

UTA CARES Grant:
“Adopting OER for Introduction to Oceanography”

Final Report

Cornelia Winguth, Ph.D.
Associate Professor of Instruction
Department of Earth and Environmental Sciences
University of Texas Arlington
January 2021

Project Summary

The goal of this project was to adopt the open textbook “Introduction to Oceanography” by Paul Webb for UTA’s GEOL 1350 (Introduction to Oceanography) class and adjust the curriculum as well as teaching materials accordingly. Most class-relevant topics are covered extensively enough in the book, but materials on the role of the ocean in the climate system and on the human impact on the ocean and its ecosystems needed to be added.

Background

GEOL 1350 has been taught in the Department of Earth and Environmental Sciences at UTA in the Fall semester for many years, with a typical enrollment of about 25 to 50 students. Until Fall 2019, the following textbook was used in this course: “Investigating Oceanography” by Keith Sverdrup and Raphael Kudela, McGraw Hill. This book comes at a cost of between \$50 (for the eBook version) to \$130.66 (for the loose-leaf option). I have taught the course for the first time in Fall 2019 and for the second time in Fall 2020.

Motivation

The main motivation for adopting an open resource textbook was to ensure that all students have immediate and equitable access to all course materials and do not have to delay the purchase of the textbook due to their financial situation, hereby improving student engagement and success. An additional benefit of using an online textbook is the environmental aspect, avoiding printed materials as well as shipping-related resource use.

Implementation

The first step in the OER adoption process was my participation in an “Open Textbook Workshop” in January 2020 under the leadership of Michelle Reed on the concept and benefits of open education resources. During the workshop, participants were encouraged to identify an OER in their field that they would be interested in reviewing and potentially adopting into one of their courses. I chose the OER “Introduction to Oceanography” by Paul Webb and submitted a review of this book to the Open Textbook Library in March 2020.

During the summer of 2020, I participated in the UTA CARES general meeting, the UTA OER meeting “Introduction to Pressbooks”, as well as the UTA OER meeting “Ethical Use of Open

Content”. I proceeded to work on updating the syllabus for GEOL 1350 for Fall 2020 to conform with the use of the new OER.

Over the course of the Fall 2020 semester, I updated the class material (lecture slides as well as study guides, videos shown in class, discussions, as well as assignments) based on the newly adopted book, which involved not only using images and graphs from the OER, but also finding publicly available images to supplement the OER graphics, as well as offering additional reading materials to the students on topics that were not fully covered in the OER. Those readings included information on modern ocean science, ocean sediments, global warming, as well as human environmental impact.

Assessment

About half of the students (16 out of 34 enrolled) participated in the UTA CARES survey distributed at the end of the semester. Of those, only 4 students (25%) were aware that the educational resources would be free to access when they registered for the course, which is not surprising, since the course was offered in this modality for the first time. Of the students who were aware of the OER when registering, only one reported that cost savings impacted his/her decision to register for the course. All respondents except for one reported accessing the online textbook during the first week of class; one student stated that he/she never accessed the course material. Almost all students who completed the survey (87.5%) preferentially accessed the course material from home; the next-popular locations were “in class” or “elsewhere on campus”. All respondents accessed the material electronically, usually from a laptop, desktop computer, or tablet; 5 students reported using their phone in addition to the other devices. 56% of students found the course material easier to access than resources in their other courses, 38% found it about as easy as in other courses, and 16% (1 student) stated that access was more difficult than in other courses. Students especially appreciated that they did not have to log in to read the book, that they could easily bookmark it on all of their devices, that they could also download a pdf version of the book, that the book itself was well-organized and easy to use, and that no costs were involved with accessing the book. 31% of the students rated the book as better than educational resources used in other courses, all others (69%) as “about the same”. The ease of navigation within the book as well as the easy-to-understand writing were especially appreciated by the students. 75% of the students stated that the availability of OERs would

“very likely” or “somewhat likely” impact their decision for future enrollment in courses, and for 50% of the students, cost has a “significant” or “moderate” impact on their decision about the number of credits they enroll in during a semester.

The student success rate in the course (students finishing with a grade of A, B, or C) increased from 83% in Fall 2019 to 91% in Fall 2020.

Personal Reflection

Although I had been interested in the general concept of OERs in the past, I had not acted on this idea until I received a personalized email from Michelle Reed with an invitation to attend an introductory workshop organized through the UTA Library and a suggestion for a textbook potentially suited for one of my courses. This email and the very helpful information received during the workshop as well as discussions with other participants convinced me that the process would be relatively easy and smooth and worth pursuing. An additional incentive was the option to review a textbook after the workshop.

The application process for the OER Adoption Grant was relatively easy and well-organized. Somewhat more confusing was signing the agreement and contract after the stipend had been granted. It would be beneficial to differentiate more between the (simple) OER Adoption Stipends and the (more complex) Scale or Innovation Grants. The transfer of funds as well as the requirements in terms of workshop attendance could also be made a bit more transparent for the Adoption Grants.

Overall, my experience of implementing an OER in one of my courses was very positive, and the student reactions as well as course success rate also indicate that the effort put into the course transformation and OER adoption was worth it. I plan to look into OER options for some of my other courses in the near future.