BREAKING THE STIGMA: FACULTY AND STUDENT PERCEPTIONS AND EXPERIENCES WITH OER

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Abstract

Over the last few years, Affordable Learning Georgia, an initiative of the University System of Georgia, has been releasing Textbook Transformation Grants to promote creation and adoption of open educational resources across USG institutions. Many of the faculty at Kennesaw State University, located just outside Atlanta, Georgia, have taken advantage of these grants to create, revise, remix, and reuse OER in their online, hybrid, and face-to-face courses in place of expensive textbooks. As of March 2018, 26 teams at KSU had been awarded Textbook Transformation Grants, and those projects have a combined estimated annual impact of $3.5 million saved among an estimated 13,467 students each year, and counting. This presentation and paper will outline the various open textbooks created, resources gathered, and classes transformed by ALG grants at KSU. It will also explore the student perceptions of these projects based on survey data; grade and withdrawal statistics in comparison to the same classes with expensive textbooks; and faculty perceptions and experiences with their created, reused, and remixed OER within their classes.

Introduction

The Student Dilemma

As the cost of formal higher education goes up each year in the United States, so does the cost of publisher textbooks. In fact, textbook prices have gone up by approximately 82% in the last decade. Students are paying an estimated $1,200 per year for textbooks on top of the costs of tuition, fees, and housing, which costs approximately $18,000 per year for in-state students at 4-year institutions (ALG 2016). At the same time, students can rarely rely on the availability of less expensive, used copies of the textbooks because the increasingly shorter update cycles of many publisher textbooks are "wreak[ing] havoc on alternative markets for traditional textbooks, discourag[ing] sharing of books among friends, and lead[ing] to new library purchases of the same titles every few years" (Clobridge 2015). Many students who would otherwise take 4-5 classes a semester are now being forced to take fewer classes to afford their textbooks, which extends their time in college and increases their debt upon graduation.

The Faculty Dilemma

Faculty are also limited by the textbook revision cycles. In cases where they would previously be able to allow students to purchase used copies of textbooks, they now must require students to always buy the most recent edition simply because page numbers and chapter order change from edition to edition, making it hard to guarantee all students are on the same page, metaphorically and literally. Faculty also have the on-going complication of needing to supplement publisher textbooks with online resources, articles, and other books, often using only parts of the textbooks, which lowers the value of purchasing them for students.

Faculty also have the added complication of copyright limitations when attempting to use resources outside the textbook. Fair Use, outlined in section 107 of the Copyright Act, is a legal way for people to use copyrighted works without proper permission in certain circumstances, most commonly applying to nonprofit education and noncommercial uses. The concept of Fair Use is a positive one for faculty; however it can be questionable due to its vague restrictions. According to the U.S. Copyright Office, Fair Use is determined on a case-by-case basis, and every case is different (2016). This vague definition can cause Fair Use, which should be a valuable resource to faculty, to become a burden that many will simply dismiss.

The Affordable Learning Georgia Solution

Since 2014, Affordable Learning Georgia, an initiative of the University System of Georgia, has been releasing Textbook Transformation Grants to promote creation and adoption of Open Educational Resources across USG institutions. As of March 2018, ALG's grant projects have saved students approximately $31.3 million among an estimated 219,343 students. These projects are where this paper and presentation will begin, but it will be specifically narrowed down to those completed at Kennesaw State University, located just outside Atlanta, Georgia, in the United States.

Many of the faculty at KSU have taken advantage of these grants to create, revise, remix, and reuse OER in their online, hybrid, and face-to-face courses in place of expensive textbooks. As of March 2018, 26 teams at KSU had been awarded textbook transformation grants, and those projects have a combined projected annual impact of about $3.5 million saved among an estimated 13,500 students each year, and counting (Reardon 2018).

In addition to the financial impact these OER transformations have had on students, they have also had primarily positive effects on student success, retention, and morale in the classroom. Similarly, faculty have seen positive effects on their ability and freedom to modify their courses and teaching practices, as well as positive effects on engagement in their classrooms and with the materials.

This presentation and paper will outline the various open textbooks created, resources gathered, and classes transformed by ALG grants at KSU. It will also explore the student perceptions of these projects based on survey data, grade and withdrawal statistics in comparison to the same classes with expensive textbooks, and faculty perceptions and experiences with their created, reused, and remixed OER within their classes.

Data Collection Methods

As of March 2018, 26 Affordable Learning Georgia Textbook Transformation Grants have been awarded to KSU. Of those, 13 have been completed. As a requirement of the ALG grants, each team has already distributed surveys to and gathered grade and withdrawal data on the students in their classes with the OER. Some teams have also gathered data on the classes before implementing the OER for comparison. For this research, student survey, grade, and withdrawal data was gathered from the 13 completed grants for analysis with intensions to report student perceptions, experiences, and success rates in classes with OER. As final reports are written by the faculty on each grant project, the information reported here varied from grant to grant and was compiled in a logical fashion. Links to completed final reports are provided in the references section of this paper.

