Affordable Learning Georgia Affordable Materials Grants  
Transformation Grants Final Report

*(or Textbook Transformation Grants, if R17 or earlier)*

Once you have completed this template, to submit your Final Report, go to the [Final Report submission](https://survey.zohopublic.com/zs/xTCCvG) form.

The final report submission form allows you to submit the following:

* This completed narrative document (required)
* Syllabus or syllabi (required)

*If multiple files, compress into one .zip folder*

* Qualitative/Quantitative Measures data files (optional, as needed)

*If multiple files, compress into one .zip folder*

* Photo of your team or a class of your students for future ALG promotions (optional)
* Invoice for the second half of the grant’s award amount (optional)

Follow the instructions on the webpage for uploading your documents. Based on receipt of this report, ALG will process the final payment for your grant. ALG will follow up in the future with post-project grantee surveys and may also request your participation in a publication, presentation, or other event.

# General Information

**Date:** May 21, 2025

**Grant Round:** 25

**Grant Number:** 715

**Institution Name(s):** Georgia Southern University

**Project Lead:** Meimei Lin

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

Meimei Lin, Associate Professor of Geography, School of Earth, Environment & Sustainability, [meimeilin@georgiasouthern.edu](mailto:meimeilin@georgiasouthern.edu)

Dawn Cannon-Rech, Associate Prof./Library Faculty, Zach S. Henderson Library, [dcannonrech@georgiasouthern.edu](mailto:dcannonrech@georgiasouthern.edu)

**Course Name(s) and Course Numbers:** GEOG 1111 Introduction to Physical Geography

**Semester Project Began:** Summer 2024

**Final Semester of Implementation:** Spring 2025

**Total Number of Students Affected During Project:** 50

# Narrative

* 1. *Describe the key outcomes, whether positive, negative, or interesting, of your project. Include:*
* *Summary of your transformation experience, including challenges and accomplishments*
* *Transformative impacts on your instruction*
* *Transformative impacts on your students and their performance*
  1. *Describe lessons learned, including any things you would do differently next time.*
  2. *Describe any materials you created or revised/remixed that will be shared with the public. Include the* [*open license your materials will be shared under*](https://creativecommons.org/share-your-work/)*—for most materials, this will be an Attribution 4.0 License (CC BY) as required in the Grants Request for Proposals.*

I piloted the transformed GEOG 1111 course in Spring 2025 with 49 students in an online format. To begin the OER transformation, I used my existing course syllabi as the foundation. This allowed me to maintain consistent course goals and student learning outcomes while ensuring that all major topics were still covered. The course includes topics related to spatial patterns of Earth’s physical environment such as Earth’s atmosphere, water, land, and living systems. More specifically, the topics include Earth-Sun geometry, the atmosphere and energy budget, wind patterns, moisture, clouds and precipitation, temperature, climate and climate change, plate tectonics, earthquakes, volcanoes, and biogeography.

A significant amount of time was spent searching for, selecting, and comparing OERs that cover these topics. I compared the OERs not only against the traditional textbooks previously used in the course but also against each other. The goal was to narrow the selection to 3 to 4 OER textbooks to avoid overwhelming students with too many sources. After deciding on these core texts, I carefully read through the chapters relevant to each weekly topic. I then selected which chapters or sections would be assigned as weekly readings. If the assigned OER readings did not fully cover the topic, I supplemented with other open sources.

Once the readings were finalized, I developed a course map and individual lesson overviews outlining the topics, learning activities, and assignments for each module. Using this structure, I created all new lecture slides to align with the adopted OERs. Each lecture started with a slide on learning objectives, which were made consistent with the original objectives used in the course when traditional textbooks were used.

There was a back-and-forth process when building lecture slides. If the OER assigned for a particular topic lacked information, I revisited the list of OERs I initially identified to see if additional chapters or sections should be added to that week's reading. This iterative approach was used to make sure that weekly readings and weekly lectures were aligned and covered the same content.

The same approach was applied to developing the question bank and hands-on activities. If existing OER-based resources were available for learning activities, I used them directly. Otherwise, I revised or created new materials to match the weekly topics and learning objectives. Some lab activities were taken from OER sources and slightly modified to fit the course structure.

