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Application Summary

Competition Details

Competition Title:	Textbook Transformation Grants, Round Fourteen (2019-2020)
Category:	University System of Georgia
Award Cycle:	Round 14
Submission Deadline:	04/09/2019 at 11:59 PM

Application Information

Submitted By:	Tiffani Reardon
Application ID:	3356
Application Title:	442
Date Submitted:	04/09/2019 at 8:22 AM

Personal Details

Institution Name(s):	Kennesaw State University
Applicant First Name:	Tiffani
Applicant Last Name:	Reardon
Applicant Email Address:	treardo2@kennesaw.edu
Applicant Phone Number:	4705787923
Primary Appointment Title:	Instructional Designer
Submitter First Name:	Tiffani
Submitter Last Name:	Reardon
Submitter Email Address:	treardo2@kennesaw.edu
Submitter Phone Number:	4705787923
Submitter Title:	Proposal Investigator

Application Details

Proposal Title

442

Final Semester of Project

Summer 2020

Requested Amount of Funding

10,800

Type of Grant

No-or-Low-Cost-to-Students Learning Materials

Course Title(s)

World Regional Geography and Introduction to Cartographic Techniques

Course Number(s)

GEOG 1130 and GEOG 3305

Team Member 1 Name

Tiffani Reardon

Team Member 1 Email

treardo2@kennesaw.edu

Team Member 2 Name

Ulrike Ingram

Team Member 2 Email

uingram@kennesaw.edu

Team Member 3 Name

Jason Rhodes

Team Member 3 Email

jrhode22@kennesaw.edu

Team Member 4 Name

Team Member 4 Email

Additional Team Members (Name and email address for each)

Sponsor Name

Susan Kirkpatrick Smith

Sponsor Title

Chair of the Department of Geography and Anthropology

Sponsor Department

Department of Geography and Anthropology

Original Required Commercial Materials (title, author, price)

GEOG 1130: Nijman, J., Muller, P. and de Blij, H. 2016. The World Today. Concepts and Regions in Geography, 7th edition. Wiley. Required, \$92.75

GEOG 3305: Cartography: Thematic Map Design by Borden Dent. Required, \$145.89

Average Number of Students per Course Section Affected by Project in One Academic Year

1130: 45, 3305: 25

Average Number of Sections Affected by Project in One Academic Year

1130: 4, 3305: 3

Total Number of Students Affected by Project in One Academic Year

1130: 180, 3305: 75, Total: 225

Average Number of Students Affected per Summer Semester

1130: 45, 3305: 0

Average Number of Students Affected per Fall Semester

1130: 135, 3305: 50

Average Number of Students Affected per Spring Semester

1130: 0, 3305: 25

Original Total Cost per Student

1130: \$92.75, 3305: \$145.89

Post-Project Cost per Student

\$0

Post-Project Savings per Student

1130: \$92.75, 3305: \$145.89

Projected Total Annual Student Savings per Academic Year

1130: \$12,521.25, 3305: \$10,941.75, Total: \$23,463

Using OpenStax Textbook?

No

Project Goals

We have personally experienced situations in which students have had to drop out of courses and even out of the university for the semester due to lacking a couple hundred dollars to pay for textbooks and class supplies. We would like to be part of the solution to find ways for students to reduce the cost of getting a degree. In this respect, we feel strongly that providing these no-cost materials will help with improved retention, progression, and graduation of students at Kennesaw State University and other institutions with faculty who use the resources created with this grant. To that affect, the goals of this project are the following:

1. Contribute to the effort to reduce the cost of course materials by providing no-cost-to-students learning materials.
2. Improve the quality and effectiveness of teaching materials used in GEOG 1130 (World Regional Geography) and GEOG 3305 (Introduction to Cartographic Techniques), thereby improving retention in these two courses, progression, and eventual graduation.
3. Create intentional linkages between GEOG 1130 and GEOG 3305. GEOG 1130 is a lower level geography course that is taken by a variety of majors, such as geography, GIS, criminal justice, history, and a few others. GEOG 3305 is a required course for GIS (Geographic Information Science) students, and an upper level choice for geography, environmental analysis and sustainability majors, and surveying and mapping majors. GEOG 1130 studies the world regions through the context of human geography, whereas GEOG 3305 gives students knowledge of maps, map making, geospatial data and technologies.

Statement of Transformation

This grant will transform two courses provided by the Geography and Anthropology Department by replacing the current resources with their associated costs with Open Educational Resources (OERs) for GEOG 1130 and GEOG 3305. These resources will potentially include textbook resources and multimedia resources including articles, videos, and interactive items. Specifically for GEOG 3305, Professor Ingram will develop a series of labs with hands-on cartographic exercises using the ArcGIS software. This digital lab manual will replace the current labs that are provided by the textbook publisher.

These resources may include, but are not limited to:

- Other open access textbooks such as:

<https://open.lib.umn.edu/worldgeography/>

<http://cartography2.org/>

<https://sites.google.com/umn.edu/mst/home>

<https://www.skillscommons.org/handle/taacct/5440>

- Other resources – module activities, audio and visual resources, including videos and podcasts

- Development of a question bank for faculty who would like to use these resources. The question bank will be made available to faculty members who teach at KSU, as well as verified faculty members at other universities.

- Development of self-assessment quizzes for students

- For GEOG 3305, a digital lab manual with hands-on exercises teaching cartographic tasks/skills.