A survey was also distributed to each of the faculty still currently employed at KSU and teaching with the resources from these projects to gather data on their perceptions of the resources and their experiences with creating, gathering, and teaching with them. This survey was distributed to 42 faculty from 20 of the grant teams—six teams were left out because they were too early in their projects to provide reliable answers to the survey questions.

Completed Projects

As of March 2018, 26 teams at Kennesaw State University have received Affordable Learning Georgia Textbook Transformation Grants. Of these, 13 of them have completed their projects, gathered student data, and reported their results to ALG. Among these completers, some teams have written their own open textbooks, some have adapted or modified an available open textbook, and some have compiled resources into a repository. Separated by grant round, this section will describe the projects that have resulted from the 13 completed ALG grants.

Round 1: Awarded Spring 2015

Round 1 of the ALG Textbook Transformation Grants includes three projects from Kennesaw State University and three projects from Southern Polytechnic State University. After Round 1 was awarded, KSU and SPSU went through a consolidation—they are now operating as one university under the KSU name. Therefore, the SPSU grants are included in this pool; the projects from them are being taught by now-KSU faculty and are affecting now-KSU students.

The projects at KSU from Round 1 included the following:

- a repository of research materials for a research methods nursing course
- a repository of resources for an introductory African and African Diaspora studies course
- a repository of resources on spirits, beers, and brews for a culinary sustainability and hospitality course
- a compilation of readings from two open calculus textbooks for a calculus course
- created materials and videos for an introductory web development course
- an adoption of the open textbook *Introductory Chemistry* by David W. Ball in an introductory chemistry course

Round 2: Awarded Summer 2015

There was one project in Round 2 from KSU—a group of faculty teaching four courses in computer science and information technology compiled repositories of readings for a database systems course, an advanced database course, a business intelligence course, and a database design and applications course.

Round 3: Awarded Summer 2015

The projects at KSU from Round 3 included the following:

- a repository of resources for an introductory Asian cultures course
- a remixed open textbook for technical communication and workplace writing courses
- a repository of resources for a first-year seminar course
- an adoption of the open textbook *OpenStax Sociology 2e* in an introductory sociology course

Round 4: Awarded Fall 2014

There was one project in Round 4 from KSU—a group of faculty teaching three courses in psychology compiled repositories of resources for a science of psychology course, a psychology research methods and statistics course, and an experimental design and analysis course.

Round 8: Awarded Spring 2017

There was one project in Round 8 from KSU—a group of faculty teaching four courses in computer science and information technology compiled repositories of resources for an ethical hacking for effective defense course; a wireless security course; an ethical hacking: network security and penetration testing course; and an infrastructure defense course.

Student Data and Analysis

As of March 2018, 26 faculty teams at KSU had been awarded textbook transformation grants, and those projects have a combined projected annual impact of about $3.5 million saved among an estimated 13,500 students each year, and counting (Reardon 2018). These students are spread across the disciplines and across courses within those disciplines. The data for this analysis was compiled by analyzing final reports from the 13 completed grants, each created by the faculty on those grants—therefore, the information gathered varies from grant to grant and has been compiled in a logical and summarized fashion. Five primary categories are covered in this section: appreciation of the "free" nature of OER, perception of content quality of OER, perception and preference with regards to the digital nature of OER, drop/fail/withdrawal rates in courses with OER compared to courses with traditional textbooks, and grade averages in courses with OER compared to courses with traditional textbooks.

Of the completed textbook transformation grants, all 13 of them reported that students appreciated that the textbook and/or materials used in the course were free—which was an expected outcome, given the high cost of higher education.

It is clear from the reports, however, that price was not the only benefit to students in the move to OER. In fact, 9 out of the 13 grant teams found that students preferred the digital nature of the materials, and the other four found that students simply wanted the option for a print copy, either by purchasing a low-cost print option or by printing resources out themselves. These projects also reported, however, that students still preferred the digital versions of the OER to an expensive textbook. Many students made comments regarding the digital modality of the textbook and/or materials. One student in an information technology course remarked that "[S]aving money on a textbook was fantastic and a welcomed addition. It's also preferred to have access to any learning materials online and available to download. This class and professor got it right" (Li 2016). Similarly, a student in another information technology course stated that "… [e]ven in classes that do require textbooks, I never buy them because there are so many resources online. It's nice to have sources listed within the course to use in conjunction with what I find on my own" (Li 2017). Another student in a sociology course felt that "… [t]he price was perfect – and there were several ways to approach the material: either on the go, in textbook form, and even in both full-book or single-chapter PDF form" (Farr 2016), indicating that the *OpenStax* approach to open textbooks is both satisfying to students and comprehensive in modality of offerings.

