Application Details

Manage Application: ALG Textbook Transformation Grants

Award Cycle:	Round 6
Internal Submission Deadline:	Monday, August 1, 2016

Application Title:	245
Application ID:	#001137
Submitter First Name:	Martiana
Submitter Last Name:	Sega
Submitter Title:	Assistant Professor
Submitter Email Address:	msega@ega.edu
Submitter Phone Number:	7067292246
Submitter Campus Role:	Proposal Investigator (Primary or additional)
Applicant First Name:	Martiana
Applicant Last Name:	Sega
Applicant Email Address:	msega@ega.edu
Applicant Phone Number:	7067292246
Primary Appointment Title:	Assistant Professor
Institution Name(s):	East Georgia State College
Submission Date:	Monday, August 1, 2016

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

Dr. David Chevalier, Assistant Professor, Biology Department, dchevalier@ega.edu

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

Dr. Jimmy Wedincamp, Professor, Dean of School of Math and Science, EGSC

Proposal Title: 245

Course Names, Course Numbers and Semesters Offered:

Principles of Biology, BIOL 1107, offered Spring, Summer, Fall

Final Semester of Instruction:	Fall 2017
Average Number of Students per Course Section:	28
Number of Course Sections Affected by Implementation in Academic Year:	7
Total Number of Students Affected by Implementation in Academic Year:	196
List the original course materials for students (including title, whether optional or required, & cost for each item):	Campbell Biology, 10th edition, Reece et. al, $237 (at EGSC online bookstore), required
Proposal Category:	OpenStax Textbooks
Requested Amount of Funding:	$10,800
Original per Student Cost:	$237
Post-Proposal Projected Student Cost:	0
Projected Per Student Savings:	$237
Projected Total Annual Student Savings:	$46,452

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

D2L & LibGuides

Project Goals:

1.1 PROJECT GOALS

1. Replace the for-profit textbook for BIOL 1107 at East Georgia State College Augusta with a free electronic textbook: OpenStax – Biology (Avissar Y. et al., 2012), available at https://openstax.org/details/biology

2. Identify OERs to supplement the information not covered by the adopted OpenStax textbook.

3. Identify additional supportive OERs in the form of online videos to accompany each face-to-face lecture.

4. Replace all the visual materials from the current PPT slides with the ones provided by the

OpenStax textbook.
5. Redesign the syllabus to include all the links to the new textbook and online videos for each lecture.
6. Implement a protocol to inform the students before the start of the semester about adopting a new free OpenStax textbook.
7. Create a master course in Georgia View - Brightspace (D2L) with the new materials: syllabus, the links to the online textbook and videos for each lecture.
8. Create a video library (with the videos corresponding to each chapter of the OpenStax textbook) in the LibGuides (Library-Specific Springshare Product) and make it available to all faculty. This is an opportunity for the faculty to adopt different pedagogical approaches, such as online or blended learning.
9. Develop assessment tools to measure the impact of these changes on student success, engagement and experience.

Statement of Transformation:

1.2 STATEMENT OF TRANSFORMATION
EGSC-Augusta, as an access institution, prepares the students for transferring to Augusta University (AU). Most of our students enroll in the BIOL-1107 (Principles of Biology I) course wanting to transfer to the nursing program at AU. It is my goal to improve their experience here but also to make sure they will be successful at AU. Our data indicates that 70% of the students enrolled in the Fall 2015 semester are low-income undergraduates and have received need-based financial aid (297 students received Pell (60%) and 48 received GI Bill grants (10%), EGSC-Augusta Annual Report). Currently, 92.8% of my students would prefer a free online textbook instead of buying/renting a textbook. Moreover, each semester the question that I always hear is “do we have to buy the textbook?”. This grant is an opportunity for all my students to have free access to textbook, the supplemental explanations through the video component, and all necessary materials to succeed.

