

# **2022 Oregon State University Student Textbooks and Course Materials Survey: Results and Findings**

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## Introduction

Textbook costs are and continue to be a concern for college students. Research indicates that students still struggle with the financial burden of textbooks. In 2016 and again in 2018, the Florida Virtual Campus conducted a survey called the “Student Textbook and Course Materials Survey” (Florida survey) to help them determine what the impact of the cost of textbooks is on students and how students are coping (Florida Virtual Campus, 2018). This report has received wide-spread attention, in particular, because it was such a large research study. One of the main findings of the report was that 66.6% of students do not purchase their textbooks because of the cost. Similarly, the second edition of the U.S. PIRG (2021) survey “Fixing the broken textbook market” reported that 65% of students do not purchase their textbooks or course materials because of cost (Senak, 2021). These two figures have are cited frequently in higher education and are taken as an indication that textbook costs are still too high, despite there being a noticeable decline in the amount students are spending at the bookstore (National Association of College Stores, 2020).

In order to set a baseline for Oregon State University (OSU) and determine how OSU compares to these nationally known figures, the Open Educational Resources Unit (OERU) which is housed in Ecampus but serves the entire university, was given permission to run a modified version of the Florida survey at OSU. This survey ran from March 1-22, 2022 to coincide with Open Education Week (March 7-11). The survey was conducted to help the OERU and institutional leadership gain a clearer picture of what is happening at OSU, how much students are actually spending on their textbooks and other course materials, how many students are not purchasing textbooks and what strategies students are using to deal with expensive textbooks. Although it is not possible to draw a clear comparison between the Florida survey study results and those of OSU, since the Florida survey involved 40 institutions and had a response rate of 21,000, we can use the results to determine a baseline for Oregon State University and to hopefully rerun the survey every few years to see what the trends are. In particular, we wanted to see how the cost of textbooks may be impacting students from traditionally underrepresented groups, Pell-grant eligible student and first generation students. Students from under-represented groups and Pell-eligible are more likely to be successful with free learning materials (Colvard, Watson & Clark, 2018). They are also more likely to be impacted by the cost of textbooks There have been a few studies (Jenkins et al., 2020; Lebens, 2021) that have looked at the impact of high textbooks costs specifically on these population but there is still more research that needs to be done to determine what impact the cost of course materials has on these populations.

## Methodology

The survey questions were taken from the Florida Virtual Campus survey 2018 (with permission) and modified. The most significant modification was the addition of demographic data including ethnic group, part-time or full time status, Pell-grant eligibility and 1<sup>st</sup> generation. The survey was approved by the Institutional Review Board on April 8, 2021 (IRB2020-0848). The survey was advertised to students via the Associated Students of OSU (Memorial Union electronic billboard and social media channels), on OSU’s Ecampus social media, via OSU Today (an online campus-based newsletter), and sent directly to a random

sample of 7,000 OSU undergraduate students. The survey contained 11 questions, including some open ended questions, and 7 demographic questions. The survey took approximately 15 minutes to complete.

The purpose of the survey was to determine the following:

1. Amount of money OSU students spent on textbooks and course materials during the winter 2022 term.
2. The frequency with which students purchase textbooks that are not used.
3. How students are affected by the cost of textbooks.
4. In what format students prefer their textbooks (print or online)?
5. How OSU compares to the national data (when appropriate).

### Participant Demographics

The survey resulted in 474 useable responses, which is a 6.8% return rate. Given this low number, the results cannot be used to draw universal conclusions but should provide a clearer picture of the situation at OSU.

- 25.3% self-identified as students of color (BIPOC) and 6.2% chose not to respond or did not report their ethnicity. Respondents could choose from multiple ethnicities. The great majority of the respondents identified as White/Caucasian (68.5%).
- 38.1% of respondents identified as first generation.
- 48.7% of respondents reported working at least 20 hours/week. 21.5% work 40+ hours per week.
- 31.8% of respondents identified as Pell-grant eligible. 29.3% did not know if they were Pell-eligible.
- 68% of the respondents were full time. The rest were part-time or other.