While many faculty disregard OER because they are not always peer reviewed, it is even clearer from the final grant reports that students found minimal issue with the quality of resources provided to them in place of a traditional textbook. In fact, 12 out of the 13 grant teams reported that students found the resources to be high quality and of direct relevance to the courses they were taking. One student in a freshman seminar course commented, "[t]his course was very effective in teaching us about global issues through online materials. By using videos and websites instead of a textbook, it makes learning and engaging in class discussion much better" (Usher 2016), making it clear that in this course, the OER was not only of high quality from the student perspective, but it also enhanced in-class engagement and discussion. One project found that the OER provided in place of a textbook was not satisfactory concerning quality—specifically, while students appreciated that the materials were free, they did not want to sacrifice learning due to a lack of quality resources (Payne 2015). This is a clear indicator that OER are most effective when strategically adopted with quality in mind.

Unlike the qualitative measures previously explained, quantitative measures of student success were a little wider spread. Drop/Fail/Withdrawal rates, also known as DFW rates, were usually either neutral or positive. Bearing in mind that one of the completed grant projects did not report on their DFW rates, the 12 that did proved encouraging for OER. Five of the completed projects reported improved rates (fewer students dropping, failing, or withdrawing from the course), five more reported neutral or similar rates as previous semesters, and just two projects reported higher (negative) rates. It should also be noted here that many of the projects teach in all three common modalities—online, in-person, and hybrid/blended. Traditionally, online courses have higher DFW rates than hybrid and in-person courses.

Similarly, grade averages in the courses for these projects were usually either neutral or positive. While two of the teams did not report on the grade averages from their projects, the 11 that did were also fairly encouraging for OER. Four of the completed projects reported improved grade averages, six reported neutral or similar grade averages as previous semesters, and just one project reported lower grade averages. Overall, these are good results.
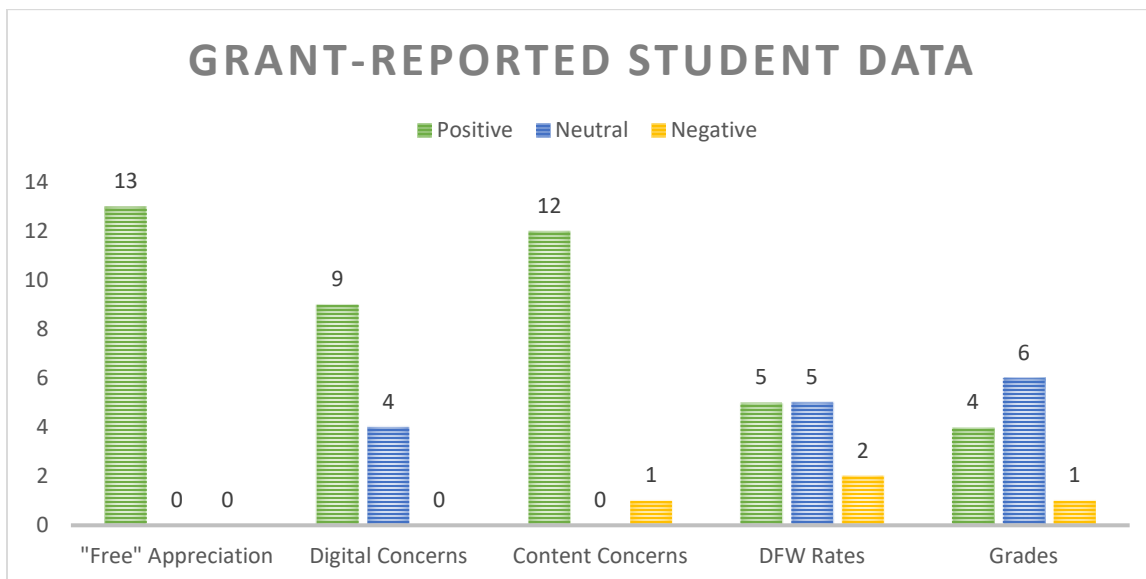
Faculty Data and Analysis

As of March 2018, 60 faculty at KSU have been awarded Affordable Learning Georgia Textbook Transformation Grants. Of those 60, 42 of them had at least gone through the process of creating and compiling their open educational resources and were still employed at Kennesaw State University at the time this survey was conducted. All 42 of these faculty were invited to complete a survey on their experiences working with and teaching with OER, and of those 42, 19 of them completed the survey. The following data was compiled from that survey.

There were four types of project that faculty had worked on. Two faculty said they wrote a new open online textbook, and six said they compiled existing open educational resources into a repository. Two more said they re-wrote or edited an existing open online textbook, and one said they adopted an existing open online textbook. Eight faculty said they had worked with two or more of those options.


