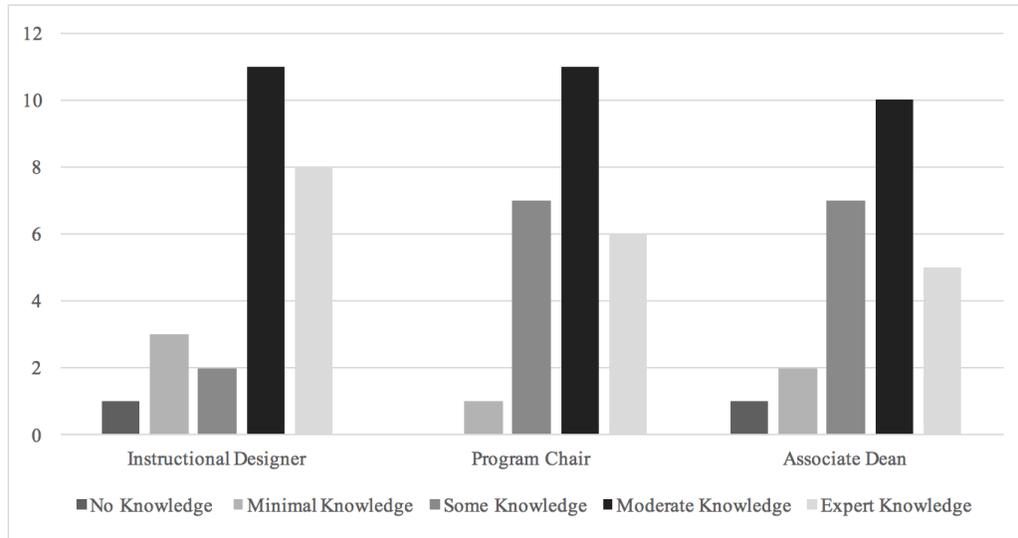


Figure 1. Perceived Level of OER Knowledge from the Following Roles

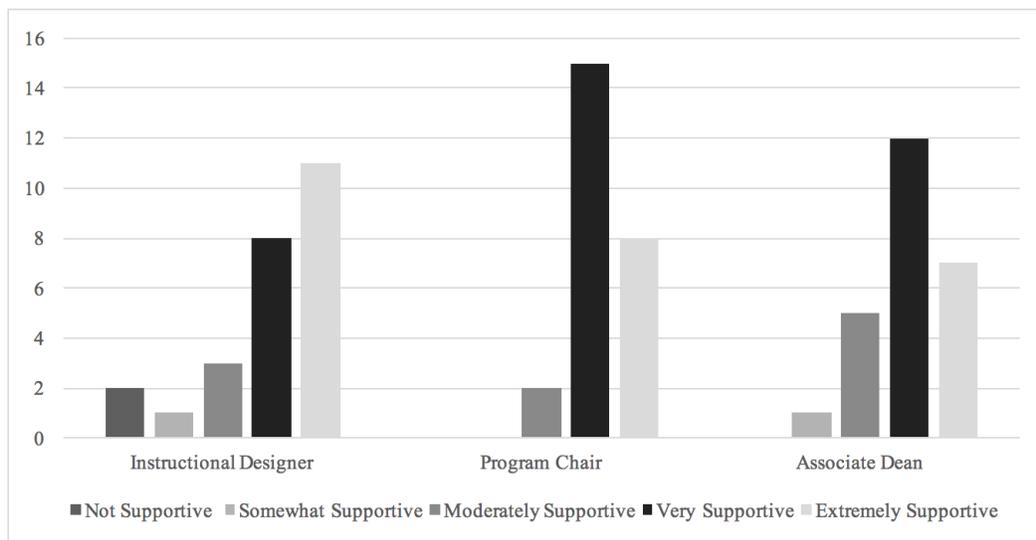


Figure 2. Perceived Level of OER Support from the Following Roles

Although not required to work with the librarian during the course development process, 64% of respondents reported they did work with the librarian. Of those that indicated they worked with the librarian, 62.5% (n=10) indicated the librarian was “very” or “extremely” helpful, 37.5% (n=6) indicated the librarian was “somewhat” or “moderately” helpful, and no respondents indicated the librarian was “not helpful.”