The stakeholders who will be affected by the transformation are:

1. The students taking the two undergraduate courses - GEOG 1130 (World Regional Geography), taken by a variety of different majors, and GEOG 3305 (Introduction to Cartographic Techniques), a survey course used in the Geography and GIS majors. Making course materials more affordable or, in this case, free means that student will be more likely to obtain and use them. Material and resources created through this transformation are anticipated to be high quality and are designed according to research-based best practices, since each of the team members are Quality Matters (QM) certified, and have collectively put multiple courses through the QM process at KSU. Another benefit of not using a printed textbook is that it is easier to keep digital resources more current rather than using outdated materials from printed books.
2. Faculty teaching GEOG 1130 and GEOG 3305 at KSU and other USG system institutions - Faculty will gain open access to high quality instructional materials and resources that they can integrate into their face-to-face and online courses. Instructors will be able to use and modify these materials and resources for their own instructional purposes. The material will be designed to meet QM standards, including accessibility, which will be beneficial for any faculty who wish to use any of the content in their online courses.
3. The Geography and GIS Degree Programs - Many of our geography majors, GIS majors, and GIS certificate students take both courses. GEOG 3305 is a required course for GIS majors, and an upper level major options course for geography majors. Therefore, it would be beneficial if both courses used no cost to student resources, and if the courses and resources were set up similarly. As we implement the grant, find OER resources, and create additional activities, we will create intentional linkages between GEOG 1103 and GEOG 3305, so that we can expose undeclared students to the Geography and GIS majors, as well as expose geography students to GIS and GIS students to Geography. An example of these intentional linkages is to have a GIS activity in GEOG 3305 that is based on a human geography topic from a regional perspective.

It is anticipated that the impact of this transformation will be tremendously beneficial for both GEOG 1130 and GEOG 3305 students and faculty since both quality (through providing improved Quality Matters (QM) standard material) and access (through eliminating cost) issues will be addressed in this transformation. Additionally, improved access, in terms of ease of actually being able to use the course material is an anticipated outcome for this transformation. A 2016 study of the impact of OERs on students by Cooney showed that, "the majority of students were able to access the OER with more ease than traditional textbooks given the multiple electronic devices they accessed the OER from". Furthermore, the potential positive impact on course outcomes when using OERs has been demonstrated by Grewe and Preston Davis (2017). They experienced results that "show that there is a moderately positive relationship between taking an OER course and academic achievement". The overall impact of these benefits will be improved retention of students in these courses, and graduation of students from this institution, and other institutions where faculty use these OER resources. Other benefits to the department will come from the fact that both of these courses will be using OER and fostering intentional linkages between the two courses. As we make connections between the

two courses known to the students, they will be more likely to move from one course to the next the following semester. This gives the students not only another course without a textbook but specifically a course that is clearly connected to the one they just left that continues to offer the benefits (as outlined above) of using OER.

Transformation Action Plan

Two members of the development team will attend the required kick-off training/implementation in May of 2019.

Content Selection:

We will use current syllabi for GEOG 1130 and GEOG 3305 to determine the course goals and learning objectives that must be met with new, freely available course content.

In an effort to benefit from department-wide expertise, as well as to increase the likelihood of a high-rate of adoption of our materials by GEOG 1130 and 3305 instructors, we will survey current instructors of these courses to solicit their ideas for development of free course materials. We will also ask for them to share with us free materials that they have already developed or are currently using that advance the goals/meet the learning objectives of these two courses. In order to raise awareness of our efforts to create free materials for these courses, and to maximize the likelihood that our colleagues will share their ideas and existing materials with us, we plan to host a "working lunch" early in our materials development process, in which all GEOG 1130 and 3305 instructors are invited to discuss the importance of reducing textbook cost for students, and to share ideas for improvement the quality of these courses through the development of free course materials.

With respect to GEOG 1130, three of the five professors who regularly teach this course (Garrett Smith, Matt Waller, and Paul McDaniel) have expressed great interest in transitioning to a textbook-free curriculum, while grant applicant Jason Rhodes has already done so. The projected student savings of \$12,521.25 represents that the savings that will accrue to students if Professors Smith, Waller, and McDaniel adopt the materials developed by Rhodes over the course of this project. Rhodes will work closely with these professors to ensure that the materials developed are aligned with their course objectives and meet their specifications for materials that they would be willing to utilize in their courses. Specifically, Rhodes will develop and share with these professors several textbook-free modules by mid-summer 2019, in the hopes that they would be willing to implement one or two textbook-free modules in their Fall, 2019 courses, which would allow for valuable feedback on these materials by students and professors alike. It is hoped that positive feedback from students and faculty on these materials can be used to encourage broader adoption of these materials within the department. In the event that these professors choose not to utilize any of these materials in their Fall, 2019 courses, their reasons for choosing not to do so will provide crucial feedback early on in the process, allowing Rhodes to begin modifying the materials, based on faculty input, at the start of the 2019-2020 academic year.

The goal of this project is to ultimately achieve department-wide adoption of textbook-free curricula for GEOG 1130. Towards this end, Rhodes will work closely with GEOG 1130 professors, receiving feedback from them at every stage of the materials design process, beginning in Summer 2019. If the goal of department-wide adoption of the materials developed for this project is achieved, the annual savings to students would be an estimated \$20,868.75 (225 students x \$92.75 in textbook cost per student).

GEOG 1130 professor Jason Rhodes will develop modules for each of the GEOG 1130 learning objectives. Module content will include, but is not limited to, readings and videos that can be made freely available online, discussion questions and activities based on these materials, assignments, assessment tools (quizzes and exams), and lecture PowerPoints. Each module activity will be clearly linked to a GEOG 1130 course goal or learning objective. The goal is to create a complete package of textbook-free GEOG 1130 course materials that can be easily adopted in their entirety by GEOG 1130 professors.