TYPES OF PROJECTS

- Wrote a new open online textbook
- Compiled existing OER into a repository
- Re-wrote or edited an existing open online textbook
- Adopted an existing open online textbook
- Two or more
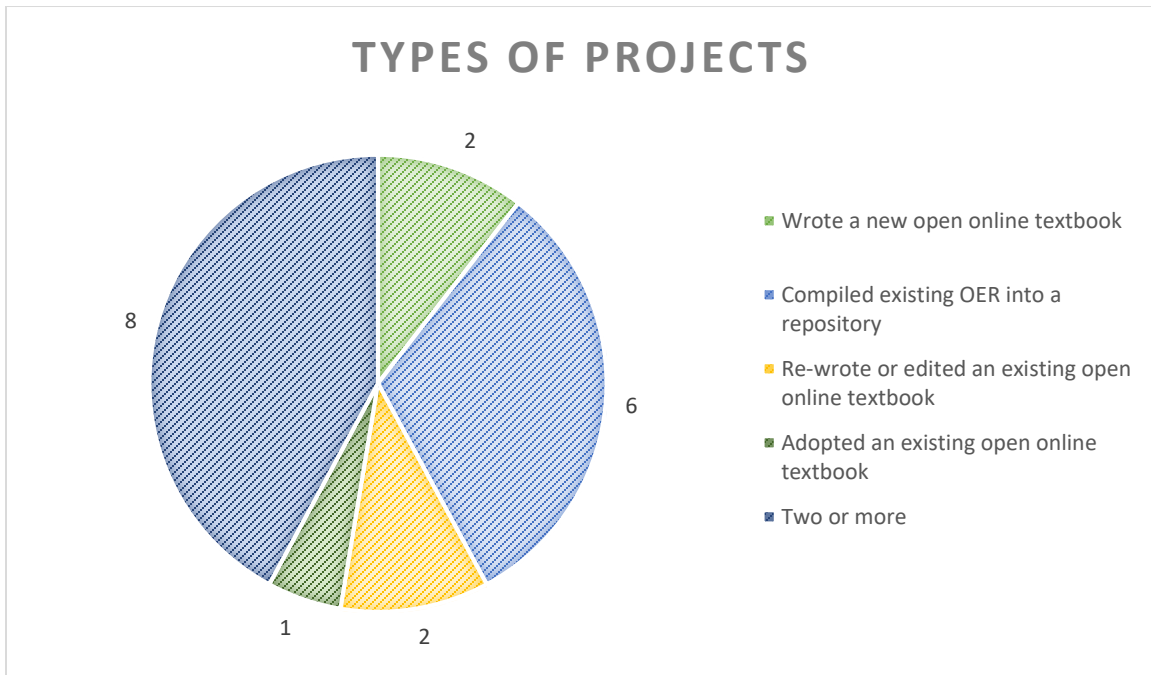
When asked about the effort required to complete these projects, faculty were asked whether the amount of time it took was expected, whether the amount of work it took was expected, and whether the project was an overall good experience. Interestingly, all faculty who answered these questions indicated that the projects were as time consuming as expected or more and as much work as expected or more. Also, 8 out of 19 indicated that it was a great experience and they would definitely do it again. Eight indicated that it was a good experience, and they might do it again. Only three indicated that it was an okay experience, but they probably would not do it again. These results indicate that while faculty did not expect the amount of effort that these projects would take, they felt that the amount of effort was worth the outcome.
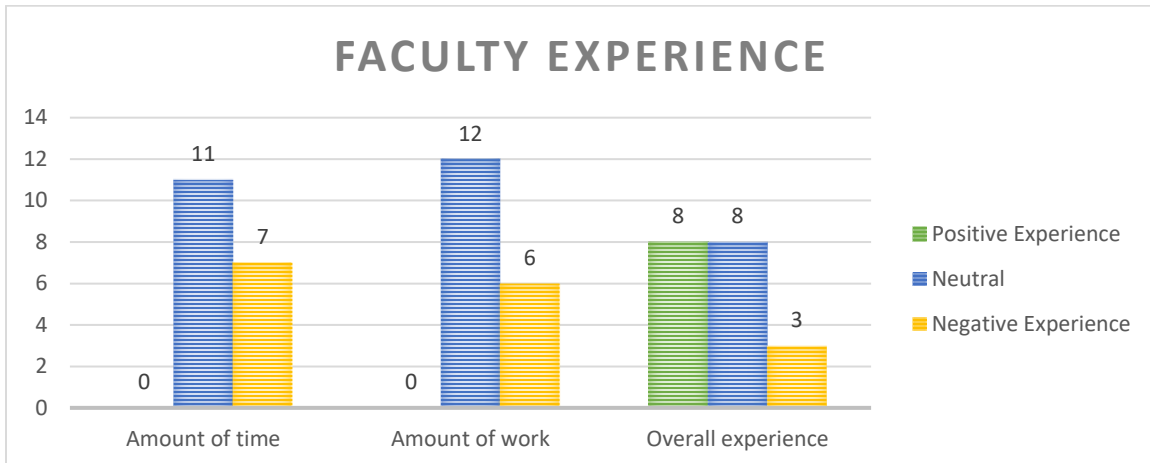

