Affordable Learning Georgia Affordable Materials Grants  
Transformation Grants Final Report

*(or Textbook Transformation Grants, if R17 or earlier)*

Once you have completed this template, to submit your Final Report, go to the [Final Report submission](https://survey.usg.edu/s3/ALG-Final-Report-Submission-Form) form.

The final report submission form allows you to submit the following:

* This completed narrative document (required)
* Syllabus or syllabi (required)

*If multiple files, compress into one .zip folder*

* Qualitative/Quantitative Measures data files (optional, as needed)

*If multiple files, compress into one .zip folder*

* Photo of your team or a class of your students for future ALG promotions (optional)
* Invoice for the second half of the grant’s award amount (optional)

Follow the instructions on the webpage for uploading your documents. Based on receipt of this report, ALG will process the final payment for your grant. ALG will follow up in the future with post-project grantee surveys and may also request your participation in a publication, presentation, or other event.

# General Information

**Date: 1/18/2022**

**Grant Round: 18**

**Grant Number: 559**

**Institution Name(s): East Georgia State College**

**Project Lead: Martiana F. Sega**

**Team Members (Name, Title, Department, Institutions if different, and email address for each):**

**Dr. Martiana Sega, Associate Professor of Biology,** [**msega@ega.edu**](mailto:msega@ega.edu)

**Dr. Jimmy Wedincamp, Professor of Biology,** [**wedincamp@ega.edu**](mailto:wedincamp@ega.edu)

**Course Name(s) and Course Numbers: Introductory Biology I - BIOL 1103**

**Semester Project Began: Fall 2020**

**Final Semester of Implementation: Fall 2021**

**Total Number of Students Affected During Project: 69**

# Narrative

* 1. *Describe the key outcomes, whether positive, negative, or interesting, of your project.*
  + Overall, we believe students' experience improved when it comes to having all the required materials on one platform (D2L). There were almost no complaints related to registration, due dates, attempts as in the case of using a third-party platform.
  + In the face-to-face class, the results on the exam questions were promising but will have to be analyzed in the future once we collect more data for the experimental group.
  + In the online class, the exam results are better in the control group but we will have to continue to acquire more data.
  + The impact on instruction is in streamlining the process of teaching, which allowed us to teach one more chapter compared to other semesters (chapter 9); we are working on being able to cover chapter 10 in the future.
  + In addition, I am happy that I was able to move some of my simplified drawings or tables, from the board, onto the slides so that all students will have them.
  1. *Describe lessons learned, including any things you would do differently next time.* 
     + For the future we would like to analyze, if possible, the frequency of using the free textbook chapters even though that might be challenging due to the textbook availability in different formats.
  2. *Describe any materials you created or revised/remixed that will be shared with the public. Include the* [*open license your materials will be shared under*](https://creativecommons.org/share-your-work/)*—for most materials, this will be an Attribution 4.0 License (CC BY) as required in the Grants Request for Proposals.* 
     + A syllabus including links to the free online chapters from Openstax.com
     + A course map including learning objectives for each chapter, a list of resources used (textbook, learning activities, videos, ppt slides), type of assessments (quizzes, exams, assignments).
     + Modified the original PPT slideshows from Openstax corresponding to BIOL for non-majors' textbook by creating and adding slides with text only or sometimes new drawings/figures were included on some ppt slides and their alternative text.
     + Learning activities (discussion forum topics and assignments) were created
     + A questions bank for each chapter was created.

# Quotes

*Provide three quotes from students evaluating their experience with the no-cost learning materials.*

“The power-point slides are easy to follow, and the questions are matching with what we discussed in the class”

# Quantitative and Qualitative Measures

## Uniform Measurements Questions

*The following are uniform questions asked to all grant teams. Please answer these to the best of your knowledge.*

**Student Opinion of Materials**

**Was the overall student opinion about the materials used in the course positive, neutral, or negative?**

Total number of students affected in this project: \_\_70\_\_\_\_\_\_\_\_

* Positive: \_\_\_\_95\_\_\_ % of \_\_\_\_\_\_\_\_ number of respondents
* Neutral: \_\_\_\_5\_\_\_ % of \_\_\_\_\_\_\_\_ number of respondents
* Negative: \_\_\_\_0\_\_\_ % of \_\_\_\_\_\_\_\_ number of respondents

