

ALG Adaptive Learning Pilot for Introduction to General Psychology

Final Report

To submit your Final Report, send this completed form in an email to Jeff Gallant (jeff.gallant@usg.edu) and Tiffani Reardon (tiffani.reardon@usg.edu).

You can submit the following in this email **optionally**:

- Files with the data behind your Quantitative and Qualitative Measures narrative. These data files **will not be made available to the public** but may be provided to researchers in an anonymized version upon request.
- Your final invoice for the second half of the award: \$1,000. Some institutions can send this early, while others will have to confirm that you sent in the Final Report before creating an invoice. Either way works for us.

Based on receipt of this report and your invoice (either with this form or submitted later), ALG will process the final payment for your grant. ALG will follow up in the future with post-project surveys and may also request your participation in a publication, presentation, or other event.

Please delete the descriptive text in italics when you fill out this form.

General Information

Date: 12/8/21

Institution Name: Clayton State University

Participant Name: Chizara Jones (in conjunction with Mark Daddona, Nichelle Gause, and Antoinette Miller)

Total Number of Students Affected During Project: 325

Cost of Materials Replaced by Lumen Waymaker: \$64.30-\$82.85

Estimated Textbook Cost Savings Per Year (cost of previous materials minus cost of Waymaker):

- Previous textbooks cost per textbooks for the 325 students would have been \$20,887-\$26,926.
- The cost for the same students using Waymaker was \$35.71 per student, \$11,605 total.
- The total savings was savings was \$28-\$47 per student, \$9,282-\$15,321 total.

Are you going to continue the use of Lumen Waymaker in your General Psychology course after Fall 2021?:

Yes- the Clayton State Psychology department will use Lumen Waymaker in our Introduction to General Psychology course through the Spring 2022 semester.

1. Narrative

The transformation experience overall was positive. A major positive aspect of this transformation experience involved participating in this pilot with three other colleagues from the Clayton State psychology department: Mark Dadonna, Nichelle Gause, and Antoinette Miller (department chair). Although the entire psychology department was required to use Lumen Waymaker e-textbook for the Fall 2021 semester, instructors had autonomy in the design and implementation of the PSYC 1101 Introduction to General Psychology course using Lumen Waymaker.

Challenges

The following challenges were experienced during the transformation experience: (1) implementing the Lumen Waymaker quizzes; (2) understanding the payment options for that Waymaker quizzes and personalized feedback; (3) implementing the Discussions with the D2L online classroom; (4) understanding the points system for the Waymaker study plan/ self-check exercises in the D2L gradebook; (5) student navigation the Waymaker study plan in D2L; and (6) limitations of the Lumen Waymaker e-textbook content on Multiculturalism.

- (1) The integration of the Lumen Waymaker tool with the D2L online classroom overall was a positive experience. However, the main challenge for my transformation experience was implementing the Waymaker quizzes in D2L. Specifically, I was unable to provide students with accommodations or who had sudden emergencies with additional time to complete the adaptive quizzes after the quiz due date passed. Also, students were unable to access the Waymaker quizzes in the “Quizzes” tab in D2L. Students were only able to access the Waymaker quizzes in the Module folders inside the “Content” tab. This issue proved to be confusing for the students in the initial weeks of the course
- (2) Students also had to pay to take the Waymaker quizzes. They were not necessarily paying for the e-textbook but that they were paying for the Waymaker quizzes and the personalized feedback. It would have been easier if that message was explicitly made to the instructors during the Waymaker training.
- (3) It was difficult to use the Discussion templates within the D2L Discussion tab that Lumen provided. I had to copy and paste the

Discussion assignments because it was very difficult to edit the templates provided. I ended up deleting the Discussion assignments from the course because it was also difficult to hide the Discussions provided in the D2L course from the students. Also, while the Lumen Waymaker faculty support staff were extremely helpful in other areas, they did not have the means to address these issues.

