Table of Contents

Application Summary

Competition Details

Competition Title:	Textbook Transformation Grants, Round Seventeen (Summer 2020 - Summer 2021)
Category:	University System of Georgia
Award Cycle:	Round 17
Submission Deadline:	04/20/2020 at 11:59 PM

Application Information

Submitted By:	Scott Sykes
Appplication ID:	4755
Application Title:	528
Date Submitted:	04/21/2020 at 8:45 AM

Personal Details

Institution Name(s):	University of West Georgia
Applicant First Name:	Scott
Applicant Last Name:	Sykes
Applicant Email Address:	ssykes@westga.edu
Applicant Phone Number:	404-314-4964
Primary Appointment Title:	Associate Professor of Mathematics
Submitter First Name:	Scott
Submitter Last Name:	Sykes
Submitter Email Address:	ssykes@westga.edu
Submitter Phone Number:	404-314-4964
Submitter Title:	Associate Professor of Mathematics

Application Details

Proposal Title
528

Requested Amount of Funding
$30000

Priority Category (if applicable)
None / N/A

Course Title(s)
Quantitative Skills and Reasoning, Support for Quantitative Skills and Reasoning

Course Number(s)
MATH 1001 and MATH 0997

Team Member 1 Name
James Bellon

Team Member 1 Email
jbellon@westga.edu

Team Member 2 Name
Rob Burnham

Team Member 2 Email
rburnham@westga.edu

Team Member 3 Name
Kyle Carter

Team Member 3 Email
kylec@westga.edu

Team Member 4 Name
Wesley Gay

Team Member 4 Email
wgay@westga.edu

Additional Team Members (Name and email address for each)
Nathan Rehfuss, nrehfuss@westga.edu

Scott Sykes, ssykes@westga.edu

Sponsor Name
Dr. Denise Overfield

Sponsor Title
Associate Vice President and Dean of the Graduate School, Professor of Spanish

Sponsor Department
Office of Research & Sponsored Projects

Total Number of Student Section Enrollments Affected by Project in One Academic Year
1,100

Average Number of Student Section Enrollments Affected per Summer Semester
50

Average Number of Student Section Enrollments Affected per Fall Semester

700

Average Number of Student Section Enrollments Affected per Spring Semester
350

Original Required Commercial Materials (title, author, price, and bookstore or retailer URL showing price)

Thinking Mathematically, Blitzer, ISBN: 9780134683713

https://www.pearson.com/us/higher-education/product/Blitzer-Thinking-Mathematically-7th-Edition/9780134683713.html

Original Total Cost per Student
$213.32

Post-Project Cost per Student
$0

Post-Project Savings per Student
$213.32

Projected Total Annual Student Savings per Academic Year
$234652

Using OpenStax Textbook?
No

Project Goals

With an average cost of $213.32 from the most readily available sources to students, the textbook for Quantitative Skills and Reasoning (Math 1001) represents a hurdle in learning and student success. Each year, approximately 1100 students take Math 1001 at the University of West Georgia. Based on the most recent data available, approximately 50% of UWG students are Pell eligible, and thus the excessive cost of textbooks and supplies for classes is a real issue. Having the materials for a class on the first day or even within the first week is extremely important and linked to overall student success. One study found that having access to course materials from the first day vs. 14 days into the semester resulted in a 13.5 percentage point difference in grades ("Impact of Student Choice of Content Adoption Delay on Course Outcomes," Baker). Our goal for this project is to alleviate this financial burden from Math 1001 students at UWG. We would like to reduce the cost of the text for Math 1001 from $213.32 to $0 by adapting existing open resources as well as creating our own. In the process, we would also present students with all necessary course resources (other than a calculator) from day one of the class. Our ultimate goal is to improve student success in Math 1001, and we believe transitioning to free text materials will strongly support this cause.

In addition, approximately 200 students per year take the co-requisite Learning Support for Quantitative Skills and Reasoning (MATH 0997) course. We currently do not require a textbook for MATH 0997 and instead use materials that faculty have created for that course. This grant would allow us to continue to use our own resources and, in fact, would allow us to better align the material in MATH 0997 with the resources we have created for MATH 1001 since we would not have to deal with any copyright issues from the publisher.

