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: 5/4/23**

**Grant Round: 21**

**Grant Number: 611**

**Institution Name(s): Georgia Institute of Technology**

**Project Lead: Christopher Stanzione**

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

* **Christopher Stanzione, Senior Lecturer, School of Psychology,** [**Christopher.stanzione@psych.gatech.edu**](mailto:Christopher.stanzione@psych.gatech.edu)
* **Meghan Babcock, Instructor, School of Psychology,**

[**Meghan.babcock@psych.gatech.edu**](mailto:Meghan.babcock@psych.gatech.edu)

**Course Name(s) and Course Numbers: PSYC 1101 General Psychology (3 sections); Instructors: Chris Stanzione & Meghan Babcock**

**Semester Project Began: Spring 2022 – Spring 2023**

**Final Semester of Implementation: Spring 2023 (final semester of project)**

**Total Number of Students Affected During Project: 320**

* **PSYC 1101 G – Stanzione – In-Person: 115**
* **PSYC 1101 L – Stanzione – Online: 92**
* **PSYC 1101 I – Babcock – In-Person: 113**

# Narrative

* 1. *Describe the key outcomes, whether positive, negative, or interesting, of your project. Include:*
* *Summary of your transformation experience, including challenges and accomplishments*
  + Key Outcomes -
    - The PI and Co-PI delivered general psychology to a large number of students (N = 320) with low-cost materials. Overall we found that our students performed similarly to previous semesters who used published materials with a higher price tag. Lastly, students had positive perceptions of the low-cost materials.
  + Challenges:
    - There was a steep learning curve with our materials. The integration into Canvas was not very easy (we needed to involve our Office of Information Technology), the quantity of materials was quite overwhelming, and the instructor materials needed to be supplemented by outside materials.
  + Accomplishments:
    - We learned how to integrate Lumen Waymaker with Georgia Tech’s learning management system (Canvas). We used, for the first time, a Canvas-embedded textbook and set of end-of-chapter quizzes. We submitted and received approval for our IRB protocol to collect data from ~10% of our students (29/320 students) using both quantitative and qualitative measures.
* *Transformative impacts on your instruction*
  + Despite the lengthy chapters in the Lumen Waymaker materials, the text covered new content wouldn’t have otherwise covered in a general psychology course.
  + Writing assignments were more applied in nature, which helped to translate content in a different way. Many of our students are non-psychology majors so this is a great way to make the science of psychology relatable.
* *Transformative impacts on your students and their performance*
  + Students: We increased cost savings for all students by implementing Lumen’s Waymaker platform (cost $25) versus the average cost of $100 for this course.
  + Performance: See below. Overall, students did just as well as previous semesters.
  1. *Describe lessons learned, including any things you would do differently next time.* 
     1. Lessons Learned: One important skill we learned was how to evaluate good textbooks. We have found that some books are more “study-based”, meaning have more empirical data in them, whereas others read more like story books. We have learned that we prefer more of the texts that have more data within them.
     2. Differently: Next time we’d like to look at other books / open resources. We choose Lumen Waymaker because it came with a lot of supported material. We’d like to search around and see if there are any alternatives available.
  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.* 
     1. We do not have materials that we created/revised/remixed to share with the public.

# Quotes

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

1. **When asked about their perceptions of the Lumen Waymaker platform:**

*“The fact it's interactive. So, when I'm like reading through, I'm just not reading for the sake of it. It allows me, the embedded questions allow me to understand like, ‘hey do you actually understand the material or not?’” (ID 213)*

1. **When asked about the accessibility of the Lumen Waymaker platform:**

*“I think it's really useful because one, it's sort of embedded in canvas. So I don't have to go to a random website, look for something that I'm not familiar with. And secondly, just it feels like it makes studying more like it divides the entire thing into steps, so it tells me first do step one and step two, then step three, which I think is pretty convenient. Um, because for some of my other classes I would say, I have to figure out what I want to study what I have to study for my tasks. For psych, at least I know that I just need to open my canvas.” (ID 207)*