Table 1. Race/Ethnicity (Please choose all the ethnicities with which you identify) (Q11.1)

Answer	%	Count	% OSU <sup>1</sup>
American Indian Or Alaskan Native	0.6%	3	0.5%
Asian	5.7%	27	7.5%
Black	2.3%	11	1.7%
Hispanic Or Latino	5.9%	28	11.0%
Multi-Racial/Ethnic	10.8%	51	6.4%
Not Reported	6.2%	29	
Hawaiian/Pacific Islander	0.00%	0	0.2%
White/Caucasian	68.5%	325	72.2%

### College Affiliation

Respondents represented almost all the colleges except the College of Pharmacy and College of Veterinary Medicine which are both graduate level programs and therefore excluded from this survey (See Table 2). Most students came from the College of Agricultural Sciences, the College of Liberal Arts or the College of Engineering. There were no responses from the College of Education but this is primarily a post-BA degree.

<sup>1</sup> Oregon State University student population

Table 2. Respondents by college affiliation (Q11.2)

<b>Answer</b>	<b>%</b>	<b>Count</b>
College of Agricultural Science	22.34%	103
College of Liberal Arts	21.04%	97
College of Engineering	18.00%	83
College of Science	12.80%	59
College of Forestry	6.94%	32
College of Business	6.51%	30
College of Earth, Ocean & Atmospheric Sciences	6.07%	28
College of Public Health & Human Sciences	5.64%	26
Total	100%	458

## Research Questions

1. How much are student spending on textbooks compared to the Florida Survey and the national average as reported by the National Association of College Bookstores?
2. Are students who are 1<sup>st</sup> generation, Pell eligible, or underrepresented students more or less affected by the cost of textbooks than students who are not 1<sup>st</sup> generation, Pell-eligible or from an underrepresented group?
3. Are there any differences in how much students spend based on their primary college?
4. How many times do students purchase textbooks that are not used?

## Key Finding 1

*Students are spending more on textbooks than the national average but below the OSU recommended \$600 annually for books and supplies.*

How much students are actually spending on textbooks is difficult to ascertain since students have many options, including purchasing, renting, sharing and occasionally pirating copies of textbooks. The minimum and maximum range was \$0-\$800. As shown in Table 3, OSU students reported spending a median of \$152 for textbooks, \$100 for course fees and \$100 for access codes in the past term. They spend an average of \$188 per term on textbooks alone; \$207 on course fees; and an average of \$122 for access codes. National Association of College Stores (NACS) reports that students spend an average of \$413/year on textbooks (NACS, 2021). This puts Oregon State at slightly above the national average with \$564 per year on textbooks alone<sup>2</sup>. OSU's cost of attendance website recommends students budget \$600 for three terms or \$200 for 1 term (Oregon State University, "Cost of Attendance). Course fees and access codes represent another large expenditure for students, costing a median of another \$100 per term. Not all courses have required textbooks, access codes or course fees.

Participants also reported needing to purchase additional materials, such as lab materials or lab kits (n=11), software/hardware, or other required course materials. They indicated that they spend a median of \$100 per term on these other types of course materials.

*Table 3. During the past quarter, approximately how much did you spend on the following instructional materials in total? (Q 6.3)*

Field	Mean	Median	Std Deviation	Count
Textbooks	188.3	152	138.07	448
Course fees	207.4	100	242.11	354
Access codes	122.6	100	104.22	345
Other	191.3	100	254.31	80

*Table 4. Average textbook expenditures per term (n=431) as compared to the Florida Survey 2018*