GEOG 3305 professor Uli Ingram will be responsible for developing learning modules for each of the GEOG 3305 learning objectives. Modules will include, but are not limited to, readings, videos that can be made freely available online, discussion questions and activities based on these materials, GIS and remote sensing assignments, and assessment tools, specifically quizzes. Each module activity will be clearly linked to a GEOG 3305 course goal or learning objective. In addition to adopting an existing, free, digital textbook, Professor Ingram will create a digital lab manual with 7-9 modules with hands-on exercises about map making using the ArcGIS software. The most recent edition of the current cartography textbook is 11 years old. It is not clear whether the publisher is working on a new edition. Many of the cartographic concepts have not changed in 11 year, but the labs that accompany the textbook are quite outdated and no longer match the current version of the ArcGIS software. This textbook transformation will give Professor Ingram the opportunity to replace the old labs with new labs that are current and compatible with ArcGIS Desktop 10.7 or ArcGIS Pro 2.3.

The other professor (Dr. Nancy Hoalst-Pullen) who teaching GEOG 3305 is in support of this grant and the effort to provide a no-cost solution to the students taking cartography. She is excited about the digital lab manual that is no longer tied to an outdated textbook. She has agreed to use the lab manual, the free textbook, and the other materials in this course when she teaches it in the future.

A crucial aspect of our project is our plan to create deliberate links and connections between the GEOG 1130 and GEOG 3305 courses, such that GEOG 1130 students gain a richer understanding of the potential for Geographic Information Science (GIS) to enhance our understanding of the issues and themes explored in the discipline of world regional geography, and for GEOG 3305 students to deepen their understanding of the ways in which the skills

learned in this course can be used as a powerful tool for understanding our social world. In addition to increasing the likelihood that GEOG 1130 students go on to take courses in GIS, and GEOG 3305 students take courses in human geography, a departmental goal, this reorientation of these two courses reflects an important current goal within the discipline of geography - the increased collaboration of human geographers and GIS scholars.

GEOG 1130 professor Jason Rhodes will work with GEOG 3305 professor Uli Ingram to create content and assignments which expand the presence of GIS in the GEOG 1130 course and world regional geography in the GEOG 3305 course. Ideas include the development of assignments for the 3305 course which directly relate to GEOG 1130 topics and themes, and which can be presented, upon completion, to GEOG 1130 students, and readings and other materials for the GEOG 1130 students which exposes them to the types of scholarship currently being undertaken in world regional geography with the use of GIS.

Implementation:

Professor Rhodes and Ingram will use the modules and materials developed as part of this project to teach their respective GEOG 1130 and 3305 courses without textbooks, and using only materials made freely available to students, in spring 2020. We will also host a lunch presentation for all GEOG 1130 and GEOG 3305 instructors in which we showcase the materials, and highlight their quality, ease of implementation, and potential savings to students. Finally, as an ongoing practice, we will meet with all newly hired GEOG 1130 and GEOG 3305 instructors to introduce them to the materials and encourage them to consider the benefits of using materials that have been custom-designed for KSU students, and which are freely available to them.

Publication:

All modules and materials will be placed in accessible formats and made freely available online on Kennesaw State University's OER website. Tiffani Reardon will format and post the materials to the website. She will also post all modules and materials to D2L sections made available to all GEOG 1130 and GEOG 3305 instructors, so that they can easily import the content into their courses.

Evaluation:

In order to receive student feedback on the course materials developed, we will survey all students in both our Fall 2019 and Spring 2020 GEOG 1130 and GEOG 3305 courses (i.e., pre- and post-adoption of the new course content), and ask them to evaluate the respective learning materials on the basis of:

- Cost effectiveness
- Ease of use
- Educational value
- Engagement
- Skill development
- Clarity
- Currency

Tiffani Reardon will then compile a final report for ALG, which presents the results from this survey, along with data related to rates of student success and participation.

Information Sharing:

The development team will be available to share our experiences of developing freely accessible and affordable learning materials with ALG and the KSU Department of Geography and Anthropology.

Revisions and Updates:

We will continue to update and improve our course materials as we continue to teach the GEOG 1130 and GEOG 3305 courses. As we do so, we continue to update the modules and materials published on KSU's OER website, as well as the D2L sections, which will remain available to all GEOG 1130 and GEOG 3305 instructors.

Quantitative & Qualitative Measures

The transformation process can be evaluated according to several metrics:

- Student textbook/material use rates – the textbooks used in Dr. Rhodes', Dr. Smith's (one of the other professors who teaches Geog 1130) and Professor Ingram's classes range from \$0 to \$145.89; we suspect that a significant number of students would attempt to get by without purchasing the books. We will survey students and determine how many students used the free, online materials versus the number who would have purchased the traditional textbooks.
- Student success and retention rates – Given the research data that supports the role of OER improving student retention and success, we suspect that we will see an increase in student success and retention in the course with OER. The faculty will keep a record of average grades and drop/fail/withdrawal rates in their fall 2019 courses for baselines to compare to data from the spring 2020 offerings that will use the OER.
- Student satisfaction – the team will seek IRB approval to survey students regarding elements of student satisfaction with the current textbooks and the OER (in their respective semesters), with regards to ease of use, accessibility, and helpfulness with regard to achieving learning objectives. The survey will also seek qualitative student feedback and suggestions for improvement.

Timeline

April 25, 2019:

- Notification of award.

May 20, 2019:

- Rhodes and Ingram will attend the kick-off meeting in Macon.

August 15, 2019:

- Reardon will start developing textbook satisfaction surveys for students.
- Rhodes and Ingram will start evaluating OER for appropriateness and usefulness in their classes.

September 1, 2019:

- Reardon will submit textbook satisfaction surveys for students to IRB for approval by this date.
- Rhodes and Ingram will identify OER content to be used in their courses that satisfies the goals and objectives of those courses by this date.

October 1, 2019:

- Rhodes and Ingram will survey pre-implementation students with current textbooks for comparison with post-implementation student survey.

November 1, 2019:

- Rhodes and Ingram will develop additional content (such as the lab manual).
- Reardon will begin developing the website to host OER resources.

December 15, 2019:

- Rhodes and Ingram will adapt content and activities to online course.