1. **When asked about the impact of the Lumen Waymaker platform on student learning:**

*“I really like the interactive format and like all the practice questions. I wish I had that for a lot of other classes. It would definitely help me a lot. I really like that we have this platform for psych, that definitely makes it a lot easier to learn.” (ID 210)*

*“I prefer Lumen. I think it works really well, to like integrate the quizzes with the text, and that like drives learning for this kind of content.” (ID 205)*

# 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**

Total number of students affected in this project: **320 students in our courses, 29 recruited for research study.**

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

**Participants responded to the question “I am satisfied with the PSYC 1101 textbook” at Time 3 (late November – December, 2022) on a 1 (strongly disagree) to 5 (strongly agree) scale. The mean response to this question was: 4.17/5.00.**

* Positive (responded 4 or 5): \_\_90\_\_\_\_\_ % of \_\_29\_\_\_\_\_\_ number of respondents
* Neutral (responded 3): \_\_10\_\_\_\_\_ % of \_\_\_\_29\_\_\_\_ number of respondents
* Negative (responded 1 or2): \_\_\_\_0\_\_\_ % of \_\_\_29\_\_\_\_\_ 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:

* \_\_\_ Positive: Higher performance outcomes measured over previous semester(s)
* \_\_X\_ 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.*

\_\_\_\_2.2\_\_\_% of students, out of a total \_\_181\_\_\_\_\_ 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.*

**See attached zip files for our interview questions from Interviews 1, 2, and 3. See attached file of the Qualtrics Survey in PDF format.**

**Responses for qualitative and quantitative data below.**

|  |  |  |
| --- | --- | --- |
|  | **Pre Transformation** | **Post Transformation** |
| *DFW Delta Rates* | No Change | No Change |
| *Course Retention and Completion Rates* | No Change | No Change |
| *Average End of Chapter Quiz Scores* | 98% | 98% |
| *Average Exam Scores* | 87% | 85% |

**Major Qualitative Themes from Interviews:**

1. OER cost
2. Understandability of OER
3. Accessibility of OER
4. OER impact on learning
5. Recommended improvements to OER
6. **OER Cost**
   * A total of 72% preferred to pay $25 for the OER over alternative course material options (e.g., more expensive paper text).
     + Qualtrics: 79% of students endorsed the cost as an advantage of the online textbook
   * Only 24% preferred to use a free online PDF without the integrated features of the Lumen platform.
   * During Interview 3, students mentioned that they would have preferred to use a free PDF versus paying for the $25 online platform at the start of the semester, and reported that they would now prefer to pay the $25 for the platform over using a free PDF because the platform’s integrated features supported their learning.
   * Qualtrics: Students’ satisfaction with the textbook increased across the semester:
     + Time 1 (*M =* 4.18/5.00), Time 2 (*M =* 4.17), Time 3 (*M =* 4.72)
7. **Understandability of OER**
   * A total of 82% found the textbook to have good readability.
   * Many students reported positive perceptions of the organization and structure of the course content.
     + For example, 54% of the students felt the organization of the textbook into smaller tiles supported their learning of the material.
   * Only 41% of students thought the textbook content was strong.
     + Qualtrics:
       - Textbook Clarity @ Time 3 (*M =* 3.9/5.0)
       - Textbook Makes them Think Critically @ Time 3 (*M* = 3.8/5.0)
8. **Accessibility of OER**
   * All students reported that it was easy to find everything within the online platform.
   * 29% of students liked that the fully online platform allowed them to access course materials from any location.
   * 21% of students appreciated that the course content was centralized, such as having all materials integrated into Canvas.
9. **Impact of OER on Student Learning**
   * 76% of students reported using the platform to study for exams over other available resources (e.g., reviewing notes, reviewing lecture slides, going to office hours).
   * Majority of students (59%) reported positive perceptions of the integrated practice questions, and 61% reported that the questions were useful for exam preparation.
   * Several students mentioned that the platform provided them with structure to the course as they were required to read the chapter and answer integrated chapter questions each week.
   * Although 52% of students reported that they would probably not use the platform as frequently if the work was not graded, most students (62%) recommended keeping the graded textbook requirements because the integrated features supported their learning of course material.
10. **Recommended Improvements to OER**
    * **Add features to the platform that would support exam preparation**
      + Add option to pull key vocabulary terms from the textbook, such as exporting the vocabulary terms into a single file.
      + Put key vocabulary terms onto virtual flashcards within the platform.
      + Include a larger bank of practice questions embedded within the platform.
      + Include practice exams within the platform.
      + Ensure all practice questions provide feedback on incorrect responses.
    * **Improve functionality of the platform**
      + Allow highlighting of key concepts.
      + Allow notetaking within textbook.
      + Improve navigation across textbook chapters.