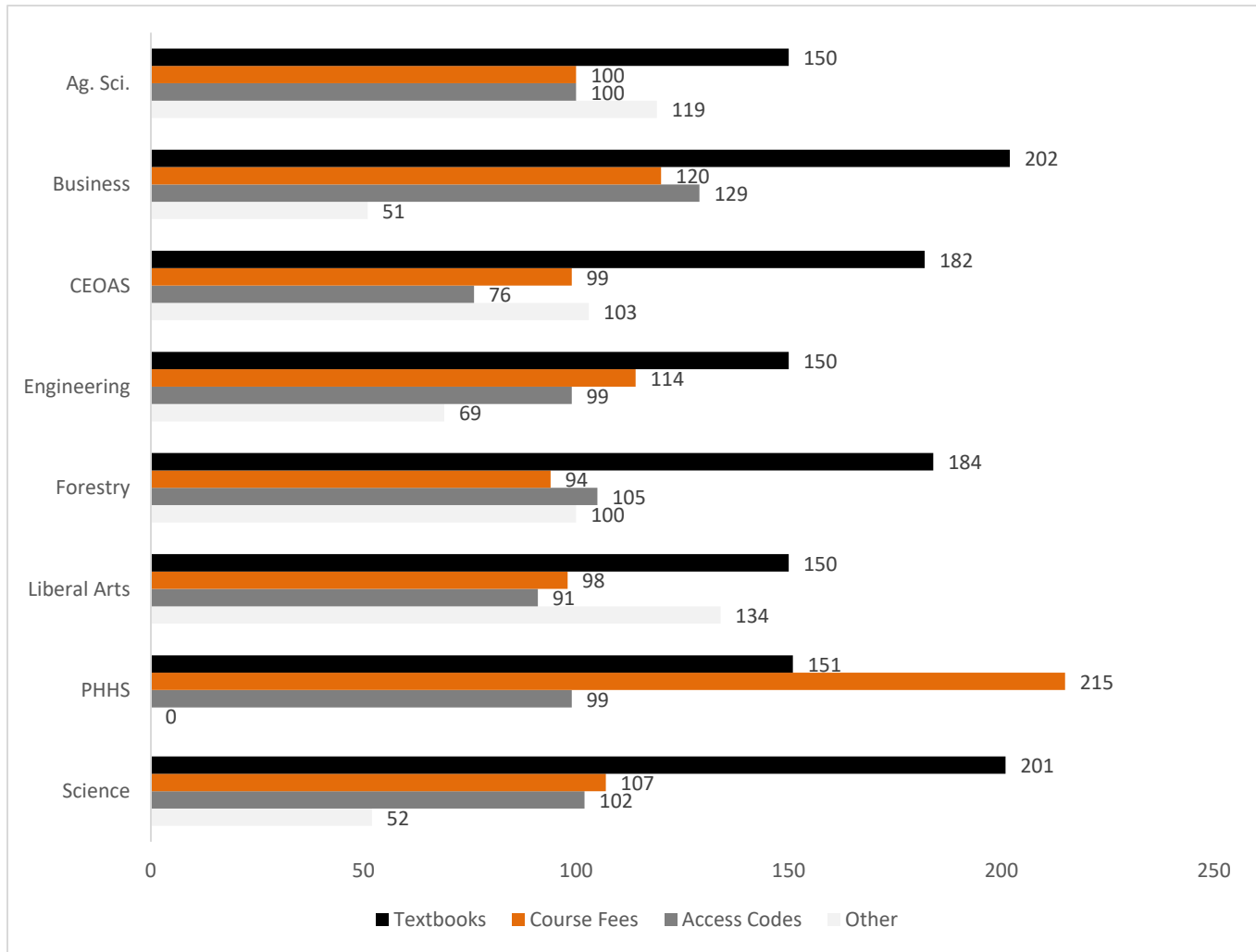
Average	Oregon State (Winter 2022)		Florida Survey (Spring 2018)	
	%	Count	%	Count
\$000-100	31.7	137	12.9	2774
\$101-200	27.3	118	20.2	4337
\$201-300	24.8	107	22.9	4903
\$301-400	9.5	41	18.3	3925
\$401-500	3.7	16	11.7	2518
\$501-600	1.1	5	7.1	1532
\$601 or more	1.6	7	6.7	1441

Respondents reported spending the most on textbooks in the College of Business and the College of Science and the least in the College of Liberal Arts, College of Engineering and College of Agricultural

<sup>2</sup> \$188 x 3 (terms) = \$564

Sciences. The difference between the colleges with the highest cost and the lowest cost for textbooks is about \$50. That is the equivalent of one low-cost textbook (\$40).

Figure 1. Median textbook, course fees, access codes and other by college





## Key Finding 2

OSU students are using a variety of means to reduce their textbook costs.

