

# Affordable Learning Georgia Textbook Transformation Grants

## Final Report

To submit your Final Report, go to the [Final Report submission page](http://affordablelearninggeorgia.org/site/final_report_submission) on the ALG website:  
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The final report submission form allows up to five files:

- This completed narrative document (required)
- Syllabus or syllabi (required)  
*If multiple files, compress into one .zip folder*
- Qualitative/Quantitative Measures data files (required)  
*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:** 12/07/2020

**Grant Round:** 15

**Grant Number:** Proposal 476

**Institution Name(s):** Georgia Gwinnett College

**Project Lead:** Shuhua Lai

**Team Members (Name, Title, Department, Institutions if different, and email address for each):** Shuhua Lai, Professor, ITEC, Georgia Gwinnett College, [slai@ggc.edu](mailto:slai@ggc.edu)

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**Course Name(s) and Course Numbers:** Web Development, ITEC 4450

**Semester Project Began:** Fall 2019

**Final Semester of Implementation:** Fall 2020

**Total Number of Students Affected During Project:** 82

## 1. Narrative

We developed the no-cost-to-student course learning material during the Fall 2019 semester and piloted its implementation in 3 sections of ITEC 4450 Web Development in Spring 2020, Summer 2020 and Fall 2020 semesters. The key outcomes of this project include:

1. A completed set of course material for students to use for free is developed
2. Student cost for textbook is significantly reduced when taking this course

The exit survey showed that students enjoyed using this no-cost-to-students course material and overall experience is overwhelmingly positive.

The instruction experience for faculty who piloted the implementation of the no-cost-to-student course learning material was improved by having more relevant and up to date course material freely available to students on the first day of class, which eliminated the situation that some students could not afford a textbook.

The main impacts the no-cost-to-student learning material had on students include:

1. No-cost-to-student learning material freely available to students on the first day of class helps students succeed in class.
2. The project-based pedagogical transformation better engaged students as they knew every skill they learned in class would be used to develop and implement their own project assignments. This also helped to improve course's attendance and retention.

We did not experience any challenge or difficulty implementing this project.

## 2. Quotes

1. *"All the different skills I learned are very useful in this course. Very glad I took a no cost class."*
2. *"It was a great money saver and we should do this for every course."*
3. *"Thanks for the no-cost-book, it was very helpful."*

## 3. Quantitative and Qualitative Measures

### A. Uniform Measurements Questions

#### **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:   82

- Positive:   96.4   % of   28   number of respondents
- Neutral:   3.6   % of   28   number of respondents
- Negative:   0   % of   28   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)
- 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?**

#### **Drop/Fail/Withdraw Rate:**

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

  3.7   % of students, out of a total   82   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)
- 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)

### **B. Measures Narrative**

We used a survey to evaluate the outcomes of using the developed no-cost-to-student course material. The survey was conducted at the end of Fall 2020 semester. 28 student volunteers in one section of ITEC 4450 Web Development participated in the survey. The survey results are summarized below:

- 64% of the participants are male, and 36% are female.
- Among the participants 0% are freshmen, 0% are sophomores, 18% are juniors, and 82% are seniors.
- 100% of participants saved more than \$100 in the course expense.
- 100% of participants agreed that the benefits of using No-Cost-to-Students Learning Materials are convenience, availability, no-cost, and up-to-dateness.
- 82% of participants felt no challenge using the No-Cost-to-Students Learning Materials, while 18% of participants thought no hard copy of the textbook was a challenge.
- 96% of participants hoped that other courses would adopt a no-cost-to-student textbook too.

Other measures:

- *Drop, fail, withdraw (DFW) delta rates: 3.7%*
- *Course retention and completion rates: 98.8%*
- *Average GPA: 3.6*
- *Student success rate in ITEC 4450 course learning goals (score 70 or above):*
  1. Understand the basic concepts of web clients and servers, as well as how they enable the operation of web-based applications: 96%
  2. Choose appropriate technologies and development tools to address a given web development task: 94%
  3. Develop web site front-ends using client side scripts: 92%
  4. Develop web site back-ends using server side scripts: 92%
  5. Develop web sites that integrate with local or remote databases: 90%
  6. Understand the development life cycle for web-based applications and services: 90%

#### 4. Sustainability Plan

All no-cost materials and resources are made publicly available in GGC D2L and will be shared among all GGC faculty teaching this course. For none GGC faculty, they can access the no-cost-to-student course learning material from the following web site:

<http://huating.altervista.org/ITEC4450/index.html>. The materials include syllabus, slides, in class activities, labs, projects, and tests. Moreover, the course materials will be updated periodically by faculty in the IT program reflecting feedback from various sources and newly emerged web development skills in the industry.

## 5. Future Affordable Materials Plans

Due to the overwhelmingly positive feedback we got from our students, we plan to provide the no-cost-to-students course materials to more sections of the ITEC 4450 Web Development course and expand the Affordable Learning concept into other potential courses, such as ITEC 3450 Computer Graphics and Multimedia. The idea of zero textbook cost and project-based learning may inspire more successful course transformation in other areas and disciplines at GGC.

## 6. Future Scholarship Plans

We are in preparation for a paper that will be presented and published in a local or national conference. The paper will summarize and reflect our work on this project.

## 7. Description of Photograph (optional)

Due to the COVID-19 pandemic, we were not able to take a group picture with our students. The classes were taught on line.