# Academic Librarians Examination of University Students' and Faculty's Perceptions of Open Educational Resources 

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#### Abstract

A survey of 2,574 students and 1,157 faculty members across ten institutions of postsecondary education in the state of Utah was conducted by the Utah Academic Libraries Consortium. Survey items were created to understand the influence of textbook costs on student academic behavior and the viability of faculty adopting open educational resources (OER) as a solution to the cost of textbooks and the possible need for librarian support of OER. Two-year and four-year institutions were compared to identify differences that might exist between them. Most students felt that their academic success was negatively impacted by textbook cost, particularly at two-year institutions where students registered for fewer courses because of associated textbook costs. Faculty survey findings showed that adjunct professors were more likely to require a traditionally copyright-restricted textbook. Approximately $90 \%$ of participants indicated they would be willing to use suitable OER for their course, and almost half of survey participants expressed a desire for help finding these resources.


Keywords: open educational resources, OER, textbooks, higher education, librarians

## Introduction

University librarians are tasked with curating and making the full range of materials accessible to support student learning and faculty research. Libraries and librarians serve to educate as many people as possible in as many ways and in as many domains as possible. Of course, budgets are limited, and hard choices need to be made regarding subscriptions and purchases as well as staff and specialty services. The International Journal of Open Educational Resources (2020) recently published a special issue entitled Librarians as Fundamental, Transformational and Visionary Leaders in the OER Movement. Clearly, librarians are at the forefront of assessing OER as a resource to enhance learning and research. Open Education Resources (OER) seem to present a solution to some concerns about costs but knowing the student and faculty experience, needs and reasons to use or not use OER are helpful data that can support planning and decision-making. This study focuses primarily on perceptions of textbooks and OER by students and faculty. The Utah Academic Libraries Consortium (UALC), consisting of ten public and private units of higher education, sponsored a wide-ranging survey of students and faculty across the state to estimate student and faculty experiences and perceptions of textbooks.

## Literature Review

Rising costs of higher education in the United States have increased the percentage of college costs borne by students (as opposed to government) from $33 \%$ to more than $50 \%$ over the last 30 years (Cahalan \& Perna, 2015). Between 2004 and 2012 the total student debt in the United States nearly tripled from $\$ 364$ billion to $\$ 966$ billion (Lee, van der Klaauw, Haughwout, Brown \& Scally, 2014). Textbooks are a significant part of the costs facing students, and in some instances can be as expensive as tuition. Allen (2010) demonstrated that the average college student in the United States spends over $\$ 900$ per year on textbooks

Senack (2014) found that students feel the effects of these high textbook costs on their education. A survey of 2,039 college students showed that $93.6 \%$ of participants were concerned with textbook costs. Nearly half of these respondents reported that textbook costs influenced the classes they took each semester. Perhaps the most significant impact of textbook costs is on student academic success and behavior. In their survey of 22,000 students, the Florida Virtual Campus (2016) found that (a) $66.5 \%$ of students reported not having purchased a required textbook due to cost, (b) $47.6 \%$ reported taking fewer courses because of the financial impact of high textbook costs, and (c) $26.1 \%$ reported dropping a course because of the financial impact of high textbook costs.
The high cost of textbooks impacts all students and may be particularly damaging for low-income students (Colvard, Watson \& Park, 2018). Paulsen and St. John (2002) found that the success of students with financial difficulties decreases by 16-19\% per \$1,000 USD tuition increase, which is approximately the same as the costs of textbooks in an academic year. Jenkins et al. (2020) characterized textbook affordability as a social justice issue. They showed that textbook costs were a significant barrier to success for most students, but significantly more so for historically underserved college students. They proposed OER as an "avenue for realizing more socially just college experience". Their survey approach was similar to the current study and was able to access $10 \%$ of the student body (705) to assess student experiences with textbooks. They estimated the burdens that students reported due to textbook costs included: increased stress (89\%), delayed purchase of textbooks until after a course began ( $80 \%$ ), the choice to not buy the required text for a class (65\%), the choice to not buy textbooks and later reporting that the decision hurt their performance (56\%), the choice to not buy textbooks even knowing beforehand that the decision would hurt performance (44\%), avoiding taking a class (27\%), dropping a class (12\%) or failing a class (9\%).
Hilton (2016) summarized sixteen studies that investigated the efficacy of OER, as well as student and faculty perceptions of OER. He found that across these studies, many students and faculty perceived that OER had the same or higher quality than traditional textbooks. Moreover, nearly all students who used OER performed as well or better than their peers who used traditional textbooks when measured on metrics such as percentage of students passing the class, final exam scores, and so forth.
While the use of OER might be a solution to many students' burdens but faculty still must use the OER solution. Martin and Kimmons (2020) explored faculty's experience and perception of barriers to their use of OER to reduce cost and improve teaching. Faculty concerns included quality, copyright issues, technical concerns, and sustainability. These are all issues that librarians can address. In fact, open education librarianship has become a viable subspecialty in the profession. Larson (2020) conducted a very careful analysis of 24 current job posting for OER librarian specialists. The need to curate and train faculty and students around OER is apparent and apparently being funded by academic libraries.
Similarly, the use of OER might be a solution to many students' burdens, but students still must accept the OER as well as the faculty do. Sheu and Grissett (2020) conducted a clever assessment of student perceptions of open versus non-open texts. They reported that after seeing the bibliographic
information and costs of open and non-open textbooks, students' initial preference for non-open texts changed to a preference for OER. Again, providing such bibliographic and information and cost benefit analysis of resources are processes at which librarians excel.

