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Spring 2018

Principles of Microeconomics (GA Southern)

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Constantin Ogloblin, John Brown, John King,
and William Levernier

Principles of Microeconomics



Grants Collection

Affordable Learning Georgia Grants Collections are intended to provide faculty with the frameworks to quickly implement or revise the same materials as a Textbook Transformation Grants team, along with the aims and lessons learned from project teams during the implementation process.

Each collection contains the following materials:

- Linked Syllabus
 - The syllabus should provide the framework for both direct implementation of the grant team's selected and created materials and the adaptation/transformation of these materials.
- Initial Proposal
 - The initial proposal describes the grant project's aims in detail.
- Final Report
 - The final report describes the outcomes of the project and any lessons learned.



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Initial Proposal

Application Details

Manage Application: ALG Textbook Transformation Grants Round 8

Award Cycle: Round 8

Internal Submission Deadline: Sunday, December 11, 2016

Application Title: 285

Application ID: #001292

Submitter First Name: Constantin

Submitter Last Name: Ogloblin

Submitter Title: Associate Professor of Economics

Submitter Email Address: coglobli@georgiasouthern.edu

Submitter Phone Number: (330) 524-5134

Submitter Campus Role: Proposal Investigator (Primary or additional)

Applicant First Name: Constantin

Applicant Last Name: Ogloblin

Co-Applicant Name(s): --

Applicant Email Address: coglobli@georgiasouthern.edu

Applicant Phone Number: (330) 524-5134

Primary Appointment Title: Associate Professor of Economics

Institution Name(s): Georgia Southern University

Submission Date: Monday, December 12, 2016

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

Constantin Ogloblin, Ph.D. (PI)
Associate Professor of Economics
coglobli@georgiasouthern.edu

William Levernier, Ph.D.
Professor of Economics
wleviernier@georgiasouthern.edu

John Brown, Ph.D.
Associate Professor of Economics
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John King, Ph.D.
Associate Professor of Economics
jking@georgiasouthern.edu

Sponsor, (Name, Title, Department, Institution):

Rand Ressler, Ph.D.
Department Chair and Professor of Economics
Department of Finance and Economics
Georgia Southern University

Proposal Title: 285

Course Names, Course Numbers and Semesters Offered:

ECON 2106 Business Economics. Summer 2017, Fall 2017.

**Average Number of
Students per Course
Section:** 45

**Number of Course
Sections Affected by
Implementation in
Academic Year:** 24

**Total Number of Students
Affected by Implementation
in Academic Year:** 1,040

**List the original course
materials for students
(including title, whether
optional or required, & cost
for each item):**

Microeconomics by Michael Parkin Required \$197.90	Microeconomics by Karlan and Morduch Required \$232.00
Microeconomics: Principles and Applications by Hall and Lieberman Recommended \$252.20	

**Requested Amount of
Funding:** \$20,800

Original per Student Cost: \$228

**Post-Proposal Projected
Student Cost:** \$29

**Projected Per Student \$199
Savings:**

**Projected Total Annual \$206,960
Student Savings:**

Creation and Hosting Platforms Used ("n/a" if none):

Folio (Georgia Southern University's customized version of Desire2Learn/Brightspace)

Folio (Georgia Southern University's customized version of Desire2Learn/Brightspace)

Proposal Category: No-Cost-to-Students Learning Materials

**Final Semester of Fall 2017
Instruction:**

Project Goals:

The main goal of the project is to make student learning more affordable. Given the current estimated average textbook cost of \$228 per student and the proposed price of the course package that we intend to develop (\$29), the cost of the course materials will be reduced by \$199 per student. And considering that on average 1,040 students take the course during an academic year, the total student savings from the project are estimated at \$206,960 per academic year. Moreover, a large portion of the proceeds from the course package sales will be used for scholarships, to further help students cover their costs and reward their achievements.