Faculty were also asked questions about their experiences with specific aspects of their projects including their understanding of copyright, their ability to find quality resources, and their need to supplement with low-cost (less than $35) resources. Regarding copyright, 12 faculty indicated that copyright options and restrictions for OER were about as complicated as they expected. Two faculty indicated that they were more complicated than expected, and two more indicated that they were less complicated than expected. Interestingly, three faculty indicated that they did not pay attention to copyright options and restrictions. This data indicates that while the majority of faculty in this group were fairly knowledgeable about copyright restrictions and options, there is definitely still room for professional development.
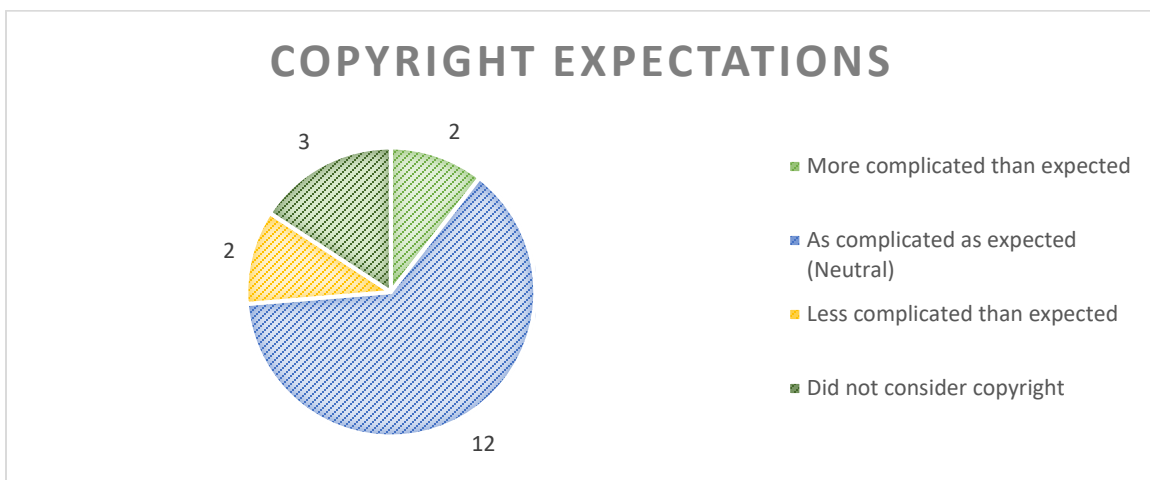
Regarding their ability to compile or create quality content related to their courses, 12 faculty indicated that they had no problems finding or creating content directly related to their courses without resulting in unused content or chapters, and 6 indicated they had some trouble, but were still able to do so. There were no indications that faculty had significant struggles finding relevant content for their courses. Similarly, 14 faculty indicated that they did not have to supplement their OER with low-cost ($35 or less) materials, and only five indicated that they did.
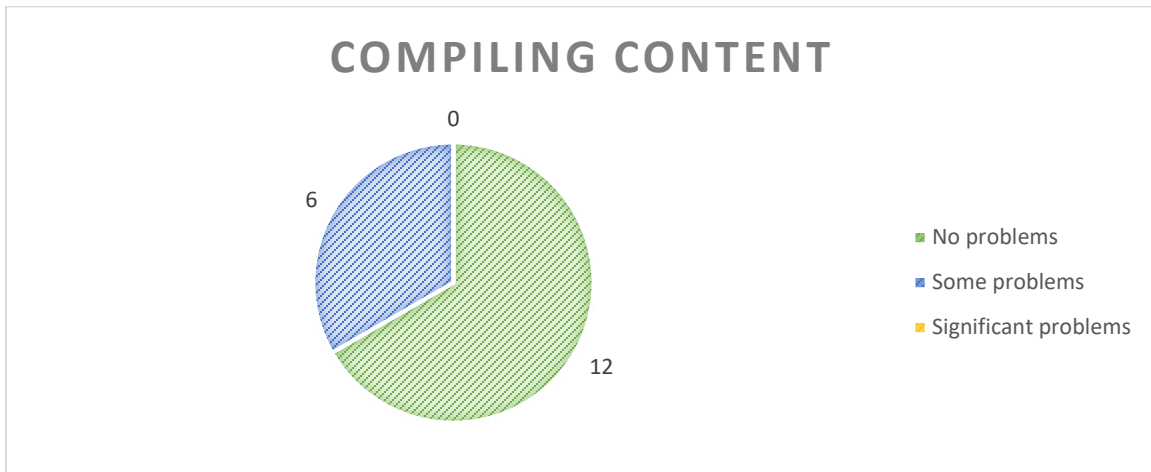