The total amount of savings to the students will be $46.452 over the course of three semesters of the implementation. As a result of this transformation, the students will be able to use their financial aid for others school-related expenses, have access to the material for later use (the upper level biology classes), have a less stressful college experience and a different learning environment through the blending of face-to-face lectures and individual study. Based on my survey, most students (78.6%) prefer an online (electronic) book instead of a “hands-on” textbook, which should not hinder their success. Moreover, all students surveyed (100%) agree on having at least one gadget with online access and 92.85% of them have online access at least on one location (home, school, library, other public spaces). To make this learning experience successful, and since the textbook could be downloaded and used offline, the students will have the ability to review their materials and do their homework at any time and place.

Since most of our students have jobs, in addition to being a full-time student (12 credit hours),

they often miss classes; this grant will allow them to have access to the explanations through the videos embedded in their syllabus and D2L. Based on a short survey, 78.5% of my students thought that having videos that accompany face-to-face lecture would be a great tool for individual study. The videos will be carefully selected following the guidelines in a recent article (Guo et al., 2014). Based on this, the most engaging movies were short, Khan-style, or talking-head. Studies showed that in the beginning of the lectures there is a 20 minutes time period until the students become engaged in activities other than passive listening (Middendorf &Kalish, 1996). For the students attending the class, I intend to break the pattern in their attention span by changing from listening to watching and actively reviewing a short movie. In face-to-face lectures another alternative is to guide students through the process of self-learning using the videos and the textbook, followed by discussions on the topic (my personal experience). This makes students aware of their own learning process and increases their metacognition, a crucial ability for student success (Bransford et al., 2000). Moreover, reading the material in the textbook, watching the videos and discussing the topic will allow for repeated retrieval, another important cognitive process that has been shown to increase long-term learning (Karpicke, 2012). I expect that, through the implementation of both the free textbook and the video library, we will increase the retention, graduation and success rates of our students.

Another positive impact of this transformation is the open access of other institutions to the newly organized materials. All course materials will be stored within two different platforms: a master course in D2L and LibGuides. The unique aspect of this proposal is the great opportunity for other faculty to use our video library in designing their traditional, online or hybrid courses. Recent research shows that more students prefer online classes and they achieved better results than those in the traditional lectures (U.S. Department of Education, 2010). Also, a hot topic in today's teaching is "flipping" the class, which allows students to watch the videos before the lecture and the class time is used for different engaging activities (Tucker, 2012). In today's world, with the high demand on transforming the traditional lectures into online or flipped classes, there is a enormous benefit to have these videos already organized.

Transformation Action Plan:

1.3 TRANSFORMATION ACTION PLAN

Dr. Martiana - Florenta Sega, subject matter expert, will be responsible for the following:

* Review of the free electronic OpenStax – “Biology” to conform to the learning objectives of the Biology Department at EGSC.
* Identification, review, selection and adoption of videos that accompanies each face-to-face lecture.
* Redesign of the course syllabus to include access to all the new course materials.
* Redesign all the PPT slides with new updated images and information corresponding to the new adopted OpenStax – "Biology" textbook.
* Design the assessment tools.
* Collect and analyze the data.

Dr. David Chevalier, subject matter expert, will be responsible for the following:

* Identification, review and adoption of new resources to supplement the new OpenStax – "Biology" textbook.
* Curate all the course materials into LibGuide (Library-Specific Springshare Product) to serve as an open access source to all faculties and students.
* Design a master course in D2L and incorporate all the course materials (syllabus, textbook, videos, other OERs) that will serve as an easily accessible resource for other EGSC faculties.