Quantitative Findings: Training

Eight out of 25 respondents reported that they completed the CCOOnline SME training. One reported that they completed training in course development, but not by CCOOnline. Many (n=22) of the SMEs also reported that they completed at least one Quality Matters(TM) training: 80% completed the Applying the Quality Matters(TM) Rubric training, 13% completed the Higher Education Peer Reviewer course, 36% completed the Designing Your Online

Course training, and 4% completed the Master Reviewer training. Only 12% of respondents reported they that have completed no Quality Matters(TM) training.

Qualitative Findings: Coded Responses

One question contained qualitative responses from respondents, which asked, “Is there anything you would like to share regarding your experiences as a subject matter expert for an OER course at CCCOnline?” and allowed for open-ended responses. Of the participants, 76% (n=19) provided additional information about their experiences, though two participants wrote they did not have anything to share “at this time.” The authors coded and categorized the qualitative responses in order to reflect themes.

Table 1. Frequency of themes found in open-ended responses from SMEs

Qualitative Theme	Frequency
Difficulty Working with Team, External Instructional Designers and/or Vendors	5
Preferred Previous Publisher Content	5
Questioned Appropriateness of OER in Discipline	5
Challenging but Positive Experience	4
Interested in and/or Enjoyed Working with Variety of Materials	4
Request Additional Training	4
High Level of Effort for Compensation	3
Appreciated Knowledge and Experience of Team	2

Open-ended comments from respondents suggest difficulties arose when working with external instructional designers and vendors whose processes diverged from the processes explained in the Subject Matter Expert training. A common theme emerged regarding the sciences, with respondents (n=5) mentioning they preferred their original publisher content for a variety of reasons, including the availability of ancillaries, assessments, cohesiveness, and the alignment with state learning objectives. Yet, respondents (n=5) also indicated they found the process of working with OER to be an interesting or enjoyable process, and that adapting existing materials was “fairly easy.” Not all respondents found developing OER courses to be positive. One respondent indicated they would not participate in developing an OER course again, others (n=3) indicated OER course development was more work than expected and (n=2) compensation should be revisited.

Discussion

Griffiths, et al. (2017) purported that instructors’ satisfaction with OER training eliminates the barriers to implementation. Respondents in our study overall reported that the training and support provided by the librarian and instructional design were helpful. Based on the feedback from respondents, CCCOnline plans to enhance the existing SME training to include guidance such as creating a narrative voice throughout the course, fostering a student-friendly online environment, and writing original content to support the course elements. In addition, CCCOnline will continue to operate in the context of a multidisciplinary team to encourage and support optimal course design.

Our findings align with the survey of faculty performed by Martin, et al. (2017). They found that the majority of faculty were open to using OER materials and it was contingent on it being “suitable” and “at least equal quality to what they are currently using (p. 85). Respondents (n=4) in the qualitative response section reported concern about finding suitable materials, particularly in the sciences. One respondent wrote, “I feel using OER resources for the hard sciences is unwise. The publisher content is so rich with applications that the LMS we are using will never reach that level.” According to Jung, Bauer, and Heaps (2017), 55% of respondents indicated that the availability of ancillary materials is “extremely” or “very” important when considering the characteristics of open textbook quality (p. 136). Additionally, the customization of open textbooks is necessary for widespread adoption, according to Jung, Bauer, and Heaps (2017), because of “...reluctance from faculty who need supplemental material” which coincides with our findings (p.138).

