

## ARTICLE

# Self-Authoring an Open Textbook for General Anthropology: Worth the Time and Effort?

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### Abstract

*Students in higher education are facing challenges with paying for their education. Cost of course materials, primarily textbooks, continues to be a financial concern. As a result, students often delay or simply do not purchase the materials they need to perform well in courses. Openly licensed materials are becoming popular because they are free to the student, accessible from the first day of class, and can be modified by the teacher. In this study, an open textbook was co-created by two anthropology faculty with the support of two instructional designers for an introductory anthropology course at a large university in the United States. A survey was given to 1,402 students to gauge satisfaction with the textbook and elicit feedback, and final grades were compared pre- and post- open textbook implementation. In general, student satisfaction was high and poor grades declined. In conclusion, we propose recommendations for those who are interested in implementing more affordable course materials in their anthropology classes.*

**Keywords:** *general anthropology; open educational resources; digital textbooks*

### Introduction

A traditional American undergraduate General Anthropology course introduces students to the five main subdisciplines of anthropology, or the five ways that anthropologists study human culture. These subdisciplines include (1) the study of culture through human bodies (biological anthropology); (2) the study of human material culture (archaeology); (3) the study of culture through language (linguistics); (4) the study of culture among living groups (cultural anthropology); and (5) the application of anthropological method and theory to address contemporary human challenges (applied anthropology). This introductory class is extremely important to anthropology departments, the discipline of anthropology, and from the student perspective. At the department level, a successful

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and engaging General Anthropology course can act as a gateway for students, inspiring them to take more anthropology classes and to declare anthropology as a major. These actions are especially important in departments within colleges or universities that have a budget model which allocates funds based on student credit hours or numbers of majors.

Because these courses are often large and included as electives in undergraduate General Education or Liberal Studies programs, they can introduce anthropology to many students who had little prior knowledge of the field. This does a number of important things for the discipline, including increasing exposure to anthropology for students in other disciplines and as a more public audience, as well as increasing the diversity of perspectives within the discipline itself. Anecdotally, Callaghan and Williams have mentored many majors who did not initially intend to major in anthropology but discovered the discipline after being inspired by General Anthropology or another introductory class in anthropology (e.g., cultural, archaeology, or biological). Some of these students continued on to master's or PhD programs in anthropology, making introductory courses an important factor in creating and replacing anthropologists in academia and the private sector. Many others opted for an anthropology minor, gaining a strong grounding in understanding human diversity and behavior as well as complementary skills for whatever major or career they are pursuing. Finally, even if undergraduates never take another anthropology course again, General Anthropology provides them with a fresh perspective and new tools to address their own professional and personal challenges using a holistic, comparative, relativistic, and culturally grounded framework (see Fuentes 2001 for a similar argument and emphasis on helping combat pseudoscience). This last point, too, has been supported anecdotally in numerous emails and messages over the years from graduating and former non-anthropology majors who have thanked Callaghan and Williams for the lessons taught in their General Anthropology courses.

Teaching General Anthropology is not without its challenges. In addition to the subject of this article (i.e., assigning a cost-effective, high quality, appropriate textbook), instructors of General Anthropology confront several other issues, some of which are related to the strengths of the course. The first challenge stems from the size of the course and the diversity of student experiences and perspectives. In colleges or universities in which General Anthropology is an elective in a core curriculum, students are often able to take the course at any point in their career. This means General Anthropology courses are composed of students in a variety of stages in their academic careers, from incoming students through last semester seniors. Instructors need to balance the pace and rigor of content and assessments to fit the needs of a large range of students with different levels of educational experience. Related to this is the diversity of students' personal and professional perspectives. Instructors must similarly balance the content and assessments to inspire and challenge students coming from a variety of majors (from the life and physical sciences to the arts and humanities) and diverse cultural backgrounds (this is especially the case at large state schools). A further challenge is that General Anthropology courses at larger state schools are often large classes as well (e.g., enrolling 100-300 students). This

amplifies the issue of needed to create a balance of material and assessments for students with different educational and cultural backgrounds (for additional challenges in teaching large anthropology courses see Mulryan-Kyne 2010). It is important to note that striking this kind of balance can also be challenging in very small classes, as Bastide (2011) illustrates through teaching in the Oxford Tutorial System. A final challenge comes from the nature of the course itself. With five subdisciplines to teach, how does an instructor decide how much class time to devote to each? What terms and case studies should be used? How much detail can or should an instructor go into for each subdiscipline? The topic of this article sits at the intersection of all these challenges: how can instructors assign relevant, reliable, cost-effective course content that teaches essential information about the five subdisciplines of anthropology and that is engaging and accessible for a diverse student body?