The purpose of this study was to estimate post-secondary students' and faculty's experiences and perceptions of textbooks that might inform librarians work.

The survey was addressed four student issues and five faculty issues as follow.

1. How do students perceive textbook costs influence their academic success?
2. What would students do with the money they saved if they did not buy textbooks?
3. What are students' general feelings about textbook costs?
4. How do student responses on the above questions vary between two-year and four-year institutions?
5. How do faculty members select their textbooks?
6. What percentage of faculty were willing to consider using and would like help finding open textbooks?
7. Are there any correlations between faculty perceived cost of textbooks (or the lack of knowledge about the cost) and their willingness to use OER?
8. Why do faculty members say they would or would not be willing to use an open textbook?
9. How do faculty responses on the above vary between two-year and four-year institutions?

## Methods

Surveys were administered to students and faculty at ten institutions of higher education institutions in the state of Utah. The survey was commissioned by the Utah Academic Libraries Consortium. All surveys were distributed after obtaining approval from the Institutional Review Board and the surveys were then administered using Qualtrics software. For more information on the student and faculty surveys, respectively, see Appendices A and B.

Librarians at each college oversaw survey distributions at their respective institutions. Institutions were divided into two groups: two-year and four-year institutions. The two-year institutions were Salt Lake Community College, Snow College, and Utah State University Eastern. This latter college, Utah State University Eastern, classifies itself on its website as a "community college" of Utah State University (USU Eastern, 2017). The four-year institutions were Brigham Young University, Dixie State University, Southern Utah University, University of Utah, Utah State University, Utah Valley University, and Weber State University.
Our final sample included 2,574 students and 1,157 faculty members. The quantitative data were analyzed using the statistical analysis software SPSS. The form of the data were categorical counts. Two-by-two Chi-square Tests of Independence using Yates' Continuity Correction were calculated to estimate proportional representation of the categorical counts across the two-year and four-year institutions. Any significant overall continuity corrected Chi-square values were followed up with Chi-square residual analyses in each cell.

Most free response questions were coded in Dedoose, a qualitative data analysis software. All responses were open-coded and grouped together into similar categories. Due to the varied nature of comments, a single response might have been assigned more than one code. For example, a student indicating that they would use any saved textbook funds on taking another course and gas to get to school would receive both the codes for education and transportation.

A knowledge-based sentiment analysis (Ortony, Clore \& Collins, 1990) was conducted to gather information on general perceptions, and then exploratory coding procedures were implemented to search for emergent themes across student and faculty responses. The data were coded by
multiple researchers. The responses were coded based on their positivity, negativity, or neutrality towards textbook cost. Responses were either positive, neutral, negative, or extremely negative. The category extremely positive was excluded because no responses were found in this category

## Results

Analyses were conducted on each respective survey for students and faculty. The results for each research question are presented and discussed in subsequent sections. Immediately after each individual question is addressed, the analysis of whether there were statistically significant differences between two-year and four-year institutions for that question is presented.