Further, 69% in Martin, et al., (2017) reported not being aware of specific OER alternatives to the materials and 53% reported they would appreciate help in finding OER alternatives. While SMEs surveyed felt they were supported by the CCCOnline Librarian and their Instructional Designer, our survey findings support Martin, et al., (2017) with 76% of respondents indicated they would appreciate training in locating OER, 80% in using (adapting or remixing) OER, and 60% in writing their own OER (Figure 3).

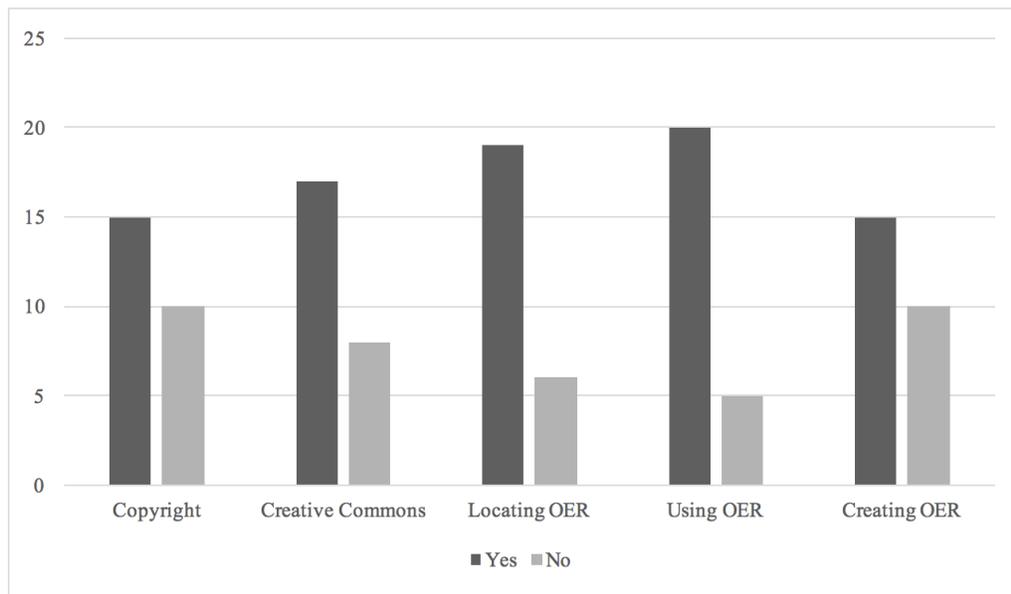


Figure 3. Topics for Additional Training

Conclusions

Two of the respondents provided significant feedback about their experience working with the instructional design vendors, which merits future research involving subject matter experts who have worked with vendors, as well as vendors, to develop experiential case studies. Additional research of librarians and subject matter expert collaborations should be conducted to ensure best practices are developed and followed.

In January 2018, CCCOnline launched redesigned SME Orientation and SME Refresher courses, but in accordance with continuous improvement efforts, CCCOnline intends to reevaluate their training to ensure existing training materials cover topics requested by SMEs. Supplementary trainings will be developed where needed, such as writing assessments and utilizing OER. Similarly, CCCOnline reevaluated compensation for OER SMEs in early 2018; however, many comments indicated dissatisfaction with workload and compensation rates. Due to the stated dissatisfaction, CCCOnline intends to study OER workload and compensation best practices.

As part of a broader zero-textbook-cost degree (Z degree) initiative in History and Early Childhood Education, some of the OER courses addressed in this study were developed. Further inquiry is warranted to explore the development of OER courses within the context of a Z-degree curriculum project.

While experiences varied from “fairly easy” to “challenging, but fulfilling” to “very stressful,” it is important to note that all respondents in the Wide Open Voices study were experienced online instructors, online course designers, and were successful in developing an OER course. Further, CCCOnline has been successful in 100% of their attempts in taking a course OER. The experiences of the SMEs surveyed have taken place over a period of seven years, which infers that the respondents may have had many different experiences with training versions, members and knowledge of development support team, and course development processes. Regardless, OER is an investment in resources, including time, training, and support.

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