Callaghan and Williams have taught General Anthropology in various modalities (face-to-face, fully online, blended) a combined 21 times over 9 years at the University of Central Florida (UCF). The DFW (grades of D or F or withdrawal) rates for this course, which stood at 15% from 2015-2019, are perhaps evidence of the challenges inherent in teaching the course to such a diverse student audience.

#### *Challenges Related to General Anthropology Textbooks*

While there are many excellent textbooks available to instructors of General Anthropology, finding a specific textbook that suits the needs of students at any one particular institution can be quite challenging. One of the main challenges is cost. While it may not seem as important to instructors, the price of a textbook is one of the primary concerns of students when they sign up for a class; subsequently, access to that text is directly related to their success in the class. Removing the cost barrier should allow all students to have equal access to the materials (see Grimaldi, Mallick, Waters, and Baraniuk 2019 for further exploration of this access hypothesis).

At the time the authors began formulating ideas about creating an openly licensed resource for General Anthropology (in 2017), textbooks for the course ranged from about \$90-150. While this may not seem a lot for one class, full-time students take an average of 10-12 courses per year. According to the Integrated Postsecondary Education Data System (2021), students at our institution spent an average of \$1200 on books and supplies for the 2020-2021 academic year – some of which they would never use again. Students could sell these books and receive less than half of what they paid, still not making up the cost to cover the text. Another option is to rent a textbook; the price of renting a textbook is considerably less – sometimes half the price or less of buying the text. However, renting texts still requires the student to pay, what can be for them, a significant amount of money for material they will never use again.

Another issue with conventional General Anthropology textbooks involves the breadth and scope of content and their relation to instructor experience and designed learning

outcomes for the course. Recently published General Anthropology textbooks are quite wonderful. They are written by authorities in the field who use accessible relatable language. The books contain case studies that translate abstract concepts into empirical studies and demonstrate discipline-specific methods. These textbooks have stunning graphics, lesson plans, and some even give instructors access to test banks and bulleted presentation slides. “So, what’s the issue?!,” a reader may ask, “Why not just assign one of these wonderful texts?” The first reason is something we noted already, these texts often reside on the upper level of the textbook price range. The second is a matter of practice; when selecting a more conventional General Anthropology text, many biological anthropologists and archaeologists face the issue of a single chapter representing an entire subdiscipline set against many chapters addressing cultural studies. When exploring the various approaches to teaching General Anthropology, we heard a wide range of colleagues emphasize one key piece of information: anthropology instructors tend to not teach strictly from textbooks. An instructor of General Anthropology often specializes in one subdiscipline (usually biological anthropology, archaeology, or cultural anthropology). In most cases, an instructor requires a text that introduces students to key concepts in each of the subdisciplines and then provides students supplemental material and case studies related to their own interests and the specific learning outcomes for the class at their institution. Essentially, a conventional textbook provides instructors with more than what they want or need, and it comes at a cost paid by students. Of course, instructors can assign a conventional text to the class and then pick and choose which content to use from it, but this still ends up costing the students in the end – a fact that is not lost on students and that instructors will learn about in their final evaluations (as we can personally testify!). Before writing our own textbook, we were using a combination of introductory texts ranging from \$35-\$100 along with a hodgepodge of library resources and other digital resources.

### *Open Educational Resources*

As veterans and frequent instructors of General Anthropology, we realized that we needed an open educational resource (OER) written by professional anthropologists in an accessible language that introduced students to theory, method, and terms in the five subdisciplines of anthropology and that could be used in concert with an instructor’s own supplementary material. Open educational resources are completely free to the user and are licensed in a way that tells the user what they can do with the material (in 2014, Wiley described the “5 Rs of openness”: retain, reuse, revise, remix, and/or redistribute). Usually, a user will have permission to rearrange and/or edit the material as long as proper attribution is given to the original creator. The vast majority of OERs are digital and available in a variety of formats, such as books, videos, images, datasets, and even test banks. A systematic review by Hilton (2020) confirms what we have found at our institution; classes that use OERs generally produce the same or better outcomes and levels of satisfaction as those that use purchased textbooks. The benefit of offering OERs to

students is that they can be accessed from day one of the class with no cost. Also, a teacher can be more selective and not feel pressured to use all the content of a single textbook (the dreaded “get the most bang for the buck” effect). Based on the specifications of the open license, a teacher may edit the content to better fit the needs and scope of the course. This could work particularly well in anthropology when new findings such as major fossil finds require a quick update to a textbook.