Students responded positively to the OER materials. They appreciated that the course did not require a textbook purchase and noted that the assigned materials were accessible and aligned with course goals. Since this was an online course, direct interaction with students was limited, and participation in the feedback survey was lower than hoped. I had planned to conduct focus group discussions, but despite sending multiple rounds of invitations, no students volunteered. This was likely due to the remote nature of the course.

One lesson learned was that more time is needed to refine the test bank and hands-on activities. While I was able to adopt some labs and exercises directly from OER sources, I would like to revise these further in the future to reflect local physical environments. Doing so would help students make more direct connections with their surroundings and communities.

Another lesson was related to student feedback. I had planned to administer the survey and conduct focus groups near the end of the semester, thinking students would be better positioned to provide feedback after engaging with the materials. However, this approach did not work well. In the future, I would consider administering surveys at multiple points during the semester. I would also consider using small incentives to encourage participation, especially in online courses.

As part of this project, I created and revised a variety of course materials that will be made publicly available under a Creative Commons Attribution 4.0 License (CC BY 4.0). These include:

A revised course syllabus with links to the adopted OER readings.

A course map with weekly lesson plans.

Weekly lecture slides aligned with OER content.

A set of revised labs and hands-on activities.

A question bank for quizzes and assignments.

These resources will be accessible through the university’s D2L system and LibGuides platform. They are designed to support both students enrolled in the course and instructors who may be interested in adopting or adapting similar materials.

# Quotes

*Provide three quotes from students evaluating their experience with the no-cost learning materials.*

“The open-source course materials were very detailed, and helped me better understand topics that I was previously confused about. I’m more of a visual learner, so having those short instructional videos and clips at the end of paragraphs or a term in the chapter helped a lot too.”

“The transition to OERs has not only saved me money, but exposed me to more authors that would typically be locked behind a financial constraint (i.e. cost of textbooks.)”

“The professor did a great job connecting the open source materials to her online lectures. I always like to read the chapters first, take notes, and watch my professors lectures after. I love how everything all just clicks!”

# Quantitative and Qualitative Measures

## Uniform Measurements Questions

*The following are uniform questions asked to all grant teams. Please answer these to the best of your knowledge.*

**Student Opinion of Materials**

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

Total number of students affected in this project: \_\_\_49\_\_\_\_

* Positive: \_\_90\_\_ % of \_20\_\_\_\_ number of respondents
* Neutral: \_\_\_5\_\_\_ % of \_\_20\_\_\_\_ number of respondents
* Negative: \_\_5\_\_\_ % of \_\_20\_\_\_ number of respondents

**Student Learning Outcomes and Grades**

**Was the overall comparative impact on student performance in terms of learning outcomes and grades in the semester(s) of implementation over previous semesters positive, neutral, or negative?**

*Student outcomes should be described in detail in Section 3b.*

Choose One:

* \_X\_ Positive: Higher performance outcomes measured over previous semester(s)
* \_\_\_ Neutral: Same performance outcomes over previous semester(s)
* \_\_\_ Negative: Lower performance outcomes over previous semester(s)

**Student Drop/Fail/Withdraw (DFW) Rates**

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

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

*1 out of 49 students dropped out*

\_\_\_2\_\_\_% of students, out of a total \_\_49\_\_\_ students affected, dropped/failed/withdrew from the course in the final semester of implementation.

Choose One:

* \_\_\_ Positive: This is a lower percentage of students with D/F/W than previous semester(s)
* \_X\_ Neutral: This is the same percentage of students with D/F/W than previous semester(s)
* \_\_\_ Negative: This is a higher percentage of students with D/F/W than previous semester(s)

## Measures Narrative

*In this section, summarize the supporting impact data that you are submitting, including all quantitative and qualitative measures of impact on student success and experience. Include all measures as described in your proposal, along with any measures developed after the proposal submission.*

*[When submitting your final report, as noted above, you will also need to provide the separate file (or .zip with multiple files) of supporting data on the impact of your Textbook Transformation, such as surveys, analyzed data collected, etc.]*