## Student Perceptions of Textbook Cost on Academic Success

Overall, most students felt that their academic success was negatively impacted due to the high cost of textbooks. Roughly $65 \%$ of students, on average, indicated they did not purchase a textbook because of the cost. More than half of those students felt that foregoing the textbook negatively influenced their grade in the course, and approximately $37 \%$ had dropped a course because they were unable to afford the textbook. For students who continued in a course without the required textbook, $20 \%$ believed that not purchasing the text caused them to fail or withdraw from the course.

Similar results were found for students who delayed purchasing a textbook because of the cost. Across the ten institutions surveyed, $86.6 \%$ of students responded that they had to delay purchasing a textbook due to the cost. A majority ( $61 \%$ ) of students who were unable to afford the textbook at the start of the term felt that the delay negatively influenced their final grade in the course.

According to some students, high textbook costs delayed them from achieving their academic goals. Of the students surveyed, $37 \%$ said they registered for fewer courses because they had already allocated so much of their funds towards expensive textbooks. Moreover, 33\% of participants indicated that their decision to not register for specific classes was influenced by knowledge of the materials that would be required and the associated cost.

Table 1 provides an overview of the 2,574 student responses to the survey questions related to academic success. The percentages of the table regarding perceptions of academic success are based on total student participants, but it is important to note that the logic of the survey only sent students to some questions based on their response to previous questions regarding delay and forgoing purchasing textbooks based on cost.

We then analyzed differences between two-year and four-year institutions. Chi-square residual analyses indicated that students at two-year colleges were more likely to respond that not purchasing a textbook negatively influenced their final grade. Furthermore, they also were more likely to report that the cost of textbooks caused them to register for fewer courses. When asked if not purchasing a textbook has caused them to fail or withdraw late from a course, a higher proportion of students at two-year colleges answered yes. There were no other statistically significant differences between the two groups.

Table 1: Student Survey Responses

| Due to textbook cost |  |  | Delayed or Non-Purchasers |  |  |
| :--- | :---: | :---: | :--- | :---: | :---: |
|  | $\boldsymbol{n}$ | $\%$ |  | $\boldsymbol{n}$ | $\%$ |
| Did Not Purchase <br> Textbook | 1688 | $65.56 \%$ | Non-Purchase Influenced Grade <br> Negatively | 1117 | $66.18 \%$ |
| Delayed Textbook <br> Purchase | 2229 | $86.60 \%$ | Non-Purchase Contributed to <br> Decision to Drop Course | 626 | $37.11 \%$ |
| Registered for Fewer <br> Courses | 953 | $37.02 \%$ | Non-Purchase Caused Failure <br> or Late Withdrawal from Course | 359 | $21.25 \%$ |
| Did Not Register for <br> Specific Sections | 862 | $33.49 \%$ | Delayed purchase influenced <br> grade negatively | 1370 | $61.48 \%$ |
| Total | 2574 |  |  |  |  |

Table 2: Student Survey Responses for Two- and Four-year Institutions

|  |  | Due to textbook cost |  |  |  | Delayed or Non-purchasers |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Institution | $n$ | Did Not Purchase Textbook | Delayed Textbook Purchase | Registered for Fewer Courses* | Did not Register for Specific Sections | Nonpurchase Influenced Grade Negatively* | Nonpurchase Contributed to Decision to Drop Course | Nonpurchase Caused Failure or Late Withdrawal from Course* | Delayed Purchase Influenced Grade Negatively |
| Twoyear | 282 | 64.22\% | 82.26\% | 41.72\% | 25.79\% | 69.58\% | 37.66\% | 28.65\% | 65.08\% |
| Fouryear | 2292 | 66.14\% | 88.45\% | 35.01\% | 36.79\% | 64.73\% | 36.87\% | 18.31\% | 59.94\% |

* $X^{2}<0.05$


## How Students Would Repurpose Saved Money

Students were asked the question: if you didn't have to spend money on textbooks, how else would you use the funds? Because each response could receive multiple codes in our qualitative analysis, there were 2,832 codes generated from the 2,564 students who chose to respond to this question. Their responses are summarized in Table 3.

Table 3: Categorization of How Students Would
Repurpose Saved Money

| Code | $\boldsymbol{n}$ | $\%$ |
| :--- | :---: | :---: |
| Food/groceries | 967 | $38 \%$ |
| Education | 854 | $33 \%$ |
| Housing | 804 | $31 \%$ |
| Miscellaneous living expenses | 584 | $23 \%$ |
| Savings | 419 | $16 \%$ |
| Transportation | 367 | $14 \%$ |
| Pay off/take out less student loans | 240 | $9 \%$ |
| Recreation | 204 | $8 \%$ |
| Family obligations | 127 | $5 \%$ |
| Other | 193 | $8 \%$ |

Note. Respondents could affirm more than one category.