The second goal is to ensure consistency in the course topic coverage, learning objectives, and assessment standards while maintaining instructors' academic freedom and encouraging diversity of teaching styles. Using the list of course topics recommended by the Department based on the course learning objectives, the team will develop core course modules that could be easily customized by instructors to suit their individual teaching styles and accommodate their preferences with regard to more in-depth coverage of certain topics and adding optional content to the course.

The third goal is to improve teaching and learning effectiveness and efficiency. This is consistent with and supported by the second goal. Developing the course content with the learning objectives in mind will ensure better targeting student learning outcomes. And providing instructors with the opportunity to adjust their course materials to make the best use of their expertise in specific areas and best suit their teaching styles will certainly ensure more effective teaching. We believe that none of the commercial textbooks currently on the market is able achieve this goal to the extent that the proposed project can. Another big advantage of the proposed course package over the traditional texts is that its digital content and links to open sources can be easily modified to reflect the latest developments in the field and current events. Finally, higher efficiency of the proposed course package will be ensured by the fact that it will be delivered entirely through Folio, the learning management system adopted

university-wide. Students are familiar with the system and trained to use it, so they won't need to waste valuable course time learning how to use various platforms for course resources offered by commercial publishers. The same is true about instructors, many of whom have gone through training at the University's Center for Teaching and Technology and are certified users of Folio.

Statement of Transformation:

The team intends to develop a low-cost-to-students course package for ECON 2106 Business Economics, an area F core curriculum course required for business majors offered by the Department of Finance and Economics (typically ten sections per regular semester). The proposed course package will have a modular structure, suitable for both face-to-face and online courses, and include the following:

- A digital text containing chapters on the core topics and, possibly, some optional chapters. The text will be based on OpenStax *Microeconomics*, which will be upgraded and modified to better target the course learning objectives, achieve the proper level of rigor, and ensure accuracy of the content.
- Rich multimedia content, which includes open-source materials found on the Internet and elsewhere
- Interactive presentations and other visual materials developed by the team.
- Interactive self-learning and formative assessment tools for each core topic (mostly developed by the team).
- Testing and summative assessment tools aligned with the course learning objectives, such as quiz and exam questions in various formats (multiple choice, multiple select, numeric answer, graphing, paragraph fill-in-the-blanks, multipart algorithmic, open-ended short answer, essay, etc.) and embedded questions for overall assessment of student learning outcomes.

The most important stakeholders are students. As indicated above, students will benefit from the transformation in several ways: (1) An average student is expected to save \$199 or 87% of the cost he/she pays for currently used course materials, with total students' savings of \$206,960 per academic year. (2) Students are expected to learn more successfully due to the higher quality and more focused and consistent course materials, as well as more effective learning tools that extensively use visualization and interaction. (3) Since all course materials will be based on the familiar Folio platform, students will be able to use their time more efficiently, focusing on the course, rather than spending time and effort on learning a course platform specific to a particular publisher. (4) A large portion of the proceeds from the course package sales will be used for scholarships, to help students cover their costs and reward them for success.

Instructors who teach the course will benefit from the thorough, relevant, and up-to-date course materials developed by their colleagues who will be open to their feedback and

constructive criticism. They will also gain from the effective ready-to-use teaching and assessment tools included in the proposed package, such as the rich multimedia content and interactive presentations. Finally, the proposed package will allow instructors to more fully utilize their potential as teachers and use their expertise in specific areas because they will be able to easily edit and customize it to best suit their individual teaching styles and topic coverage preferences.

Since the course is required for all business majors and is a prerequisite for the upper division economics courses required to complete the College of Business BBA and BA in economics programs, better student learning outcomes that are expected to result from the transformation will lead to higher progression and graduation rates and thus will benefit the College of Business and the University as well.

Transformation Action Plan:

The transformation action plan aims at developing a high-quality low-cost-to-students course package that would be adopted by the Department to use for all sections of the ECON 2106 Business Economics course. The team plans to develop all the materials listed in the Statement of Transformation.