- (4) It was not clear in D2L what points contributed to the study plan. I could see in the gradebook that students were provided with 5 points for completing the study plan, but Waymaker did not clarify what the students had to do to earn those points. I eventually found this information by Googling “Waymaker Study plan” and I found the right information on another instructor’s Introduction to Psychology syllabus. Waymaker should include a grade breakout in the instructor materials on how students can earn points for completing the self-check exercises for each section in the study plan.
- (5) The Study plan navigator links within Desire 2 Learn were somewhat confusing for students. When a student was reading content in the Study plan, if they wanted to move to another “tile” in the study plan, they had to select a very small link labeled as “Back to Study Plan” and not the D2L “next” link which would automatically take them to the end of the module quiz. Waymaker should make the “Back to Study Plan” link was much larger so students can avoid entering the module quiz prematurely.
- (6) Lastly, the e-textbook provided in the Lumen Waymaker study plan did not have sufficient information on Multicultural Psychology as other Introduction to Psychology textbooks have provided. The Lumen e-textbook does provide some information on stereotypes, discrimination, and prejudice in the Social Psychology module. However, there was a lack of course content on cultural and gender influences in psychology that were provided in our previously used textbook.

Benefits

The positive aspects of the transformation experience included: (1) the ease of access of the Waymaker course; (2) the Waymaker instructor materials, and (3) the low-cost option of the Lumen Waymaker e-textbook.

- (1) Students were able to review the study plans which had everything they needed to study for the course. With previously used external learning tools, students had to exit out of Desire 2 Learn to complete supplementary learning activities which required a small learning curve. With the Lumen Waymaker e-textbook, students were able to view additional learning resources provided in the study plan along

with the e-textbook inside the D2L online course. This prevented a lot of confusion for students at the beginning of the semester. Along with the supplementary materials provided by the instructor, students had everything they needed for the course in one place.

- (2) I appreciated the way the PowerPoint templates for the Waymaker e-textbook were created. They were clear, concise, and very easy to edit as I made my lecture recordings. There would not be anything that I would change regarding the PowerPoints and the Lecture notes.
- (3) Although there was a price increase at the University bookstore, the cost of the Lumen Waymaker e-textbook was less than 50 dollars. This was a major benefit to provide students with this low-cost option.

The Lumen Waymaker e-textbook provided several positive transformative impacts on my instruction. Particularly, the Waymaker tool provided adaptive quizzes and the automatic emails to the student on their progress in the class. I appreciated the option to unlock personalized automatic email feedback from the instructor to students on their progress in the class and on the quizzes. Students appeared to like the personalized emails and they would respond to those messages expressing thanks or interest in improving their grades after receiving such emails. This option improved my ability to manage the course. There did not appear to be any major differences in class performance between the previous text and this semester with the Lumen Waymaker tool. (*see 3A- Quantitative and Qualitative Measures*).

The main lesson I learned from this experience was the importance of staying involved with my students in asynchronous online learning. Especially with those students who might struggle with online course assessments. The Waymaker tool provided me with emails on students who were struggling on their quizzes and who might need additional assistance. Next semester, I intend to inform students of this function and contact students more often when they score low on quizzes.

2. Quotes

Below are three quotes from students on the Lumen Waymaker e-textbook:

- (1) *"I really like how our class textbook is organized. Compared to other types of e-books, the one for this course is easy to understand because each topic is individually organized. I also like the fact that there are practice problems (try it questions) embedded within the textbook. By practicing the questions in the online textbook, I am able to further understand the content that is being presented to me. Not to mention, the self checks at the end are extremely helpful when it comes to the quizzes at the end of the module."*
- (2) *"I feel as if the textbook does help me understand more of the material. I can also take notes from the e-book too."*

(3) *"The e-textbook is very helpful in this course because it provides sufficient information that is necessary to pass this course. It's also very convenient. Every section is labeled and you can find important vocabulary at the bottom of each page."*

3. Quantitative and Qualitative Measures

A. Uniform Measurements Questions

Student Opinion of Materials

Was the overall student opinion about Waymaker used in this course positive, neutral, or negative?

****Of note, the student opinion of materials was asked of all students in the PSYC 1101 Introduction to General Psychology course.**

Total number of students affected in this project: 325 (201 returned surveys)

- Positive: 92.04 % of 201 respondents
- Neutral: 3.48 % of 201 respondents
- Negative: 4.48% of 201 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?