* *Include measures such as:*
  + *Drop, fail, withdraw (DFW) delta rates*
  + *Course retention and completion rates*
  + *Average GPA*
  + *Pre-and post-transformation DFW comparison*
  + *Student success in learning objectives*
  + *Surveys, interviews, and other qualitative measures*
* *Indicate any co-factors that might have influenced the outcomes.*

The transformed course was first delivered in Spring 2025 as an asynchronous online course with a typical class size of 49 students. A survey was administered at the end of the semester to gather student feedback on the adopted OER materials and their overall learning experience. The survey responses were collected using the online Qualtrics platform. Despite several rounds of announcements, only 20 students participated in the survey, and just 12 students completed all questions.

The full set of survey responses is included in the final project deliverables as a PDF file (OER Survey Responses.pdf). Below, I provide a detailed analysis of the survey data collected from these 12 respondents. The analysis includes respondent demographics, OER familiarity and experience, quantitative ratings of the OERs used in the course, and qualitative feedback on topics such as impact on learning, accessibility and affordability, integration by the instructor, key takeaways, and student recommendations.

Course: GEOG1111 – Introduction to Physical Geography

Institution: Georgia Southern University

Instructor/PI: Dr. Meimei Lin

Survey Respondents: 13-20 depending on the question

Period: Spring 2025

**1. Respondent Demographics**

- Academic Standing (N=13):

• Freshman: 1

• Sophomore: 4

• Junior: 2

• Senior: 4

• Other (dual enrollment): 2

- First-Generation Status (N=13):

• Yes: 1 (8%)

• No: 11 (85%)

• Prefer not to say: 1 (8%)

- Prior Geography Coursework (N=13):

• None: 9 (69%)

• 1–2 Courses: 4 (31%)

- Expected Grade (N=14):

• A: 6 (43%)

• B: 6 (43%)

• C: 2 (14%)

- Majors: Broad range including Psychology, Anthropology, Multimedia Journalism, Criminal Justice, Studio Art, Elementary Education, Public Relations, and undeclared.

**2. OER Familiarity and Experience**

- Not familiar (first-time use): 8 (62%)

- Somewhat familiar: 3 (23%)

- Very familiar: 1 (8%)

- Unsure: 1 (8%)

Interpretation: Most students had their first exposure to OERs in this class, highlighting its introductory role in promoting open-access content.

**3. Quantitative Ratings of OERs Used in This Course (N=12)**

Statement Average Score

*Clearly informed about shift to OERs 4.42*

*Support the transition to OERs 4.42*

*High quality of OERs compared to textbooks 4.17*

*No major issues accessing materials 4.58*

*Easy to use 4.50*

*Financial savings satisfaction 4.42*

*Materials aligned well with course content 4.33*

*Improved learning experience 4.25*

*Adequate support from professor 4.50*

*Would recommend OER-based courses 4.50*

*Enhances accessibility for diverse financial backgrounds 4.33*

*Personally benefited from cost savings 4.42*

*Pleased with overall transition to OERs 4.42*

**4. Qualitative Feedback**

a. Impact on Learning

- Students praised cost savings, ease of access, and multimedia resources.

- Some preferred fewer sources/authors and more visuals or summaries.

b. Accessibility and Affordability

- Not paying for textbooks was a major benefit.

- Some noted a disconnect with new university online fees (not clearly tied to OER).

c. Integration by the Instructor

- Dr. Lin received praise for integrating OERs into lectures and weekly schedules.

- The structure helped students follow readings and prepare for assignments.

**5. Key Takeaways**

- High satisfaction with the OER approach and course design.

- Financial savings and clear integration were most valued.

- Students suggest simplifying sources and enhancing visual content.

**6. Student Recommendations**

- Streamline materials into fewer primary sources.

- Include more multimedia and visuals for complex topics.

- Highlight cost-savings and benefits of OER to students.

- Consider applying the OER model to other foundational courses.

Since this is a core course, I also have core assessment data, which includes pre- and post-tests from the most recent three semesters of GEOG 1111: Physical Geography, to evaluate the impact of using OERs. The course used traditional textbooks in Spring 2024 and Fall 2024, and switched to OER materials in Spring 2025.

