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Inequitable Impacts of Textbook Costs at a Small, Private College: Results from a Textbook Survey at Gettysburg College

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Abstract

Recognizing that higher education settings vary considerably, librarians at Gettysburg College sought to better understand textbook spending behaviors and the effects of costs on our students. We adapted the Florida Virtual Campus 2016 Student Textbook and Course Materials Survey to suit the context of our small, private, liberal arts college. Most students spent \$300 in Fall 2019. Financial aid awards did not cover the cost of required books and course materials for most students receiving aid. Negative effects were more pronounced for first-generation students and Pell Grant recipients, who were more likely to not purchase required books, to not register for a course due to cost, and to struggle academically. Some reported negative effects beyond their academic lives, as well. We recommend adoption of Open Educational Resources as an equity-minded practice that addresses this academic success barrier.

Keywords: Textbook survey, OER, undergraduate students, private college

Introduction

Gettysburg College is a private, residential, liberal arts college with 2,600 undergraduate students located in Adams County, Pennsylvania. Over the past decade, the campus library has observed and responded to a perceived increase in financial need from students. The sense that financial hardship is becoming a more acute problem among our students is supported by national data—the 2015–16 National Postsecondary Student Aid Study found that 72% of undergraduates received some form of financial aid (National Center for Education Statistics, n.d.-a). Despite the common assumption that students who attend private liberal arts colleges come from primarily wealthy backgrounds, our own institutional data reveal that 79.3% of Gettysburg College students received financial aid awards in the 2018–19 academic year, constituting a 33% increase in funds awarded from 2014–15 to 2018–19 (Office of Institutional Analysis, 2019; 2020).

To put this in context, the cost of attendance at Gettysburg College increases approximately 3.5% each year, rising from \$60,870 for the 2015–16 academic year to \$69,850 for 2019–20 (Office of Institutional Analysis, 2020). The cost of textbooks has also increased over the last several decades. A 2005 report from the US Government Accountability Office found that the overall price of college textbooks increased 186% between 1986 and 2004, more than twice the rate of general inflation (U. S. Government Accountability Office, 2005). Librarians frequently see the effects of this increase

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first-hand; students often come to our public service desks early in the semester hoping we have copies of their required course materials in the general collection or in course reserves as an alternative to purchasing or renting the texts. Librarians were motivated to begin researching solutions, the most promising of which was Open Educational Resources (OER). On our campus, we define OER as teaching and learning materials that are both free to use and include permissions to reuse, retain, remix, revise, and redistribute.

We began promoting OER adoption in 2014 as a way to lower the cost of required books and course materials, believing that this was a natural fit with the library's role of supporting student academic success. Our initial campus outreach involved educating both faculty and librarians about the potential benefits of OER to students and faculty, focusing particularly on the cost-saving aspect of OER, which are licensed for free digital use. Early outreach initiatives included hosting faculty presentations (Wertzberger, 2017, 2019a, 2019c), creating infographics for new faculty orientation in partnership with the campus bookstore (Barnes & Wertzberger, 2018), conducting a Textbook Listening Tour inspired by one done at Temple University (Bell & Johnson, 2019; Wertzberger, 2019b), presenting to undergraduates about social justice issues related to textbook costs (Appedu, 2019), and hosting programming for Open Education Week each March, including displays on the library main floor (Bein, 2018; Bradford, 2019). However, many faculty were not convinced that high textbook prices were problematic, as they perceived our students to be wealthy enough to afford the assigned course materials. Notably, some even dismissed the financial concerns of students who *do not* come from wealthy backgrounds by claiming that financial aid awards cover all textbook costs for those who have genuine need (Wertzberger, 2019b).

To support our initial advocacy, we used qualitative, anecdotal evidence from informal conversations with students and from a #textbookbroke wall displayed during Open Access Week (Scholarly Communications, 2017). Lacking local quantitative data describing what our students spend on textbooks, we relied on findings from the Florida Virtual Campus Student Textbook and Course Materials Survey (Florida Virtual Campus, 2011; 2016; 2019; Florida Virtual Campus et al., 2012) to help make a case that high textbook costs negatively impacted students' academic success. The Florida reports are the one of the largest open sources of textbook use data, including self-reported expenditures, from U.S. students in higher education. They are commonly referenced by other textbook survey authors (Jhangiani & Jhangiani, 2017; Martin et al., 2017; Tillinghast, 2017; Murphy & Rose, 2018; Wittkower & Lo, 2020). However, because the Florida studies surveyed students at public colleges and universities across the state—a population with significant differences from our own student body—we observed hesitation from faculty regarding the relevance of the results on our own campus. As a result, we decided to adapt the Florida Virtual Campus 2016 Student Textbook and Course Materials Survey to suit our needs.

Our research questions included:

- How much money do Gettysburg College students spend on textbooks and required course materials?
- What strategies do students use to reduce textbook costs?
- What textbook formats are preferred by students?
- How are students affected by textbook costs?

We intended to use the results to shape expansion of library support for faculty who wish to reduce or eliminate the cost of course materials as a strategy to improve student success.

We will share our considerations for revising the survey questions, our procedure for administering the survey, how we handled data analysis, the major survey findings, and a discussion about what this means in our local and national context. Ours is one of the first surveys to be conducted at a small, liberal arts college like Gettysburg, adding to the literature about the impact of high textbook costs on undergraduate students. Our results reveal both common and differing experiences of students across higher education.