Choose One:

- ☐ 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)

The overall comparative impact on student performance regarding my PSYC 1101 Introduction to General Psychology grades over previous semesters was neutral. See below for the Fall 2021 grades in my three sections of PSYC 1101 Introduction to General Psychology using Lumen Waymaker in comparison to the past two semesters using another textbook. There was a small discrepancy in grades from the Fall 2020 semester, which might be a confound due to the COVID-19 pandemic.

Fall 2021 PSYC 1101 Grades Breakdown- using Lumen Waymaker e-textbook

CRN	A	B	C	D	F	Incomplete	Withdrawal	WF	Grand Total	%ABC	%DFW	Modality
83382	18	10	3	1	2	0	3	0	37	83.78	16.22	Online
83440	22	6	2	1	5	0	0	0	36	83.33	16.67	Online
83893	15	9	4	2	6	0	0	0	36	77.78	22.22	Online
Grand Total	55	25	9	4	13	0	3	0	109	81.65	18.35	

Spring 2021 PSYC 1101 Grades Breakdown- using other Introduction to Psychology textbook

CRN	A	B	C	D	F	Incomplete	Withdrawal	WF	Grand Total	%ABC	%DFW	Modality
22294	21	6	4	1	4	0	0	1	37	83.78	16.22	Online
22296	23	10	2	1	4	0	0	0	40	87.50	12.50	Online
Grand Total	44	16	6	2	8	0	0	1	77	85.71	14.29	

Fall 2020 PSYC 1101 Grades Breakdown- using other Introduction to Psychology textbook

CRN	A	B	C	D	F	Incomplete	Withdrawal	WF	Grand Total	%ABC	%DFW	Modality
80872	10	6	6	2	9	0	2	35	3	62.86	37.14	Online

**Of note, the Fall 2020 semester was during the COVID-19 pandemic. The grade outcomes from this semester might not be generalized to the average grades of students from previous semesters prior to the pandemic.

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?

18.35 % of students, out of a total 109 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)
- ☐ 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)

B. Measures Narrative

Fall 2021 PSYC 1101 Demographics

The Clayton State Psychology department sought feedback from students on the Lumen Waymaker e-textbook at the end of the Fall 2021 semester. Below are data from the student survey responses along with demographic information.

Per Institutional data

Class Modality	% Pell Eligible	% Full Time Enrollment	Average Institutional GPA	Average Overall GPA	Total # Students
Hybrid	63.2%	14.72%	2.64	2.36	38
Online	58.8%	75.76%	2.60	2.60	257
Seated	53.3%	9.52%	2.82	2.80	30
Grand Total	58.7%	71.1%	2.63	2.61	325

Age Range	% of total	Choice Count
17 and under	21.32%	42
18-25	67.51%	133
26- 39	8.63%	17
40-65	1.52%	3
66+	1.02%	2
	Total	197

Gender	% of total	Choice Count
Female	76.88%	153
Male	23.12%	46
	Total	199

Race/Ethnicity	% of total	Choice Count
African	2.78%	5
Asian/Asian American	11.67%	21
Biracial	2.78%	5
Black/African American	64.44%	116
Hispanic	2.78%	5
Indigenous	0.56%	1
Latinx	2.22%	4
Multiracial	1.11%	2
Other*	0.56%	1

West Indian	1.11%	2
White/Caucasian	0.56%	18
	Total	180

**Other= one respondent identified as "human"*

*** Responses of N/A, None, etc. omitted, total of 17.*

Please select the category that best describes your student type	% of total	Choice Count
Dual-Enrollment (Currently in high school)	27.14%	54
New Freshman	36.18%	72
Native student (started as freshman and continuously enrolled)	25.13%	50
Transfer student (not the 1st semester at Clayton State)	11.56%	23
	Total	199

Please select the category that best describes your current semester enrollment.	% of total	Choice Count
Part-time student (taking 9 or less credit hours)	31.34%	63
Full-time student (taking 12 or more credit hours)	68.66%	138
	Total	201

