

Exploring First-Generation Student Experiences with OER Textbooks

Sarah LeMire, Kathy Christie Anders, and Terri Pantuso

As academic librarians engage in Open Educational Resources (OER) creation and adoption programs, exploring student perceptions of OER provides information that can be used to revise and improve OER, to inform faculty perceptions, and to contextualize the benefits of OER in relation to student financial concerns. This case study explores how first-generation students perceive their textbooks, particularly in the areas of cost savings and format. It also supports research indicating that first-generation students are concerned about the cost of textbooks and experience financial challenges, such as food insecurity. Adopting OER may ease financial concerns and increase access to higher education for first-generation students.

Introduction

It is no secret that textbook costs have become prohibitively expensive for students; students commonly are expected to budget around \$1,000 per academic year just for textbooks and supplies. The high cost of textbooks means that many students forgo purchasing required course materials, even though it could impact their grade in the course.¹ Academic libraries have been supporting faculty wishing to adopt open educational resources (OER) as a means to increase textbook access for students. OER, as defined by UNESCO, are “the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes.”² OER include a variety of types of teaching materials, not just textbooks. OER permissions are typically defined in terms of the ‘5R’s’: “users are free to Retain, Reuse, Revise, Remix and Redistribute these educational materials.”³ The types of support and leadership that libraries provide for OER development and adoption range from guiding faculty to OER to publishing OER themselves.

When the authors began to collaborate to create an open textbook for an introductory composition course, ENGL 104, it became clear during the development process that it would be beneficial to understand more about student perceptions of this new OER, as well how students viewed the impact of textbook costs. Assessment of the student population’s needs became a key part of the OER adoption process, particularly as the university began an initia-

* Sarah LeMire is Professor, email: slemire@tamu.edu; Kathy Christie Anders is Associate Professor, email: kanders@library.tamu.edu; and Terri Pantuso is Associate Dean for Assessment and Curricular Matters and Instructional Associate Professor of English, email: tpantuso@tamu.edu. All are at Texas A&M University. ©2024 Sarah LeMire, Kathy Christie Anders, and Terri Pantuso, Attribution-NonCommercial (<https://creativecommons.org/licenses/by-nc/4.0/>) CC BY-NC.

tive to increase student success for underserved populations.

First-generation students are an underserved population that has been the target of recent efforts to improve retention and graduation rates at Texas A&M, one of the largest public research universities in the country. One reason that first-generation students may demonstrate gaps in student success is due to family income disparities. Texas A&M's student body is generally relatively affluent. According to the *College Mobility Report Cards* from Raj Chetty et al., Texas A&M ranks third out twenty-seven highly selective public universities for students from families in the top 20 percent income bracket (\$110,000 annually or more), but eighteenth for students from families from the lowest 20 percent bracket (\$20,000 annually or less).⁴ Recent demographic information published by the university revealed that only 12 percent of the undergraduate student body reported a family income of less than \$60,000.⁵ However, an outsized portion of those families are likely to have first-generation students; 63 percent of first-generation students at the university reported a family income of less than \$60,000.⁶

In order to better understand the experiences of first-generation students with an OER textbook, the researchers invited both continuing-generation and first-generation students enrolled in ENGL 104 to share their perceptions of their textbooks, including the newly developed OER textbook and the standard fee-based textbook pack. The research questions for this study are as follows:

- Do first-generation students have different perceptions of their textbooks than continuing-generation students in terms of factors such as format, costs, and availability?
- What aspects of textbooks are most important to first-generation students?

By gathering data about first-generation student perceptions of the new OER, the researchers hoped to use those perceptions to show faculty members what the students valued in OER, which may be different than what faculty value in OER. While there are a few studies that broadly explore student perceptions of OER, in this case the researchers wanted to measure the perceptions of TAMU first-generation students in order to connect to a key student success initiative on campus.

Literature Review

Adopting OER materials for higher education has been shown to either benefit student academic performance in many cases or, at the very least, to not harm it. Literature suggests that adopting an OER textbook for a class may either increase student performance or result in student performance that was comparable to that of students using a commercial textbook.⁷ This may be due to the increased access that comes from having freely available textbooks.

Broad student perceptions of OER textbooks are equal to or more favorable than traditional textbooks.⁸ After surveying community college students enrolled in math courses that used open materials, Hilton III et al. found that "83% either strongly agreed or slightly agreed with the statement, 'Overall, the materials adequately supported the work I did in class.'"⁹ Similarly, a study of students at Ohio State University found that student responses to the adoption of open learning materials were largely positive.¹⁰ Students were also very likely to recommend OER courses to their peers according to Brandle et al.¹¹ Ozdemir and Hendricks concluded that faculty also had many reasons for adopting OER textbooks, including the ability to repurpose the content, favorable views of the quality of open content, concerns about the accessibility of traditional textbooks, and the desire to lower textbook costs for students.¹²

According to student perception surveys conducted at research universities, the high cost of textbooks harms academic performance. At Old Dominion University, researchers found that nearly 38 percent of students they surveyed had forgone purchasing course materials due to cost, and nearly 20 percent thought they had received a lower grade in a class because they could not purchase their textbooks.¹³ In their survey of students in British Columbia, Jhangiani and Jhangiani found approximately 30 percent of surveyed students said that textbook costs had led them to receive a lower grade, and that, “these individuals were more likely to self-identify as a member of a visible minority group...hold a student loan...and be working more hours per week.”¹⁴ There are clear indications that textbook costs are creating barriers to student success.