Literature Review

The most recent Florida Virtual Campus Student Textbook and Course Materials Survey was conducted in 2018. 46% of respondents reporting spending over \$300, 64% of respondents chose not to purchase a required text to reduce costs, and only 4.4% did not attempt to reduce their textbook costs in some way (Florida Virtual Campus, 2019). Additionally, 42.8% of respondents reported they took fewer courses, 40.5% reported that they had avoided registering for specific courses, 22.9% reported having dropped a course, and 18.1% reported withdrawing from a course due to the price of their textbooks.

In a 2013 national survey, the U. S. Student PIRGs similarly reported that 65% of respondents had chosen not to buy a textbook because it was too expensive, and that 48% of respondents felt textbook costs had some impact on the amount of courses they were able to take at a time (Senack, 2014). Their most recent survey was published in 2020, in which they found that 63% of students had chosen not to buy a textbook because of the cost, a slight decrease from the 2013 survey (Nagle & Vitez, 2020). In 2015, Jhangiani and Jhangiani surveyed students at 12 colleges and universities in British Columbia and found that 54% of participants had decided not to purchase the required textbook at least once, and 30% of respondents reported receiving a poorer grade due to textbook costs, although this effect was not evident from self-reported grades in the same study (Jhangiani & Jhangiani, 2017).

In a survey by Murphy and Rose at American University also conducted in 2015, 45% of respondents spent over \$300 on textbooks in Fall 2015, and 67% of respondents said that they had decided not to purchase a textbook due to cost (Murphy & Rose, 2018). When students at Brigham Young University were surveyed in 2016, 66% reported that they had chosen not to purchase a textbook due to cost, and 47% of those reported that it had negatively affected their grades (Martin et al., 2017). University of Hawaii at Manoa's student textbook survey on student behaviors towards traditional textbooks and OER found that 82% of respondents had chosen not to purchase required textbooks for a course, and only 13% said that this did not affect their performance in the class. 60% of respondents had spent over \$200 for the Spring 2017 semester (Tillinghast, 2017). In Spring 2017, researchers at Old Dominion University found that 58.8% of respondents had spent over \$300 that semester on textbooks and other course materials. Additionally, 37.9% of respondents reported not purchasing required course materials, and 19.8% said they had earned a lower grade than expected because they could not afford their course materials (Wittkower & Lo, 2020).¹

While these surveys provide important context on which to build an affordability-focused OER program, so far little research has been conducted regarding the purchasing and use of textbooks by students at small, private liberal arts colleges. Additionally, our student population is small (2,623 full-time students in Fall 2019), undergraduate-only, and composed overwhelmingly of traditional students² who are not often the focus of affordability initiatives.

Methods

Our research questions included:

- How much money do Gettysburg College students spend on textbooks and required course materials?
- What strategies do students use to reduce textbook costs?
- What textbook formats are preferred by students?
- How are students affected by textbook costs?

Survey items were adapted from the 2016 Florida Student Textbook and Course Materials Survey; we asked ten questions related to course materials (see Appendix 1). Influenced by Sarai Rosenberg's work on respectful survey design (Rosenberg, 2018), we carefully considered which demographic data were necessary and chose to present nine demographic questions at the end of the survey. We were interested in whether textbook costs differed for students by class year, major, gender, first-generation status³, international student status, race, ethnicity, and/or socioeconomic status (we used the Pell Grant award⁴ as a proxy measure); because of Gettysburg's programmatic emphases on first-generation students and students from low-income households, we were especially interested in those response groups. For some items, we included demographic definitions provided by our Institutional Analysis office in order to facilitate comparison between the response group and the entire student body. Because the survey was anonymous and confidential, we relied on self-reported demographic data from respondents.

The survey was administered using Lime Survey, an open source online survey tool, during the first three weeks of the Fall 2019 semester. Rather than employing a random representational sampling method, we encouraged all students to complete the survey. We promoted the survey throughout the administration period using a variety of digital and physical media, as well as word of mouth.

438 students (17% of total enrollment in Fall 2019) completed the survey. Post hoc comparisons between the response group and the student body revealed that our sample, while not completely representative, was fairly close. Women, first year students, and Pell Grant recipients were overrepresented; we recognize that the number of self-reported Pell Grant recipients may be lower than the actual number, as some students may not know the details of their financial aid packages. Men, juniors, and seniors were underrepresented (see Appendix 2). Because of the response rate, we found value in analyzing results even though the response group did not align precisely with the entire student population.

The survey data were cleaned and prepared for analysis using both Excel and SPSS. We created a few new variables in order to categorize some of the continuous variables on spending and preferred costs. In general, we limited ourselves to univariate and bivariate descriptive statistics, because inferential comparisons to determine statistical significance rely upon a randomized and representative sample. Our descriptive statistics primarily consist of frequencies and cross tabulated comparisons of groups. For some variables, we performed means comparisons to easily summarize the extent of the differences. In all cases where we report differences between groups, the differences are large enough to be meaningful; non-meaningful differences are not discussed. For questions that included free response fields, responses were organized thematically to uncover repeated concerns and issues raised by students.