January 7, 2020:

- Rhodes and Ingram will deliver their transformed courses for spring 2020 semester.
- Rhodes and Ingram will survey students in the first two weeks of classes for comparison with end of semester.

April 15, 2020:

- Rhodes and Ingram will survey students in implementation courses to gather feedback of the new resources.

End of Spring 2020:

- Reardon will post website with OER resources online by this date.
- Reardon will publish materials to D2L resource page for geography instructors by this date.
- Reardon, Rhodes, and Ingram will begin collecting data, including satisfaction rate, pass/fail rate, withdraw rate, success rate, and completion rate.
- Reardon will complete and submit final report.
- Data will be shared with colleagues and administrators at KSU and may be presented in appropriate upcoming conferences or meetings.

Budget

*Travel Money for Reardon - \$2,000

Overload pay for Rhodes - \$4,000

Overload pay for Ingram - \$4,000

Travel for Ingram and Rhodes to attend kick-off in Macon - \$800

Total - \$10,800

*Kennesaw State University does not allow staff members at KSU to earn additional compensation for work on grants anymore. However, as ALG and KSU value the input of an instructional designer and OER expert such as Reardon, instructional designers continue to work on these grants with the promise of professional development. Reardon uses this professional development funding to attend conferences that are either directly related to open pedagogy and open educational resources OR she uses them to attend technology-enhanced learning conferences to present on the OER initiatives at KSU.

Sustainability Plan

The overall goal of this project is to create a compilation of materials that cover the themes required to teach these two geography courses. All materials will be made available to every instructor in the department (if they choose to adopt them) prior to the beginning of the semester through D2L.

The materials will also be made available to faculty at other USG institutions through a website built by Tiffani Reardon and hosted on the KSU server.

GEOG 1130 is offered every fall, spring, and summer semester. GEOG 3305 is offered every fall and spring semester. Following the development of the resource, the materials will be available for all future offerings of the course. We will encourage the other instructors who teach these courses in our department to adopt these materials, which would ensure consistency of course content.

In an effort to maintain and continuously improve this course and its materials, we will meet at the end of each semester to assess if changes should be made for the next semester. Any such changes will be based upon student feedback and our own evaluations of what is working (or not working) in the course. Adjustments in course content and material will be made to reflect changes in the field, as appropriate.

All materials are open, and there are no recurring expenses. There are no additional costs that will need to be paid in the future. The transformation will be sustained solely by updating the materials.

Acknowledgment

Grant Acceptance

[Acknowledged] I understand and acknowledge that acceptance of Affordable Learning Georgia grant funding constitutes a commitment to comply with the required activities listed in the RFP and that my submitted proposal will serve as the statement of work that must be completed by my project team. I further understand and acknowledge that failure to complete the deliverables in the statement of work may result in termination of the agreement and funding.



April 2, 2019

To Whom It May Concern,


I am writing to offer my full support for the Affordable Learning Georgia Textbook Transformation Grant (ALGTTG) proposal entitled *Transforming Introductory Geography Courses for a More Affordable Learning Experience*. This proposal will benefit more than 200 students each semester with up-to-date information about rapidly changing technology and how that technology is applied to the field of Geography.

While many ALGTTG proposals benefit students by providing low- to no-cost textbook options, this proposal goes further by providing students with links between two different courses, World Regional Geography and Cartography. The former is a lower division geography course that can be taken by students in majors such as geography, anthropology, and education. The latter is required for the GIS degree and is an upper division elective in the geography degree. Given the reach of the two courses that will be affected by this ALGTTG proposal, students will benefit by having course material that is specifically created to show linkages between subject areas that may not appear to be related to one another.

Both of the faculty members have years of experience in an online teaching environment, and have demonstrated excellence in this teaching modality. The instructional designer working with them also has many years of experience in designing outstanding online learning material and has served as a successful member of other ALGTTG projects. While the course materials they will develop are not specifically for an online audience, the materials do need to be accessible in electronic format, and be something that students want to engage with. I know that the materials they produce will have both of these features.

The proposal for *Transforming Geography* is sustainable. The faculty have agreed to meet each semester to assess the materials from the courses and to adjust them as needed. They will also make sure to keep other faculty members apprised of the changes they make, thereby ensuring that the materials are current as technology and pedagogical needs change.

Sincerely,



Susan Kirkpatrick Smith, Ph.D.
Chair, Department of Geography and Anthropology
Associate Professor of Anthropology

April 1, 2019

Dear ALG Grant Committee,

I am writing to support the proposal titled “Transforming Geography Courses for a More Affordable and Current Learning Experience” submitted by Tiffani Reardon, Ulrike Ingram, and Jason Rhodes. This proposal seeks to create no-cost-to-students learning materials for GEOG 3305: Introduction to Cartographic Techniques which serves 50 students per year in GIS certificate program, and to GEOG 1130, for which three professors, teaching 135 students annually, have expressed interest in transitioning to a textbook-free course using entirely free materials.

These courses are excellent candidates for transformation with a no-cost textbook option. By replacing the current textbook with no-cost-to-students resources, the proposal team will save students in their GEOG 3305 courses \$145.89 each per year, for a total possible savings of \$7,294.50 per year based on a 50 students course capacity. In addition, the publisher of this text is not keeping pace with the rapidly changing field of GIS. Curated by the instructors, the planned OER materials for this course would not only be an update to the current available textbook, but would be able to keep pace with developments in the field at a more responsive rate. Lastly, GIS students do not qualify for financial aid while pursuing the GIS certificate at KSU. Thus, providing no-cost solutions to our students is even more critical for these students facing an increased financial burden without possibility of financial aid. Similarly, this proposal offers a potential savings of \$92.75 in textbook costs to impacted GEOG 1130 students, for a total projected annual savings of \$12,521.25.