## Selecting (and then Creating) an Open Textbook

In Summer 2018, deNoyelles and Raible encouraged Callaghan and Williams to participate in a grant opportunity funded by the State University System of Florida to find and implement OERs for large introductory courses in the General Education Program (GEP) at our institution. Raible is familiar with the anthropology courses at the University of Central Florida and knew that Callaghan and Williams regularly taught General Anthropology. The instructors agreed to take part in the grant, but when they began looking for existing OERs to use in their course, there were few if any resources available for anthropology. What they did find were OERs that were specific to only one subdiscipline (mostly cultural anthropology) and some very problematic OERs for biological anthropology that used outdated, and in some cases racist, rhetoric and examples. Callaghan and Williams quickly realized that if they wanted to implement an OER for their General Anthropology course, they would likely have to write it themselves.

Initially the task seemed daunting. The authors did not want to write an entire OER that included theory, terminology, and case studies for all five subdisciplines. The amount of time and effort to research and write about subdisciplines they were not familiar with (i.e., cultural anthropology and linguistics) would be tremendous. In addition, the exercise would likely result in yet another instructor-specific (albeit free!) text that included all subdisciplines which instructors at other institutions would choose not to use. This is when Williams realized she and Callaghan were not thinking in terms of the practical use of OER materials in classes – they were stuck in the conventional mindset of using all-inclusive published textbooks. The advantage of OERs is that they can be used in tandem with other resources – specifically other OERs. Since there was already an excellent OER for cultural anthropology that included a section on linguistics and which was published and endorsed by the American Anthropological Association (Brown, McIlwraith, and Tubelle de González 2020), Williams proposed she and Callaghan create an OER for General Anthropology that focused only on biological anthropology and archaeology with some examples drawn from applied anthropology. Their new OER could be used in concert with the open AAA resource to give students of General Anthropology a free, authoritative, and accessible introduction to the fields of anthropology.

The overall goals for our book were: 1) that the text be readable and visually stimulating; 2) that the chapters be integrated with one another but also be written so instructors could pick and choose what they wanted to use in their courses; 3) that the text

act as an instructional tool but not a substitute for an instructor (i.e., in the case of online content); and 4) that the text contain enough concepts, terminology, and case studies to demonstrate key concepts in biological anthropology and archaeology, but not so much that instructors could not supplement with their own examples. Callaghan and Williams also agreed that while the chapters could be assigned to students in isolation from the rest of the text, the OER should maintain some semblance of a traditional textbook: namely, a glossary and index so that students could know where to search for definitions and concepts. They also agreed that while the text would focus on biological anthropology and archaeology, it still needed a general introduction to the discipline of anthropology. Finally, they decided to not include ancillary materials like quizzes, exams, presentations, or in-depth activities. As mentioned above, General Anthropology instructors often already use supplementary teaching and assessment materials self-developed based on their disciplinary interests and the specific learning outcomes for the class at their institution.

After deciding to focus specifically on biological anthropology and archaeology, Callaghan and Williams began the project by creating a table of contents for the OER. The outline began with an introductory chapter to General Anthropology that presented students with important fundamental concepts: namely, an introduction to the culture concept, cultural relativity, and how each subdiscipline contributed to the study of culture through the study of the human body (biological anthropology), material (archaeology), language (linguistics), and lived behavior (cultural anthropology). Next, they outlined chapters and learning outcomes related to fundamental concepts and terminology in biological anthropology and archaeology. The concepts and terminology were similar to those presented in popular textbooks used in introductory courses that focus specifically on biological anthropology or archaeology. In biological anthropology these concepts included evolution and genetics, biodiversity, and classifying fossil hominids. In archaeology these concepts included practicing archaeological methods and examining complex societies. Within each chapter basic concepts and terminology were presented that would be taught in any biological anthropology or archaeology text but with minimal extended examples. After presenting fundamental concepts, a few extended examples were provided that highlight research areas in which Callaghan and Williams specialize (namely, contemporary biodiversity in biological anthropology and the ancient Maya in archaeology), but these examples can be substituted by any instructor. Key terms within chapters were highlighted and included in an index and glossary at the end of the OER (see Figures 1 and 2). Callaghan and Williams believed that structuring the text this way allowed instructors to draw upon their own experience or preferred case studies to illustrate fundamental concepts or terms and not be locked into a text that they could not reconfigure. In this way, a balance between presenting fundamental concepts and teaching to their own individual and department specialties was achieved.