All members of the team are subject matter experts who have been teaching the course for fifteen years or more. Two members of the team are trained and certified users of Folio and Quality Matters course reviewers. In addition, the primary investigator (PI) has more than ten years of experience in developing course materials for major textbook publishers (Pearson, Cengage, Worth, and others). These materials include the recently published *Study Guide with Practice Problems* for use with the innovative microeconomics text authored by three prominent economists from University of Chicago, the interactive online Problem Sets for courses in international economics published electronically using the Aplia (Cengage) platform, and other instructional materials that are used by instructors and students nationwide. In addition to his high proficiency in designing courses in Folio, the PI also has extensive experience in instructional design using advanced technology tools such as Adobe Creative Cloud suite, Adobe Captivate, Camtasia Studio, iSpring Presenter, and various HTML/CSS editors and other web design tools. The PI is committed to using this expertise and experience to implement the proposed plan.

All team members will participate in (1) selecting core course topics, (2) editing the OpenStax chapters and selecting other open-source content for the topics of their best expertise, (3) developing additional course materials for the topics of their best expertise, (4) reviewing the work of peer team members.

The PI will be responsible for (1) summarizing the team members' peer reviews and discussions, (2) putting together and editing the package as a whole, (3) creating digital course content using instructional design tools, (4) implementing the course in Folio, ensuring

consistency across the course modules and tools and overall consistent and aesthetic course design and delivery in line with the Quality Matters standards.

Students will automatically get full access to the Folio course, with all the resources included in the package available to them, after registering for the course and paying the \$29 course package fee.

Quantitative & Qualitative Measures: Data on students' results in the course (overall course percentage scores as well as scores on selected tests) will be collected by instructors and analyzed by the team using advanced statistical methods that will allow us to estimate the impact of the transformation on student success controlling for other factors. In addition, the achievement of the course learning objectives will be measured using special assessment questions embedded in the exams. Qualitative analysis of student experience will be based on student feedback through surveys (in class and via Folio), individual interviews, and focus groups.

Timeline:

The table below shows the timeline with the milestone dates through the end of the first semester the transformed course is offered.

Activity	Participants	Completion Date
Selecting core topics	All team members	2/6/2017
Editing the OpenStax text and selecting other open-source contents	All team members	3/6/2017
Developing additional course materials	All team members	3/20/2017
Peer reviews	All team members	4/3/2017
Summarizing peer reviews and team discussions	PI	4/10/2017
Assembling and editing the package as a whole	PI	4/24/2017
Implementing the course in Folio	PI	5/1/2017

Overall review of the Folio course	All team members	5/8/2017
Piloting the course package in selected course sections	Team members who teach the pilot sections	7/20/2017
Collecting quantitative and qualitative data	Team members who teach the course in the summer	7/20/2017

Budget:

Personnel	\$20,000
Travel expenses	\$800
Total amount requested	\$20,800

The Department will be responsible for receipt and distribution of funding. The Department Chair, in consultation with the PI, will determine how to distribute the personnel funds based on each team member's contribution to the project. Depending on the Department's teaching appointment needs, funds may be distributed as overload compensations, replacements of teaching load, or in other acceptable forms. The travel funds are designated for team members to attend the required in-person project kickoff meeting.

Sustainability Plan:

All team members are experienced and dedicated teachers who continuously work to improve their course contents. And all of them regularly teach the course designated for transformation under the proposed project. The PI has been developing high-quality course content and interactive learning and assessment tools and using these materials in his courses throughout his whole teaching career. He is highly devoted to the cause of affordable learning and is willing to take responsibility for continuous maintenance of the course package developed under the proposed project. The Department Chair will set up the Affordable Learning Committee, initially consisting of the team members, charged with ensuring sustainable offering of the course package in the ECON 2106 Business Economics course and considering possibilities for extending the project to other courses.

