Final Report Summary

Textbook Transformation Grants Rounds Three, Four, and Five

Background

The Affordable Learning Georgia (ALG) Textbook Transformation Grants are intended to pilot different approaches in University System of Georgia (USG) courses for textbook transformation including adoption, adaptation, and creation of open educational resources (OER) and/or identification and adoption of materials already available through GALILEO and USG libraries. The grants support release time, materials, instructional design, library research and materials identification, and professional development needed for faculty to transform their use of learning materials.

This report summarizes the findings of all grantees in grant rounds starting in Academic Year 2015-2016. Three rounds (rounds Three, Four, and Five) were awarded in AY 2015-2016, resulting in 51 projects from teams of USG faculty and staff at 21 institutions. One project is delaying data collection until Fall 2017 in order to have a substantial sample size; therefore, the number of reporting projects on quantitative measures is 50.

All grant projects, along with a collection of their proposal, syllabi, and Final Reports, are included in the Lists of Rounds Three, Four, and Five Grantees:
Round Three Grantees
Round Four Grantees
Round Five Grantees

As required for compliance, all project teams submitted final reports at the end of their final semester, where all implemented materials were taught within the course. Final reports included quotes from students and professors, data on student performance, drop/fail/withdraw rates, and measures of student perceptions of course materials. Including savings estimates, this data meets all four requirements of the Open Education Group's standard COUP Framework, measuring cost, outcomes, usage, and perceptions in each implementation.

Highlights

Students affected by the Textbook Transformation Grants were mostly positive about the savings and access they provide, while instructors found that their projects were important experiences in informing their instructional knowledge and methods. Fifty out of 51 teams plan on using and/or improving the same open, no-cost, and low-cost materials implemented in the project. Teams reported largely positive or neutral comparative student learning outcomes and course-level retention data compared to previous semesters, control groups, and/or instructor and departmental averages with a commercial textbook, all while saving students $3,800,512 total just within the time of the project, and mostly within only the final semester of instruction.

This summary report addresses the following topics:

Analysis Challenges and Report Changes

Variation occurred with the number of semesters of data used and whether averages calculated were department-wide or instructor-specific. Confounding factors when measuring learning outcomes and retention efficacy included changes and cuts in faculty at institutions, differences in student composition between semesters, enrollment shifts, and organizational complications due to institutional consolidations or departmental issues.

Three uniform questions about student perceptions, student learning outcomes, and drop/fail/withdraw rates were added to the Final Report requirements, starting in Round Two and continuing through current rounds of grants, as supplementary to the summary of all research conducted. The interpretation of qualitative and quantitative findings, evaluations of statistical significance, and analysis of confounding factors are in the hands of the faculty teams conducting the research.

Grantee Experiences

Rounds Three, Four, and Five project teams had nearly unanimous positive experiences in implementation processes and teaching with affordable materials. Fifty out of 51 reporting teams are planning to use affordable materials in the future, as indicated in the Sustainability Plan or Future Plans sections of the final reports. These teams have planned to use and/or revise the same resources implemented within the project.

These findings are an indicator that grants to support OER and alternative low-cost material adoption activities are valuable tools in building sustainable low-cost learning materials practices among faculty.

As with previous rounds, Rounds Three, Four, and Five teams saw the grant project experience as enhancing their teaching and learning skills and pedagogy. Project Leads often remarked that the imperative to create new ancillary materials and/or open textbooks enhanced their teaching and learning experience.

These experiences have led to the current or future production of scholarship around implementing affordable materials in the classroom. Thirty-three teams have already conducted or will conduct scholarly work, such as writing articles and presenting at state, national, and international conferences, sharing their experiences within the grant project with colleagues in their fields of expertise.