Meaningful Findings

Student Spending and Textbook Use

Students reported their Fall 2019 book spending in whole dollars. We asked them to report separately what was spent on required texts and what was spent on additional required materials (including, but not limited to, access codes, clickers, art supplies, and lab manuals). Most respondents likely

estimated their costs, but this effect was mitigated by the timing of the survey collection period. The survey was administered during the first three weeks of the semester, shortly after course materials were acquired.

Participants most frequently answered in \$50 increments. The most common response (mode) for total amount spent on books was \$300; the highest response was \$950 and the lowest was \$0 (Figure 1). Because we asked how much participants spent rather than how much their books cost, these numbers reflect money spent after employing the cost-saving strategies asked about later in the survey.

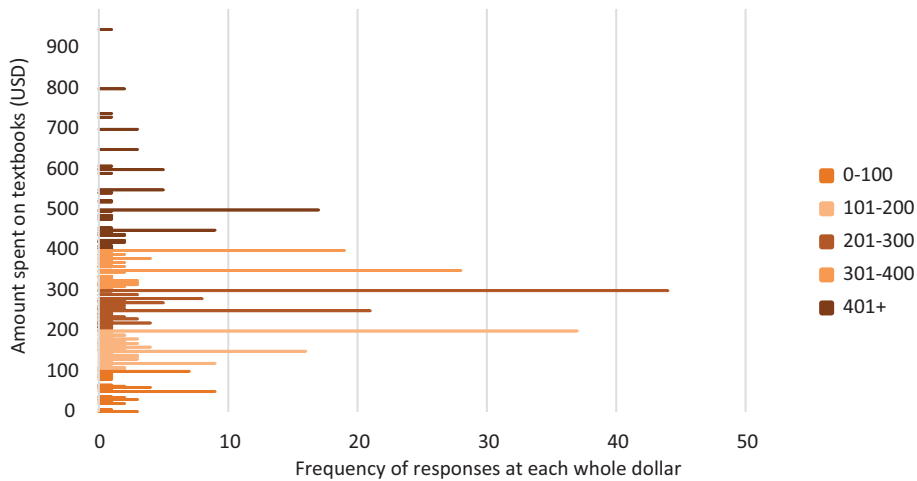


Figure 1: How much did you spend on textbooks for Fall 2019? (All respondents)

New variables were created to sort individual responses into \$100 ranges in order to simplify spending patterns. 10.3% of respondents spent less than \$100 for all their books, while 17% spent more than \$400. 37% of respondents spent more than the most common answer of \$300.

Participants were also asked about money spent on other course materials. For greater insight into the total money spent by students in one semester, we created a new variable that combined individual responses to the amount spent on books and the amount spent on other materials. These responses were again separated into ranges. The combined variable revealed that 33% of respondents spent over \$400 for books and course materials in one semester; only 17% spent over \$400 on books alone.

Students estimated what portion, if any, of their total books and materials costs were covered by financial aid (Figure 2). 56.8% reported that they received financial aid but did not have any remaining funds available to pay for books and course materials. 8.4% reported that any of their required materials were covered by financial aid; only 3.2% reported that all of their required materials were covered.

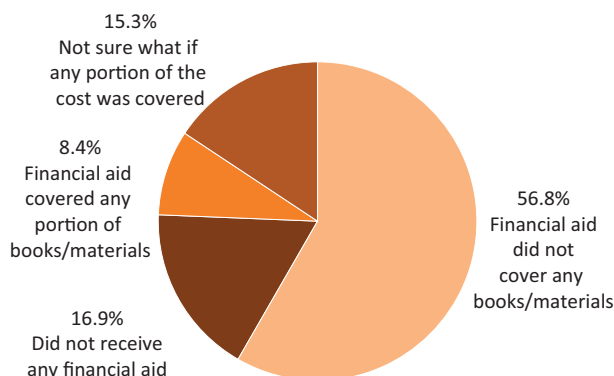


Figure 2: What percentage of the total cost of books and other course materials was covered by financial aid for Fall 2019? (All respondents)

Responses to this question were cross tabulated with responses about whether participants received a Pell Grant (Figure 3). 68.5% of Pell Grant recipients reported that financial aid did not cover any books or course materials compared to 55.5% of students who did not receive a Pell Grant. 14.4% of Pell Grant recipients reported having some financial aid funding available to purchase books, compared to 4.7% of those who did not receive a Pell Grant.