Students from different demographic groups experience textbook cost harms in varying degrees; the adoption of OER texts, while helpful for everyone, can be substantially beneficial to students from underserved populations, such as those who are eligible for Pell Grants, by lowering their D/F/W (D grade, F grade, withdraw) rates.¹⁵ This suggests that first-generation students may benefit from access to OER in their classes. Studies from both Gettysburg College and a public Hispanic Serving Institution in Southern California found that first-generation students were more likely to report textbook cost-related stress and to choose not to purchase required textbooks, potentially impacting their success in the course.¹⁶ Benefits for first-generation students also are not limited to financial relief; Amy T. Nusbaum found that first-generation students who used an OER specifically designed for inclusivity showed an increase in their sense of belonging on campus.¹⁷

This study contributes to the body of literature on first-generation students and OER textbooks by examining first-generation student perceptions of their textbooks including format preferences, access methods, and awareness of OER during course registration.

Methods

In order to determine student perceptions of their textbooks, the researchers created and disseminated a survey to students enrolled in ENGL 104 Composition and Rhetoric classes during the Fall 2019 semester. After receiving IRB approval, the researchers contacted faculty and graduate students teaching sections of ENGL 104, regardless of the textbook they chose to use for the semester. Instructors were asked to share the survey with their students and to consider offering extra credit to students who participated. Instructors who chose to offer extra credit were also provided with an alternative assignment for students who chose not to participate but wanted the extra credit opportunity.

The survey was designed to explore select areas of investigation related to OER and textbooks. Specifically, the researchers wanted to better understand financial barriers related to textbook costs, student textbook preferences, and student experiences with OER. Survey questions included both qualitative and quantitative questions. The survey also contained questions in a variety of formats such as Likert-style, multiple choice, multiple answer, and free-text. The qualitative responses were imported into Excel and coded thematically by a single researcher and analyzed to identify patterns in responses. Quantitative responses were imported into Stata for analysis. The researchers ran descriptive statistics, including means and frequencies. In order to determine whether differences between first-generation and continuing-generation students were statistically significant, the researchers ran regression analyses in Stata.

Results

There were 206 complete survey responses from fifteen sections of the course. Of those 206 responses, one was dropped due to insufficient information in responses about the type of textbook used in their course. The final data set included 205 total records: 146 from sections that used the OER textbook, and fifty-nine from sections that used commercial textbooks.

Student responses to demographic questions indicated that 132 respondents (64 percent) were sophomores, followed by fifty-six (27 percent) freshmen, fifteen (7 percent) juniors, and two (1 percent) who selected “other” as their class standing. The vast majority, 96 percent, (196) of respondents were not transfer students; only 4 percent (nine) identified themselves as transfer students. Seventy percent of respondents (144) were continuing-generation students, while 30 percent (61) were first-generation students, meaning here that neither parent had graduated from a four-year college or university.

In order to better understand how students’ experiences may have varied based on the textbook they used in their class, the researchers asked respondents to select or write in the name of the textbook they used in ENGL 104. Based on students’ responses, the researchers coded the respondents as having used the OER or having used a commercial textbook.

In accordance with the design of the study, the results revealed salient points related to first-generation students’ financial concerns, textbook preferences and access methods, and awareness of OER.

Financial Concerns

Despite the overall relative affluence of the Texas A&M student body, survey participants commonly indicated that they had financial concerns. The survey asked participants to answer Likert-style questions indicating how frequently they had concerns about the cost of college, cost of textbooks, access to meals, and the need to work. Both continuing-generation students and first-generation students indicated that they had some of these financial concerns, particularly with regard to the cost of college and of textbooks (Table 1). Those concerns become even

TABLE 1
First-Generation and Continuing-Generation Student Financial Concerns
(Descriptive Statistics)

		N	Mean	Std. dev.	Min	Max	25th	50th (Median)	75th
College Cost	First Gen	61	4.33	0.91	1	5	4	5	5
	Continuing	144	3.37	1.3	1	5	2	4	4
	Combined	205	3.65	1.27	1	5	3	4	5
Cost of Textbooks	First Gen	61	4.18	0.85	2	5	4	4	5
	Continuing	144	3.25	1.3	1	5	2	3	4
	Combined	205	3.53	1.26	1	5	3	4	5
Access to Meals	First Gen	61	3.2	1.29	1	5	2	3	4
	Continuing	144	2.33	1.23	1	5	1	2	3
	Combined	205	2.59	1.31	1	5	2	2	4
Needing to Work	First Gen	61	3.74	1.28	1	5	3	4	5
	Continuing	144	2.76	1.4	1	5	1	3	4
	Combined	205	3.05	1.44	1	5	2	3	4

more marked among first-generation students. First-generation students were significantly more likely to indicate that they were frequently concerned about the cost of college, cost of textbooks, access to meals, and having to work (Table 2).