December 8, 2016

Dear Selection Committee,

I am wholeheartedly in support of Dr. Ogloblin's proposal pursuant to an Affordable Learning Georgia Textbook Transformation Grant that would pertain to ECON 2106 Business Economics. Dr. Ogloblin has assembled a team of scholars who routinely teach ECON 2106, and are therefore familiar with both the content of the course as well as topics therein which students find particularly challenging. I believe this is a worthwhile grant which will yield a variety of benefits to our students.

The first benefit is in accordance with the overall purpose of the grant: learning the content of ECON 2106 will be much more affordable. The proposed cost to each student of the developed materials is \$29.00. This is less than 13 percent of the average cost of typical textbooks used for this course. Furthermore, given the number of students who enroll in ECON 2106, total savings to students are estimated to exceed \$200,000 per year.

A second benefit is that the product of the proposed grant will allow a degree of customization such that the reading materials and problems will be directly aligned with the course learning objectives and the expectations of the instructor. This should increase student success, and as a consequence, retention and progression rates.

A third benefit stems from the ease of updating course materials to ensure they are reflective of current economic events. Whether it be a crisis in the housing market, dynamic health insurance regulations, or an unanticipated shock to energy prices, Business Economics must be kept current to maximize relevancy. The ease of keeping course materials current is an added advantage of the proposed textbook transformation.

In addition to the Team Members all being regular instructors of ECON 2106, they are also involved with assurance of learning. Dr. Ogloblin has years of experience developing course materials and has undergone Quality Matters training. Dr. Levernier and Dr. King are the primary authors of our annual assessment reports for the economics undergraduate and graduate degrees, respectively. Thus they are familiar with and dedicated to aligning course materials to student learning objectives. Furthermore, all team members understand that assurance of learning requires an ongoing commitment on the part of faculty to continuously reassess all aspects of course delivery. I share this commitment and will remain supportive of such efforts.

Sincerely,



Rand W. Ressler, Chair
Department of Finance and Economics

DEVELOPING LOW-COST-TO-STUDENTS LEARNING MATERIALS INTEGRATED WITH FOLIO (D2L) FOR ECON 2106 BUSINESS ECONOMICS

1.1 Project Goals

The main goal of the project is to make student learning more affordable. Given the current estimated average textbook cost of \$228 per student and the proposed price of the course package that we intend to develop (\$29), the cost of the course materials will be reduced by \$199 per student. And considering that on average 1,040 students take the course during an academic year, the total student savings from the project are estimated at \$206,960 per academic year. Moreover, a large portion of the proceeds from the course package sales will be used for scholarships, to further help students cover their costs and reward their achievements.

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1.6 Budget

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consisting of the team members, charged with ensuring sustainable offering of the course package in the ECON 2106 Business Economics course and considering possibilities for extending the project to other courses.

Syllabus

ECON 2106 PRINCIPLES OF MICROECONOMICS

Course Outline (FALL SEMESTER)

Semester Week	Topic	Course Materials
Week 1	What Economics Is and How It Helps You Succeed in Your Career and Life	<u>Microeconomics for Business, Chapter 1</u> by Constantin Ogloblin ¹
Weeks 2–3	Demand and Supply in Competitive Markets	<u>Microeconomics for Business, Chapter 2</u> by Constantin Ogloblin ¹
Week 4	Elasticity of Demand and Supply	<u>Microeconomics for Business, Chapter 3</u> by Constantin Ogloblin ¹
Week 5	Review. Exam 1	
Week 6	Markets and Government	<u>Microeconomics for Business, Chapter 4</u> by Constantin Ogloblin, William Levernier, and Rand Ressler ¹
Week 7	Consumer Choice	<u>Microeconomics for Business, Chapter 5</u> by John King (some materials are adapted from OpenStax) ¹
Week 8	Production, Costs, and Profit	<u>Principles of Microeconomics, Chapter 7</u> by OpenStax ²
Week 9	Review. Exam 2.	
Week 10	Firms Decisions under Perfect Competition	<u>Principles of Microeconomics, Chapter 8</u> by OpenStax ²
Weeks 11-12	Monopoly, Rent Seeking, and Antitrust Policies	<u>Principles of Microeconomics, Chapter 9</u> by OpenStax ² <u>Principles of Microeconomics, Chapter 11</u> by OpenStax ²
Week 13	Firms Decisions under Monopolistic Competition	<u>Principles of Microeconomics, Chapter 10</u> by OpenStax ²
Week 14	Market Concentration, Oligopoly, and Firms' Strategic Interaction	<u>Principles of Microeconomics, Chapter 10</u> by OpenStax ²
Week 15	Fall Break	
Week 16	Review	
Week 17	Final Exam	