The plan going into this project is to eventually transform the textbooks for all four courses in the GIS certificate program into no-cost resources for the students. When completed, this project will result in a net savings of about \$500 for students pursuing the GIS certificate. This certificate gives students an important advantage in the job market and is especially desirable for future governmental positions. For GEOG 1130, the ultimate goal is department-wide adoption of the textbook-free curriculum to be developed with the support of this ALG grant. This would impact 225 students annually, for a total projected annual savings of \$20,868.75.

This proposal team understands that an important part of facilitating wider adoption of these text materials is creating robust and valuable support materials-quizzes in the learning management system to go along with the textbook, easily replicable assignments with grading rubrics, and PowerPoints (to create voiceover lectures) that bridge the gap between the course goals and the textbook readings. The team is made up of experienced online teachers with a great amount of experience in instructional technology. Therefore, they have the skills to create high quality support materials for this textbook transformation project.

Sincerely,

Stephen Bartlett

Stephen Bartlett
Director of Distance Education
College of Humanities and Social Sciences
Kennesaw State University



College of Humanities
and Social Sciences
Office of Distance Education

March 29, 2019

Dear Members of the Proposal Review Committee:

I am writing to support the proposal to create no cost to students learning materials for GEOG 1130 (World Regional Geography) and GEOG 3305 (Introduction to Cartographic Techniques).

I have worked with the proposal and learning material authors for many years. They are dedicated professionals with a passion for their fields and for student success. If given the chance, they will create high quality, no cost teaching materials that will support student success and be available worldwide.

The team is made up of experienced online teachers with a great amount of experience in instructional technology. Therefore, they have the skills to create high quality course materials for important courses in today's economy.

Please don't hesitate to reach out if I can provide more information or be of further service in any way. I can be reached at 678-756-3028.

Sincerely,

A handwritten signature in blue ink that reads "Tamara Powell".

Dr. Tamara Powell

Special Advisor to the College of Humanities and Social Sciences Office of Distance Education

Professor of English

**Affordable Learning Georgia Textbook Transformation Grants
Round 14
For Implementations beginning Summer Semester 2019
Running Through Summer 2020**

Proposal Form and Narrative

Submitter Name	Tiffani Reardon
Submitter Title	Instructional Designer
Submitter Email	treardo2@kennesaw.edu
Submitter Phone Number	470-578-7923
Submitter Campus Role	Principal Investigator
Applicant Name	Tiffani Reardon
Applicant Email	treardo2@kennesaw.edu
Applicant Phone Number	470-578-7923
Primary Appointment Title	Instructional Designer
Institution Name(s)	Kennesaw State University
Team Members	<p>Tiffani Reardon, Instructional Designer, College of Humanities and Social Sciences, treardo2@kennesaw.edu</p> <p>Jason Rhodes, Lecturer of Geography, Department of Geography and Anthropology, jrhode22@kennesaw.edu</p> <p>Ulrike Ingram, Lecturer of Geographic Information Systems, Department of Geography and Anthropology, uingram@kennesaw.edu</p>

Sponsor, Title, Department, Institution	<p>Susan Kirkpatrick Smith, Chair of the Department of Geography and Anthropology and Associate Professor of Anthropology, Department of Geography and Anthropology</p> <p>Stephen Bartlett, Interim Director of Distance Education and Senior Lecturer of History, College of Humanities and Social Sciences Office of Distance Education and Department of History and Philosophy</p> <p>Tamara Powell, Special Assistant to the Dean for Distance Learning and Professor of English, College of Humanities and Social Sciences Office of Distance Education and Department of English</p>				
Proposal Title	Transforming Geography Courses for a More Affordable Learning Experience				
Course Names, Course Numbers and Semesters Offered	<p>World Regional Geography, GEOG 1130, Fall and Summer</p> <p>Introduction to Cartographic Techniques, GEOG 3305, Fall and Spring</p>				
Final Semester of Instruction	<p>GEOG 1130, Summer 2020</p> <p>GEOG 3305, Spring 2020</p>				
Average Number of Students Per Course Section	1130: 45 3305: 25	Number of Course Sections Affected by Implementation in Academic Year	1130: 4 3305: 3	Total Number of Students Affected by Implementation in Academic Year	1130: 180 3305: 75 Total: 255
Average Number of Students Per Summer Semester	GEOG 1130: 1 section x 45 students each = 45 students GEOG 3305: Not taught in summer				
Average Number of Students Per Fall Semester	GEOG 1130: 3 sections x 45 students each = 135 students GEOG 3305: 2 sections x 25 students each = 50 students				
Average Number of Students Per Spring Semester	GEOG 1130: Not taught in spring GEOG 3305: 1 section x 25 students = 25 students				

Award Category (pick one)	<input checked="" type="checkbox"/> No-or-Low-Cost-to-Students Learning Materials
Are you planning on using an OpenStax textbook?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
List the original course materials for students (including title, whether optional or required, & cost for each item)	GEOG 1130: Nijman, J., Muller, P. and de Blij, H. 2016. The World Today. Concepts and Regions in Geography, 7th edition. Wiley. Required, \$92.75 GEOG 3305: Cartography: Thematic Map Design by Borden Dent. Required, \$145.89
Requested Amount of Funding	\$10,800.00
Original Per Student Cost	GEOG 1130: \$92.75 GEOG 3305: \$145.89
Post-Proposal Projected Per Student Cost	GEOG 1130: \$0 GEOG 3305: \$0
Projected Per Student Savings	GEOG 1130: \$92.75 GEOG 3305: \$145.89
Projected Total Annual Student Savings	GEOG 1130: 135* students x \$92.75 each = \$12,521.25 GEOG 3305: 75 students x \$145.89 each = \$10,941.75 Total projected annual student savings: \$23,463

	*one of the four impacted GEOG 1130 sections is already being taught without a textbook; the savings will thus accrue to 135 students (3 x 45) rather than 180 (4 x 45)
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NARRATIVE