	Estimate	Standard Error	t-value	p-value
Cost of College				
Intercept	3.37	.10	33.76	0.000
First Gen/Continuing	.96	.18	5.25	<0.001*
Cost of Textbooks				
Intercept	3.25	.10	32.86	0.000
First Gen/Continuing	.93	.18	5.13	<0.001*
Access to Meals				
Intercept	2.33	.10	22.45	0.000
First Gen/Continuing	.86	.19	4.53	<0.001*
Need to Work				
Intercept	2.76	.11	24.17	0.000
First Gen/Continuing	.98	.21	4.69	<0.001*
* = $p < 0.05$				

Important Aspects of Textbooks

First-generation and continuing-generation students also exhibited differences in the importance they placed on different aspects of their textbooks. OER and commercial textbooks can have differences ranging from aesthetics (production value) to cost. Using a Likert-scale question, students were asked to indicate the importance of four different aspects of textbooks: format (digital, print, or both), cost, professional appearance, and comprehensiveness (having everything in one place).

Results indicated that, in general, students felt that having everything in one place was the most important aspect of their textbook, followed closely by cost. Format was less important, and production value was the least important aspect according to students (Table 3).

		N	Mean	Std. dev.	Min	Max	25th	50th (Median)	75th
Textbook Format	First Gen	61	3.3	1.22	1	5	3	3	4
	Continuing Gen	144	3.08	1.12	1	5	2	3	4
	Combined	205	3.15	1.15	1	5	2	3	4
Textbook Cost	First Gen	61	4.31	0.94	2	5	4	5	5
	Continuing Gen	144	3.79	1.08	1	5	3	4	5
	Combined	205	3.95	1.06	1	5	3	4	5

TABLE 3
First-Generation and Continuing-Generation Student Important Aspects of Textbooks
(Descriptive Statistics)

		N	Mean	Std. dev.	Min	Max	25th	50th (Median)	75th
Professional Production	First Gen	61	2.95	1.13	1	5	2	3	4
	Continuing Gen	144	2.82	1.14	1	5	2	3	4
	Combined	205	2.86	1.14	1	5	2	3	4
Comprehensiveness	First Gen	61	4	0.82	1	5	4	4	4
	Continuing Gen	144	4	0.94	2	5	3	4	5
	Combined	205	4	0.9	1	5	4	4	5

In order to understand if first-generation and continuing-generation students exhibited different priorities, the researchers ran a regression analysis for each of the four aspects considered (Table 4). Although first-generation students ranked each aspect of the textbook as highly or more highly than their continuing-generation peers, these differences were small in relation to textbook format, production, and comprehensiveness. However, first-generation students rated the importance of cost significantly higher than continuing-generation students.

TABLE 4
First-Generation and Continuing-Generation Student Important Aspects of Textbooks
(Regression Analysis)

	Estimate	Standard Error	t-value	p-value
Textbook Format				
Intercept	3.08	.096	32.22	0.000
First Gen/Continuing	.212	.175	1.21	.229
Textbook Cost				
Intercept	3.79	.087	43.82	0.000
First Gen/Continuing	.52	.159	3.28	0.001*
Professional Production				
Intercept	2.82	.095	29.66	0.000
First Gen/Continuing	.131	.174	.75	.452
Comprehensiveness				
Intercept	4	.075	53.08	0.000
First Gen/Continuing	0.00	.138	0.00	1.000

*= $p < 0.05$

Course Materials Access Methods

Survey results also revealed trends in how students access online course materials. Students were asked how frequently they used different devices to access their materials with a score of 1 for Never and a score of 4 for Frequently. Results revealed that students were most likely to use laptops and least likely to use tablets. Very few students selected the “Other” option, indicating that the device options were those most commonly used.

Additional trends were revealed when the data was broken out by first-generation and continuing-generation students. Both populations most commonly used laptops, but first-generation students were significantly more likely to use a desktop computer and to use their phones to access course materials.

TABLE 5
First-Generation and Continuing-Generation Student Course Materials Access Methods
(Descriptive Statistics)

		N	Mean	Std. dev.	Min	Max	25th	50th (Median)	75th
Desktop Computer	First Gen	61	2.36	1	1	4	2	2	3
	Continuing Gen	144	1.99	1.01	1	4	1	2	3
	Combined	205	2.1	1.02	1	4	1	2	3
Laptop Computer	First Gen	61	3.84	0.52	1	4	4	4	4
	Continuing Gen	144	3.82	0.48	2	4	4	4	4
	Combined	205	3.82	0.49	1	4	4	4	4
Tablet	First Gen	61	1.67	1.08	1	4	1	1	2
	Continuing Gen	144	1.56	0.92	1	4	1	1	2
	Combined	205	1.59	0.97	1	4	1	1	2
Phone	First Gen	61	2.69	0.99	1	4	2	3	3
	Continuing Gen	144	2.08	0.99	1	4	1	2	3
	Combined	205	2.26	1.02	1	4	1	2	3
Other	First Gen	61	1.18	0.7	1	4	1	1	1
	Continuing Gen	144	1.05	0.27	1	3	1	1	1
	Combined	205	1.09	0.45	1	4	1	1	1