**Quantitative Results from Qualtrics Data:**

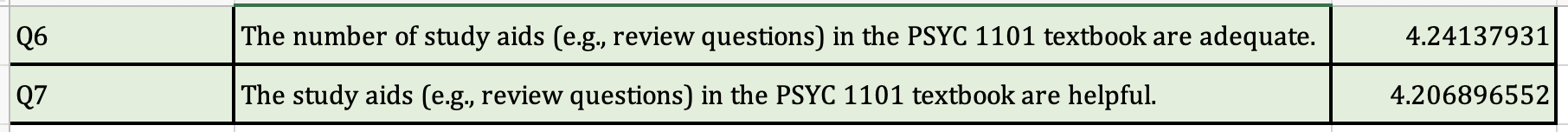
**Interview 1 (September – October). Focus: Initial Perceptions.**

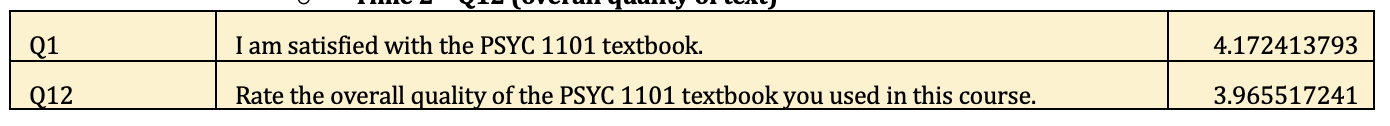
**Means provided in second column (1 = strongly disagree; 5 = strongly agree)**

A picture containing text, screenshot, receipt, line

Description automatically generated

**Interview 2 (October - November). Focus: Exam Preparation & Satisfaction**

**Means provided in second column (1 = strongly disagree; 5 = strongly agree)**

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**Interview 3 (November - December). Focus: Exam Preparation, Confidence, Satisfaction, & Cost**

**Means provided in second column (1 = strongly disagree; 5 = strongly agree)**

**A picture containing text, screenshot, line, number

Description automatically generated**

* **Cost:** 
  + **What do you see as the advantage(s) of a low-cost online textbook similar to the one used in your PSYC 1101 course? (check all that apply).**
  + **79% of participants selected cost**

# 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.*

**Chris Stanzione continued to use the Lumen Waymaker materials in his Spring 2023 semester (in addition to Fall 2022), and we will revisit the possibility of adopting the materials in the future. All materials (e.g., text, end of chapter quizzes) are updated by Lumen Waymaker.**

**One of our graduate research assistants (Emily Gleaton) created a Lumen Waymaker handbook for interested instructors, and this can be updated as needed.**

# 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 us to share our findings with other General Psychology instructors, as well as to consider extending OERs to other Psychology courses (e.g., Human Development, Abnormal Psychology, Psychological Statistics) – all topics for which Waymaker has materials.**

# 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.*

**We searched for professional outlets to share our work at a conference or journal. We plan to submit an abstract to the NITOP (National Institute on the Teaching of Psychology) Conference or the APS-STP Teaching Institute Conference. Sharing information about our project via professional outlets will bring awareness to Lumen Waymaker’s materials and other low-cost textbook options.**

# 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.*

**N/A**