Food/Groceries. Students shared hardships they had encountered when budgeting for food throughout the semester. Students said they would use the money "to not be as hungry" or stated that they "would buy food," which may "seem silly, but food is normally what [they] end up going without in order to make ends meet." Some students attributed this lack of money for food to textbook costs. A student stated that they "remember living off $\$ 7$ a week my freshman year even when [they] worked 15 hours a week. [The student] "literally didn't eat because [their] textbooks were expensive." Another student stated that they would "buy food, [because] last year [they] couldn't afford both." There were traditional and nontraditional students who shared these sentiments. Many students, both single and with families, were not always in a position to buy healthy food for themselves or sometimes buy food at all. These students identified that the reduction of textbook cost could alleviate some of this pressure.

Education. The second most prominent category towards which students would reallocate funds from textbook savings was education. Students stated that they would use the money directly towards other education costs. To students, this often meant paying their tuition or buying other educational materials required. Students expressed that finding the funds to pay for tuition can be burdensome, with comments like: "I would add the money to savings to pay tuition for next semester. Paying for school is the biggest stressor in my life." There were other students though who stated they would pay for tutoring expenses or that they would be able to take more classes and graduate sooner.

Housing. Another expense that students would reallocate textbook costs towards was rent or housing. These students were not homeless; rather, they stated that they wished to improve their housing situation or live closer to campus so that they could spend more time studying rather than travelling.

Savings. Students expressed that savings could be extremely helpful for them as they prepare to encounter life events that may be financially burdensome. One student shared the comment: "I would put it right into savings. I get a Pell grant and a half tuition scholarship each semester, so if I can save $300-500$ [dollars] on books then that helps my emergency fund."

Transportation. Students also stated that they would use the funds for transportation, whether that meant paying for their car, their fuel, their auto insurance, or on campus parking fees. Students indicated that they do not always live close enough to campus to walk, and that they commute to get to their classes.

Student Loans/Work. Many students stated that they would use the money to either pay off existing loans or use the money to avoid taking additional loans and paying the interest associated with those loans. Although textbooks may seem like a less significant portion of the cost of higher education, some students stated that they would not need to take out any loans if they did not have to pay for textbooks. A student shared that they "just simply wouldn't be in debt right now" if they did not have to pay for textbooks. Another student commented that they "would be able to take out smaller loans for school but right now [their] textbooks take up the majority of [their] money." Students who mentioned using the money towards their student loans commented on the significance of these funds towards the alleviation of their surmounting debts.

There was a smaller group of students who said they would use the money saved towards their education in an indirect way. Forty-eight students stated that if they would need to work less hours to remain financially stable. A student posited: "I wouldn't have to work as many hours, and I could use that time to get ahead in my schoolwork instead of always struggling to stay caught up."

Recreation. Respondents stated that they would use funds saved from textbook costs for recreation. Although lower in response than some other categories, there were 204 students who would reallocate these funds for recreation. These students felt that recreation may round out their college experience. In a response to this question, a student remarked on textbook savings: "It would also allow me to participate in more extracurricular activities that require money. Such involvement would enrich my academic experience." Some students also noted that they would only use the money for recreation after they had met their basic needs.

Family Obligations. Many students responded that they would use the funds for familial obligations. One hundred and twenty-seven responses related to this category, and although this reflects $5 \%$ of the responses, comments regarding these obligations reflect a vulnerable population. One respondent stated: "I am a single mother raising two teenagers who need things like food and clothing, shoes and fees for school, sports and hobbies. I would spend that money on my children, they often go without because I am a full-time student and I work 2 part-time jobs." Several responses reflected the same sentiment. Other general living expenses included clothing and medical expenses.

Other. There were a number of lesser mentioned categories towards which students expressed they would reallocate their funds. These were expenses and responses such as investments, alleviating college costs on their parents, and charitable donations/service.