TABLE 6
First-Generation and Continuing-Generation Student Course Materials Access Methods
(Regression Analysis)

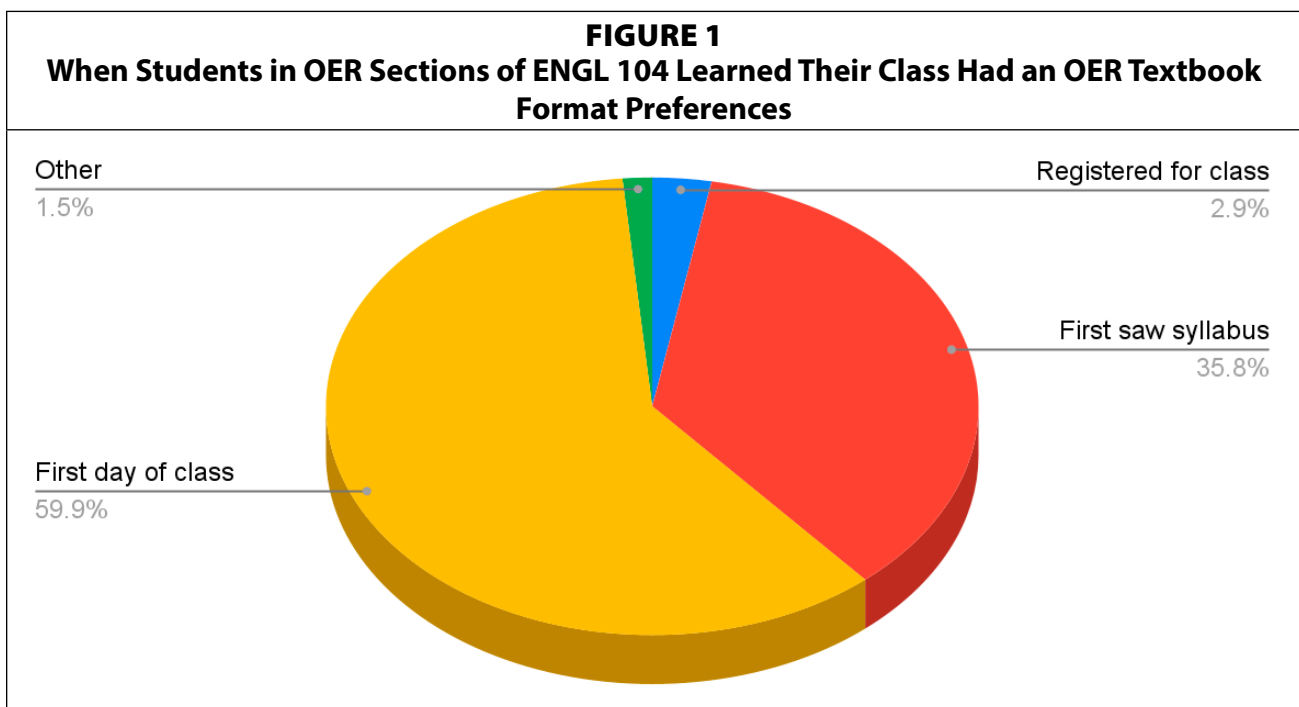
	Estimate	Standard Error	t-value	p-value
Desktop				
Intercept	1.99	.084	23.66	0.000
First Gen/Continuing	.375	.154	2.43	.016*
Laptop				
Intercept	3.82	.041	92.66	0.000
First Gen/Continuing	.017	.076	.22	.826
Tablet				
Intercept	1.56	.081	19.24	0.000
First Gen/Continuing	.117	.148	.79	.432
Phone				
Intercept	2.08	.082	25.31	0.000
First Gen/Continuing	.605	.151	4.01	<0.001*
Other				
Intercept	1.05	.037	28.46	0.000
First Gen/Continuing	.132	.068	1.95	.053

*= $p < 0.05$

Awareness of OER

Texas A&M University has a course marking system, or a way to tag courses using an OER in the class schedule. Because of this system, it was possible that students could learn their course had an OER textbook as early as during class registration. To determine whether students indeed learned that their course was using an OER at the point of registration, the survey asked students who identified their class as having an OER at what point they learned that their class textbook would be an OER.

Although this information was available through the registration system, survey results revealed that only a handful of students, 2.9 percent (four), learned that their class had an OER during the registration process (Figure 1). Instead, most students learned that they had an OER around the time that courses began, either on the first day of class, at 59.9 percent (82), or when they first saw the course syllabus, at 35.85 percent (49).



Students were asked which textbook formats they preferred: print, electronic, or a combination of the two. A combination of print and electronic formats was preferred by 37 percent of respondents (76). Electronic only, at 29 percent (60), and print only, at 26 percent (53), were nearly even in popularity. Eight percent (16) of students expressed no preferred textbook format.