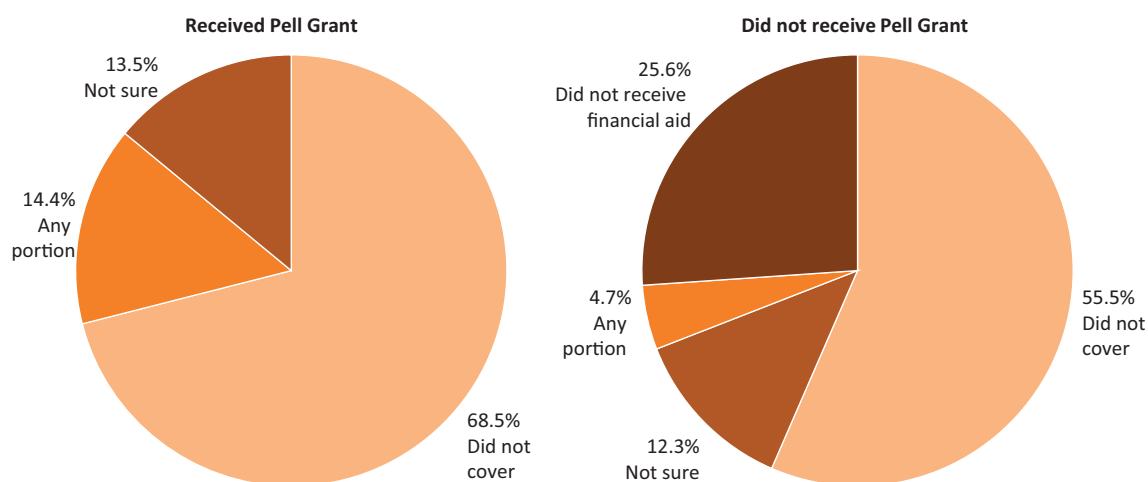


Figure 3: What percentage of the total cost of books and other course materials was covered by financial aid for Fall 2019? (Pell Grant status)

Strategies for Reducing Cost in Fall 2019

Participants were asked which measures they used to reduce the costs of required books for the Fall 2019 semester (Table 1). Only 1.1% of all respondents reported that they had not attempted to use any cost-reducing strategy. The most-reported strategies included buying and selling used textbooks, renting books, and purchasing from sources other than the campus bookstore.

Table 1: In your entire academic career at Gettysburg College, has the cost of required books caused you to...? (All respondents)

Strategies used	Percentage (all responses)
Rent a copy from the campus bookstore	52.3%
Buy books from a source other than the campus bookstore	49.5%
Buy used copies from the campus bookstore	47.5%
Rent books from a source other than the campus bookstore	39.0%
Sell used books	26.0%
Share books with a classmate	16.4%
Only purchase some of the required books	15.8%
Check out course materials from the library	11.6%
Buy lifetime access to a digital version of the book	8.4%
Use a reserve copy from the campus library	7.3%
I do not attempt to reduce book costs	1.1%

Cross tabulations allowed comparisons among demographic groups; meaningful differences were identified in several instances. 20.5% of first-generation student respondents reported sharing books with a classmate to reduce cost, while only 13.7% of non-first-generation student respondents employed this strategy. 20.7% of Pell Grant recipients reported sharing books with a classmate, while only 14.7% of non-Pell recipients used this strategy. 16.2% of Pell respondents reported checking out textbooks from the library to reduce cost, while only 10.4% of non-Pell recipients used this strategy. 19.8% of Pell respondents reported purchasing only some of their required texts, while only 14.7% of non-Pell recipients used this strategy. Responses from students who reported being “not sure if they received a Pell Grant” were not included in this comparison.

Participants were also asked which strategies they used to reduce the cost of additional required course materials. 35% reported not attempting to reduce the cost of these materials.

Impact on Student Experience

Most survey questions asked about the cost of books and additional required materials for the Fall 2019 semester. Two questions asked respondents to report on the effects of books and materials costs over their entire career at Gettysburg College (Figure 4).

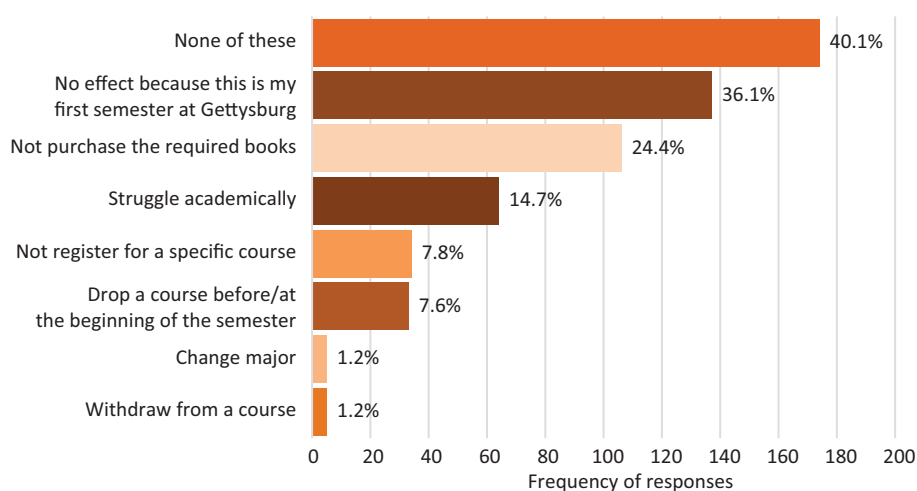


Figure 4: In your entire academic career at Gettysburg College, has the cost of required books caused you to...? (All respondents)

While a large portion reported “no effect” or “no effect because this is my first semester”, the most commonly selected effects were “did not purchase the required books” and “struggle academically because I could not access the book(s)”. 24.2% of respondents reported not purchasing the required books at some point in their college career, and 14.7% disclosed that they have struggled academically because they could not access books and/or materials. Cross tabulation revealed that 46% of respondents who reported not purchasing their books due to cost *also* reported struggling academically. Participants were able to choose “other” in response to this question and elaborate in a free-text field; 12 students (2.7% of respondents) entered responses in this field.