## Students' Feelings About Textbook Costs

The last question of the student survey invited participants to share any final thoughts they had regarding textbook costs. The responses to these questions were coded into four categories: positive, meaning that something complimentary was said (e.g., "Textbook costs, in my opinion, are worth it"); neutral, in which nothing good nor bad was stated about textbook costs (e.g., "I don't feel that they are unreasonable"); negative, statements that showed a dislike for textbook costs (e.g., "Many professors like to use the most recent edition of a textbook despite little being changed and this is more expensive for students in the long run, which is unfair for poor students"); and extremely negative. Comments coded as extremely negative contained a sense that students were being exploited (e.g., "The school bookstore extorts students into paying outrageously high prices by creating ISBN packages 'unique’
to the school that we are required to purchase through the school even though the same books can be found individually online for a fraction of the cost"). Table 4 provides an overview of how the 1,733 responses from students who responded to the final survey question were coded.

Table 4: Categorization of Students' Feelings About Textbook Costs

| Comment category | $\boldsymbol{n}$ | \% of total comments |
| :--- | :---: | :---: |
| Positive | 14 | $0.8 \%$ |
| Neutral | 43 | $2.5 \%$ |
| Negative | 1,217 | $70.2 \%$ |
| Extremely Negative | 459 | $26.5 \%$ |
| Total | 1,733 | $100.0 \%$ |

There were no differences in responses between two-year and four-year schools. More than one-quarter of all comments were vociferously opposed to high textbook costs. One issue that was brought up multiple times was access codes. For example, one student wrote,
"[Access codes] are a scam and, even worse, they are a scam that students cannot avoid. Every required online lab/homework/study software provided by the major publishers (Pearson, Cengage, etc.) has been nothing but a financial hindrance on my education. These software are never intuitive, and they are never useful. More importantly, they are never worth their $\$ 50-300$ price tags. They exist as a play on market competition and the used book market. What easier target than students who have a GPA and an education dependent on the course materials required by a professor?"

Multiple comments expressed similar student outrage at not being able to access used books because of access codes.

## Faculty Member Textbook Selection

There was an approximately equal number of participants from each faculty rank: adjunct faculty (24.1\%), assistant professor (24.9\%), associate professor (26.2\%), and full professor (24.8\%). We found that a significantly higher proportion of adjunct faculty required students to purchase a textbook or other commercially published resource in their classes. In addition to requiring commercial texts, adjunct faculty were less likely to personally select the required material and relied more heavily on department mandated texts for both lower- and upper-division courses. This means adjunct faculty required their students to purchase texts that they were not selecting but might have been required by the department. There were no differences between two-year and four-year colleges in how faculty members selected/required textbooks.

## Faculty Willingness to Use OER

Approximately 90\% of participants indicated that they would be willing to use suitable OER for their courses. Additionally, almost half of those who participated in the survey expressed a desire for help finding open textbooks in their subject area. This latter finding was particularly notable, given that
survey respondents gave up their anonymity by submitting their email address to allow an academic librarian to contact them and aid them in finding OER. There were no differences between two-year and four-year institutions in terms of faculty members' willingness to use and desire to receive help finding open textbooks.

## Faculty Perceived Cost of Textbooks and Willingness to Use OER

We then analyzed if there was any correlation between faculty members' awareness of textbook costs and their willingness to use OER in their course. As shown in Table 5, less than half (43.3\%) of faculty members knew the list price of the text they required (faculty who failed to respond to this question were counted as not knowing the cost). However, there was no significant difference between faculty who knew the price of the textbooks they require and those who did not in terms of their willingness to use OER.

Table 5: Faculty Rank and Willingness to Use OER

| Rank | $\boldsymbol{n}$ | Knows list price <br> of textbook | Willing to <br> use OER | Would like help <br> finding OER |
| :--- | :---: | :---: | :---: | :---: |
| Adjunct | 279 | $49.1 \%$ | $93.3 \%$ | $53.4 \%$ |
| Assistant | 288 | $43.4 \%$ | $98.4 \%$ | $58.8 \%$ |
| Associate | 303 | $39.9 \%$ | $86.5 \%$ | $46.2 \%$ |
| Full | 287 | $41.1 \%$ | $87.8 \%$ | $44.3 \%$ |
| Overall | 1157 | $43.3 \%$ | $90.3 \%$ | $49.9 \%$ |

## Faculty Reasons for Willingness to Use OER

When faculty members responded that they would be willing to use an open textbook if a suitable alternative could be identified, they were invited to explain why they might be willing to do so. The prominent codes that emerged from the 1,052 faculty member responses were: cost savings, adaptability/pedagogical advantages, benefits of a digital format for student use, and general willingness to experiment. Table 6 shows the distribution of codes between these various categories.