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² Licensed under a Creative Commons Attribution 4.0 International License.

Final Report

AFFORDABLE LEARNING GEORGIA TEXTBOOK TRANSFORMATION GRANTS
Final Report

Date: 12/22/2017

Grant Number: 285

Institution Name: Georgia Southern University

Team Members:

Constantin Ogloblin, Ph.D.
Associate Professor of Economics
coglobli@georgiasouthern.edu

John Brown, Ph.D.
Associate Professor of Economics
jbrown@georgiasouthern.edu

John King, Ph.D.
Associate Professor of Economics
jking@georgiasouthern.edu

William Levernier, Ph.D.
Professor of Economics
wlevernier@georgiasouthern.edu

Project Lead:

Constantin Ogloblin, Ph.D.
Associate Professor of Economics
coglobli@georgiasouthern.edu

Course Name and Course Number: ECON 2106 Principles of Microeconomics¹

Semester Project Began: Spring 2017

Semester of Implementation: Fall 2017

Average Number of Students Per Course Section: 40

Number of Course Sections Affected by Implementation: 10 (Fall 2017)

Total Number of Students Affected by Implementation: 400 (Fall 2017)

¹ Formerly ECON 2106 Business Economics. The course name has been changed in the curriculum for the new consolidated Georgia Southern University.

1. Narrative

A. Key outcomes

Although the main purpose of the project has been to make student learning of economics more affordable, our ultimate goal is to develop an integrated course package that offers *high-quality* course materials and learning tools at an affordable price.

As our survey results indicate, students typically spend on average \$424 per semester on textbooks. None of them believes that textbooks offered by commercial publishers are affordable. Although 94% of the respondents usually still buy textbooks because they are required, 70% of these students say they often get disappointed because those texts do not help them much to succeed in the course. We believe, and our experience with the project shows, that we can do better than that in terms of both affordability and quality of the materials for our course.

We started the project with outlining our philosophical approach to developing the course content and came up with the following principles:

1. Focus on the content that best serves the principal goal of the course: help students develop the ability to make evidence-based decisions using the concepts, models, and tools of microeconomics.
2. Aim at developing a course package that is application-oriented and as practical as possible; keep theoretical derivations and technical details at the necessary minimum.
3. Make the course sufficiently rigorous, avoiding misleading oversimplifications and dumbed down contents.
4. Put a strong emphasis on evidence-based economic analysis and ensuring students' data literacy.
5. Make the course content exciting and fun to learn.

The team communicated and collaborated using a “sandbox” course in Folio (Georgia Southern custom version of D2L-Brightspace).

To ensure consistency in the course topic coverage, learning objectives, and assessment standards we first defined the course key learning objectives and core topics that need to be covered to achieve them. To assure academic freedom and encourage the diversity of teaching styles, we left it to the instructors to choose the sequence of the topics and add optional content to the course. Another big advantage of this approach is that the course content can be easily modified to reflect the latest developments in the field and current events.

The main challenge we faced in the process of developing the course was that the *OpenStax* text, which we had originally planned to use as the base for our course materials, could not serve this purpose well. First, its general approach, learning objectives, and topic coverage turned out to be rather inconsistent with ours. Second, its contents were not accurate and rigorous enough to satisfy our aspirations to develop a high-quality course package that would be more useful to

students than textbooks available from commercial publishers. Therefore, we decided to develop a course that would eventually consist of mostly our original content.