"The transformation impact on instruction was very positive, in that it allowed the instructors the opportunity to develop supplemental materials accompanying the textbook (chapter outlines, study guides, and power-point presentations), which facilitated and benefited the teaching and learning experience." –Dr. Hassan El-Najjar, Dalton State College

"The process of tailor-making content material for the course improved the pedagogical and integrity of the course. When we selected each element for the content, the team members really had to ask if it added value to the learning experience." -Dr. Bridget Melton, Georgia Southern University
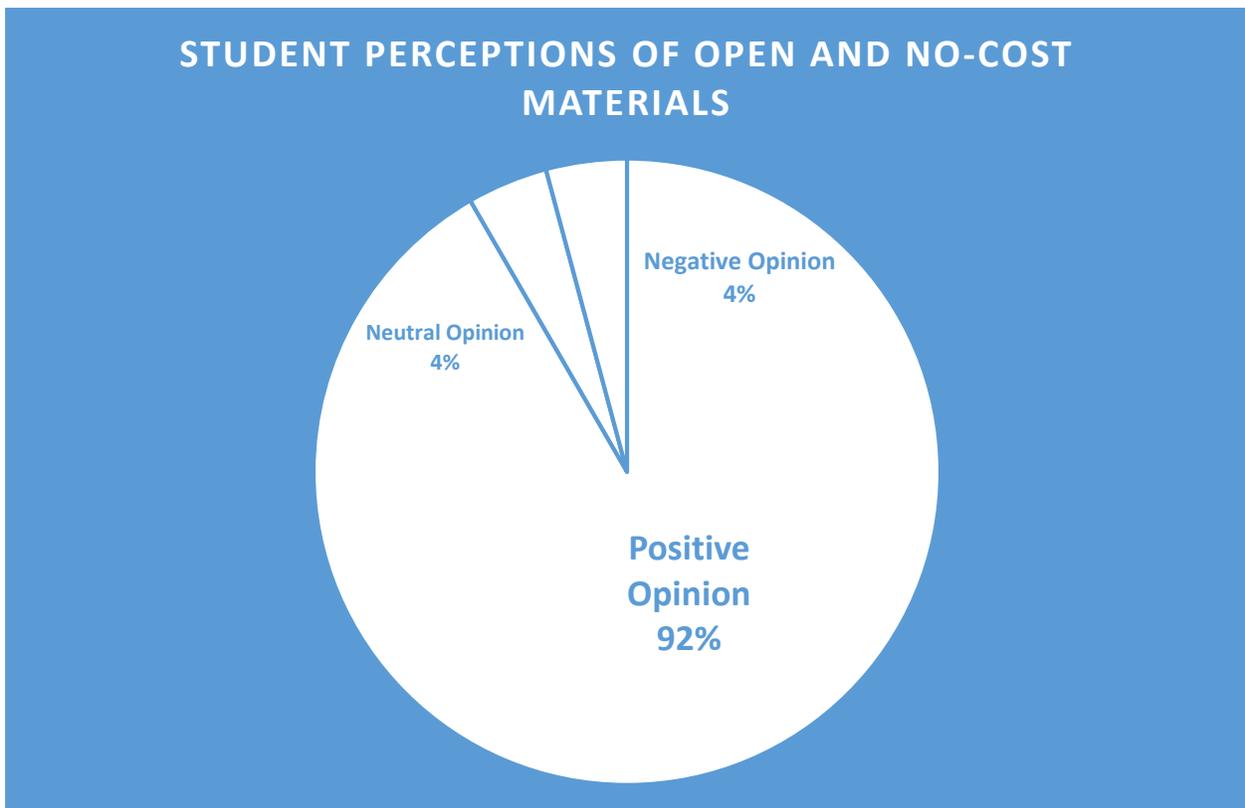
Savings

During Round Two projects, 86 grant-supported courses were taught to 18,408 students and saved these students an estimated $3,800,512 in student textbook costs in relation to their commercial equivalent, the purchase of a new commercial textbook as previously required within the course.

The student savings return on the grant investment is high even within the short durations of the projects. With nearly all teams indicating that these materials or other affordable materials will be used in future semesters, a high sustainability of these student savings is anticipated over at least the next academic year, leading to an even higher return on this one-time award as time passes.

Student Satisfaction

The final reports also provided diverse qualitative and quantitative student satisfaction measures and testimonials, including open-ended student survey responses, scored student evaluation responses, and quotes from students.

Teams reported that students were highly satisfied with the affordability and ease of access with open textbooks and affordable materials, with 44 out of 48 teams (92%) reporting students having an overall positive perception of the new resources in comparison to a traditional commercial textbook.

STUDENT PERCEPTIONS OF OPEN AND NO-COST MATERIALS

Negative Opinion
4%

Neutral Opinion
4%

**Positive
Opinion
92%**

Negative student responses primarily involved the lack of a print option for the open textbook, and higher satisfaction may be achievable with training on how to annotate and highlight digital OER.

