

Application Details

Manage Application: ALG Textbook Transformation Grants Round 8

Award Cycle: Round 8

Internal Submission Deadline: Sunday, December 11, 2016

Application Title: 274

Application ID: #001283

Submitter First Name: Larry

Submitter Last Name: Gibson

Submitter Title: Lecturer of Biology

Submitter Email Address: larry.gibson@ung.edu

Submitter Phone Number: 706-867-3095

Submitter Campus Role: Proposal Investigator (Primary or additional)

Applicant First Name: Larry

Applicant Last Name: Gibson

Co-Applicant Name(s): --

Applicant Email Address: larry.gibson@ung.edu

Applicant Phone Number: 706-867-3095

Primary Appointment Title: Lecturer of Biology

Institution Name(s): University of North Georgia

Submission Date: Monday, December 12, 2016

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

Valerie Fambrough

Biology Program Specialist

Biology Department

valerie.fambrough@ung.edu

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

Nancy Dalman, Chair, Department of Biology, University of North Georgia

Proposal Title: 274

Course Names, Course Numbers and Semesters Offered:

Course: BIOL 2120K; Anatomy & Physiology I

Course: BIOL 2130K; Anatomy & Physiology II

Both courses are offered fall, spring, and summer semesters of the academic year.

Average Number of Students per Course Section: 24

Number of Course Sections Affected by Implementation in Academic Year: 8

Total Number of Students Affected by Implementation in Academic Year: 192

List the original course materials for students (including title, whether optional or required, & cost for each item): Current Required Materials: Required Materials: Anatomy & Physiology textbook packet by Marieb & Hoehn; 5th edition; \$285.58. TOTAL COST: \$285.58

Requested Amount of Funding: \$10,800

Original per Student Cost: \$285.58

Post-Proposal Projected Student Cost: 0

Projected Per Student Savings: \$285.58

Projected Total Annual Student Savings: \$54,831.36

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

n/a

Proposal Category: OpenStax Textbooks

Final Semester of Instruction: Fall 2017

Project Goals:

Goal I

The first goal of this project is to provide my projected 192 students taking Anatomy & Physiology I (2120K) and Anatomy & Physiology II (2130K) during the grant period at the University of North Georgia, Dahlonega campus, a free quality required A&P textbook from OpenStax, thereby, removing one of the major barriers that students encounter in pursuing higher education in general, and their specific career aspiration of being a member of the healthcare professions in particular by saving each student \$285.58.

Goal II

The second goal of this project is to offer to other UNG anatomy & physiology I and II instructional colleagues evidence of the equal quality and pedagogic efficacy of the free OpenStax A&P textbook as compared to the required high-cost traditional commercial A&P textbook. Therefore, hopefully, they will choose to adopt the free OER textbook and thereby help approximately an additional 1,508 UNG students per year save \$430,654.64.

The quantitative and qualitative data and analyzed results of this textbook transformation will be actively communicated to all A&P instructors across all five UNG campuses for their review.

Statement of Transformation:

Anatomy & Physiology I and II are two of the largest enrollment courses in the Department of Biology at the University of North Georgia (UNG). The team's transformation is to replace the required existing high-cost commercial textbook with the free online version of OpenStax's anatomy & physiology textbook.

There are between 1,500 to 1,700 students who take these courses every academic year at the five UNG campuses, with between 900 to 1,000 of those students taking the courses at Dr. Gibson's home campus of Dahlonega, and approximately 17 faculty members who teach them across all five campuses. A common statement made by many of these students to the faculty is that the cost of required materials for these courses cause them a significant financial burden. In my experience, there are many students who do not purchase, because of this financial hardship, all the required course materials, especially the textbook. They are at a cognitive disadvantage and thus are more disposed to performing below their intellectual capability.

The transformative impact of this project will be to make these high enrollment courses more affordable, and thereby, greatly reducing the emotional and intellectual drain on students; thus permitting them to engage more intellectually in the course and be more likely to successfully complete the course (U.S. Public Interest Research Group, 2014).

Transformation Action Plan:

Dr. Larry Gibson: Principle Investigator; will oversee the project from start to its completion including: submission of the ALG transformation proposal, working with OpenStax personnel to

assure the availability of its anatomy & physiology textbook for the students, identification and adoption of any other course appropriate open educational resources (OERs), development of related course materials such as PowerPoints and a test bank that supports the OpenStax A&P textbook. The team will work to inform the other faculty members that teach these courses of the pedagogic quality, availability, and student benefits of the free OpenStax A&P textbook and other developed support materials that result from this project. Dr. Gibson will actively share his resultant syllabus and instructional redesigns.

Mrs. Fambrough will proofread, edit, and transcribe test questions, lecture outlines, and study notes compiled by Dr. Gibson, and other faculty members who wish to provide this type of material.

Quantitative & Qualitative Measures: Both quantitative and qualitative methods will be utilized to measure and evaluate the success of the transition from the use of a high-cost-to-student A&P commercial textbook to free-to-student OER OpenStax A&P textbook.

The data collection for this project will begin with the Spring 2017 semester and the results collected from the Spring, Summer, and Fall 2017 semesters will be analyzed and utilized to evaluate the success of this textbook transformation project.

Quantitative data: All quantitative data from the pre- and post-transformation courses taught by Dr. Gibson will be analyzed by the paired t-test.

1. DFW rates
I expect the DFW rate to significantly decrease because of anticipated increased student utilization (completing reading assignments) of the OER textbook.
2. Students' Exam Scores and Final Course Grade
This is to evaluate if the adoption of a free and immediately accessible online textbook can improve students' learning and performance on exams and final course completion because they will have access to the required A&P textbook even before the first day of classes.