## Using Anthropological Perspectives



### Learning Objectives

1. Describe how anthropology differs from other fields that study humans
2. Explain primary interests of the major subfields of anthropology
3. Discuss practical uses of anthropology in solving contemporary problems
4. Summarize practical benefits of studying anthropology

### What Is Anthropology?

**Anthropology** is a social science that focuses on the study of what makes us human. The word “anthropology” comes from the combination of the Latin words *anthropos* meaning “human” and *logia* or *logos*, meaning “to study”. As **social scientists**, anthropologists use theory and method to generate qualitative and quantitative data in order to test hypotheses about specific questions they have about the human experience. These questions are far reaching and focus on aspects of the human body (**biological anthropology**), the human past (**archaeology**), human language (**linguistics**), and contemporary behaviors (**cultural anthropology**). Anthropologists may also work outside the university or research system and apply their skills to address social issues – this is called **applied anthropology**. While anthropology is similar to other social sciences since it uses the **scientific method** (Figure 1.1) to study human behavior, it’s also unique. Anthropology is distinguished because it’s holistic, relativistic, comparative, and focuses on the concept of human culture.



**Figure 1. Beginning of Chapter**  
(Chapter 1 cover image, “Henna female,” by Ross Cain, CC0 1.0)

Callaghan and Williams took advantage of the timeframe of the Complete Florida Challenge grant and worked to complete the project in 1-1.5 years. As mentioned above, while they each wrote chapters for their specific subdiscipline (Williams for biological anthropology and Callaghan for archaeology), they created a template using Microsoft Word to standardize chapters. Each chapter began with 3-5 specific learning objectives, continued to content, and ended with a review of the learning objectives, references cited, a concept review, and a few exercises to apply concepts (Figures 1, 2, and 3). Images were found in online openly licensed repositories, and several others were taken by Williams. A PDF version was created for easy download and offline access for students and is also made available to the public through the STARS repository (see <https://stars.library.ucf.edu/oer/5/>). The open license applied to the work was Creative

Commons Attribution NonCommercial ShareAlike, meaning that the reader can share and adapt the book as long as they apply the same license to their own adaptation, and that the work cannot be used commercially.

When the OER draft was completed by the end of the grant term, two anonymous anthropologists were asked to perform a professional review of the text. Callaghan and Williams were grateful, as scholarly review is a critical component of academic publishing. It ensures that scholarly work meets certain standards in a given field, gives authors the opportunity to improve their work, and adds legitimacy and value to a publication. The OER was sent to two anonymous reviewers (one biological anthropologist and one archaeologist) who reviewed the whole manuscript but paid particular attention to chapters in their specialties. The authors then integrated reviewer comments, edits, and concerns into the final work.

## Glossary

**ABO blood type:** polymorphic trait that is controlled by a single gene with three types of alleles: A, B, and O

**acclimatization (acclimation):** process of adjusting to a change in environment allowing an individual to maintain physical capabilities across a range of environmental conditions

**adaptation:** heritable trait that aids the survival and reproduction of an organism in its present environment

**adaptive radiation:** diversification of a group of organisms into forms filling different ecological niches, ultimately resulting in multiple speciation events