"Overall I found it far more valuable to have a variety of materials providing course content rather than an overpriced textbook, and the variety kept interest better as well. There were games which were interesting and illustrated the subject matter, and I would definitely take a class with this sort of material use again." -Student of Dr. Kathleen Barrett, University of West Georgia

Student Learning Outcomes

Twenty-five of the 49 reporting project teams on student outcomes (51%) reported positive significant changes to student learning outcomes in comparison to control groups, previous semesters, faculty averages, and/or departmental averages, while 20 teams (41%) saw no significant changes to outcomes. This is a combined 92% of Rounds Three, Four, and Five teams who experienced either a significantly positive or neutral effect on learning outcomes while using affordable materials, matching the exact percentage of positive or neutral outcomes experienced by teams in the previous Round Two.

STUDENT LEARNING OUTCOMES WITH MATERIALS IMPLEMENTED

Negative Outcomes 8%

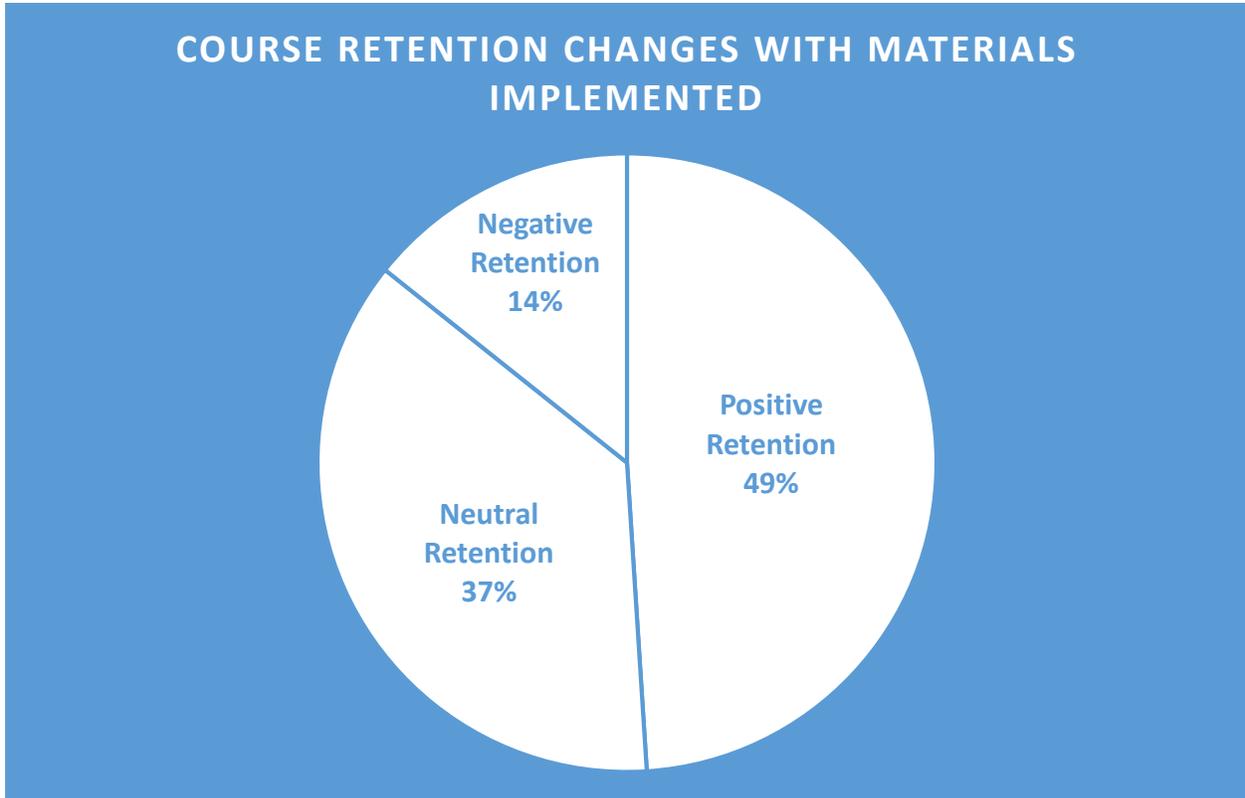Neutral Outcomes 41%

Positive Outcomes 51%
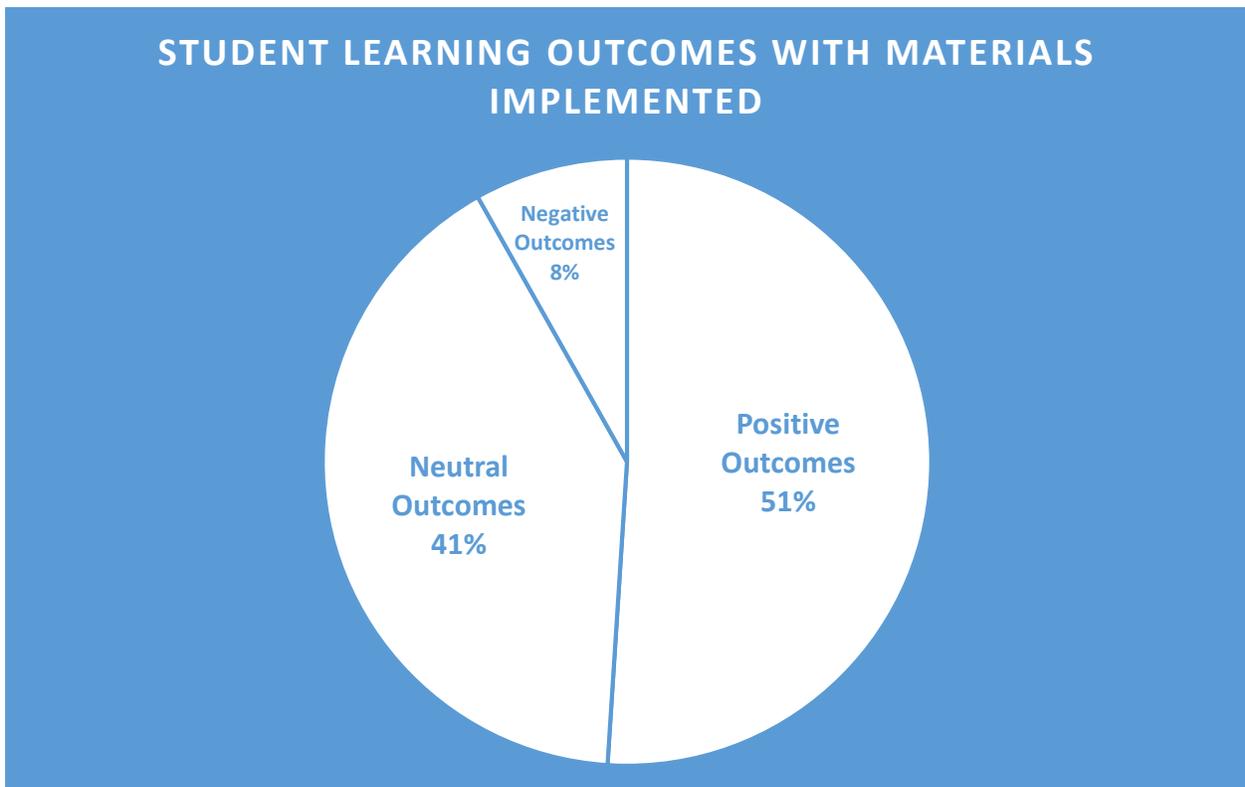
Comparative data on student performance varied in each group, and some projects indicated confounding factors that possibly negated the overall impact of new materials. Repeat student results are not always one-to-one normable with students in the first semester of implementation of the new materials, and some teams experienced a change in the type of students taught within the course. Teams also reported changes in personnel for reasons including budget cuts, turnover, and the consolidations of institutions.

"The new no-cost online textbooks also allowed us to update the material and include very current authentic cultural sources (such as videos or songs), which kept the students more informed and engaged. Overall, the improved and easier access to the required and recommended materials allowed the students to feel more confident and improve their class performance."
-Dr. Valerie Hastings, University of North Georgia

Drop/Fail/Withdraw (DFW) Delta Rates

Along with learning outcomes, a standard measure of student retention and progression is the combined rate of course drops, failures, and withdrawals, or DFW delta rates. 49% reported positive significant changes, 37% reported no changes, and 14% reported negative changes.