This substantially increased the volume of work required. We made some corrections regarding the implementation process and the project timeline, but the overall amounts of time and resources that the team had under this grant were insufficient to create high-quality original content for all the topics. Thus, we've developed our own contents for the first five topics of the course and adopted the *OpenStax* chapters for the rest five.

Despite these limitations, we consider our textbook transformation project a success. We enjoy teaching the course contents tailored to directly target the course learning objectives and hence allowing us to more effectively foster students' success in achieving them. Unlike the "one-size-fits-all" texts offered by third-party publishers, our custom-built course targets specific audience and can be easily further customized to best suit our individual teaching styles and topic coverage preferences. This helps us more fully utilize our potential as teachers and make better use of our expertise in specific areas. According to our survey, 73% of the students who have used our course materials believe that they've helped them succeed in the course better (25% say "much better") than textbooks typically offered by commercial publishers.

Still, we view this project as only the beginning of a much broader and longer endeavor of continuous development of customized high-quality, low-cost materials for this course and, possibly, other courses offered by the Department.

B. Lessons learned

Perhaps the main lesson from this project was that we were too optimistic about the quality of available open-source materials and their capacity to effectively serve the learning objectives of a sophomore/junior level course in economics that fulfills a curriculum requirement for business majors, serving as a bridge between introductory economics and upper division economics and business courses. Much of the currently available open-source materials for economics is not rigorous and accurate enough and some of it is outright misleading.

This problem is probably to a large extent discipline-specific. Economics is a combination of social science, mathematics, and business applications and as such is a challenging subject to teach and find good course materials for. We've carefully vetted numerous sources available on the Internet and selected materials that we recommend as additional resources for the course instructors. However, we plan to rely mainly on our own content, supplemental materials, and courseware when sustaining the project and further developing the course.

Our experience has also shown that for a project as large and ambitious as ours, the amount of compensation that is about equivalent to one course relief per team member (which is currently the case) is far from adequate. Our suggestion for the future ALG grants is to lift the \$5,000 per team member restriction on project funding and provide it based on the actual volume of work needed. We suggest the same regarding the limit on the total amount of funding and the time framework for the projects, especially when the objective is to develop original course materials and/or courseware. Although our moral motivation to participate in the ALG initiative is high, as economists, we also believe in material incentives and consider the opportunity cost of our time.

In this regard, the current ALG compensation rules allow the grants to cover only a fraction of what the authors of course materials would earn when developing comparable contents for commercial publishers.

2. Quotes

“Over the course of my college career, I have worked to pay for my college textbooks. I only make minimum wage at my on campus job so every semester I am hit hard financially with the cost of college textbooks. It was such a relief to find out that I didn't have to pay for a textbook for a class that was not even in my major. I really appreciate the fact that I did not have to pay for an overpriced textbook or an access code for this class.”

Stafford Baum
Junior
Accounting

“I think the eText is a great tool. It's easy to find material in the eText that is related to the assignments.”

Gregory Neely,
Junior
Marketing

“I really appreciated having all that I needed provided for me. I feel like I used what was provided for me a lot more frequently than I did my other textbooks this semester. I liked being able to have the "text" with me easily without having to carry a heavy book.”

Madison Hyde
Senior
Marketing

“I enjoyed the format because it was all on the same system and I did not have to go back and forth between websites and paper textbooks.”

Mallory Markham
Sophomore
Management

3. Quantitative and Qualitative Measures

A. Overall Measurements

Student Opinion of Materials

Was the overall student opinion about the materials used in the course positive, neutral, or negative?²

² The numbers reported here reflect the respondents' opinion on how our materials helped them succeed in the course as compared to textbooks typically offered by third-party publishers.