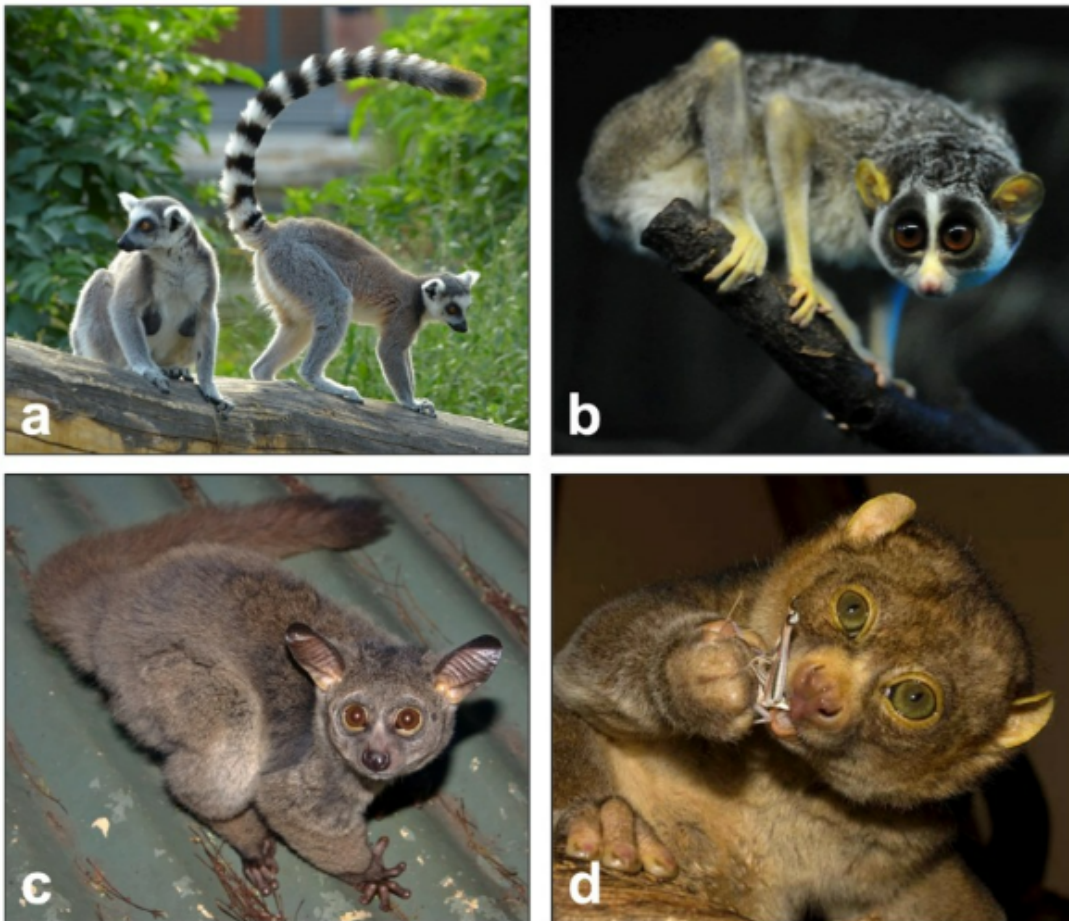
**adenine:** nitrogen base that pairs with thymine in DNA molecules and uracil in RNA molecules

**adult development:** period of human development that follows adolescence

**aging:** process of growing older

Figure 2. Glossary

**Haplorhines** are more widely distributed geographically and include many more species. These species are further divided into three taxonomic groups: Tarsiidae, Platyrrhini and Catarrhini. **Tarsiers** (Figure 4.12) are only found in the island areas of Southeast Asia and are small animals with enormous eyes, in some cases larger than its entire brain, to help them see well at night. They can rotate their heads around 180 degrees, which is necessary because they cannot move their eyes side to side. They also have an excellent sense of hearing, which aids in avoiding predators and finding food. Tarsiers are strict **carnivores**, feeding on insects, birds, and lizards.



**Figure 4.11:** Strepsirrhines include species such as the (a) ring-tailed lemur ( *Lemur catta* ), (b) red slender loris ( *Loris tardigradus* ), (c) Senegal galago ( *Galago senegalensis* ) and (d) potto ( *Periodicticus potto* )

### Figure 3. Use of Images

(Image (a) by onkelramirez1, licensed under CC0 1.0; Image (b) by Joachim Müller, licensed under CC BY-NC-SA 2.0; Image (c) by Ron Porter, licensed under CC0 1.0; and image (d) by atheris, licensed under CC BY-SA 2.0)

## Research Questions

As mentioned above, being unsuccessful in an introductory course could discourage students from majoring in anthropology and/or slow down students' progress to graduation. We wanted to discover ways to support students to perform better in this seminal course.

We were interested in better understanding the influence of incorporating a teacher-authored open textbook on the attitudes, perceptions, behaviors, and performances of General Anthropology students. What feedback do students have regarding their use of the open textbook? What recommendations did they give in order to improve upon the resource? Also, were there changes in academic performance after the open textbook was adopted?