Statement of Transformation

The Math Department at the University of West Georgia is committed to helping the University meet the University System of Georgia's Momentum Year goal of ensuring that every student passes Freshmen Math in their first year. Towards that goal, the department has already transitioned from a traditional textbook to the OpenStax textbook for MATH 1111, 1112 and 1113. In fact, the Freshmen Math program at UWG was recently awarded the 2020 University System of Georgia's Regents' Momentum Year Award for Excellence in Teaching and Curricular Innovation and one of the points noted from the award committee was the use of Open Education Resources. This project would allow us to offer MATH 1001, Quantitative Skills and Reasoning. another of our large enrollment freshmen courses, as "no-cost to students" by adopting free resources for the course. Since MATH 0997, Support for Quantitative Skills and Reasoning, uses the same materials as MATH 1001, this course would also be a part of this project.

Currently, Math 1001 has approximately 1100 students annually and MATH 0997 has approximately 200 students annually. The Math Department has sought some degree of uniformity for Math 1001, and to this end the department has adopted the text "Thinking Mathematically" for all sections of Math 1001. As mentioned before, this presents an average $213.32 hurdle for our students. The primary concern facing our department is having a cheaper alternative for the text that maintains strong standards and rigor. This grant would allow us to better align MATH 1001 and MATH 0997 for the students that are required to take both classes. In addition, we will be creating some new materials for MATH 0997 that focus on academic mindset and learning strategies which is where many of the students in MATH 0997 traditionally struggle.

Our team will work to provide this alternative. Having a free alternative to the current textbook will impact the course positively by increasing the overall exposure of the material to students. The textbook and additionally created resources will be loaded into CourseDen from the first day of classes so that every student has what they need from day one. This will also come at no cost to our students, so low income situations will not be at a disadvantage or feel that purchasing a text is a hurdle. One study found that having access to and opening the text by the first day of classes was predictive of student success ("Analyzing early at-risk factors in higher education elearning courses," Baker). We want to be sure our students have the option to open the book from day one.

Completion of this project will also improve our department and institution. Creating/adapting open source materials will allow us to focus the materials on the learning objectives listed on the course syllabus without having extraneous topics that exist in all the currently available textbooks for the course, including the textbook we use. This grant will enable us to tailor the topics and examples used in both courses towards the majors of the students at the University of West Georgia who typically take these courses and emphasize how the material in both courses is relevant in their chosen major. We hope that this will improve the percentage of students passing the course and lead to higher retention rates for the university. Increased student retention and success will mean the Math Department is doing its best to equip our students for success, and it will help the University of West Georgia attain its goal of being the best place to learn.

Transformation Action Plan

For this project, we will be adapting pre-existing open source materials as well as creating original content. We will be drawing primarily from the open resource "Math in Society," by David Lippman, but we will be using parts of other sources including various Math Openstax resources. In an effort to align the curriculum with current departmental considerations, we will also be creating original content in the form of textbook sections, video tutorials and quiz resources. We will also be developing homework modules on MyOpenMath, a free online homework system to be used in the course. We will develop these materials to be tested in pilot sections for Spring 2021 and expand it to all sections beginning in Fall 2021.

The MATH 1001 course primarily focuses on 4 units, so each of the Instructional designers listed below will create materials for one unit of the course. Because of the breadth of this project, we will divide the tasks as follows:

Team Leader/Reviewer/Content Expert: Scott Sykes

Dr. Sykes will primarily take on the role of managing the team. He will also act as a content expert and liaison to the Math Department as he is the Director of Freshmen Math. He will also act as a reviewer of any created or adapted resources ensuring that the materials are consistent across units.

Primary Instructional Designer/Content Expert: Kyle Carter

Mr. Carter will primarily act as the primary instructional designer for this project since he has considerable experience creating free resources for e-core classes in the past so has knowledge and expertise in creating these types of materials. He will be responsible for creating the materials for one unit of the course and also will assist the other faculty with their units.

Instructional Designer/Content Experts: Jim Bellon, Rob Burnham and Nathan Rehfuss

Each of these faculty has experience teaching MATH 1001 in the past. They will use this experience to develop the materials for one unit of the course, including the textbook sections, video tutorials, quiz resources and MyOpenMath assignments.

Instructional Designer/Content Expert: Wesley Gay

Mr. Gay is currently a member of the Faculty Reading group on brain-based learning. He will use the knowledge he has gained from that as well as his experience teaching MATH 1001, to develop materials that can be used in the MATH 0997 course.

Quantitative & Qualitative Measures

As mentioned before, we will pilot what we create in several sections of Math 1001 in Spring 2021. Immediately following the pilot, we wish to measure student satisfaction, student performance and course-level retention.