When asked about their teaching experiences, faculty had some interesting and varied results. Regarding the amount of time they spend teaching, six faculty indicated that they actually spend more time organizing for and teaching class now than they did with a publisher textbook, eight indicated that they spend the same amount of time, and four indicated that they spend less time. This data is significant and interesting when compared to the previously stated data regarding faculty experience with their projects. Even though most faculty spend the same amount or more time organizing for or teaching class, they still indicated that the experience was good, and they would probably do it again.
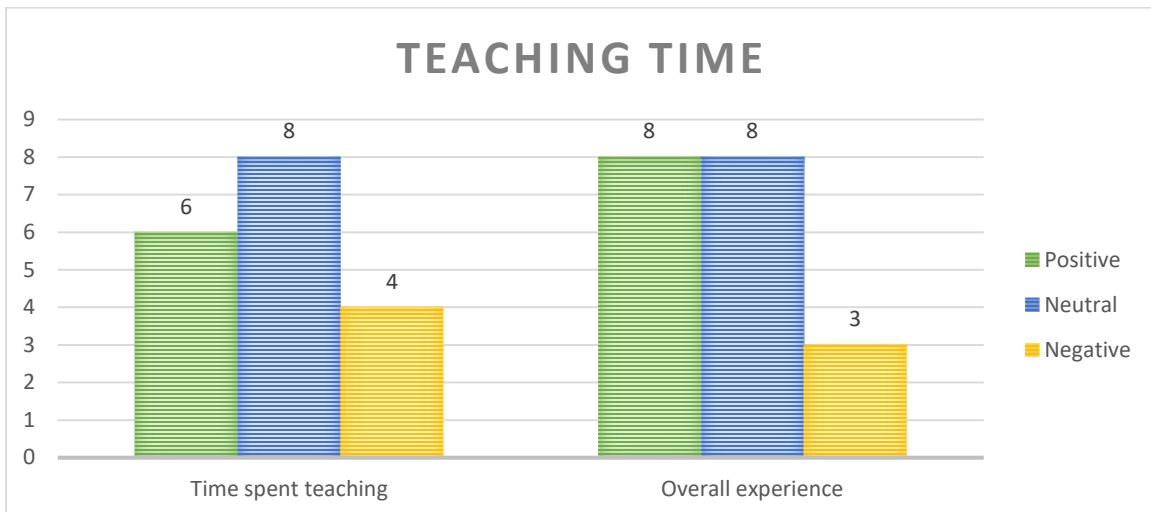
When asked about their freedom to change their course around, the results were near expected. Nine faculty indicated that they have more freedom to change their courses around than they did with the publisher textbooks, eight indicated that they have the same amount of freedom, and only one indicated that they have less freedom now than they did with the publisher textbook. These were expected but encouraging results.

FREEDOM TO CHANGE COURSE

- More freedom
- Same freedom (neutral)
- Less freedom
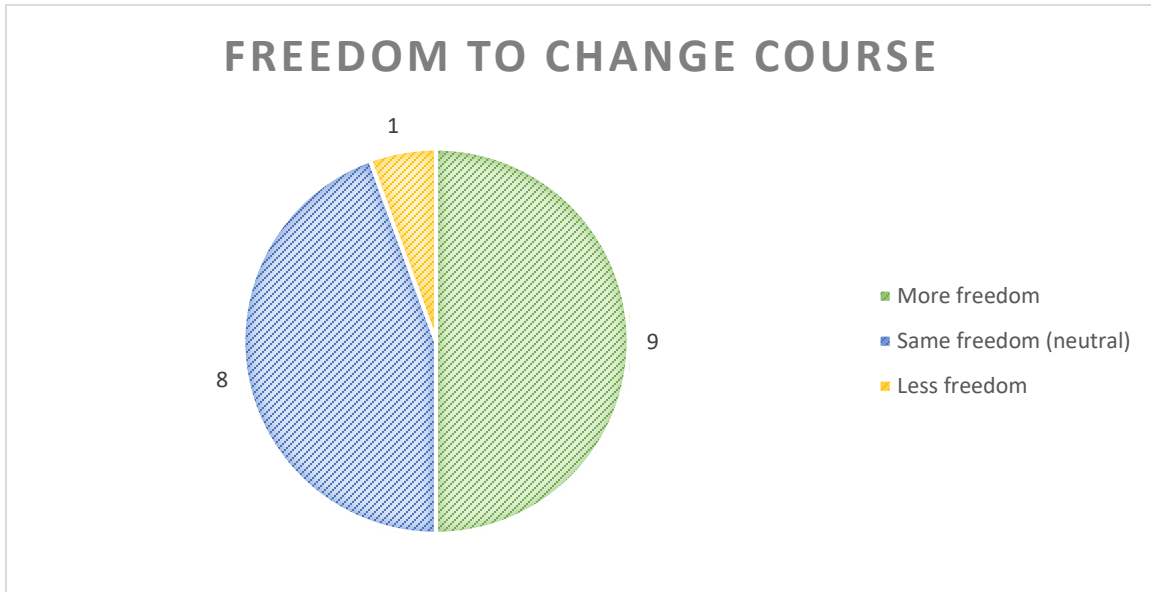
When asked about the quality of student work, only two faculty indicated that their students are producing higher quality work using the OER than they did with the publisher textbook. However, 13 faculty indicated that their students are producing the same quality of work as with the publisher textbook, and no faculty had indications that their students were producing lower quality work.