*Half the time I do not purchase the textbook to avoid cost.*

*-Student*

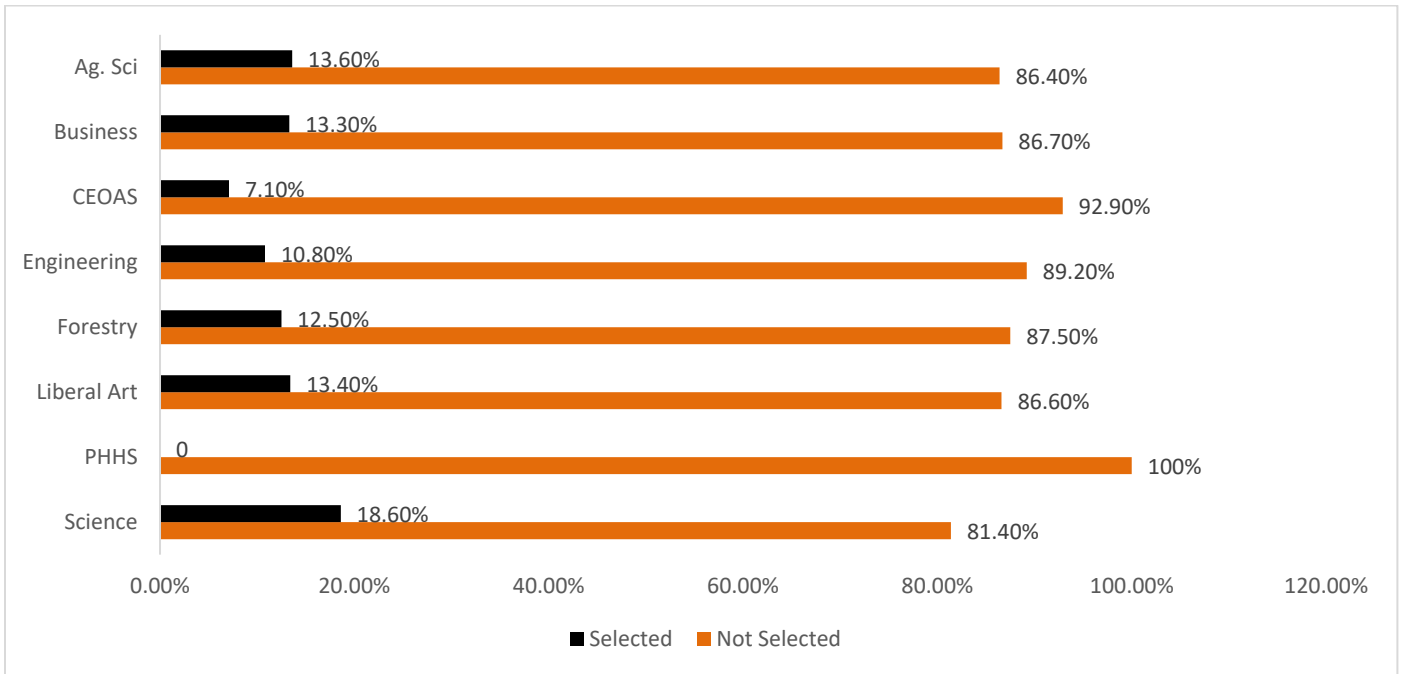
Despite the national decline in textbook spending, students at OSU are still looking for ways to mitigate the cost of textbooks. Most commonly, they purchased their textbooks used, either from the local campus bookstore (12.33%) or another source (21.4%). Renting digital textbooks was also an option favored by some respondents (18.4%). In their comments, students mentioned waiting to purchase the textbook until they knew they needed it or finding (illegal) copies online and downloading these instead. Only 6.5% of the respondents reported that they did not attempt to reduce the cost of their textbooks. A number of students responded that they simply do not purchase the textbook. One student commented, “Don’t buy the textbook and just take the grade hit.” Another noted that, “I just didn’t buy them and hope for the best.” While this is a minority of the respondents, it does indicate that there are OSU students foregoing the purchase of a textbook because of cost and it is impacting their grades.

Table 5. Which of the following strategies did you use last term to reduce textbook costs? (Check all that apply) (Q6.5)

Answer	%	Count	Florida Survey
Buy used copies from the campus bookstore	12.3%	116	53.0%
Buy books from another source other than the campus bookstore	21.4%	201	66.0%
Rent digital textbooks	18.4%	173	41.4%
Buy lifetime access to a digital version of a textbook	6.4%	60	5.6%
Rent only the digital textbook chapters needed for the course	6.0%	56	7.7%
Rent printed textbooks	7.0%	67	47.8%
Use reserve copy from the campus library (print or ebook)	8.1%	76	11.7%
Share books with classmates	6.4%	60	27.1%
I did not attempt to reduce textbook costs	6.5%	61	4.4%
Other	7.6%	71	10.0%

Students were least likely to attempt to reduce the cost of their textbooks in the College of Science followed by the College of Agricultural Sciences and the College of Liberal Arts. Anywhere from 7% to 18% of the respondents reported using one or more strategies to reduce textbook costs (See Figure 2).

Figure 2. I did not attempt to reduce textbook costs by college



## Key Finding 3

*Students are still lacking the daily essentials and may have to choose between food and rent and textbooks.*

Close to 19% of the students indicated that they would spend the money normally reserved for textbooks and access codes on food (groceries). They also reported rent (17%) and paying outstanding bills (17%) as their priorities if textbooks were free. Some respondents would use the money for tuition or medical care or even saving the money for the future. Very few students chose clothing or entertainment or communications.