Additional personnel are available to support our efforts with the following:
* Dr. Jimmy Wedincamp, Dean of the School of Mathematics and Natural Sciences
o Subject matter expert.
* We will work with EGSC Information Technology personnel to add a master course in D2L.
* Ms. Katie Shepard:
o Librarian, LibGuides expert

Quantitative & Qualitative Measures:

1.4 QUANTITATIVE AND QUALITATIVE MEASURES
Quantitative:
* Compare the results in a standardized assessment questionnaire used in BIOL 1107 since Fall 2015 at the beginning and the end of the semester to assess for learning gain;
* Assess the success of attaining specific learning objectives by comparing the results for specific questions included in the exams to the ones in the past exams (where the textbook and videos were not used as a learning tool in the classroom);
* All the data collected in the above assessments will be analyzed using t-Test.
* Collect usage statistics of the videos and the textbook (however, the book can be used offline) from D2L;
* Compare the drop, fail, withdraw (DFW) rates; the data will be analyzed using a z-test (comparing proportions).Qualitative:
* A survey will be developed to receive students' feedback on their learning experience using the new textbook and video library. The survey will be administrated at midterm and again at the end of each term.

Timeline:

1.5 TIMELINE
* August 2016:
o Review of the free electronic OpenStax – "Biology" to conform to the learning objectives of the Biology Department at EGSC.

* September 2016:
o Identification, review and adoption of new resources to supplement the new OpenStax – “Biology” textbook.
o Identification, review, selection and adoption of videos that accompanies each face-to-face lecture.
* October 2016:
o Redesign lecture slides to align with the OpenStax – “Biology” textbook.
o Announcement of adopting a new textbook for BIOL 1107 on EGSC website.
o Redesign the course syllabus to include access to all the new course materials.
* November 2016:
o Design a master course in D2L and incorporate all the course materials (syllabus, textbook, videos, other OERs) that will serve as an easily accessible resource for other EGSC faculty.
o Design the assessment tools.
* December 2016:
o Check all the links in the master course (D2L).
* January, March, May 2017:
o Implementation Spring 2017
o Assess students and analyze data from Spring 2017 semester.
* May 2017:
o Complete the project status report for the Spring 2017 semester.
o Curate all the course materials into LibGuide to serve as an open access source to all faculty and students.
o Based on the feedback from students and personal experience, redesign the master course in D2L. Additionally, check and repair any broken links in the master course and make the master course an open accessible resource for other EGSC faculty.
* June, July, August 2017:
o Implementation Summer 2017
o Collect and analyze data from Summer 2017 semester.
o Complete the project status report for Summer 2017 semester.
* August, October, December 2017:
o Implementation Fall 2017 semester
o Collect final data and complete the final project report.
o Provide data on impact on student success and a course schedule with resource links.
* Spring 2018:
o Participate in professional meetings and report our data on the results of the transformation.

Budget:

1.6 BUDGET
Personnel: $10,000 – salary for Primary Investigator and Team Member
Travel: $800 – the amount required to attend the required kickoff meeting.
Total amount required: $10,800.

Sustainability Plan:

1.7 SUSTAINABILITY PLAN

I will continue to use the same materials for my future classes if the results of this implementation are similar or better than the previous semesters (where the for-profit textbooks were used). In the future, any EGSC faculty teaching BIOL 1107 course will be able to use our OERs stored in the master course in D2L. The website links will be checked by me at the beginning of each semester to ensure their availability. Any additional feedback on improving the master course from my colleagues will be reviewed and accounted for. Any changes in the master course will be followed by an update of the LibGuide.

East Georgia State College

THE UNIVERSITY SYSTEM OF GEORGIA
Office of the Dean, School of Mathematics and Natural Sciences
131 College Circle
Swainsboro, Georgia 30401-2699
Phone (478) 289-2166 • Fax (478) 289-2080
Email • wedincamp@ega.edu

July 26, 2016

Affordable Learning Georgia Textbook Transformation Grants
GALILEO
University System of Georgia
270 Washington Street, S.W.
Atlanta, GA 30334

Dear ALG members,

It is my pleasure to write this letter of support for the ALG Open Mathematics in Action Project submitted by Florenta Sega and David Chevalier. The ALG project will provide an ideal solution to the rising costs of textbooks and will result in significant savings for students. The faculty teaching the courses targeted in this proposal have significant experience and a willingness to participate. The goal of providing less expensive learning materials for our students is noble and has my full support. I believe this project will be sustainable long term and hopefully the knowledge acquired here will be applied to other courses at EGSC.