In order to separate respondents who are not impacted by costs from those who have not yet felt any effects, first year and transfer students were able to select “no effect because this is my first semester at Gettysburg College”. Surprisingly, cross tabulation revealed that 13 first year students reported already experiencing at least one effect within the first three weeks of their college experience.

Overall, first-generation students reported experiencing the negative effects of book costs more frequently than other students. 30% of first-generation respondents reported not purchasing required textbooks, while only 21% of non-first-generation respondents reported this effect. 22% of first-generation respondents reported struggling academically due to lack of access caused by cost, while only 11% of non-first-generation students reported this effect. 12% of first-generation respondents reported not registering for a course due to book costs, while only 6% of non-first-generation students reported this effect. Additionally, only 28% of first-generation respondents reported not feeling *any* effects of book costs compared to 45% of non-first-generation respondents.

Similarly, responses from Pell Grant recipients revealed that this group was at greater risk of experiencing the consequences of textbook costs. 33% of Pell Grant respondents reported not purchasing the required materials, while only 18% of non-Pell students reported this effect. 27% of Pell Grant respondents reported struggling academically because of textbook costs, while only 9% of non-Pell respondents reported this effect. Only 26% of Pell Grant respondents reported no effects from book costs, while 49% of non-Pell students reported no effects.

Textbook Format and Reasonable Cost Per Class

Participants were asked about their preferred formats for their textbooks; they were able to choose as many options as they wished. 87% of respondents stated that they preferred printed books. The next most popular options were “printed book with companion website” at 29%, “downloadable ebook/PDF” at 26%, and “online ebook” at 15%.

To provide some additional context to our local textbook affordability initiative, participants were asked to submit a reasonable cost in whole dollars for all textbooks and course materials assigned for a single class. \$50 was both the median and mode response. The mean response of \$73.56 was influenced by large outliers as high as \$500. Because most survey questions asked students to report on total book costs per semester (not by class), the outlier responses may reflect reasonable cost per semester.

Additional Findings from Free-text Responses

The final survey question was a free response item with a simple prompt: “Anything else to say?” 146 respondents submitted comments, which were organized into three major categories: responsibility, frustration, and consequences.

Responsibility

Many participants used this question to assign responsibility for high textbook costs. While the list price of textbooks and other course materials is set by the publishing industry, students related that local individuals and offices should make certain that all students have access to necessary materials. 25 suggested that ensuring access to course materials was the responsibility of professors, while 10 identified the college and 4 identified academic departments as responsible entities. 18 students named the bookstore as being responsible for textbook prices, while 5 expressed that the library had a role. Only 2 students looked beyond our campus and identified publishers as the driving force behind high textbook prices.

Frustration

Respondents repeatedly expressed frustration with their textbook acquisitions; most comments focused on cost. However, 8 students also used this question to express dissatisfaction with the

underutilization of required books and asserted that they were not worth the cost. 12 students singled out the cost of access codes and subscriptions as a major frustration; 6 expressed that the cost of an online homework system access code was excessive when paired with the textbook cost; one also pointed out that the access code prevented them from having access to materials after the semester ended. 10 respondents used this item to report frustration with the overall cost of college and how the cost of textbooks factors into the overall cost of being a student. 6 students shared that their financial aid award didn't adequately cover their textbook and materials costs. Finally, 12 students shared that they were frustrated by the variability of textbook costs both from semester to semester and by academic department. For example, one participant said that due to the high cost of the textbooks, they could never be a science major "even if [they] wanted to."

Consequences

8 students divulged specific financial and academic consequences that resulted from high costs. One participant said that they had fallen behind in their courses because the professor waited until the first week of classes to communicate their book assignments, which did not allow the student to budget for purchases. Another student shared that the cost of textbooks impacted their family at home.

Discussion

Textbook Purchasing and Behaviors

Our survey instrument was adapted from the Florida Virtual Campus survey, which allows for direct comparison between our results and the results of the most recent iteration of their survey. The 2018 Florida Virtual Campus survey found that 43.5% of Florida students reported spending more than \$300 on textbooks in Spring 2018 (Florida Virtual Campus, 2019). Our survey, administered approximately a year and a half after the Florida survey, found that 37.4% of Gettysburg College students reported spending more than \$300 on textbooks in Fall 2019. The smaller percentage of Gettysburg students spending over \$300 in one semester is consistent with the approximately 10% decrease in Florida students spending that much between the 2016 and 2018 iterations of the survey, assuming the decrease continued into 2019.

While our reports of student spending are similar to results from the Florida surveys, our survey responses suggest that the realities of financial aid at Gettysburg College may be different from those previously studied. Although our survey did not directly ask students whether they received financial aid, 16.9% of participants reported receiving *no* financial aid when asked what portion of their book costs were covered by aid. If we extrapolate from this response, we can assume that 83.1% of survey respondents received some form of financial aid; this is approximately consistent with the 79.3% of all Gettysburg College students receiving aid as reported in the 2018–19 Common Data Set (Office of Institutional Analysis, 2019).

Only 8.4% of our respondents said that any amount of their textbook and course materials cost was covered by financial aid—about one-tenth of the percentage who reported receiving aid. These percentages are notably lower than those reported in the Florida Virtual Campus Survey, where an extrapolated 66.1% of students reported receiving aid in Spring 2018, and 43.2% reported that any of their course materials were covered by aid (Florida Virtual Campus, 2019). The difference between our results and the findings of the Florida survey may be the result of any number of factors, such as students who choose not to accept all funds offered in financial aid packages or simply the high cost of tuition at Gettysburg College.