**Student Learning Outcomes and Grades**

**Was the overall comparative impact on student performance in terms of learning outcomes and grades in the semester(s) of implementation over previous semesters positive, neutral, or negative?**

*Student outcomes should be described in detail in Section 3b.*

Choose One:

* \_\_\_ Positive: Higher performance outcomes measured over previous semester(s)
* \_X\_\_ Neutral: Same performance outcomes over previous semester(s)
* \_\_\_ Negative: Lower performance outcomes over previous semester(s)

**Student Drop/Fail/Withdraw (DFW) Rates**

**Was the overall comparative impact on Drop/Fail/Withdraw (DFW) rates in the semester(s) of implementation over previous semesters positive, neutral, or negative?**

*Depending on what you and your institution can measure, this may also be known as a drop/failure rate or a withdraw/failure rate.*

\_\_\_\_34\_\_\_% of students, out of a total \_\_\_\_69\_\_\_ students affected, dropped/failed/withdrew from the course in the final semester of implementation.

Choose One:

* \_\_\_ Positive: This is a lower percentage of students with D/F/W than previous semester(s)
* \_X\_\_ Neutral: This is the same percentage of students with D/F/W than previous semester(s)
* \_\_\_ Negative: This is a higher percentage of students with D/F/W than previous semester(s)

## Measures Narrative

*In this section, summarize the supporting impact data that you are submitting, including all quantitative and qualitative measures of impact on student success and experience. Include all measures as described in your proposal, along with any measures developed after the proposal submission.*

*[When submitting your final report, as noted above, you will also need to provide the separate file (or .zip with multiple files) of supporting data on the impact of your Textbook Transformation, such as surveys, analyzed data collected, etc.]*

* *Include measures such as:*
  + *Drop, fail, withdraw (DFW) delta rates*
  + *Course retention and completion rates*
  + *Average GPA*
  + *Pre-and post-transformation DFW comparison*
  + *Student success in learning objectives*
  + *Surveys, interviews, and other qualitative measures*
* *Indicate any co-factors that might have influenced the outcomes.* 
  + When comparing the average on the exams in the face-to-face classes (taught by Sega) we found statistically significant (P values less than 0.05) better results after introducing the textbook and materials from this ALG grant; in this setting 3 out of 4 exams have better averages than the control. In the online environment, we found statistical significance on 2 out of 4 exams with better results in the control classes than the classes with the ALG materials. The main difference between in-class and on-line classes was that mainly the same questions were used in the face-to-face setting for both control and experimental groups. However, for the online class the questions bank created was totally new and no helpful study guides were provided for the ALG group and maybe the material on ALG slides (corresponding to exam 3 & 4) was more difficult to understand without additional help; this might account for the better results on the control group in the online settings. Nevertheless, any of these results can change over time as we accumulate more data from our ALG classes.
  + Since some of the questions on the exams were identical between the control and the experimental group for the face-to-face classes, the data on some of these questions was analyzed further. Almost half of the total questions analyzed (21/38) compared to the control (10/38) showed better results than the benchmark of 70% students with the correct answer per question. However, we will continue to collect and analyze data in the future and hopefully these results will be similar.
  + The results from the pretest and posttest were also similar when comparing the two groups before and after the ALG transformation.
  + To check whether the GPA had any significant difference in explaining these above student results we compared the GPA, but no statistical difference was found.
  + Moreover, student success rates, DFW rates, course retention were all similar before and after introduction of the ALG materials in both types of classes: online and in-class.

# Sustainability Plan

*Describe how your project team or department will offer the materials in the course(s) in the future, including the maintenance and updating of course materials.*

* The textbook and materials will be used in the future in all BIOL 1103 classes that will be taught by each of us, Sega and Wedincamp.
* I will update any course materials as necessary and make them available for EGSC faculty under the Master Course created on D2L.

# Future Affordable Materials Plans

*Describe any impacts or influences this project has had on your thinking about or selection of learning materials in this and other courses that you will teach in the future.*

* It is great to use materials created to match our students' fast-paced lifestyle and our main learning objectives.

# Future Scholarship Plans

*Describe any planned or actual papers, presentations, publications, or other professional activities that you expect to produce that reflect your work on this project.*

* The future will depend on the results once we get more data for the experimental group.

# Description of Photograph (optional)

*This is where a team can list the names of the people shown in this separately uploaded photograph, along with their roles, if applicable.*