The EGSC Business Affairs Office will be responsible for the receipt and distribution of award funds. If the project is successful, EGSC School of Mathematics and Natural Sciences will act to encourage the project in other academic areas.

Thank you for this opportunity to assist our students in obtaining an affordable learning opportunity through participation in the ALG project.

Sincerely,

Jimmy Wedincamp

Dean and Professor

East Georgia State College

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East Georgia State College

Affordable Learning Georgia Textbook Transformation Grants

Rounds Six, Seven, and Eight

For Implementations beginning Fall Semester 2016

Running Through Fall Semester 2017

Proposal Form and Narrative

Submitter Name	Martiana Florenta Sega
Submitter Title	Assistant Professor
Submitter Email	msega@ega.edu
Submitter Phone Number	706 729 2246
Submitter Campus Role	Primary Proposal Investigator
Applicant Name	Martiana Florenta Sega
Applicant Email	msega@ega.edu
Applicant Phone Number	706 729 2246
Primary Appointment Title	Assistant Professor
Institution Name(s)	East Georgia State College

Team Members	Dr. David Chevalier, Assistant Professor, Interim Chair Biology Department				
Sponsor, Title, Department, Institution	Dr. Jimmy Wedincamp, Professor, Dean of School of Mathematics and Sciences, East Georgia State College				
Proposal Title	EGSC-Augusta_BIOL1107_ALG_round6				
Course Names, Course Numbers and Semesters Offered	Principles of Biology I, BIOL 1107, offered Spring, Summer and Fall				
Final Semester of Instruction	Fall 2017				
Average Number of Students Per Course Section	28	**Number of Course Sections Affected by Implementation in Academic Year**	**7**	**Total Number of Students Affected by Implementation in Academic Year**	196
Award Category (pick one)	☐ No-or-Low-Cost-to-Students Learning Materials ☐ OpenStax Textbooks ☐ Interactive Course-Authoring Tools and Software ☐ Specific Top 100 Undergraduate Courses				
List the original course materials for students (including title, whether optional or required, &	Campbell Biology, 10th edition, Reece et al, $237 (EGSC online bookstore), required				

cost for each item)	
Requested Amount of Funding	$10,800
Original Per Student Cost	237
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Projected Total Annual Student Savings	$46,452
Creation and Hosting Platforms Used	D2L LibGuides

NARRATIVE

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- Assess the success of attaining specific learning objectives by comparing the results for specific questions included in the exams to the ones in the past exams (where the textbook and videos were not used as a learning tool in the classroom);
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1.8 REFERENCES & ATTACHMENTS

1. Avissar Y. et al, (2012). OpenStax – “Biology” textbook available at https://openstax.org/details/biology
2. GeorgiaView (Brigthspace or D2L) – available here: https://ega.view.usg.edu/
3. LibGuides – available here: http://www.springshare.com/libguides/
4. KhanAcademy – available here: https://www.youtube.com/user/khanacademy
5. Guo, J. P., Kim J., Rubin, R., (2014). How video production affects student engagement: an empirical study of MOOC videos. Proceedings of the first ACM conference on Learning; 41-50.
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8. Means, B., Toyama, Y., Murphy, R., Bakia, M., and Jones, K. (2010). Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies. U.S. Department of Education. Office of Planning, Evaluation, and Policy Development. Policy and Program Studies Service. ED-04-CO-0040
9. Tucker, B. (2012). The Flipped Classroom. Education Next, 12 (1).
10. Karpicke D. J., (2012). Retrieval-based learning: active retrieval promotes meaningful learning. Current Directions in Physiological Science, 21 (3): 157-163.
11. Attached Letter of support