## Methodology

### *Participants and Setting*

Participants were undergraduate students enrolled in General Anthropology at the University of Central Florida, a large public university in the southeastern United States; the courses were taught by either Callaghan or Williams. Table 1 displays the semester, teacher, modality, and enrollment of each course offering. Class sizes ranged anywhere from 30 to 250 students, and the course was offered in fully online, blended, video, and face-to-face modalities.

**Table 1. Participants and Setting**

Before open text was implemented			
Semester	Teacher	Modality	Enrollment
Fall 2015	Callaghan	Face-to-face	219
Fall 2016	Callaghan	Face-to-face	252
Spring 2017	Callaghan	Face-to-face	157
Fall 2017	Callaghan	Face-to-face	250
Fall 2018	Williams	Blended	126
Summer 2018	Callaghan	Face-to-face	41
Spring 2019	Callaghan	Face-to-face	235
Spring 2019	Callaghan	Blended	64
Summer 2019	Callaghan	Blended	31

Total (before OER)			1,375
After open text was implemented and survey was distributed			
Semester	Teacher	Modality	Enrollment
Fall 2019	Callaghan	Blended	147
Fall 2019	Callaghan	Face-to-face	144
Spring 2020	Callaghan	Blended	147
Spring 2020	Williams	Face-to-face	62
Summer 2020	Callaghan	Online	132
Fall 2020	Callaghan	Video	174
Fall 2020	Williams	Online	139
Spring 2021	Callaghan	Video	309
Spring 2021	Williams	Online	148
Total (after OER)			1,402

Toward the end of each semester beginning with Fall 2019 (when the open textbook was first incorporated), an anonymous online survey was distributed to enrolled students. The survey was optional, but students could earn extra credit if they completed it; if they did not want to complete the survey, they were offered an alternate way to earn extra credit. The survey was distributed from Fall 2019 to Spring 2021 to 1,402 students. 57 percent of enrolled students (n=804) completed the survey. This study was approved by UCF's Institutional Research Board.

#### *Data Sources and Analysis*

There were two sources of data: the survey results and final grades. The survey (Appendix A) consisted of closed-ended items about student experiences with the open textbook. Items addressed general topics (for example, "The textbook for this course was valuable"), design-specific details (for example, "Layout is consistent and chapters are arranged logically"), and the representation of diversity (for example, "Women and minorities are featured in important roles in the text"). Students were additionally asked one open-ended question: "Please provide some feedback about the open textbook. What improvements do you suggest?" Finally, students were also asked some demographic questions (for example, "Have you taken any previous classes in anthropology?").

To better understand changes in course performance, the department of Institutional Knowledge Management at the university compared final grades from several sections

before the open textbook was implemented with those after the open textbook was implemented to see if there was any notable effect on the “DFW” (grades of D or F or withdrawal) rates. Grade distribution was also included in the analysis. deNoyelles received a file that included the DFW tag, students enrolled, semester, etc.

## Results

### Survey Feedback

Before reporting students’ perceptions of the OER text, it is important to acknowledge the unique group of students who completed the survey. Not surprisingly, the vast majority of students (90 percent) had not taken previous courses in anthropology. 45 percent reported an “average” interest in anthropology before enrolling in the course, while 40 percent reported “no” or “low” interest. Most students took the course because it was needed to fulfill graduation requirements (29 percent) or fit their schedule (28 percent). These trends are similar to those in other general courses, and it presents an instructional challenge when 40 percent of the respondents were not initially interested in the subject.

Regarding past financial behaviors, 28 percent of respondents reported being primarily responsible for buying their own course materials, 75 percent said they have delayed purchasing a textbook in the past because of cost, and 58 percent claimed they have decided not to purchase a textbook at least once in their academic careers.

Table 2 shares responses to survey items related to basic access and ease of use of the author-penned open textbook. The table displays the survey items, the percentage of respondents who agreed or strongly agreed with the item, and the percentage who neither agreed nor disagreed with the item (that is, those who showed relative ambivalence).