Our findings also run counter to local, anecdotal perceptions from faculty that students who cannot afford textbooks cover their costs with financial aid (Wertzberger, 2019b); 68.5% of Pell Grant recipients reported that *none* of their books or course materials were covered by aid. In *Paying the Price: College Costs, Financial Aid, and the Betrayal of the American Dream*, Sara Goldrick-Rab (2016) writes:

The hard truth is that while financial aid reduces the ever-increasing cost of college, more often than not it still leaves families with unmanageable prices.... [W]hen it comes to the group that this financial aid system was designed to help the most—those families earning an average of \$16,000 a year—the net price of college now amounts to a whopping 84% of their income (Goldrick-Rab, 2016).

For these students with the greatest financial need, this lack of funding for course materials is especially likely to have negative financial and academic impacts.

Like students at other institutions, Gettysburg students reported using a variety of strategies when trying to reduce costs. Among these were some that the authors of the Florida Virtual Campus survey termed “coping strategies” (2019), i.e., those that resulted in temporary or partial access to materials. These coping strategies include sharing books with a classmate, purchasing only some of the required textbooks, checking out textbooks from the library, and using library reserves. Of these, sharing books and only purchasing some of the required books were more likely to have been implemented by first-generation students and Pell Grant recipients than their counterparts. The use of these strategies may be connected to these students’ likelihood of feeling the effects of textbook costs, a topic discussed further below.

When comparing Gettysburg students and students in previous studies, the most noticeable difference in cost-saving strategies is the number who chose not to purchase required textbooks. While past work at a variety of institutions has found that anywhere between 38% and 67% of students have not purchased a required textbook to cut costs (Florida Virtual Campus, 2019; Jhangiani & Jhangiani, 2017; Martin et al., 2017; Murphy & Rose, 2018; Senack, 2014; Wittkower & Lo, 2020), only 16% of our respondents said that they only purchased some of their required books in the Fall of 2019, and just 24% of respondents said that they had chosen not to purchase required books at any point during the course of their college career. While first-generation students and Pell Grant recipients were more likely not to have purchased required books (both in the Fall semester and throughout their career), the percent of affected participants in these groups is still not as high as in previous studies.

Our participants reported fewer negative effects of the high cost of textbooks across the board when compared to respondents in the previous surveys. Some of this discrepancy may be because first-year participants, who were at most three weeks into their college career at the time of the survey, were able to choose that they had not yet felt any effects of textbooks costs, an option not presented in previous studies.

The billing structure at Gettysburg College also may help to explain this—because students are billed by the semester, rather than by course or credit hour, they do not have the opportunity to control costs by dropping or withdrawing from individual classes. Responses from participants who added their own effects of textbook costs reveal that some students choose to make sacrifices in other aspects of their lives because of textbook costs:

“Broke my wallet and made me lose other opportunities that required money”

“Have to budget money for other things I need”

“I pay for my books myself, and so it causes me to not spend money on other things”

“Cut costs in other school areas”

These non-academic consequences of book costs, although outside of the scope of this study, may play a significant role in student behaviors surrounding textbook purchasing at our institution.

Inequitable Impacts of Textbook Costs

Our survey results indicate that Pell Grant recipients and first-generation students more frequently experience negative consequences from the high cost of course materials than their counterparts. First-generation students were 50% more likely to report not purchasing required books, twice as likely to not register for a course due to cost, and only reported *not* feeling any effects from book costs at about two-thirds the rate of non-first-generation students. Similarly, Pell Grant recipients were almost twice as likely to report not purchasing required books and half as likely to not feel any effects in comparison to those who did not receive Pell Grants. The cost of course materials also has negative effects on learning, with first-generation students about twice as likely to report struggling academically as a result of book costs than their counterparts and Pell Grant recipients reporting this effect at three times the rate of non-recipients.

The higher education community is increasingly aware that high textbook costs impact equitable access to learning for specific demographic groups. First-generation college students face additional challenges adjusting to a higher education setting, including decreased likelihood of degree attainment (DeAngelo et al., 2011), decreased academic and social integration (Nunez & Carroll, 1998), lower self-confidence and feelings of academic preparation (Saenz et al., 2007), and greater numbers of hours spent working (Pascarella et al., 2004). First-generation students employ coping strategies to save on the high cost of textbooks at a higher rate than their peers and more frequently report negative effects from these costs, implying that, at Gettysburg College, course materials are an additional barrier to success for many first-generation students.

As previously discussed, the hidden costs of obtaining a college education and the resulting disenfranchisement of students with the greatest financial need are not adequately addressed by financial aid at Gettysburg College. Our findings imply that Pell Grant recipients and other financially struggling students are also frequently academically disadvantaged in comparison to their peers due to the high cost of course materials. One student expressed that, "I have on several occasions been asked to purchase books during the first week of classes, which I did not budget for. This is unfair, and often causes me to be behind in a class while waiting for the materials to come in." These financial struggles may have impacts that reach past the individual students as well; one student shared that, "[the cost] created a struggle and a more strict budget for not only myself, but my parents and family at home." Our results show that the high costs associated with textbooks and other course materials not only exacerbate existing socioeconomic inequities on campus and beyond, but also put lower-income students at an academic disadvantage.