Chart 1 shows the average pre- and post-test scores across all three semesters. Spring 2025 students began with slightly higher pre-test scores and finished with strong post-test scores that were comparable to Fall 2024 and higher than Spring 2024.

The overall improvement in Spring 2025 (about 25.5 percentage points) was similar to the gains in the other semesters. While the learning gains were not dramatically larger, student performance with OERs was consistently strong, and score differences across topics were smaller. This suggests that OER materials supported student learning as effectively as traditional textbooks and helped achieve more balanced performance across different content areas. When looking at individual questions in Spring 2025 (OER), performance improved across most questions and was consistent with the strong results from Fall 2024.

A graph with numbers and letters

AI-generated content may be incorrect.

We also compared and analyzed final course grades from Fall 2024 (traditional textbook) and Spring 2025 (OER) classes to evaluate average student performance and the proportion of students earning a D, F, or withdrawing (DFW rate). The sample size was 49 students in each semester. The average final grade was 88.39 in Fall 2024 and 85.54 in Spring 2025. The DFW rate was 2.04% in Fall 2024 and 8.33% in Spring 2025. The completion rate was 100% in Fall 2024 and approximately 98% in Spring 2025, with one student officially withdrawing.

In Spring 2025, two students reported serious personal challenges (mental health and family emergency) and requested accommodations to make up months of missed work. I followed up to request the necessary documentation, but neither student responded. One student ultimately withdrew, and the other received an F. If these two outliers are excluded from the analysis, the average grade in Spring 2025 increases to 88.10, and the DFW rate decreases to 4.35%, bringing the results more closely in line with those from Fall 2024.

These findings suggest that student outcomes in the OER semester were comparable to those observed when traditional textbooks were used. Given normal variation in student populations and term-specific circumstances, some differences are expected. We will continue to monitor these measures in future semesters to assess the ongoing impact of OER adoption on student performance and course completion.

# Sustainability Plan

*Describe how your project team or department will offer the materials in the course(s) in the future, including the maintenance and updating of course materials.*

Instructors teaching this course will continue to use the adopted OERs each semester. The materials will be shared with all instructors teaching the course. I will maintain and update the OERs as needed based on course changes, new resources, and student feedback. These materials include newly developed and/or revised and adapted lecture slides, question banks, lab activities, discussion questions, and other hands-on learning activities. All materials are stored in the learning management system to ensure ongoing access and ease of updates.

# Future Affordable Materials Plans

*Describe any impacts or influences this project has had on your thinking about or selection of learning materials in this and other courses that you will teach in the future.*

This project has encouraged me to prioritize free and low cost learning materials in all courses I teach. I plan to continue using OERs and other affordable resources in this course and explore similar options for other courses whenever possible. The field of geography is dynamic, especially in areas like physical geography and GIS technology, so regular updates to course materials are necessary to keep content accurate and relevant. I will revise and improve existing OER materials based on student feedback and course outcomes.

Another important consideration is that many of the websites or video sources I use as supplemental materials may become unavailable over time. I plan to regularly monitor these resources and make updates as needed. If a source becomes unavailable, I will identify and replace it with a comparable alternative to ensure continued access to quality content.

# Future Scholarship Plans

*Describe any planned or actual papers, presentations, publications, or other professional activities that you expect to produce that reflect your work on this project.*

I plan to share my experience with this OER project and the materials I developed with colleagues in my field at the 2026 Southeastern Division of the American Association of Geographers (SEDAAG) Annual Meeting. In terms of scholarly dissemination, I plan to collaborate with my colleagues in the School of Earth, Environment, and Sustainability at Georgia Southern University who have also adopted OERs in other core geography courses. Specifically, we plan to combine and analyze survey data from both courses to conduct a comparative study that evaluates student outcomes, perceptions, and engagement across different course contexts. This may lead to a research paper that highlights the broader impact of OER adoption on student success, retention, and equity, to be submitted to a journal focused on geography education or teaching and learning.

# Description of Photograph (optional)

*This is where a team can list the names of the people shown in this separately uploaded photograph, along with their roles, if applicable.*