Table 6: Categorization of Faculty Reasons to Use OER

| Code | $\boldsymbol{n}$ | \% of total responses |
| :--- | :---: | :---: |
| Cost savings | 774 | $73.6 \%$ |
| Pedagogical benefits and customization | 170 | $16.2 \%$ |
| Easy access for students and faculty | 155 | $14.7 \%$ |
| Did not respond | 114 | $10.8 \%$ |
| Up-to-date materials | 39 | $3.7 \%$ |
| Already uses an open textbook | 37 | $3.5 \%$ |
| Other | 39 | $3.9 \%$ |

Cost savings. The overwhelming number of responses ( $73.6 \%$ of total responses) stated that their primary motivation for adopting an open textbook, if there was a suitable alternative, was cost savings for students. For example, a faculty member at a two-year institution stated a motivation for lower textbook costs "because I service some of the poorest students in the state." The sentiment was shared by the majority of respondents who were interested in the financial well-being of their students and who stated that if a suitable alternative was available at low or little cost, that they would certainly consider adopting it.

Pedagogical benefits and customization. The ability to modify, adapt, and use portions of the text that would support learning, as well as combine textbooks was an incentive for adoption for 170 faculty members ( $16.2 \%$ of total). A faculty member noted regarding open textbooks that they "facilitate a certain flexibility to faculty. [They] allow faculty to move away from the one size fit all model." Faculty respondents noted that this could improve their teaching, could improve the specificity and variety of content their students are reading, and do so in a way that integrates well with their personally created content for the class.

Easy access for students and faculty. Although not all students and faculty have a preference for digital textbooks, there was mention of the portability and convenience that accompanies digital textbook use. Faculty noted that students are often already comfortable with these formats. This can ensure that texts are brought back and forth to class and home, can be annotated online, are searchable, and can be used effectively by students. Although the digital format may not have been the primary motivator, there was a collective acknowledgment that current students are familiar enough with online materials to use a digital text effectively.

Up-to-date materials. Thirty-nine faculty members (3.7\%) noted that the likelihood of these texts being up-to-date is higher than that of the traditional publisher because edits can easily be made online and users do not have to wait through a multi-year publication process. One faculty member noted specifically that this has been their experience with open textbooks, and that they have in some instances themselves been able to ensure it is up-to-date. Textbooks being current was especially important for faculty members who teach students new technologies.

## Faculty Reasons for Not Using OER

Based on their responses to previous questions, only a small portion of faculty were asked why they would not be willing to use an open textbook. In total, 111 faculty respondents chose to answer the question why would you not be willing to use an open textbook? Their responses generated 115 codes that are summarized in Table 7.

Table 7: Categorization of Faculty Reasons to Not Use OER

| Code | $\boldsymbol{n}$ | \% of total responses |
| :--- | :---: | :---: |
| Prefer hardcopy of text | 23 | $20.0 \%$ |
| Suspicious of quality | 22 | $19.1 \%$ |
| Additional instructor resources | 13 | $11.3 \%$ |
| Would first need to vet | 9 | $7.8 \%$ |
| No suitable alternatives | 8 | $7.0 \%$ |
| Like current textbook | 8 | $7.0 \%$ |
| Time to adopt | 7 | $6.1 \%$ |
| Did not respond | 6 | $5.2 \%$ |
| Funding model concerns | 6 | $5.2 \%$ |
| Other | 13 | $11.3 \%$ |

The largest response category indicated that faculty members preferred that students use a hardcopy of the text (perhaps not knowing that OER can be in hard copy). Other popular reasons for not being willing to adopt a textbook were suspicion of the quality of a free resource and reliance upon supplemental resources provided by the traditional publisher. A respondent noted that the faculty makes "heavy use of automatic grading technology, and "unless that is available, [they are] not interested in any other textbook." Other responses included that the time to adopt would be too cumbersome, they are not comfortable with the idea of academic work being available for free online, and that they are comfortable with the resources they are currently using.

For the question of why or why not faculty would be willing to adopt OER, there were no statistically significant differences between the responses of those at two-year and four-year institutions.