1.1 PROJECT GOALS

We have personally experienced situations in which students have had to drop out of courses and even out of the university for the semester due to lacking a couple hundred dollars to pay for textbooks and class supplies. We would like to be part of the solution to find ways for students to reduce the cost of getting a degree. In this respect, we feel strongly that providing these no-cost materials will help with improved retention, progression, and graduation of students at Kennesaw State University and other institutions with faculty who use the resources created with this grant. To that affect, the goals of this project are the following:

1. Contribute to the effort to reduce the cost of course materials by providing no-cost-to-students learning materials.
2. Improve the quality and effectiveness of teaching materials used in GEOG 1130 (World Regional Geography) and GEOG 3305 (Introduction to Cartographic Techniques), thereby improving retention in these two courses, progression, and eventual graduation.
3. Create intentional linkages between GEOG 1130 and GEOG 3305. GEOG 1130 is a lower level geography course that is taken by a variety of majors, such as geography, GIS, criminal justice, history, and a few others. GEOG 3305 is a required course for GIS (Geographic Information Science) students, and an upper level choice for geography, environmental analysis and sustainability majors, and surveying and mapping majors. GEOG 1130 studies the world regions through the context of human geography, whereas GEOG 3305 gives students knowledge of maps, map making, geospatial data and technologies.

1.2 STATEMENT OF TRANSFORMATION

This grant will transform two courses provided by the Geography and Anthropology Department by replacing the current resources with their associated costs with Open Educational Resources (OERs) for GEOG 1130 and GEOG 3305. These resources will potentially include textbook resources and multimedia resources including articles, videos, and interactive items. Specifically for GEOG 3305, Professor Ingram will develop a series of labs with hands-on cartographic exercises using the ArcGIS software. This digital lab manual will replace the current labs that are provided by the textbook publisher.

These resources may include, but are not limited to:

- Other open access textbooks such as:
 - <https://open.lib.umn.edu/worldgeography/>

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- <http://cartography2.org/>
 - <https://sites.google.com/umn.edu/mst/home>
 - <https://www.skillscommons.org/handle/taaccct/5440>
 - Other resources – module activities, audio and visual resources, including videos and podcasts
 - Development of a question bank for faculty who would like to use these resources. The question bank will be made available to faculty members who teach at KSU, as well as verified faculty members at other universities.
 - Development of self-assessment quizzes for students
 - For GEOG 3305, a digital lab manual with hands-on exercises teaching cartographic tasks/skills.

The stakeholders who will be affected by the transformation are:

1. The students taking the two undergraduate courses - GEOG 1130 (World Regional Geography), taken by a variety of different majors, and GEOG 3305 (Introduction to Cartographic Techniques), a survey course used in the Geography and GIS majors. Making course materials more affordable or, in this case, free means that student will be more likely to obtain and use them. Material and resources created through this transformation are anticipated to be high quality and are designed according to research-based best practices, since each of the team members are Quality Matters (QM) certified, and have collectively put multiple courses through the QM process at KSU. Another benefit of not using a printed textbook is that it is easier to keep digital resources more current rather than using outdated materials from printed books.
2. Faculty teaching GEOG 1130 and GEOG 3305 at KSU and other USG system institutions - Faculty will gain open access to high quality instructional materials and resources that they can integrate into their face-to-face and online courses. Instructors will be able to use and modify these materials and resources for their own instructional purposes. The material will be designed to meet QM standards, including accessibility, which will be beneficial for any faculty who wish to use any of the content in their online courses.
3. The Geography and GIS Degree Programs - Many of our geography majors, GIS majors, and GIS certificate students take both courses. GEOG 3305 is a required course for GIS majors, and an upper level major options course for geography majors. Therefore, it would be beneficial if both courses used no cost to student resources, and if the courses and resources were set up similarly. As we implement the grant, find OER resources, and create additional activities, we will create intentional linkages between GEOG 1103 and GEOG 3305, so that we can expose undeclared students to the Geography and GIS majors, as well as expose geography students to GIS and GIS students to Geography. An example of these intentional linkages is to have a GIS activity in GEOG 3305 that is based on a human geography topic from a regional perspective.

It is anticipated that the impact of this transformation will be tremendously beneficial for both GEOG 1130 and GEOG 3305 students and faculty since both quality (through providing improved Quality Matters (QM) standard material) and access (through eliminating cost) issues will be addressed in this transformation. Additionally, improved access, in terms of ease of actually being able to use the course material is an anticipated outcome for this transformation. A 2016 study of the impact of OERs on students by Cooney showed that, "the majority of students

were able to access the OER with more ease than traditional textbooks given the multiple electronic devices they accessed the OER from". Furthermore, the potential positive impact on course outcomes when using OERs has been demonstrated by Grewe and Preston Davis (2017). They experienced results that "show that there is a moderately positive relationship between taking an OER course and academic achievement". The overall impact of these benefits will be improved retention of students in these courses, and graduation of students from this institution, and other institutions where faculty use these OER resources. Other benefits to the department will come from the fact that both of these courses will be using OER and fostering intentional linkages between the two courses. As we make connections between the two courses known to the students, they will be more likely to move from one course to the next the following semester. This gives the students not only another course without a textbook but specifically a course that is clearly connected to the one they just left that continues to offer the benefits (as outlined above) of using OER.

1.3 TRANSFORMATION ACTION PLAN

Two members of the development team will attend the required kick-off training/implementation in May of 2019.

Content Selection:

We will use current syllabi for GEOG 1130 and GEOG 3305 to determine the course goals and learning objectives that must be met with new, freely available course content.