COURSE RETENTION CHANGES WITH MATERIALS IMPLEMENTED

Negative Retention 14%

Positive Retention 49%

Neutral Retention 37%

While DFW rates are a standard measure of student retention, the difference between a positive or negative outcome can vary depending on the course and the project. A course with consistently low DFW rates with a small negative effect during implementation may not reflect a large impact on the course – possibly one or two students less within the course, as opposed to another course with high DFW rates significantly dropping or vice versa. Project teams sometimes reported drastic changes in student composition for their courses due to course restructuring, which also affected DFW rates.

"We found [an] increase in DFW rates startling. Upon deeper investigation, we found that these courses had a higher than normal incidence of students who attended the first week of class (thus meeting federal student aid requirements) but who did not return to class after this. This was particularly an issue in the online section. Additionally, student readiness and lack of work-life-school balance have been discussed as factors impacting this finding. In the second semester following the textbook transformation, DFW rates in both online and face-to-face sections stabilized."
-Dr. Christina Wolfe, Georgia Highlands College

Lessons Learned

Each Final Report contains a section within the narrative document for Lessons Learned. From the reports, Affordable Learning Georgia has reached the following overall conclusions when implementing open, no-cost, or low-cost materials to replace a commercial textbook in a course:

- **Faculty Attrition Is the Largest Disruptor of OER Projects:** One team's Project Lead was cut from the institution in a round of budget-cut-related layoffs, while another team experienced the sudden death of their Project Lead and primary textbook author in the middle of the project. These abrupt losses in personnel, along with various changes in personnel due to consolidations and departmental restructuring, caused teams to be suddenly overloaded with work and new roles in the middle of a grant project. Within administrative roles, ensuring the success of an OER project must include doing everything possible to ensure the stability of the project team's personnel throughout creation and implementation processes.

- **Inform Students How to Use Open Materials:** Despite anecdotal assumptions about current students as "digital natives" when it comes to educational technologies, students are not aware of all the techniques available to them to maximize their experience with OER. The adoption of OER is a relatively new practice, and students may only have a prior background in working with expensive commercial materials within their closed platforms or within print texts. Ensuring that all students have the knowledge and ability to annotate and highlight digital materials is essential to achieving parity in effective student use between digital and print resources. Students must also be well-informed of any options for print materials, such as the print versions of OpenStax textbooks.

- **Project Management Helps with Consistency in Creating Materials:** Some teams reported that their newly-created materials for the end of the semester were not as robust as the created materials for the beginning, due to teams starting the beginning materials first. Having a designated project manager with more efficient ways to create, review, and revise all materials would assist these teams greatly in maintaining consistency in quality and features throughout a set of course materials.

- **Address Online Homework System Transformations Immediately:** A few teams were transforming their courses not only from a traditional textbook to an open textbook, but also from an expensive online homework platform to either a completely manual system or a low-cost online platform. Teams which did not fully evaluate these homework systems either during the application process or immediately following it had issues adapting to differences in these systems during the final semester of implementation. Addressing these issues as early as possible in the process will assist with making the transformation successful.

"I think that one of the major lessons learned is that students are still not entirely comfortable with the idea of not having a "hard copy" of a textbook in a course."
-Dr. Matthew Hipps, Dalton State College

Conclusions

The final reports indicate many benefits to participating in and being affected by a Textbook Transformation Grants project:

- Students continue to be largely positive about the implementation of free and open materials in the classroom.

- Through the transformation process, instructors are finding that they are not only transforming the materials, but also their instructional knowledge, methods, and pedagogy.

- Students prefer the experience of using open and curated materials, but they need to further understand *how* to use these materials before the course starts, as many of them may not be accustomed to using an open textbook or other OER.

- Instructors continue to have opportunities to share their transformation experiences and findings through conference presentations, panels, and articles.

- Textbook Transformation Grants projects in these three rounds once again resulted in mostly positive or comparable performance and retention data compared to previous semesters, control groups, and/or instructor and departmental averages, all while saving students $3,800,512 in textbook costs during the project.

- Ensuring that personnel on a project team stay within the team for the duration of the project is essential to a successful OER implementation.

"The transformation experience was exhilarating and inspiring as we achieved our dream of creating a resource for students that was under our control and reflected the way we wanted to teach."
-Dr. Tamara Powell, Kennesaw State University