QUALITY OF STUDENT WORK

- Higher Quality
- Same Quality
- Lower Quality
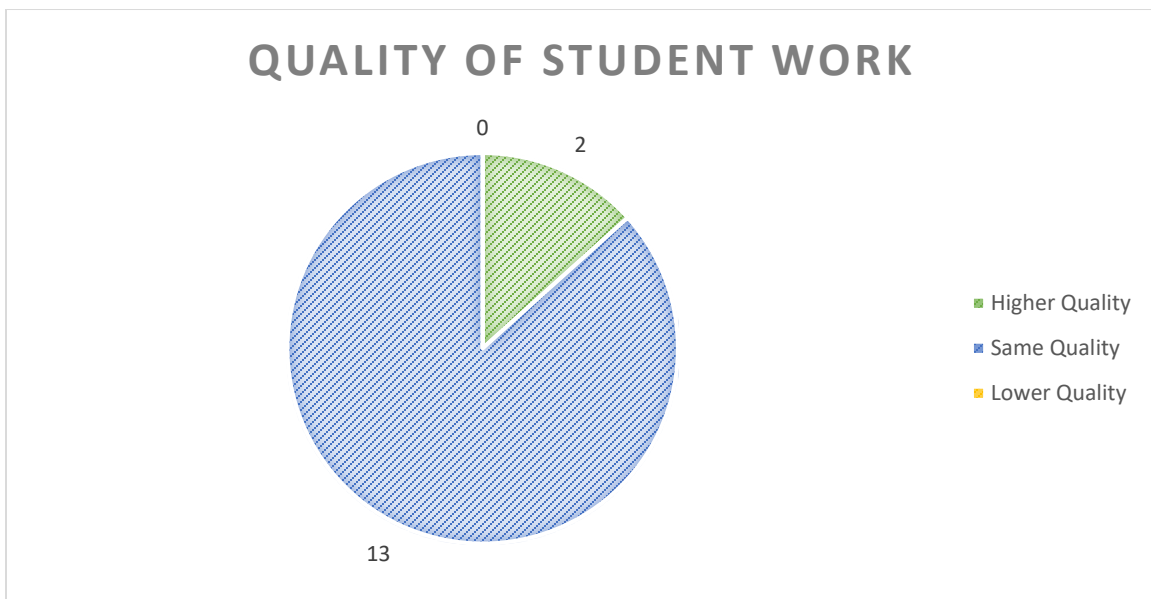
While the quality of student work was similar to that of courses with publisher textbooks, the engagement levels of these courses were slightly more exciting. Six faculty indicated that their students are more engaged with the course content using the OER than they were with publisher textbook, seven indicated that the engagement level was the same, and only one faculty member indicated that the engagement level was lower. Comparing this data with that of the student data analysis, it is a fair assumption that engagement as well as classroom morale are more likely to be higher in a course with OER than they are to be lower.