While many campus groups have a stake in conversations about equity and inclusion, few prioritize efforts to address the high cost of course materials. However, these data suggest that the high cost of course materials is situated within the greater context of increasing tuition and an increasingly socioeconomically diverse student body. In order to support the learning of all students, faculty must begin considering how the cost of their required course materials can heighten social and academic stratifications that exist in their classrooms. While textbook publishers set the prices of their materials, faculty can choose to implement creative solutions that reduce this barrier to equal participation in the educational experience.

Conclusion

The results of this survey suggest a few issues that have been missing in reports on similar studies. The academic structure at Gettysburg College—where the vast majority of students are residential and tuition costs do not vary by number of credits taken—may affect how student behaviors and experiences are shaped by high textbook costs. Our results imply that students at our institution are generally unlikely to have financial aid money to spend on their course materials, even though a higher percentage of our students receive aid than those at some previously-studied institutions.

At the same time, our respondents were less likely to report negative effects of high costs. Most notably, we found that first-generation students and Pell Grant recipients were more likely than their peers to feel negative impacts from the high costs of their course materials. Both groups were also shown to more frequently struggle academically as a result of those costs. Our results reveal clear barriers to our students' chances at succeeding academically, driven by the high costs of textbooks and course materials.

OER as an Equity Solution

Research shows that adopting OER can help address inequities among students created by the high cost of textbooks. A University of Georgia study shows that while all students benefit from courses shifting from commercial textbooks to OER (with better grades and lower rates of Ds, Fs, and withdrawals), Pell-eligible students benefit the most (Colvard et al., 2018). In 2019, researchers produced similar findings for students in calculus courses with commercial textbooks exceeding \$120 in price (Delgado et al., 2019).

The textbook affordability umbrella covers low-cost and zero-cost course materials in addition to OER. From a student perspective, any significant reduction in the cost of textbooks is a win. In cases where we cannot identify appropriate open materials to support a course, we enthusiastically recommend library-licensed materials (which carry no additional charge to students) and even, on occasion, commercial materials with lower costs.

When our library began learning and teaching about OER in 2014, commercial publishers dismissed the potential of the open education movement to disrupt their long-established revenue streams. Since then, sales of commercial textbooks have dropped, and publishers have attempted to co-opt the affordability conversation and even the word “open” (Jhangiani, 2019). Educators who are truly concerned with issues of equity and inclusion should critically examine commercial packages labelled “inclusive access”; these are actually automatic billing programs that remove student agency from the textbook acquisitions process and can carry hefty price tags (Jhangiani, 2017).

We prioritize truly open materials because of their pedagogical flexibility and sustainability. For example, although we found that most students prefer print textbooks and many OER are digital-first, the open licenses applied to these materials allow for them to be printed without restriction. Adopting OER is the best strategy for instructors who want to control, customize, and sustain their course materials and to create an equitable learning environment for all students.

Areas for Future Study

While this survey has made headway in revealing some of the effects of high course material costs at Gettysburg College and may have implications for similar institutions, some areas would benefit from further study to better understand the full impact of these costs. We do not yet understand why students at our institution less frequently report receiving enough financial aid funds to cover

textbooks and course materials, especially in comparison to previous studies. Future studies may wish to investigate this phenomenon further. Additionally, our qualitative responses revealed that some students felt the impact of book costs in areas beyond their academic lives; future studies may wish to consider investigating these effects on the whole student experience.

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Notes

1. Several other student textbook surveys have been conducted in various settings that deserve mentioning but cannot be fully detailed here, including: University of Otago's student textbook survey, which highlights student perceptions and behaviors towards textbook prices in New Zealand (Stein et al., 2017); William & Mary's survey on student textbook purchasing practices (Taliaferro et al., 2019); and Adams State University's student survey on the need for student engagement with OER initiatives (Langdon & Parker, 2020).
2. "Traditional students", as defined by the National Center for Education Statistics, are not employed full-time, are not financially independent, do not have children or a spouse, and are not GED recipients (National Center for Education Statistics, n.d.-b).
3. Gettysburg College defines "first-generation student" as one from a family where neither parent has obtained at least a Bachelor's degree (Office of Institutional Analysis, 2020).
4. Federal Pell Grants are awarded to undergraduate students who display exceptional financial need and have not earned a bachelor's, graduate, or professional degree (U.S. Department of Education, n.d.).

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Appendix 1 – Survey and Demographic Questions

Q1 Are you a Gettysburg College student? [required question]

- Yes
- No

Q2 How much money did you spend on books (textbooks, novels, ebooks) for your Fall 2019 courses? Please enter an amount (not a range) expressed in whole dollars.

Q3 Excluding books, how much did you spend on other required course materials for the Fall 2019 semester (art supplies, lab notebooks, lab manuals, access codes, clickers, etc.)? Please enter an amount (not a range) expressed in whole dollars.

Q4 What percentage of the total cost of books and other required course materials is covered by your financial aid for the Fall 2019 semester?