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*Literally all of these. Pell Grant is great but gets put straight to account so I cannot use any on textbooks.*

*-Student*

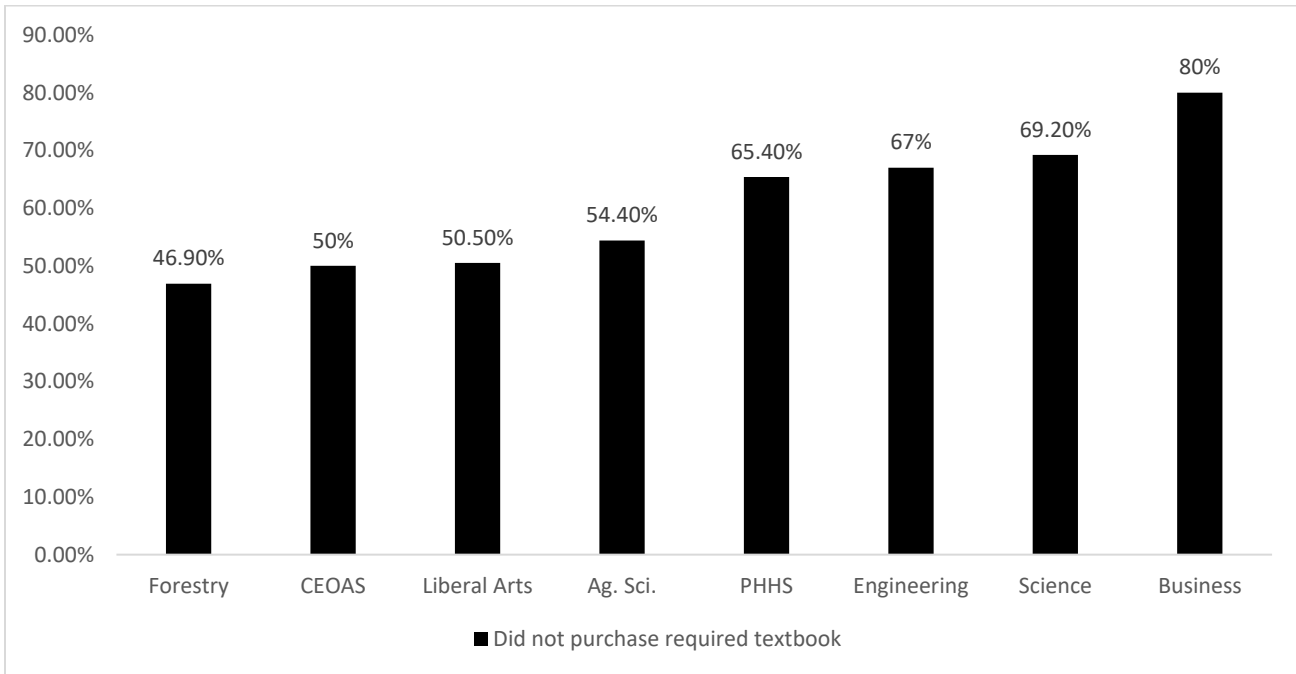
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Table 6. If you could spend the money you used for textbooks or access codes on something else, what would it be? (Check all that apply) (Q6.8)

Answer	%	Count
Food	18.8%	336
Pay outstanding bills	17.4%	310
Rent	16.9%	301
Transportation	11.5%	205
Take more classes	9.4%	167
Communications (phone, internet)	6.7%	119
Technology	6.5%	116
Clothing	5.9%	106
Entertainment	4.4%	79
Other	2.6%	47

Within each college, nearly half or more of the students report **not** purchasing their textbooks because of the cost. This was most notably seen in the College of Business but other colleges (Science, Engineering, PHHS and Agricultural Sciences) saw more than 50% of the respondents not purchasing textbooks because of cost (See Figure 3).

Figure 3. Frequently or sometimes did not purchase textbook because of cost by college



## Key Finding 4

*Students are being asked to purchase textbooks which they do not end up using.*

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*All the required textbooks for courses were not actually needed. ... I have only ever actually needed to use a required textbook for 2 classes the whole time I've been at OSU.*

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*-Student*

Respondents reported that they are purchasing textbooks that they consider not useful or required to pass the course. Although 52% of the students responded that 0 classes required no purchase of textbooks or instructional materials, a little less than ½ of the respondents (47.8%) indicated that the textbook they were required to purchase was not actually used in one or more courses. As one respondent pointed out, “[I] didn’t buy textbook until I was told it was needed- many of the textbooks I was told would be required and weren’t even used.” Throughout the survey, student expressed frustration at being asked to purchase course learning materials that are not, according to the students, used in the course. This perception, based on past experience, that course texts are not used by the instructor, makes students even less willing to purchase their textbooks. One student commented, “If the textbook is not integral to the course learning, drop it. If the lectures cover book material, drop it. If the learning can be done through articles, do that instead. Arbitrary textbook requirements are archaic and should be changed.”