TABLE 7
Preferred Textbook Format

Preferred Format	Number of Respondents
Print textbooks	53
Electronic textbooks	60
Print with an electronic copy	76
No preference	16

The researchers included an optional free-text question asking the reasons for respondent textbook format preferences. The researchers then coded these questions to uncover patterns in participant responses which are detailed in Table 8 below. Individual responses could include multiple codes.

Code	Electronic Only Number of Responses	Electronic Only % of Respondents (58)	Print Only Number of Responses	Print Only % of Respondents (44)	Print with Electronic Copy Number of Responses	Print with Electronic Copy % of Respondents (66)
Academic performance	1	2%	12	27%	6	9%
Ease of access	32	55%	7	16%	17	26%
Highlighting/notes	1	2%	9	20%	13	20%
Multiple access options	0	0%	0	0%	23	35%
Physical access	0	0%	9	20%	9	14%
Portability	26	45%	2	5%	21	32%
Searchability	11	19%	1	2%	2	3%
Environment	2	3%	0	0%	0	0%
Cost	4	7%	0	0%	0	0%
Readability	3	5%	16	36%	0	0%
Efficiency	0	0%	0	0%	2	3%

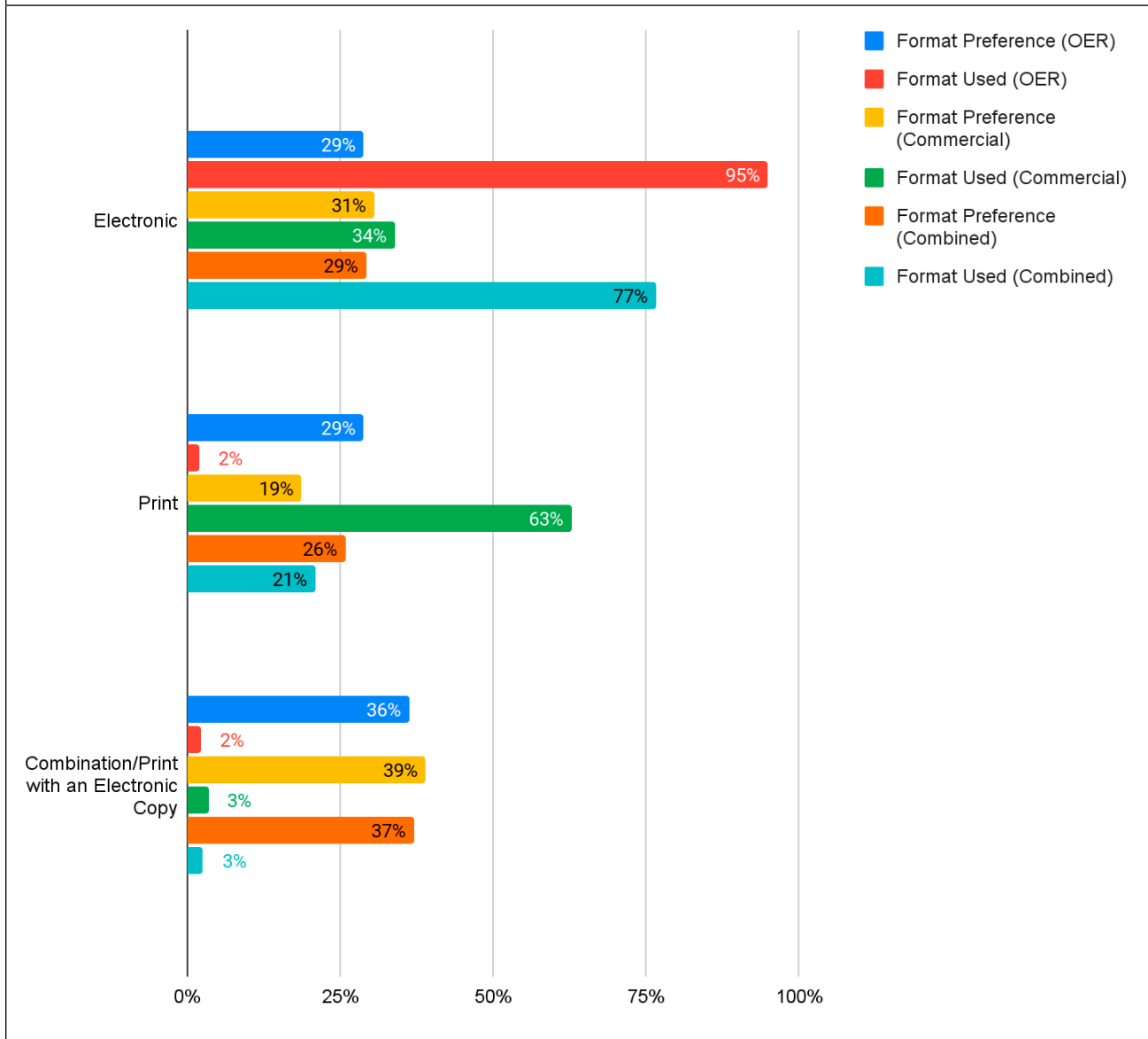
Students were also asked which format they actually used for their textbook for the course: print, electronic, or some combination of the two (i.e., printed pages of an electronic book). Results indicated that there was a gap between what students expressed that they wanted in terms of format and what they actually used. Although print with an electronic copy was the most common preference, the most common format used—77 percent—was electronic only (150). At 21 percent (41), print only was the second most popular option. Only 3 percent (five) of students actually used a combination of print and electronic copies.