- I do not receive financial aid
- None
- Less than 25%
- 26% to 50%
- 51% to 75%
- 76% to 99%
- All of my course materials costs are covered by financial aid
- I'm not sure
- Prefer not to answer

Q5 What measures have you taken to reduce your required book costs for the Fall 2019 semester? [Check all that apply]

- I do not attempt to reduce book costs
- Buy used copies from the campus bookstore
- Rent a copy from the campus bookstore
- Buy books from a source other than the campus bookstore
- Rent books from a source other than the campus bookstore
- Buy lifetime access to a digital version of a book
- Sell used books
- Use a reserve copy from the campus library
- Check out course materials from the library
- Share books with classmate
- Only purchase some of the required books
- Other (please specify)

Q6 Excluding books, what measures have you taken to reduce your required course material costs for the Fall 2019 semester? (art supplies, lab notebooks, lab manuals, clickers, access codes, etc.) [Check all that apply]

- I do not attempt to reduce course material costs
- Buy used course material from the campus bookstore
- Rent used course materials from the campus bookstore
- Buy course material from a source other than the campus bookstore
- Rent course materials from a source other than the campus bookstore
- Sell used course material

- Share course material with classmate
- Purchase only the minimal required course materials
- Other (please specify)

Q7 In your entire academic career at Gettysburg College, has the cost of required books caused you to...? [Check all that apply]

- Not register for a specific course
- Drop a course before/at the beginning of the semester
- Withdraw from a course later in the semester
- Not purchase the required books
- Struggle academically because I could not access the book(s)
- Change Major
- None of these
- This is my first semester at Gettysburg College
- Other

Q8. In your entire academic career at Gettysburg College, has the cost of required course materials (art supplies, lab notebooks, lab manuals, clickers, access codes, etc.) caused you to...? [Check all that apply]

- Not register for a specific course
- Drop a course before/at the beginning of the semester
- Withdraw from a course later in the semester
- Not purchase the required course materials
- Struggle academically because I did not have the course materials
- Change Major
- None of these
- This is my first semester at Gettysburg College
- Other

Q9 Which book formats do you prefer? [Check all that apply]

- Printed book
- Printed book with companion website
- Online ebook
- Downloadable ebook/PDF
- Formatted for cellphone or tablet
- Formatted for print disabilities/assistive technology
- Audio book
- Other (please specify)

Q10 How much do you feel is reasonable to pay for ALL books and required course materials for a single class? Please enter an amount (not a range) expressed in whole dollars.

Q11 Anything else to say? Please enter your comments below.

D1 What is your class year?

- 2019
- 2020
- 2021
- 2022

D2 Are you currently studying off campus for the Fall 2019 semester?

- Yes
- No

D3 Your major(s)? [Check all that apply]

D4 What is your gender?

- Woman
- Man
- Non-Binary
- Self-identify
- Prefer not to answer

D5 Are you a first-generation college student? (Gettysburg College defines first-generation as a student from a family where neither parent has obtained at least a Bachelor's degree)

- Yes
- No
- Prefer not to answer

D6 Did you receive a Pell Grant?

- Yes
- No
- I'm not sure
- Prefer not to answer

D7 Are you an international student?

- Yes
- No
- Prefer not to answer

D8 What is your ethnicity? (the term "Hispanic or Latinx or Spanish Origin" is defined as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race)

- Hispanic or Latinx or Spanish Origin
- Not Hispanic or Latinx or Spanish Origin
- Prefer not to answer

D9 What is your race? [Check all that apply]

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White
- Prefer not to answer
- Self-identify

Appendix 2 – Demographic Data

How many students...	Gettysburg College*	Survey respondents
in each class year?	First Year: 686 (26.2%)	First Year: 137 (31.3%)
	Sophomore: 706 (26.9%)	Sophomore: 125 (28.5%)
	Junior: 641 (24.4%)	Junior: 72 (16.4%)
	Senior: 590 (22.5%)	Senior: 85 (19.4%)
		No answer: 19 (4.3%)
by gender?	Women: 1,394 (53.1%)	Women: 301 (68.7%)
	Men: 1,229 (46.9%)	Men: 108 (24.7%)
		Nonbinary: 8 (1.8%)
		No answer: 20 (4.6%)
by first generation status?	First Year: 136 (19.9%)	First Year: 37 (27%)
	Sophomore: 199 (26.6%)	Sophomore: 34 (27.2%)
	Junior: 151 (21.0%)	Junior: 20 (27.8%)
	Senior: 151 (21.6%)	Senior: 20 (23.5%)
by Pell grant recipients	≈ 472 of total class (18%)	111 of all respondents (25.3%)
by ethnicity (of any race)?	Hispanic/Latino: 241 (9.2%)	Hispanic/Latino: 48 (11%)
by race?	Black or African American: 102 (3.9%)	Black or African American: 30 (7.2%)
	American Indian or Alaska Native: 8 (0.3%)	American Indian or Alaska Native: 4 (1%)
	Asian or Pacific Islander: 66 (2.5%)	Asian or Pacific Islander: 39 (9.3%)
	Two or More Races: 59 (2.2%)	Checked two or more boxes: 8 (1.9%)
	White: 1,946 (74.2%)	White: 313 (74.9%)
	Race and Ethnicity Unknown or International: 201 (7.6%)	No answer: 30 (7.2%)

*Gettysburg College demographics have been gathered from the 2019–20 College Factbook, as well as from personal correspondence with administrators in the Financial Aid Office.

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