Total number of students affected in this project: **400**

Positive: **73.1%** of **67** respondents

Neutral: **16.4%** of **67** respondents

Negative: **10.4%** of **67** 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?

- ☒ Positive: Higher performance outcomes measured over previous semester
- ☐ Neutral: Same performance outcomes over previous semester
- ☐ Negative: Lower performance outcomes over previous semester

Student Drop/Fail/Withdraw (DFW) Rates

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

11.5% of students out of a total **75** students in a representative sample dropped/failed/withdrew from the course in the final semester of implementation.

- ☒ Positive: This is a lower percentage of students with DFW than previous semester
- ☐ Neutral: This is the same percentage of students with DFW than previous semester
- ☐ Negative: This is a higher percentage of students with D/F/W than previous semester

B. Narrative

The survey of the impact of the project on students was conducted at the end of the semester. The sample included two section of the course where our original course content was used to the fullest extent. In addition to the materials developed under the grant, other teaching and learning tools—such as interactive online presentations, online homework assignments, practice quizzes, and exams—were used to test-drive what we intend to develop according to the plans outlined below. Out of 75 students enrolled in these sections, 67 completed the survey.

In addition, four students were interviewed about their opinion of our project and the materials used in the course. The video of the interviews is available on the project [website](#).

The survey data clearly indicate that students are very concerned about the high cost of textbooks offered by commercial publishers. They typically spend on average \$424 per semester on textbooks. None of the respondents believes textbooks are affordable, but 94% say they usually still buy them anyway because they are required to. As much as 95.5% of the respondents typically pay \$200 or more per semester for textbooks and supplemental materials, 58.2% pay \$400 or more, and 20.9% pay \$600 or more. Yet, 98.4% of the students who usually buy textbooks say they sometimes get disappointed because those materials do not help them much to succeed in the course, with 69.8% saying they *often* get disappointed. Furthermore, 47.8% of the

respondents say commercial textbooks are way too expensive and not worth the price the publishers charge for them.

Answering the question about how the materials offered under this project helped them succeed in the course as compared with the textbooks typically offered by commercial publishers, 73.1% of the respondents said our materials were better—with 25.4% saying “much better”—16% said our materials were about the same, 9% said they were just a little worse, and only 1.5% thought they were worse. Thus, judging by the survey results, an overwhelming majority of students preferred our course materials not only because they were offered free of charge, but also because they were more helpful than third-party texts. This conclusion is further supported by the students’ responses indicating that the average price they would be willing to pay for our course materials is \$107, with 58.2% of the respondents willing to pay \$100 or more, 73.1% willing to pay \$70 or more, and 91% willing to pay \$40 or more.

The impact of the project on students’ grades was analyzed using the same two Fall 2017 sections. The grades were compared with those for two Fall 2016 sections where the same instructor used similar course materials and courseware offered by a major commercial textbook publisher. The course syllabi, assignments, grading policies, and testing tools were also similar. That is, when evaluating the impact of the transformation, we tried to hold constant other factor that might influence the outcomes. An external factor that might have adversely influenced students’ results in Fall 2017 was that the normal semester schedule was disrupted as the class was cancelled for a whole week due to inclement weather (Hurricane Irma). The table below summarizes the results.

	Fall 2017	Fall 2016
Number of students	78	85
DWF rate	11.5%	20.0%
Grade point average	2.51	2.36

Judging by the criteria above, the impact of our textbook transformation project is noticeably positive. We would like to note, however, that in general we do not believe the DFW rate is a useful measure of student learning outcomes. We would like to express our opposition to using it as an indicator of the quality of course materials, effectiveness of instruction, or overall project success. Low DFW rates could be easily achieved by dumbing down the course content and inflating the grades, which is the opposite of what the intention of this project has been. The same applies to students’ GPAs.