Qualitative data: All qualitative data will be collected via online surveys developed by the Qualtrics web-based survey software. The surveys' results will be analyzed and compared between pre-transformation and post-transformation classes.

The qualitative data obtained via these student surveys will help measure students' perception and opinions about the quality, readability, design, helpfulness, and overall evaluation of the OER textbook.

Timeline:

January 9, 2017 – April 28, 2017: Teach two courses of A&P I (BIOL 2120K) and two course of A&P II (2130K) – 96 students – using the OpenStax anatomy and physiology textbook.

May 22, 2017 – May 26, 2017: Assess collected data and create a summary report.

August 2017 – December 2017: Teach two courses of A&P I (BIOL 2120K) and two course of A&P II (2130K) – 96 students – using the OpenStax anatomy and physiology textbook.

December 4, 2017 --- December 22, 2017: Assess collected data and create a summary report

December 28, 2017: Complete and submit a final report.

Budget:

Supplemental (extra) Salary for Dr. Gibson: \$5,000

Support for travel for Dr. Gibson to attend Grant Kick-Off Meeting: \$400

Supplemental (extra) Salary for Mrs. Fambrough: \$5,000

Support for travel for Mrs. Fambrough to attend Grant Kick-Off Meeting: \$400.00

TOTAL: \$10,800

Sustainability Plan:

These two courses are high-demand courses that are offered every semester. Dr. Gibson, an A&P instructor for UNG's Dahlonega campus, and other interested faculty members will be able to access student feedback and make improvements to the OER material every semester. Assessments and recommendations will be shared with other colleagues who also teach these courses. It is the team's intent to continue the use of these OER materials and to increase the adoption of these materials by other faculty members who teach the courses.

Grant Proposal Narrative:

This grant proposal is for \$10,800 that will be used by the team members to facilitate the transition of using a required high-cost commercial anatomy & physiology textbook to adopting an OpenStax's free online version anatomy & physiology textbook.

Initially, eight sections (192 students), will be involved in this transition. This small initial transition will save UNG students approximately \$54,831 per academic year. If in the future, this transition was implemented across the five UNG campuses by all the faculty members that teach BIOL 2120K and 2130K (Anatomy & Physiology I & II respectively), it would result in an approximate \$430,655 educational cost savings per academic to UNG students.

Resources:

Allen, I.E. & Seaman, J. (2014). Opening the curriculum: opening educational resources in US Higher education. Babson Survey Research Group/Pearson. Retrieved from: <http://www.onlinelearningsurvey.com/reports/openingthecurriculum2014.pdf>

Bliss, T.J. Hilton III, J. Wiley, D. & Thanos, K. (2013). The cost and quality of open textbooks: Perceptions of community college faculty and students. *First Monday*, 18(1). Retrieved from: <http://journals.uic.edu/ojs/index.php/fm/article/view/3972/3383>

Bonner, B. (2014). Neebo survey finds college students worry more about textbook costs than College tuition for spring semester. Nebraska Book Company/Neebo. Retrieved from: <http://www.nebook.com/wp-content/uploads/2014/12/Neebo-Survey-Press-Release.pdf>

Petrides, L. Jimes, C. Middleton-Detzner, C. Walling. J. & Weiss, S. (2011). Open textbook Adoption and use: Implications for teachers and learners. *Open Learning: The Journal of Open, Distance and e-Learning*. 26(1). Retrieved from: <http://www.tandfonline.com/doi/full/10.1080/02680513.2011.538563>

Senack, E. (2014). Fixing the broken textbook market: How students respond to high textbook costs and demands alternatives. U.S. PIRG Education Fund & The Student PIRGs. Retrieved from: <http://www.studentpirgs.org/sites/student/files/reports/NATIONAL%20Fixing%20Broken%20Textbooks%20Report1.pdf>



Department of Biology

8 December, 2016

Dear ALG Review Board,

I am writing this letter to support Dr. Larry Gibson's *Affordable Learning Georgia Textbook Transformation Grant* proposal. University of North Georgia (UNG) formed 3.5 years ago through the consolidation of North Georgia College & State University and Gainesville State College. The new institution now serves over 18,000 students, from 132 Georgia counties and 98 different countries, spread across five distinct campuses. Unlike many USG institutions, enrollment at UNG has continually risen over the past several years and retention and 6 year graduation rates are among the highest in the state.

Dr. Gibson teaches our Human Anatomy and Physiology (A&P) courses at the Dahlonega campus. These high – demand courses are required for all pre – nursing and exercise science majors, and typically serve approximately 1,000 student per year, just on the Dahlonega campus. Dr. Gibson is planning on developing No – Cost – To – Students learning materials by using a rigorously peer – reviewed OpenStax textbook. Dr. Gibson has already begun vetting the OpenStax Human Anatomy and Physiology textbook and found it comparable in scope and rigor to the existing traditional textbook currently used at UNG. I feel confident that implementing this book will provide students with the same quality resource that they get with the hard – copy book, without the hefty price – tag. Further, I suspect that once other A&P instructors see the anticipated success of Dr. Gibson with this resource, they will be eager to adopt it as well; our goal is to implement this resource throughout all sections of A&P.

Finally, Dr. Gibson plans on qualitatively and quantitatively assessing student learning and perceptions using these new course materials, which will be compared against students using a traditional textbook in the course. The biology department will provide financial support to allow Dr. Gibson the opportunity to present his findings at a teaching and learning conference and will also underwrite the cost of any materials needed to conduct analyses of learning outcomes.

Thank you very much for your consideration of this proposal and please do not hesitate to contact me at (706)867-2831 if you have any more questions.

Sincerely,

Nancy Dalman, Ph.D.
Professor and Department Head of Biology