In addition, students displayed different usage patterns based upon whether they were using an OER or a commercial textbook (Figure 2). A majority—63 percent—of students using a commercial textbook (37) used a print textbook, while 95 percent (130) of students using an OER used an electronic copy only. Only 2 percent (four) students who had an OER textbook reported using the textbook both electronically and in print, although they had the option to print it out.

Discussion

Study results indicated that first-generation students demonstrated significant differences from continuing-generation students in two key areas: 1. financial concerns and 2. aspects of textbooks they consider important. In addition, overall findings suggest that students need

FIGURE 2
Students in Commercial and OER Sections and their Textbook Format Preferences and Formats Used



more information about the availability of OER textbook options and how to access OER textbooks in their preferred textbook format.

Financial Concerns

This study reinforces research that indicates a substantial number of university students experience textbook-related financial barriers¹⁸ and food insecurity.¹⁹ A majority, fifty-seven percent (117) of respondents indicated that they had experienced concern about the cost of textbooks somewhat often or very often. Similarly, the cost of a college education weighs heavily on students' minds. Sixty-two percent (128) reported feeling concern about the cost of college somewhat often or very often. Almost half, 44 percent (91), reported needing to work to pay for their college education somewhat often or very often. A smaller, though still dismaying,

percentage of respondents, 26 percent (54), reported concern about access to meals since the beginning of the semester.

Furthermore, cost barriers are experienced more frequently by some student populations, and OER adoption can benefit those students more than others. For instance, research indicates that OER adoption can disproportionately benefit underserved student populations, such as Pell-eligible students.²⁰ This study revealed that students who identified as first-generation students were significantly more likely to indicate that they experienced concern about financial barriers than their continuing-generation peers. As Texas A&M strives to make higher education more equitable for underserved populations, OER should be recognized as one strategy that can help reduce cost barriers.

Important Aspects of Textbooks

This study also revealed what students found important about their textbooks. Seventy-seven percent of students (157) considered it either very important or extremely important that their textbook be comprehensive, meaning that everything was gathered in one place. The researchers interpret this finding to mean that students find ease of access an important factor; students may dislike having to look through multiple resources to find the information they need. This finding was particularly noteworthy because the commercial textbooks previously used in the class were a three-textbook package, which meant that students had to keep track of which book to bring on any given day. Additionally, this suggests that when OER authors and adaptors are compiling readings it will benefit students to gather those materials into one collection or textbook. Rather than accessing multiple links through different portals, students perceive a benefit to joining all of those materials together.

The other aspect of textbooks that students found very important, at 31 percent (64) or extremely important, at 38 percent (78) was cost. Cost was particularly important for first-generation students. Fifty-nine percent (36) of first-generation students considered cost to be an extremely important factor, compared to twenty-nine percent (42) of continuing-generation students. Strikingly, not a single first-generation student considered cost to be unimportant.

This finding reinforces that, while not all students are sensitive to textbook costs, many first-generation students are likely to consider price to be a critical factor in choosing a textbook. Faculty should consider that first-generation students in their classes may have an expectation that faculty will be price-sensitive when assigning materials. Likewise, universities may wish to place additional emphasis on textbook affordability initiatives when developing first-generation student success programs.

Awareness of OER

First-generation students, along with other financially disadvantaged students, may be particularly likely to benefit from a change to OER course materials. But in order for that benefit to be realized, students must be empowered to act as informed consumers, using information about prospective textbook costs to guide their course registration choices. The results from this study indicate that students are not able to effectively use information about textbook costs even when an OER course marking system is in place during registration.

Although the OER sections of ENGL 104 were tagged in the University's course marking system, a mere 2.9 percent of students (four) reported being aware that their course was an OER course when they registered. By contrast, 96 percent (131 students) reported learning

that the textbook was available at no cost when classes were already starting (i.e., on the first day or when they received their syllabus). This delay in learning about textbook costs means that students who could most benefit from a no-cost textbook were unable to strategically select an OER section. Receiving the financial relief of an OER textbook was effectively luck of the draw. This finding indicates that course marking alone is not sufficient to ensure that students can act as informed consumers. Instead, instructors and librarians should work to improve awareness of OER in course sections, working with administrators, academic advisors, and other campus stakeholders to ensure that messaging about OER courses is being communicated effectively to students. Additionally, for universities where students are registered into courses by academic advisors, additional outreach to that advising group may be necessary for increased awareness and impact.