*Table 7. Of the courses you took last quarter that had a required textbook, how many courses never used the required textbook? (Q6.6)*

Answer	%	Count
0	52.2%	246
1	25.3%	119
2	13.4%	58
3	5.5%	26
4	3.0%	14
5	0.4%	2
More than 5	1.3%	6
Total	100%	471

As shown in Table 8, respondents are not spending their financial aid on textbooks. Thirty three percent of the respondents did not receive financial aid and 34% did not spend any of their financial aid on textbooks. Financial aid, while beneficial, may not be available to a student the first week of classes so acquiring the textbooks using these resources remains difficult. Only 6.4% were able to purchase all of their course materials using their financial aid.

*Table 8. What percent of your financial aid did you spend on textbooks and instructional materials? (Q6.4)*

Answer	%	Count
I do not receive financial aid	32.9%	160
None	33.7%	164
Less than 25%	18.7%	91
26%-50%	5.8%	28
51%-75%	2.1%	10

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76%-99%	0.4%	2
All of my textbook and instructional material costs	6.4%	31
Total	100%	486

## Key Finding 5

*The cost of textbooks still has a negative effect on student learning.*

Sixty-one percent of the students reported sometimes or frequently not purchasing a textbook because of the cost. This is slightly lower than both the Florida survey and the U.S. PIRG surveys which place the number at 64% and 65% respectively. Other less frequently used strategies include taking fewer courses or not registering for a specific course because of the cost of the course materials. These figures are lower than those reported nationally (See Table 7).

Table 9. Which of the following actions do you take or have you taken as a result of textbook costs (Q6.7)

Question	Never		Sometimes		Frequently		Total
	%	Count	%	Count	%	Count	
Take fewer courses	55.5%	253	32.2%	147	12.3%	56	456
Not register for a specific course	62.3%	283	26.9%	122	10.8%	49	454
Drop a course	81.8%	369	14.9%	67	3.3%	15	451
Withdraw from a course	86.1%	389	11.3%	51	2.7%	12	452
Earn a poor grade because I could not afford to purchase the textbook	71.7%	324	24.1%	109	4.2%	19	452
Fail a course because I could not afford to buy the textbook	89.3%	401	8.9%	40	1.8%	8	449
Not purchase the require textbook	38.9%	178	38.4%	176	22.7%	104	458
Other	79.0%	79	5.0%	5	16.0%	16	100

Table 7. OSU responses compared to 2018 Florida survey and U.S. PIRG data (Q6.7)

Question	OSU Responses <sup>3</sup>	Florida Responses	U.S.PIRG
Take fewer courses	44.5%	42.8%	48%
Not register for a specific course	37.7%	40.5%	
Drop a course	18.2%	22.9%	
Withdraw from a course	13.9%	18.1%	
Earn a poor grade because I could not afford to purchase the textbook	28.3%	35.6%	
Fail a course because I could not afford to buy the textbook	10.7%	17.2%	
Not purchase the require textbook	61.1%	64.2%	65%

<sup>3</sup> Sometimes or frequently combined

## Key Finding 6

*Respondents from underrepresented groups were more impacted by the cost of textbook in some areas over white/Caucasian students.*

One of the reasons for undertaking this survey was to see if our underrepresented populations are more strongly affected by the cost of textbook than our Asian and white/Caucasian students.<sup>4</sup> The phenomenon has been reported in the literature (Colvard, Watson & Clark, 2018). In order to compare the groups, the students who selected American Indian/Alaska native, Black, Hispanic, or Latino and Multi-racial/ethnic were collapsed into one group (Underrepresented), since no one group size was large enough to detect a difference.

Question 6.X asks students about the effect of the cost of textbooks on their textbook buying behavior. Students could choose from a select set of responses or choose other and add their own response. A Chi-square analysis of differences in responses across the Underrepresented, Asian and Caucasian groups showed some significant differences shown in Table 8. This table shows how the Underrepresented student group responded to four questions that resulted in significant differences. In addition to counts, this table shows expected counts produced in the statistical analysis.