A better way to measure a project’s success would be to define learning objectives for the course and then evaluate the extent to which students have achieved those objectives using assessment tools such as embedded exam questions or special assignments. This would also be in line with the general student learning outcome assessment practices currently used by the USG institutions. We’ve defined the learning objectives for our course, but we’ve not fully developed the assessment instruments yet. We intend to do that in the future as part of our sustainability plan.

4. Sustainability Plan

Our plan is to continue developing the contents and courseware for ECON 2106 Principles of Microeconomics rather than just sustain what we already have. We view our ALG grant project as only the beginning of a much broader endeavor to develop high-quality low-cost materials for this course and, possibly, for other courses offered by the Department.

As Dr. Rand Ressler—the initial sponsor of the project, now Associate Dean of the Georgia Southern College of Business—notes in his foreword to our course materials, they are a “living document” in two ways: first, in the sense that updating is ongoing to ensure that the content is always relevant to current economic events and second, because the authors plan to further develop the course design and instructional technology.

The Project Lead is highly devoted to the cause of affordable learning and will be taking the responsibility for continuous maintenance and further development of the course materials. His initiatives and efforts are supported by the colleagues in the Department, the Department Chair, and the College of Business Dean’s Office. The Department Chair is considering setting up a committee charged with ensuring sustainable offering and further development of the course materials for ECON 2106 Principles of Microeconomics for business and considering possibilities for extending the project to other courses. The news and updates regarding the project will be available on the project [website](#).

As evident from our survey and interviews, our students have different learning styles and preferences with regard to the types and formats of course resources. For example, 38.8% of the survey respondents prefer a traditional printed text. And the percentage of those who find electronic resources—either simple PDF or interactive eBook—is exactly the same. There is a general agreement, however, that the course resources should be offered in one integrated package and be easily accessible from anywhere, whether using a computer or a mobile device. And when asked to rank usefulness of various kinds of learning resources, the survey respondents gave practice exercises with solutions and explanations the highest mark.

Based on our experience with the project and the feedback from students, we plan to further develop the course content and resources as follows:

1. Create original contents for all core course topics to replace the materials currently adopted from *OpenStax*
2. Have every core chapter available both as an interactive eBook and as printable PDF, with the option for students to order a printed copy at low additional cost
3. Develop interactive online lecture outlines, study guides, practice exercises, and homework assignments for each core topic
4. Develop assessment instruments and use them to evaluate the extent to which students achieve the course learning objectives

The ultimate goal is to have an integrated customizable course package for Principles of Microeconomics that can be uploaded to online learning management systems used by the USG institutions. We plan to continue using these materials in all sections of ECON 2106 Principles

of Microeconomics offered by the Department at both Statesboro and Savannah campuses as well as fully online. We also plan to make our low-cost-to-students course package available to any USG institution that would like to adopt it.

5. Future Plans

In addition to what is said above, we'd like to note that our experience with developing and using custom-made affordable course materials has shown that the ALG initiative has a good potential. This could become the way most course materials and courseware are offered to students in the future.

We also believe that we have a competitive advantage over commercial publishers not only because our materials will cost much less to students, but also because we are in a better position to closely align the text and other course resources with the course learning objectives as well as with our lectures and tests.

The higher quality materials that we offer to students at a very low cost will certainly serve the purposes of both more affordable and more effective learning. Also, as this approach becomes more and more widespread, it is likely to force commercial publishers to lower their prices as well, which will further benefit students.

The project lead, Dr. Ogloblin, intends to publish at least one journal article on the subject. He also plans to present the results and share the experience of implementing the project at the 2018 University System of Georgia Teaching and Learning Conference.

6. Description of Photograph

Students of Dr. Ogloblin's Business Economics course vote in favor of continuing the efforts to make learning economics more useful and affordable.

Enclosures uploaded separately (as a .zip file):

1. Foreword to the project materials by Dr. Rand Ressler
2. Course description, learning objectives, and core topics
3. Course outline with links to the materials freely accessible from the project website
4. Student survey results
5. Photograph of Dr. Ogloblin's class voting in favor of the ALG initiative