## Discussion

One of the main research questions was to understand how textbook costs influence students' academic success at a variety of higher education institutions in the state of Utah. Close to twothirds of the students who participated in the study chose to forego purchasing a textbook due to the high cost. More than $85 \%$ of students in the sample delayed purchasing an expensive textbook. Most of these students felt either foregoing or delaying the purchase of a text negatively impacted their final grade in the course. These estimates are very similar to the results reported by Jenkins et al. (2020). With such a high percentage of students struggling to afford necessary class materials, it is easy to see why $96 \%$ of the free responses regarding students' feelings towards textbooks included statements that were coded as negative or extremely negative.

The statistical analysis showed that students at two-year colleges were more likely to report negative grade impacts from not purchasing a textbook than four-year university students. They were also more likely to report registering for fewer courses because of textbook costs.

Two-year institutions generally have easier academic entry requirements and a more ethnically diverse student body than four-year institutions (Labov, 2012). As Jenkins et al. proposed, textbook affordability can be seen as a social justice issue. Although over half of the faculty
respondents did not actually know the costs of the textbooks they required, by far the most common reason for willingness to use OER was cost savings for students. While faculty might not know the specific costs, they seem to be aware of the financial burden that the costs of textbooks place on students.

Our most financially vulnerable students' education seems impacted most by high textbook costs. High textbook costs influenced students' ability to take more courses, echoing a finding from Fischer, Hilton, Robinson and Wiley (2015). Of course, this compounds over time with lower educational attainment leading to lower income and fewer opportunities. Broader use of OER could mitigate the cycle by helping students graduate more quickly and reduce student debt.

Perhaps not surprisingly, adjunct faculty, a group which tends to be more represented at two-year institutions, were more likely to require a commercial textbook and less likely to have input into the selection of their textbooks. They might rely on, or be required to adopt, the department's choice of textbooks. Or perhaps, coming from outside the department proper, (sometimes hired at the last moment) they are unaware of available options. At the same time, adjunct faculty were the most willing to adopt OER. Adjunct faculty, particularly at two-year colleges might be the first target group for librarians to assist finding and implementing OER.

The objective of the survey was to inform the Utah Academic Librarians Consortium regarding student and faculty perceptions of OER across institutions of higher education in the state. To this end, the survey served well. All institutions were represented. Nevertheless, while these results were consistent with other recent estimates, they might well be delimited to inferences about Utah institutions. Most students surveyed probably entered college from Utah K-12 school systems and were prepared somewhat similarly. As with other surveys, a limitation is typically associated with self-report data which might be subjectively skewed.

## Conclusion

Given academic librarians' typical mission to enhance learning and research, which certainly dovetails with social justice motives, they still cannot do it alone. Academic librarians must rely on faculty to access OER and implement open pedagogy in their courses. The results of the faculty survey were hopeful. Most faculty were willing to use OER, primarily to decrease financial burden on students. Half of those faculty would like help from librarians to find appropriate OER. It would seem that faculty and librarians' shared desire for quality education and social justice intersect well in the use of OER.

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## Appendix A

## Utah Student Survey

Q1 Utah Higher Education Survey Consent to be a Research Subject
Introduction: This survey is being conducted by Lane Fischer and the Open Education Group (http://openedgroup.org) on behalf of the Utah Academic Libraries Consortium. The survey is about textbook selection, costs and use.

Q2 What college/university are you attending?

- Brigham Young University
- Dixie State
- Salt Lake Community College
- Snow College
- Southern Utah University
- University of Utah
- Utah State University
- Utah State University-Eastern
- Utah Valley University
- Weber State
- Westminster

Q3 Approximately how much money do you spend per class on textbooks?
Q4 How do you pay for textbooks?

- Parents pay
- I pay with my own money
- Scholarships
- Loans

Q5 Have you ever not purchased a textbook for a class because of the cost of the textbook?

- Yes
- No

If Yes Is Selected, Then Skip To Do you think that not purchasing the ...If No Is Selected, Then Skip To Have you ever delayed purchasing a textbook...

Q6 Do you think that not purchasing the textbook influenced your grade in the course in a negative way?

- Yes
- No

If Yes Is Selected, Then Skip To Has not purchasing a textbook contrib...If No Is Selected, Then Skip To Have you ever delayed purchasing a textbook...

Q7 Has not purchasing a textbook contributed to your decision to drop a course?