*Table 8. Due to textbook costs....responses from Underrepresented groups (Q6.X)*

<b>Underrepresented Student Responses</b>		<b>Never</b>	<b>Sometimes</b>	<b>Frequently</b>	<b>Total</b>
6.7.1 Took fewer courses	Count	34	<b>35*</b>	<b>15*</b>	84
	<i>Expected</i>	<i>47.2</i>	<i>26.4</i>	<i>10.4</i>	84
6.7.3 Dropped a course	Count	66	10	<b>8*</b>	84
	<i>Expected</i>	<i>69.9</i>	<i>11.3</i>	<i>2.8</i>	84
6.7.4 Withdrew from a course	Count	65	<b>14*</b>	<b>6*</b>	85
	<i>Expected</i>	<i>74.0</i>	<i>9.0</i>	<i>2.0</i>	85
6.7.6 Failed a course	Count	72	<b>10*</b>	1	83
	<i>Expected</i>	<i>75.0</i>	<i>6.5</i>	<i>1.6</i>	83

\*Chi-square analyses significant at the  $p < .05$  level

Across the three groups (Asian, Underrepresented and White/Caucasian), the results indicated that the Underrepresented students were more likely to choose “frequently” when selecting “took fewer courses” and “dropped a course.” They were also more likely to choose “frequently or sometimes” when selecting “withdrew from a course and “sometimes” when selecting “failed a course because I could not afford to buy the textbook.” There was no detectable difference between Underrepresented students and the other groups when selecting “did not register for a specific course,” “earned a poor grade,” “did not purchase required textbook,” and other actions taken. The results suggest that students in Underrepresented groups may be more likely to

- Take fewer classes
- Drop a course

<sup>4</sup> The OSU Registrar leaves Asian students as their own group rather than adding them to the Multi-racial/ethnic group.



- Withdraw from a course
- Fail a course

because they cannot purchase the required course textbooks. While this number is small, it needs to be considered within the larger framework of equity and inclusion. Decisions about taking, dropping and/or withdrawing from a course have consequences on the students' financial aid, time to graduation and future economic success. Thirty-eight percent of all college dropouts say they leave college because of financial pressure (Hanson, 2021).

## Key Finding 7

*Students are becoming more accepting of digital or online textbooks.*

However, they still display a slight preference for print over digital format. Some respondent indicated that it depends on the course whether they would want print or digital. This is in line with the findings of the Florida Virtual Campus survey which found that in 2018, “the majority of participating students (59%) were willing to rent either print or digital textbooks compared to 51% in 2016 Survey” (Florida Virtual Campus, 2018).

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*Digital but only if it gives unlimited access...*

*-Student*

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*Table 12. What format do you prefer for your textbooks? (Q6.9)*

<b>Answer</b>	<b>%</b>	<b>Count</b>
Either is fine	44.1%	207
Print	32.8%	154
Digital	21.8%	102
Other	1.3%	6
Total	100%	469

Students also reported renting digital textbook or chapters from digital textbooks as a way to reduce textbook costs. Digital textbooks have the advantage of being available on the first day of class but students complained in the comments about having technical difficulties with digital textbooks. In addition, with a few exceptions, students lose access to their textbook at the end of the term and, since they are generally renting these, they cannot sell them back and recoup some losses. They will also have to repurchase the digital textbook should they choose to retake the class for a better grade. Digital textbooks, like access codes, are not transferable so students cannot share a textbook as they sometimes do. The library cannot acquire many of these textbooks for course reserves because of publisher limitations. Digital textbooks may allow only limited printing or downloading. However, since they tend to be priced lower than print textbooks, students are willing to use them.

Research indicates that students still have a preference for print materials and there is ongoing research about which format is best for student learning (Millar & Shrier, 2015). Open Educational Resources, which are freely available, can be viewed online or downloaded and printed, can be shared and are available to the students in perpetuity.