**Table 2. Textbook Access and Usability**

Survey Item: The textbook for this course was....	Agreed/Strongly Agreed	Neither Agreed nor Disagreed
Easy to acquire	93.53%	3.89%
Easy to use	93.77%	3.25%
Easy to read	91.17%	5.19%
Easy to study from	85.04%	9.10%
Visually appealing and interesting	81.62%	13%
Textbook provides a useful table of contents, glossary, and index.	78.67%	18%

Layout is consistent and chapters are arranged logically.	89.52%	9.03%
Voice and tone are authoritative, but familiar and friendly.	82.33%	15.45%

Most students found the textbook easy to acquire, which was one of our top goals. One of the students remarked, "I really like and appreciate that the textbook and other supplemental class materials are provided. It makes the class more enjoyable because there is no need to worry about the financial implications of purchasing/renting a textbook." Most students found the book easy to read, with one student explaining that being easy to read "makes it digestible to newcomers." Another describes, "The text reads with a tone that is clearly informed, but presents itself as being very approachable, giving necessary context for ideas that may be unfamiliar to some readers." Most respondents agreed that the book was easy to use and study from, although improvements could be made with visuals and navigation. Small font size, lack of highlighting, and difficulty with searching for keywords were most often cited.

Table 3 shares responses to survey items that pertained to students' perceived value of the open textbook.

**Table 3. Value of the Open Textbook**

Survey Item: The textbook for this course was....	Agreed/Strongly Agreed	Neither Agreed nor Disagreed
High in quality	89.09%	7.92%
Credible	94.14%	3.78%
Valuable	89.09%	8.05%
Relevant to the course	94%	3.91%
Supported performance	87.65%	9.1%
Prepared me for quizzes and exams	89.85%	6.39%
Increased interest in the subject	71.04%	22.08%
Increased my learning about the subject	89.56%	7.44%
Increased my enjoyment of the class	64.62%	28.09%

Encouraged me to think about the content in a new way	69.31%	22.89%
Challenged the way I think	66.14%	24.87%

Most students found that the textbook was credible and high in quality. Most found that it was relevant, prepared them for exams, and supported their performance. One student remarked, "I really loved this textbook because since it was written by the teacher, we knew the information we needed to know. Most other teachers say their tests/quizzes are based off the readings, but then most of the time the questions are unheard of. Since the teacher actually wrote this book, we had exactly the information we needed." Another explained, "It paired well with the class and makes learning the concepts easier." Nearly 90 percent agreed or strongly agreed that it increased their learning about the subject. More ambivalence was found concerning increased interest in the subject, enjoyment of the class, and challenging thinking – a trend that we have observed over many years of distributing similar surveys in other courses. A desire for more interactivity was voiced by students; this indicated a need to go beyond a digital reproduction of a traditional textbook.

Table 4 presents responses to survey questions related to diversity and inclusion.

**Table 4. Diversity and Inclusion**

Survey Item	Agreed/Strongly Agreed	Neither Agreed nor Disagreed
Women and minorities are featured in important roles in the text.	78.76%	19.39%
Women and minorities are featured in important roles in the images.	76.19%	22%
Pronouns are descriptors of both sexes are used equally in the text.	76.36%	22%
Students of all genders and various cultures will use the materials without feeling excluded, estranged, or diminished.	85.2%	13%

After reviewing other OERs, we identified diversity and inclusion as prime areas of consideration when penning the textbook. The majority of respondents agreed that women and minorities were featured in important roles in the text and images presented in the book. 85 percent agreed or strongly agreed that the materials do not exclude, estrange, or diminish their lived experience. One student explains, "The text does a good

job of showing diversity when possible and makes anthropology feel inclusive and open to everyone, regardless of background.”

### Course Performance

The DFW (grades of D or F or withdrawal) rate in semesters before the open textbook was adopted was 14.77 percent. After the open textbook was adopted, the DFW rate decreased to 7.35 percent. The final course grades were largely improved in the semesters in which the open textbook was being used (Table 5).

**Table 5. Final Grades, Pre- and Post-OER Adoption**

Final Grade	Before OER	After OER
A	34.4%	52.4%
B	31.2%	28.64%
C	19%	9.7%
D	4.4%	1.8%
F	5.4%	1.4%
W (withdrawal)	5%	1.4%

### Discussion

Through this study, we can say with certainty that writing an open textbook and integrating it into a General Anthropology course was worth the time and effort taken by the authors. The most notable finding was the reduction of D and F grades and withdrawal rates, especially considering that the COVID-19 pandemic began in Spring 2020. We can offer several reasons for this dramatic drop.

By surveying the students on their financial behaviors, we learned that 28 percent reported being primarily responsible for buying their own course materials, and most of those students have delayed and/or decided not to purchase a textbook in a course at least once in their college careers. Offering a free textbook is a matter of equity. Because it was freely accessible from day one, students could immediately gain access without stressing about paying for it. The textbook was digital and available offline, so it was portable as well. Put simply, students had immediate access to the materials they needed.