- Yes
- No

Q8 Has not purchasing a textbook ever caused you to fail or withdraw from a course?

- Yes
- No

Q9 Have you ever delayed purchasing a textbook for a class because of the cost of the textbook?

- Yes
- No

If Yes Is Selected, Then Skip To Do you think that delaying purchasing...If No Is Selected, Then Skip To Have you ever registered for fewer courses...

Q10 Do you think that delaying purchasing the textbook influenced your grade in a negative way?

- Yes
- No

Q11 Have you ever registered for fewer courses because of textbooks costs?

- Yes
- No

Q12 Have you ever not registered for a specific section of a course because of textbook costs?

- Yes
- No

Q13 If you didn't have to pay for textbooks, how would you use the money you saved?
Q14 What additional thoughts would you like to share regarding textbook costs?

## Appendix B

## Utah Faculty Survey

Q1 Utah Higher Education Survey Consent to be a Research Subject
Introduction: This survey is being conducted by Lane Fischer and the Open Education Group (http://openedgroup.org) on behalf of the Utah Academic Libraries Consortium.

Q2 At what college/university do you teach?

- Brigham Young University
- Dixie State
- Salt Lake Community College
- Snow College
- Southern Utah University
- University of Utah
- Utah State University
- Utah State University-Eastern
- Utah Valley University
- Weber State
- Westminster

Q3 What is your academic appointment/rank?

- Professor
- Associate Professor
- Assistant Professor
- Adjunct Faculty

Q4 What is your age?
Q5 What courses do you typically teach? (e.g. introductory physics).
Q6 Do you require students to purchase a textbook or other commercially published resources for use in your classes?

- Yes
- In some, but not all, of my classes
- No

If No Is Selected, Then Skip To In the course(s) where you do not req...If In some, but not all, of my... Is Selected, Then Skip To In the course(s) where you do not req...If Yes Is Selected, Then Skip To Click to write the question text

Q7 In the course(s) where you do not require students to purchase textbooks or other commercially published materials, what do you use in place of these resources?
If In the course(s) where you ... Is Not Empty, Then Skip To How much do the substitute materials ...
Q8 How much do the substitute materials cost?
If How much do the substitute ... Is Not Empty, Then Skip To How did you find it?
Q9 How did you find the substitute materials?
If How did you find it? Is Not Empty, Then Skip To How do you choose textbooks for lower...
Q11 Do you know the list price of the textbook or other commercially published resources you require your students to purchase?

- Yes
- No

If Yes Is Selected, Then Skip To How much do they cost? If No Is Selected, Then Skip To How do you choose textbooks for lower...

Q12 Approximately how much do they cost?
Q10 How do you choose textbooks for lower-division courses? (catalogue numbers 100-200 or 1000-2000)

- personally select for individual classes (used only in my sections; other professors may choose another textbook
- departmental discussion and agreement (all faculty use same text for all sections)
- informal consensus (most professors use the same text but could require a different text)
- other (describe) $\qquad$

Q13 How do you choose textbooks for upper-division undergraduate courses? (catalogue numbers 300-400 or 3000-4000 -- not graduate courses)

- personally select for individual classes (used only in my sections; other professors may choose another textbook
- departmental discussion and agreement (all faculty use same text for all sections)
- informal consensus (most professors use the same text but could require a different text)
- other (describe)

Q15 The following questions ask you about "open textbooks." By "open textbooks" we mean digital textbooks that are (1) free of charge and (2) provide faculty with permission to make a wide range of changes, customizations, and improvements. Are you aware of any open textbooks that could be used to replace traditional textbooks or other commercially published resources in your course?

- Yes
- No

Q16 If a suitable open textbook could be identified for the course you teach, would you be willing to use it?

- Yes
- No

If Yes Is Selected, Then Skip To Why? If No Is Selected, Then Skip To Why not?
Q17 Why would you be willing to use an open textbook?
If Why? Is Not Empty, Then Skip To Would you like assistance in identify...
Q18 Why would you not be willing to use an open textbook?
If Why not? Is Not Empty, Then Skip To End of Survey
Q19 Would you like assistance in identifying a suitable open textbook?

- Yes
- No

If No Is Selected, Then Skip To End of Survey
Q20 Please provide your name and email address so that a campus librarian can assist you in identifying a suitable open textbook for your course(s).