## Conclusion and Recommendations

The high cost of textbooks continues to be a burden to OSU students despite many efforts by our faculty to reduce these costs. Currently, (AY2021-2022) 23.4% of our courses are listed a no or low cost in the course catalog, which is up from 19.6% in AY2020-2021. Clearly there is work being done to help alleviate this burden. This includes faculty switching to open educational resources or using library materials or free-online materials in their courses. However, many of our students are still without the basic needs and choosing between textbooks and paying their rent or eating (key finding 3). Students are reporting that they don't purchase textbooks because of the cost (key finding 5) and are frustrated that when they do purchase the textbooks which the students feel they are not always well integrated into the course (key finding 4). Students appear to be more accepting of digital textbooks (key finding 7) but there are significant drawbacks to some digital texts, such as the inability to print or download the text for off-line reading. It appears that students in underrepresented groups are more impacted by the cost of textbooks in some ways than our White/Caucasian or Asian students (key finding 6). In terms of textbook spending, the OSU results are less than some other institutions, textbook spending is still not below the national average (key finding 1). Additional efforts are needed to assist students in overcoming these barriers.

While outside the scope of the student survey, results from a faculty survey run at the same time as the student survey indicate there are three major roadblocks to faculty moving from a commercial textbook to a low or no-cost option. First is time. Second is a lack of incentives and third is a lack of clarity about how to integrate OER work into the P&T process.<sup>5</sup> Since it is primarily faculty who are making the decisions about which course materials to use, it is clear that we need to address these concerns in order to, in the end, reduce the financial stress on our students.

1. **Direct payment to faculty authors.** Currently, the funding from the OERU, provided by Ecampus, is a department to department transfer. Some departments may take some of these funds for other purposes, possibly leaving the author with not enough funds for a course buy-out. If faculty could be paid directly, there would be more of an incentive to do this necessary work.
2. **Additional funding** to help faculty buy out course time to revise their course materials. Faculty need time to rework their courses. Switching from a commercial textbook to something low or no-cost requires a redesign of the course and is a considerable lift. Currently there is only the OERU funding to provide incentives to faculty and allow them the time to do the work. Additional funding would result in larger grants that can actually be used to make time for the work.
3. **Clarity in the P&T manual** about how OER can be represented in a successful dossier. The P&T committee should review its guidelines and recommend an amendment that helps clarify under which circumstances OER materials can be represented in the dossier or annual review, whether teaching, scholarship or research. This would incentivize more junior faculty who are working towards tenure.

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<sup>5</sup> OSU Faculty Survey 2022 (unpublished).

Finally, we recommend that this survey be repeated at regular intervals. Support from the institution in this endeavor would help us greatly in getting more and better survey results. For example, faculty could perhaps give an extra credit point to students who complete the survey or the institution could make this survey a priority when conducting institution wide assessments.

## References

- Colvard, N, Watson, C.E. & Park, H. (2018). The impact of open educational resources on various student success metrics. *International Journal of Teaching and Learning in Higher Education*, 30, 262-276. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1184998.pdf>
- Florida Virtual Campus. (2019). *2018 Student Textbook and Course Materials Survey: Results and Findings*. Retrieved from <https://www.dlss.flvc.org>
- Hanson, M. (2021, November 22). "College Dropout Rates" *EducationData.org*. Retrieved from <https://educationdata.org/college-dropout-rates>
- Jenkins, J. J., Sanchez, L.A., Schraedely, M.A.K., Hannas, J., Navick, N. & Young, J. (2020). Textbook broke: Textbook affordability as a social justice issue. *Journal of Interactive Media in Education*, 1, 1-13. <https://doi.org/10.5334/jime.549>.
- Lebens, M. (2021). Impact of textbook costs on student success: An opportunity to increase equity in MIS courses by removing the textbook cost barrier. *AMCIS 2021 TREOs*, 11. [https://aisel.aisnet.org/treos\\_amcis2021/11](https://aisel.aisnet.org/treos_amcis2021/11).
- Millar, M. & Schrier, T.P. (2015). Digital or printed textbooks: Which do students prefer and why? *Journal of Teaching in Travel and Tourism*, 15(2), 166-185.
- National Association of College Stores (NACS). (2020). *Student Watch: Attitudes and Behaviors toward Course Materials Infographic*. [https://irp-cdn.multiscreensite.com/badb3262/files/uploaded/OCR.1310.06.20\\_Student\\_Watch\\_2020\\_Infographic-2.pdf](https://irp-cdn.multiscreensite.com/badb3262/files/uploaded/OCR.1310.06.20_Student_Watch_2020_Infographic-2.pdf)
- Oregon State University. (2022). "Cost of attendance." *Financial Aid*. Retrieved from <https://financialaid.oregonstate.edu/cost-attendance>
- Senak, E. (2021) Fixing the broken textbook market: How students respond to high textbook costs and demand alternatives (3<sup>rd</sup> ed.). *US PIRG*. <https://uspirg.org/reports/usp/fixing-broken-textbook-market-third-edition>.