Textbook Preferences

Another important finding is that the primary method by which students accessed their OER textbook, electronic only access, does not align with the access method students stated they preferred. Respondents indicated that they wanted textbooks that they could highlight and make notes in; they wanted a textbook that they could hold in their hands and that didn't strain their eyes. At the same time, respondents wanted textbooks that they could access from anywhere and that had searchable text. Finally, respondents strongly indicated a desire for a textbook that is not unwieldy and heavy to lug across campus. Print with an electronic copy, the format most popular with students, meets all of these criteria.

OER textbooks are ideally suited for the print with an electronic copy format. Although OER textbooks are most cost-effective in an online-only format, their licensing is typically far more permissible than commercial electronic textbook or ebook format, which may prohibit printing or restrict the number of pages that can be printed. While few students took advantage of the option, the ENGL 104 OER textbook is licensed such that students could print pages, sections, or the entire textbook.

In order to emphasize the flexibility of the OER textbook, librarians and course instructors may choose to discuss printing options when introducing the textbook. Promoting a print option may reduce resistance to an OER by students who learn better from, or simply prefer, a print textbook. Course instructors and librarians can work together to make it easier for students to identify and access available printing options, both on campus and online, to meet the needs of students who prefer print.

Additionally, study results support the common-sense notion that students who prefer print options do so for a variety of reasons. Many respondents indicated that they learn better from a print version, or that they benefit from being able to highlight and annotate as they read their textbooks. Having a print option available may be necessary to meet accessibility requirements. In addition to facilitating print options, faculty and librarians working to adopt, adapt, or create OER should take into account student interests in these types of learning tools. OER creators can support these needs by building in highlighting and annotating tools, or even by providing an editable version that students can highlight and annotate in word processing software. For students who want or need a printed textbook, OER creators can ensure that they include print-friendly downloadable files at OER electronic access points.

Limitations

This study has several limitations. This survey was distributed to students enrolled in one course for a single semester; the researchers initially intended to collect a larger data set by surveying students over the course of two semesters, but data collection for the Spring 2020 semester was canceled due to the COVID-19 pandemic. Furthermore, data was collected at a single institution using a convenience sample, and its results cannot be generalized to other institutions. Finally, this study is based on perception data, which may not correlate with student behavior.

Conclusion

As libraries commit to supporting OER adoptions and creation, it is important to continually assess student perceptions of OER. The college student experience is in flux as schools employ new technologies and the college cost models are continually reviewed and modified. Furthermore, the ramifications of COVID-19 and the momentum towards open publishing in general will continue to affect students for years to come. Considering this continual upheaval, libraries promoting OER, whether by supporting faculty through guidance and funding or by taking a more active role in the creation process, should regularly survey students and faculty to see what will be most beneficial for future iterations.

When considering the potential impact of OER on students, librarians and faculty should consider the specific impact on underserved populations such as first-generation students. Even on a relatively affluent campus, there are many students for whom the cost of textbooks is a significant burden. Switching to an OER textbook can be a key strategy toward ensuring equitable access to course materials for students who are financially disadvantaged. But making OER available is only the first step. Ensuring that underserved students know about OER courses and can enroll in these OER classes is key to maximizing the potential of OER. Furthermore, ensuring that students can access OER textbooks in a format that suits their learning needs will help ensure that students receive a more equitable experience.

Notes

1. "2019 Florida Student Textbook & Course Materials Survey," *Florida Virtual Campus* (2019), available online at <https://dlss.flvc.org/documents/210036/1314923/2018+Student+Textbook+and+Course+Materials+Survey+Report+--+FINAL+VERSION+--+20190308.pdf/07478d85-89c2-3742-209a-9cc5df8cd7ea>.

2. "Forum on the Impact of Open Courseware for Higher Education in Developing Countries: Final report," UNESCO (2002), available online at <https://unesdoc.unesco.org/ark:/48223/pf0000128515> [accessed 13 November 2020].

3. "Open Education," SPARC (2020), available online at <https://sparcopen.org/open-education/> [accessed online 13 November 2020].

4. Raj Chetty et al., "Mobility Report Cards: The Role of Colleges in Intergenerational Mobility," The Equality of Opportunity Project, hosted by the New York Times, accessed November 4, 2022, <https://www.nytimes.com/interactive/projects/college-mobility/city-college-of-new-york>.

5. "Student Demographics," *Texas A&M University Accountability* (2022). <https://accountability.tamu.edu/all-metrics/mixed-metrics/student-demographics>.

6. "Student Demographics," *Texas A&M University Accountability*.

7. Lane Fischer, John Hilton III, T. Jared Robinson, and David A. Wiley, "A Multi-institutional Study of the Impact of Open Textbook Adoption on the Learning Outcomes of Post-secondary Students," *Journal of Computing in Higher Education* 27, no. 3 (2015): 159-172. <https://doi.org/10.1007/s12528-015-9101-x>; John Hilton III, "Open Educational Resources and College Textbook Choices: A Review of Research on Efficacy and Perceptions," *Educational Technology Research and Development* 64, no. 4 (2016): 573-590. <https://doi.org/10.1007/s11423-016-9434-9>; Penny Beile, Aimee deNoyelles, and John Raible, "Analysis of an Open Textbook Adoption in an American

History Course: Impact on Student Academic Outcomes and Behaviors," *College & Research Libraries* 81, no. 4 (2020): 721-736. <https://doi.org/10.5860/crl.81.4.721>.