In an effort to benefit from department-wide expertise, as well as to increase the likelihood of a high-rate of adoption of our materials by GEOG 1130 and 3305 instructors, we will survey current instructors of these courses to solicit their ideas for development of free course materials. We will also ask for them to share with us free materials that they have already developed or are currently using that advance the goals/meet the learning objectives of these two courses. In order to raise awareness of our efforts to create free materials for these courses, and to maximize the likelihood that our colleagues will share their ideas and existing materials with us, we plan to host a "working lunch" early in our materials development process, in which all GEOG 1130 and 3305 instructors are invited to discuss the importance of reducing textbook cost for students, and to share ideas for improvement the quality of these courses through the development of free course materials.

With respect to GEOG 1130, three of the five professors who regularly teach this course (Garrett Smith, Matt Waller, and Paul McDaniel) have expressed great interest in transitioning to a textbook-free curriculum, while grant applicant Jason Rhodes has already done so. The projected student savings of \$12,521.25 represents that the savings that will accrue to students if Professors Smith, Waller, and McDaniel adopt the materials developed by Rhodes over the course of this project. Rhodes will work closely with these professors to ensure that the materials developed are aligned with their course objectives and meet their specifications for materials that they would be willing to utilize in their courses. Specifically, Rhodes will develop and share with these professors several textbook-free modules by mid-summer 2019, in the hopes that they would be willing to implement one or two textbook-free modules in their Fall, 2019 courses, which would allow for valuable feedback on these materials by students and professors alike. It is hoped that positive

feedback from students and faculty on these materials can be used to encourage broader adoption of these materials within the department. In the event that these professors choose not to utilize any of these materials in their Fall, 2019 courses, their reasons for choosing not to do so will provide crucial feedback early on in the process, allowing Rhodes to begin modifying the materials, based on faculty input, at the start of the 2019-2020 academic year.

The goal of this project is to ultimately achieve department-wide adoption of textbook-free curricula for GEOG 1130. Towards this end, Rhodes will work closely with GEOG 1130 professors, receiving feedback from them at every stage of the materials design process, beginning in Summer 2019. If the goal of department-wide adoption of the materials developed for this project is achieved, the annual savings to students would be an estimated \$20,868.75 (225 students x \$92.75 in textbook cost per student).

GEOG 1130 professor Jason Rhodes will develop modules for each of the GEOG 1130 learning objectives. Module content will include, but is not limited to, readings and videos that can be made freely available online, discussion questions and activities based on these materials, assignments, assessment tools (quizzes and exams), and lecture PowerPoints. Each module activity will be clearly linked to a GEOG 1130 course goal or learning objective. The goal is to create a complete package of textbook-free GEOG 1130 course materials that can be easily adopted in their entirety by GEOG 1130 professors.

GEOG 3305 professor Uli Ingram will be responsible for developing learning modules for each of the GEOG 3305 learning objectives. Modules will include, but are not limited to, readings, videos that can be made freely available online, discussion questions and activities based on these materials, GIS and remote sensing assignments, and assessment tools, specifically quizzes. Each module activity will be clearly linked to a GEOG 3305 course goal or learning objective. In addition to adopting an existing, free, digital textbook, Professor Ingram will create a digital lab manual with 7-9 modules with hands-on exercises about map making using the ArcGIS software. The most recent edition of the current cartography textbook is 11 years old. It is not clear whether the publisher is working on a new edition. Many of the cartographic concepts have not changed in 11 year, but the labs that accompany the textbook are quite outdated and no longer match the current version of the ArcGIS software. This textbook transformation will give Professor Ingram the opportunity to replace the old labs with new labs that are current and compatible with ArcGIS Desktop 10.7 or ArcGIS Pro 2.3.

The other professor (Dr. Nancy Hoalst-Pullen) who teaching GEOG 3305 is in support of this grant and the effort to provide a no-cost solution to the students taking cartography. She is excited about the digital lab manual that is no longer tied to an outdated textbook. She has agreed to use the lab manual, the free textbook, and the other materials in this course when she teaches it in the future.

A crucial aspect of our project is our plan to create deliberate links and connections between the GEOG 1130 and GEOG 3305 courses, such that GEOG 1130 students gain a richer understanding of the potential for Geographic Information Science (GIS) to enhance our understanding of the issues and themes explored in the discipline of world regional geography, and for GEOG 3305 students to deepen their understanding of the ways in which the skills learned in this course can be used as a powerful tool for understanding our social world. In addition to increasing the likelihood

that GEOG 1130 students go on to take courses in GIS, and GEOG 3305 students take courses in human geography, a departmental goal, this reorientation of these two courses reflects an important current goal within the discipline of geography - the increased collaboration of human geographers and GIS scholars.

GEOG 1130 professor Jason Rhodes will work with GEOG 3305 professor Uli Ingram to create content and assignments which expand the presence of GIS in the GEOG 1130 course and world regional geography in the GEOG 3305 course. Ideas include the development of assignments for the 3305 course which directly relate to GEOG 1130 topics and themes, and which can be presented, upon completion, to GEOG 1130 students, and readings and other materials for the GEOG 1130 students which exposes them to the types of scholarship currently being undertaken in world regional geography with the use of GIS.

Implementation:

Professor Rhodes and Ingram will use the modules and materials developed as part of this project to teach their respective GEOG 1130 and 3305 courses without textbooks, and using only materials made freely available to students, in spring 2020. We will also host a lunch presentation for all GEOG 1130 and GEOG 3305 instructors in which we showcase the materials, and highlight their quality, ease of implementation, and potential savings to students. Finally, as an ongoing practice, we will meet with all newly hired GEOG 1130 and GEOG 3305 instructors to introduce them to the materials and encourage them to consider the benefits of using materials that have been custom-designed for KSU students, and which are freely available to them.

Publication:

All modules and materials will be placed in accessible formats and made freely available online on Kennesaw State University's OER website. Tiffani Reardon will format and post the materials to the website. She will also post all modules and materials to D2L sections made available to all GEOG 1130 and GEOG 3305 instructors, so that they can easily import the content into their courses.