STUDENT ENGAGEMENT

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6

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- More Engagement
- Same Engagement
- Less Engagement
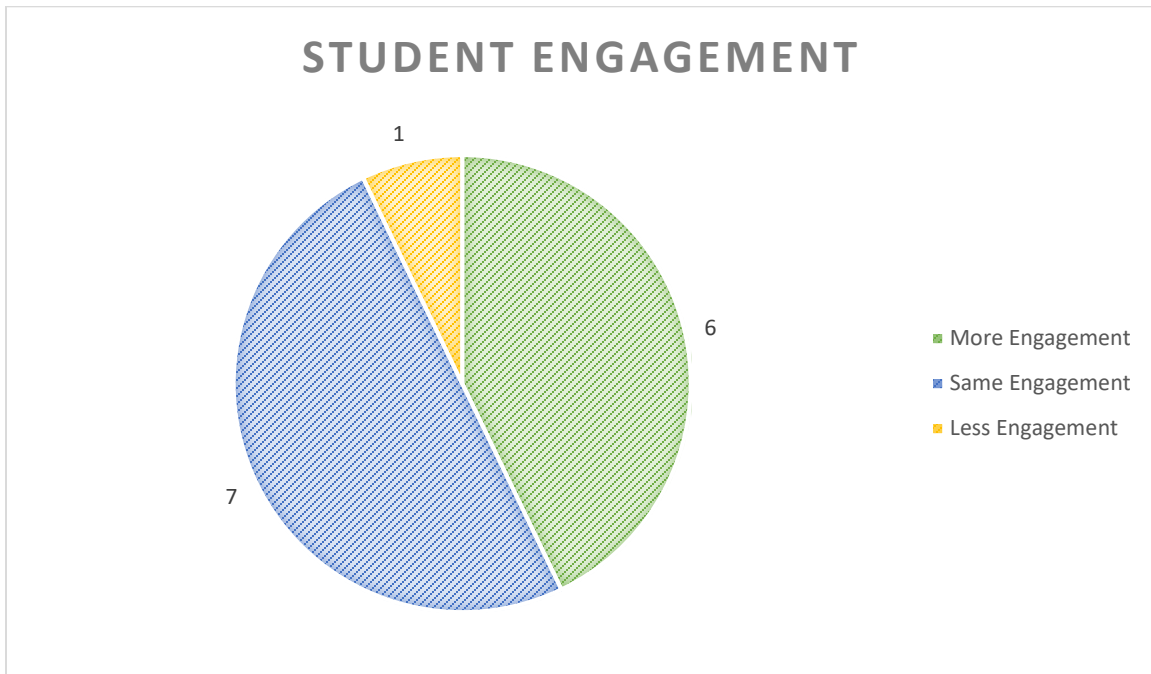
Conclusion

Over the last few years, Affordable Learning Georgia, an initiative of the University System of Georgia, has been releasing Textbook Transformation Grants to promote creation and adoption of Open Educational Resources across USG institutions. Many of the faculty at Kennesaw State University, located just outside Atlanta, Georgia, have taken advantage of these grants to create, revise, remix, and reuse OER in their online, hybrid, and face-to-face courses in place of expensive textbooks. As of March 2018, 26 teams at KSU had been awarded Textbook Transformation Grants, and those projects have a combined estimated annual impact of $3.5 million saved among an estimated 13,467 students each year, and counting. Based on the data and analyses conducted and explained in this paper, several significant deductions can be made. It should be noted that this research is limited, and that it is only the start of what should be a much larger study. However, there are several good starting points identified in this paper.

Regarding student perceptions, students want and appreciate the elimination of expensive textbooks in their college courses. While this is not a surprising revelation, it is significant. It is also clear that while some students prefer to have a hard copy in front of them rather than a digital copy of materials, they still prefer free or low-cost digital options to expensive paper options--meaning that in general, students care more about cost than modality. It is also clear that at least for the subjects covered in the projects from this study, high-quality open educational resources were available and fairly easy to find. In the case of the one project that was not able to find high quality resources, it can also be deduced that students care about the quality of their resources and that while they prefer free or low-cost options, they would rather pay for a textbook than sacrifice their success due to low-quality materials. This is a clear indicator that OER should be strategically adopted with quality in mind. Echoing other studies, it is also clear from the DFW rates and grade averages that with high-quality resources, students generally have the same or better success rates in courses with OER than in courses with expensive textbooks.

With regards to faculty experiences, it is clear from the data that compiling, creating, adopting, and teaching with OER is, in general, at least as time consuming and as much work (sometimes more) as faculty expect it to be. However, while the time spent and work is high, faculty still felt that the amount of work and time spent was worth it, and they would either consider doing it again or they definitely would do it again—indicating that they felt the amount of work was worth the outcome. It is also clear from the data on copyright that while most faculty in this group were fairly knowledgeable about copyright, some faculty would benefit from some professional development with regards to OER and copyright restrictions. When considering teaching with their OER, it is clear that faculty feel they have at least as much if not more freedom to change their course around when using OER—which was an expected result, considering the closed nature of publisher textbooks. What might be most exciting to faculty, however, is that all faculty in this study felt that their students were producing equal or better work and are equally or more engaged in their courses with OER than they were in courses with publisher textbooks. This not only speaks to the quality of resources available, but also to the significance textbook prices have on classroom success, engagement, and morale.

Overall, there is a strong argument that the OER initiative at KSU has been, and will continue to be a success.

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