8. T.J. Bliss et al., "An OER COUP: College Teacher and Student Perceptions of Open Educational Resources," *Journal of Interactive Media in Education* (2013). <http://doi.org/10.5334/2013-04>; Tarah K. Ikaiahifo et al., "Assessing the Savings from Open Educational Resources on Student Academic Goals," *International Review of Research in Open and Distributed Learning* 18, no. 7 (2017): 126-140. <https://doi.org/10.19173/irrodl.v18i7.2754>; Brian L. Lindshield and Koushik Adhikari, "Online and Campus College Students Like Using an Open Educational Resource instead of a Traditional Textbook," *Journal of Online Learning and Teaching* 9, no. 1 (2013): 26-38. https://jolt.merlot.org/vol9no1/lindshield_0313.htm.

9. John Levi Hilton III et al., "The Adoption of Open Educational Resources by One Community College Math Department," *International Review of Research in Open and Distributed Learning* 14, no. 4 (2013): 37-50. <https://doi.org/10.19173/irrodl.v14i4.1523>.

10. Shanna Smith Jaggars, Amanda L. Folk, and David Mullins, "Understanding Students' Satisfaction with OERs as Course Materials," *Performance Measurement and Metrics* 19, no. 1 (2018): 66-74. <https://doi.org/10.1108/PMM-12-2017-0059>.

11. Shawna Brandle et al., "But What Do the Students Think: Results of the CUNY Cross-Campus Zero-Textbook Cost Student Survey," *Open Praxis* 11, no. 1 (2019): 85-101. <http://dx.doi.org/10.5944/openpraxis.11.1.932>

12. Ozgur Ozdemir and Christina Hendricks, "Instructor and Student Experiences with Open Textbooks, from the California Open Online Library for Education (Cool4Ed)," *Journal of Computing in Higher Education* 29, no. 1 (2017): 98-113. <https://doi.org/10.1007/s12528-017-9138-0>.

13. Lucinda Rush Wittkower and Leo S. Lo, "Undergraduate Student Perspectives on Textbook Costs and Implications for Academic Success," *Open Praxis* 12, no. 1 (2020): 115-130. <http://dx.doi.org/10.5944/openpraxis.12.1.1036>

14. Rajiv Sunil Jhangiani and Surita Jhangian, "Investigating the Perceptions, Use, and Impact of Open Textbooks: A Survey of Post-secondary Students in British Columbia," *The International Review of Research in Open and Distributed Learning* 18, no. 4 (2017): 172-192. <https://doi.org/10.19173/irrodl.v18i4.3012>.

15. Nicholas B. Colvard, C. Edward Watson, and Hyojin Park, "The Impact of Open Educational Resources on Various Student Success Metrics," *International Journal of Teaching and Learning in Higher Education* 30, no. 2 (2018): 262-276. <https://www.isetl.org/ijtlhe/pdf/IJTLHE3386.pdf>.

16. J. Jacob Jenkins et al., "Textbook Broke: Textbook Affordability as a Social Justice Issue," *Journal of Interactive Media in Education*, 2020, no. 1 (2020): 1-13. <https://doi.org/10.5334/jime.549>; Sarah Appendix et al., "Inequitable Impacts of Textbook Costs at a Small, Private College: Results from a Textbook Survey at Gettysburg College," *Open Praxis* 13, no. 1 (2021): 69-87. <http://doi.org/10.5944/openpraxis.13.1.1147>.

17. Amy T. Nusbaum, "Who Gets to Wield Academic Mjolnir?: On Worthiness, Knowledge Curation, and Using the Power of the People to Diversify OER," *Journal of Interactive Media in Education*, 2020, no. 1 (2020): 1-9. <https://doi.org/10.5334/jime.559>.

18. Joseph A. Salem, "Open Pathways to Student Success: Academic Library Partnerships for Open Educational Resource and Affordable Course Content Creation and Adoption," *The Journal of Academic Librarianship*, 43, no. 1 (2017), 34-38. <https://doi.org/10.1016/j.acalib.2016.10.003>.

19. Devon C. Payne-Sturges et al., "Student Hunger on Campus: Food Insecurity Among College Students and Implications for Academic Institutions," *American Journal of Health Promotion*, 32, no. 2(2018), 349-354. <https://doi.org/10.1177/0890117117719620>; (2020). "2020 Undergraduate Former Student Survey Food Insecurity," *Texas A&M University Student Life Studies* (2020). <https://studentlifestudies.tamu.edu/index.php?gfdownload=2021%2F04%2F2020-UG-Former-Student-Survey-Food-Insecurity.pdf&form-id=1&field-id=4&hash=afb9c7a9c750a8bb8fc7d2800b7c8a35896df25177437f5df34ee489a7eee7e8&gv-iframe=true>.

20. Colvard, Watson, and Park, "The Impact of Open Educational Resources on Various Student Success Metrics."