Evaluation:

In order to receive student feedback on the course materials developed, we will survey all students in both our Fall 2019 and Spring 2020 GEOG 1130 and GEOG 3305 courses (i.e., pre- and post-adoption of the new course content), and ask them to evaluate the respective learning materials on the basis of:

- Cost effectiveness
- Ease of use
- Educational value
- Engagement
- Skill development
- Clarity
- Currency

Tiffani Reardon will then compile a final report for ALG, which presents the results from this survey, along with data related to rates of student success and participation.

Information Sharing:

The development team will be available to share our experiences of developing freely accessible and affordable learning materials with ALG and the KSU Department of Geography and Anthropology.

Revisions and Updates:

We will continue to update and improve our course materials as we continue to teach the GEOG 1130 and GEOG 3305 courses. As we do so, we continue to update the modules and materials published on KSU's OER website, as well as the D2L sections, which will remain available to all GEOG 1130 and GEOG 3305 instructors.

1.4 QUANTITATIVE AND QUALITATIVE MEASURES

The transformation process can be evaluated according to several metrics:

- Student textbook/material use rates – the textbooks used in Dr. Rhodes', Dr. Smith's (one of the other professors who teaches Geog 1130) and Professor Ingram's classes range from \$0 to \$145.89; we suspect that a significant number of students would attempt to get by without purchasing the books. We will survey students and determine how many students used the free, online materials versus the number who would have purchased the traditional textbooks.
- Student success and retention rates – Given the research data that supports the role of OER improving student retention and success, we suspect that we will see an increase in student success and retention in the course with OER. The faculty will keep a record of average grades and drop/fail/withdrawal rates in their fall 2019 courses for baselines to compare to data from the spring 2020 offerings that will use the OER.
- Student satisfaction – the team will seek IRB approval to survey students regarding elements of student satisfaction with the current textbooks and the OER (in their respective semesters), with regards to ease of use, accessibility, and helpfulness with regard to achieving learning objectives. The survey will also seek qualitative student feedback and suggestions for improvement.

1.5 TIMELINE

April 25, 2019:

- Notification of award.

May 20, 2019:

- Rhodes and Ingram will attend the kick-off meeting in Macon.
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August 15, 2019:

- Reardon will start developing textbook satisfaction surveys for students.
- Rhodes and Ingram will start evaluating OER for appropriateness and usefulness in their classes.

September 1, 2019:

- Reardon will submit textbook satisfaction surveys for students to IRB for approval by this date.
- Rhodes and Ingram will identify OER content to be used in their courses that satisfies the goals and objectives of those courses by this date.

October 1, 2019:

- Rhodes and Ingram will survey pre-implementation students with current textbooks for comparison with post-implementation student survey.

November 1, 2019:

- Rhodes and Ingram will develop additional content (such as the lab manual).
- Reardon will begin developing the website to host OER resources.

December 15, 2019:

- Rhodes and Ingram will adapt content and activities to online course.

January 7, 2020:

- Rhodes and Ingram will deliver their transformed courses for spring 2020 semester.
- Rhodes and Ingram will survey students in the first two weeks of classes for comparison with end of semester.

April 15, 2020:

- Rhodes and Ingram will survey students in implementation courses to gather feedback of the new resources.

End of Spring 2020:

- Reardon will post website with OER resources online by this date.
 - Reardon will publish materials to D2L resource page for geography instructors by this date.
 - Reardon, Rhodes, and Ingram will begin collecting data, including satisfaction rate, pass/fail rate, withdraw rate, success rate, and completion rate.
 - Reardon will complete and submit final report.
 - Data will be shared with colleagues and administrators at KSU and may be presented in appropriate upcoming conferences or meetings.
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1.6 BUDGET

*Travel Money for Reardon - \$2,000
Overload pay for Rhodes - \$4,000
Overload pay for Ingram - \$4,000
Travel for Ingram and Rhodes to attend kick-off in Macon - \$800
Total - \$10,800

*Kennesaw State University does not allow staff members at KSU to earn additional compensation for work on grants anymore. However, as ALG and KSU value the input of an instructional designer and OER expert such as Reardon, instructional designers continue to work on these grants with the promise of professional development. Reardon uses this professional development funding to attend conferences that are either directly related to open pedagogy and open educational resources OR she uses them to attend technology-enhanced learning conferences to present on the OER initiatives at KSU.

1.7 SUSTAINABILITY PLAN

The overall goal of this project is to create a compilation of materials that cover the themes required to teach these two geography courses. All materials will be made available to every instructor in the department (if they choose to adopt them) prior to the beginning of the semester through D2L.

The materials will also be made available to faculty at other USG institutions through a website built by Tiffani Reardon and hosted on the KSU server.

GEOG 1130 is offered every fall, spring, and summer semester. GEOG 3305 is offered every fall and spring semester. Following the development of the resource, the materials will be available for all future offerings of the course. We will encourage the other instructors who teach these courses in our department to adopt these materials, which would ensure consistency of course content.

In an effort to maintain and continuously improve this course and its materials, we will meet at the end of each semester to assess if changes should be made for the next semester. Any such changes will be based upon student feedback and our own evaluations of what is working (or not working) in the course. Adjustments in course content and material will be made to reflect changes in the field, as appropriate.

All materials are open, and there are no recurring expenses. There are no additional costs that will need to be paid in the future. The transformation will be sustained solely by updating the materials.

1.8 REFERENCES & ATTACHMENTS

Reference letters attached.

Cooney, Cailean (2016). How do open Educational resources (OERS) Impact Students? A Qualitative Study at New York City College of Technology, Cuny.

https://academicworks.cuny.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=2386&context=gc_etds

Grewe, K.E. and W. Preston Davis (June 2017). The Impact of Enrollment in an OER Course on Student Learning Outcomes. *International Review of Research in Open and Distributed Learning*. Vol 18, No. 4.