Writing the book helped us better align the course materials with the assessments. As Callaghan attests, “when it’s your content, it’s a smoother teaching experience.” By writing about our own expertise, we did not have to interpret others’ words or framing or decipher a test bank written by someone else. Writing the book also forced us to write to our own

audience. Knowing that some students are brand new to this subject and that first-year to senior students take the course encouraged us to pay careful attention to our use of language.

Asking students for feedback on the book was essential. Students generally reported that the book was easy to acquire, use, and study from. More ambivalence was found concerning increased interest, enjoyment, and challenging thinking – a textbook trend that the authors have observed over many years of distributing similar surveys in other courses. Based on their suggestions, here are some changes we will consider for the next version of the book:

- Increase font size
- Increase the accessibility of the PDF version
- Include more visual elements such as images and icons to break up the text
- Increase the mobile friendliness of the text (be able to zoom text to make it larger, swipe, etc.)
- Link to interactive elements
- Provide more technical support to show students how to effectively study using a digital resource
- Rethink the traditional look and feel of the resource.

## **Conclusion**

General Anthropology is a challenging subject to teach, and this article demonstrates how integrating an openly licensed textbook that is aligned with the overall course goals can promote access and support student performance. In the spirit of sharing, the textbook is available for interested readers to share and adapt. Readers interested in creating their own open resources are encouraged to first review the materials they currently use and determine the cost as well as the value and alignment of these resources with the overall goals for the course. If there are deficits, explore existing materials that are already available to use. The approach of using existing open materials and supplementing with an instructor-written text was more efficient than writing an entire body of work.

In the future, we would like to revise the textbook and continue to explore student feedback and performance. Also, the influence of the teacher-author is one to be further explored. If a different instructor adopted this open resource, would they also find such positive results concerning course performance? That line of research will help us understand the influence of having a freely accessible resource.

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## Appendix A: Survey Questions

1. What device did you use most frequently to access the digital version of the open textbook? (smartphone, tablet, eBook reader, Desktop/laptop computer)
2. The digital textbook was: (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree):
  - a. Easy to acquire
  - b. Easy to use
  - c. Easy to read
  - d. Easy to study from
  - e. High in quality
  - f. Credible
  - g. Valuable
  - h. Relevant to the course
3. The digital textbook: (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree):
  - a. Supported my performance in the course
  - b. Prepared me for quizzes and exams
  - c. Increased my interest in the subject
  - d. Increased my learning about the subject
  - e. Increased my enjoyment of the class
  - f. Encouraged me to think about the class content in a new way
  - g. Challenged the way I think
4. The next questions ask about the nature of the textbook (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree):
  - a. Voice and tone are authoritative but familiar and friendly.
  - b. Concepts and definitions are clear and easy to understand.
  - c. Textbook provides a useful table of contents, glossary, and index.
  - d. Layout is consistent and chapters are arranged logically.
  - e. Chapters contain clear and comprehensive introductions and summaries.
  - f. Learning outcomes are fully addressed in each chapter.
  - g. Size and format of text are appropriate.
  - h. Format is visually appealing and interesting.
  - i. Appropriate applications and examples are given to explain concepts/terms.
  - j. Non-text content (maps, graphs, pictures) is accurate and well-integrated into the text.
  - k. This textbook inspired me to look up content outside of the text.
  - l. Women and minorities are featured in important roles in the text.
  - m. In the text, subject matters covers a spectrum of accomplishments and contributions by all sexes, races, and physical conditions.

- n. In the images, subject matter covers a spectrum of accomplishments and contributions by all sexes, races, and physical conditions.
  - o. All groups are presented in broad scope in the text.
  - p. All groups are presented in broad scope in the images.
  - q. Pronouns and descriptors of both sexes are used equally in the text.
  - r. Nouns, adjectives, terms, and illustrations are non-stereotypical and non-prejudicial.
  - s. Students of all genders and various cultures will use the materials without feeling excluded, estrangers, or diminished.
5. Please provide some feedback about the open textbook you used for this class. What improvements do you suggest?
6. Have you taken any previous classes in anthropology? (Yes/No)
7. Rate your level of interest in anthropology before you took this course. (No interest, low interest, average interest, high interest).
8. I took this course because: (it fit my schedule, it fit my interest, I need it to graduate, it was recommended to me, I chose it at random, other)