If you work, how many hours per week do you typically work?	% of total	Choice Count
I do not work	47.00%	94
20 or less hours per week	15.50%	31
20 hours or more per week	37.50%	75
	Total	200

Which of the following best describes this course?	% of total	Choice Count
Fully seated course, meet multiple times per week	12.44%	25
Fully seated course, meet 1 time per week	3.98%	8
Hybrid course, half online and meet 1 time per week	2.99%	6
Fully online, no in class meetings	80.60%	162
	Total	201

Now that you completed a course using the Waymaker, how likely are you to recommend a friend enroll in PSYC 1101 based on your experience with the learning resource?	% of total	Choice Count
Very likely	65.00%	130
Somewhat likely	16.50%	33

Likely	14.00%	28
Not very likely	4.00%	8
Not likely at all	0.50%	1
	Total	200

Which of the following is MOST TRUE for you?	% of total	Choice Count
I read modules as assigned to prepare for class	72.64%	146
I read ahead of schedule (ahead of the assigned readings for the upcoming week)	15.92%	32
I only read the textbook right before the exam	6.47%	13
I do not read the textbook	4.98%	10
	Total	201

Which of the following resources did you use/review, in addition to the textbook? Check all that apply	% of total	Choice Count
Videos	13.93%	28
Recommended Readings	6.47%	13
Try It Questions	11.94%	24
Self-Check Questions	64.68%	130
I did not use any outside resources	2.99%	6
	Total	201

How would you rate the quality of the Waymaker resource as compared to books and/or resources used in other university classes?	% of total	Choice Count
This book is the same quality as other books I have used	75.00%	150
This book is of poorer quality than other books I have used	3.00%	6
I have not used the book for this course	4.50%	9
I have not used other university text books so I cannot compare	17.50%	35
	Total	200

How would you rate the ease of use for this low-cost learning resource compared to other online resources?	% of total	Choice Count
This low-cost book is the same quality as other books I have purchased	70.15%	141
This low-cost book is of poorer quality than other books I have purchased	2.99%	6
I have not used the low-cost book for this course	6.97%	14
I have not purchased other university textbooks so I cannot compare	19.90%	40
	Total	201

Did you use technical support for the platform?	% of total	Choice Count
Yes	11.94%	24
No	88.06%	177
	Total	201

My experience with the Waymaker resource was positive	% of total	Choice Count
Strongly agree	69.15%	139
Somewhat agree	22.89%	46
Neither agree nor disagree	3.48%	7
Somewhat disagree	2.49%	5
Strongly disagree	1.99%	4
	Total	201

4. Future Instruction Plans

Our primary issue as a department with the Waymaker was the comparative lack of material/content/focus on multicultural aspects of the field vs. our most recent text. Our faculty with content expertise in the area have worked to pull together additional material and activities for the Spring 2022 semester, and we have also been in communication with Lumen regarding other improvements that may be possible to the Waymaker product itself and other resources that Lumen may be able to incorporate from other texts/courses they offer.

I do plan to use the Lumen Waymaker for General Psychology in the Spring 2022 semester. I like the low-cost option for students and the interactive tools that are embedded in each module study plan. I will use the Lumen Waymaker for the Spring 2022 semester and afterwards compare class performance and student feedback to the responses and outcomes from the Fall 2021 semester. The entire Psychology department was required adoption the Lumen Waymaker text in the Fall 2021 and we will continue to use this text in the Spring 2022 semester for our Introduction to General Psychology courses.

If a textbook version of Waymaker is published in the near future, it will allow students the option to also purchase the book. It seems that many of our nontraditional students like to read from an actual textbook. Although OpenStax publishes a similar version, it does not completely match the Waymaker online text.

5. Future Scholarship Plans

At Clayton State University, our team of four faculty (Nichelle Gause, Antoinette Miller, Mark Dadonna, and Chizara Jones) who piloted Lumen Waymaker this semester obtained

Institutional Review Board (IRB) approval to survey our own students about their experience with Lumen Waymaker. Although plans are not definite at this time, we would like to submit a conference proposal at an appropriate upcoming conference. In addition, we might prepare and submit a paper for publication to share our experiences and findings from our student surveys.