Student Satisfaction - We will rely on surveys to understand the student's satisfaction with the created materials. Students enrolled in the pilot sections will be asked to rate the course on a variety of measures including but not limited to the helpfulness of the online materials, the ease of use of those materials, whether those materials were clear, and the convenience of using the online materials. We will also compare student responses on standard course evaluations between the pilot sections and non-pilot sections in Spring 2021 to see if any trend in comments occur and update the materials if necessary.

Student Performance – In order to evaluate student performance, we will use the 7 common assessment questions on their finals that are part of our General Education assessment of the course. We will compare aggregate results to determine performance on these key concepts.

Course-Level Retention – In order to evaluate course-level retention, we will compare aggregate overall grades and the DFW rates from the pilot sections against the non-pilot sections offered in the Spring.

Timeline

Summer 2020– During the of 2020, the team led by Dr. Sykes, the Director of Freshmen Mathematics at the university, will complete reviewing all open resources we wish to use for this project. We have already looked fairly extensively at Lippman's "Math in Society," as well as suitable sections from various OpenStax resources. The Lippman text is accompanied with 190 supplementary videos that need to be reviewed fully as well.

We will also discuss the current text and curriculum for MATH 1001 with department leadership and faculty teaching these classes to be sure we create materials that satisfy everyone for future wide-spread adoption.

Finally, we will begin creating/adapting materials for both courses. Mr. Bellon, Mr. Burnham, Mr. Carter and Mr. Rehfuss will each be assigned one unit of MATH 1001 and will begin creating the content for that unit. Mr. Gay will use his expertise on learning strategies to begin creating content for MATH 0997. Each will use a sandbox course in CourseDen to house the materials being created.

Fall 2020–Each of the members will finish their unit's materials by the midterm of the semesters. The rest of the semester, the team will work collectively to review the materials for accuracy and clarity and ensure consistency throughout the materials. We will finish the draft of the content by the end of Fall 2020.

Spring 2021– During the spring semester, the materials will be used in pilot sections of MATH 1001 taught by the design team. The team will meet monthly to discuss the progress of the courses and determine if any changes or updates to the materials are warranted based on student and faculty feedback.

Summer 2021 – Any final updates will be completed and materials will be available to all faculty teaching MATH 1001 and MATH 0997 in the future at the University.

Budget

We are requesting a total of $30,000 for this project to be used as follows:

- $30,000 -Faculty salary and fringe to be divided evenly between the start of the project in Summer 2020 and the end of the project in Summer 2021. Since each team member is taking on an equal share of the responsibilities of the work, the grant funds will be evenly distributed to each member of the team. The salary will be divided as follows, with half payable each summer: Scott Sykes ($3968 salary + $1032 fringe = $5000 total) to serve as the project lead and to coordinate and lead the teamJim Bellon ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001Rob Burnham ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001Kyle Carter ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001Wesley Gay ($3968 salary + $1032 fringe = $5000 total) to develop the content for MATH 0997Nathan Rehfuss ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001

Sustainability Plan

The result of this project will be having the created materials used in the pilot sections of Math 1001 in the Spring 2021. If we have high student satisfaction and course-level retention, we will seek to get departmental faculty approval to begin to use the materials in all sections of MATH 1001 and 0997.

We do not expect there to be much maintenance in keeping the course materials up to date, but the team will monitor the course materials after completion of the project and adapt according to student feedback.

We plan to present our results after the project at the Innovations in Pedagogy Conference at UWG in order to inspire inquiry into low-cost or no-cost options from fellow UWG faculty.

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.

UNIVERSITY of West Georgia

Office of Research and Sponsored Projects
Carrollton, Georgia 30118

Division of Academic Affairs

April 14, 2020

Jeff Gallant
Program Manager, Affordable Learning Georgia
Library Services, Board of Regents of the University System of Georgia

Dear Mr. Gallant and the ALG Textbook Transformation Grant Committee:

Please accept this letter of support for the Textbook Transformation Grant submitted by Dr. Scott Sykes, James Bellon, Rob Burnham, Kyle Carter, Wesley Gay, and Nathan Rehfuss of the Department of Mathematics at the University of West Georgia. Their project allow us to offer MATH 1001, one of USG's largest core courses, as "no-cost to students" by adopting free resources for the course. Since MATH 0997 uses the same materials as MATH 1001, this project will benefit those students as well. Adoption of these materials will alleviate the burden of purchasing a $213.32 textbook for more than 1,100 students and will provide students with all of the necessary course materials from the very first day of classes.

Professor Sykes and his team have the full support and endorsement of their department chair and college dean. With this level of support and with the quality of the project, we are confident that this project is worthy of funding and we look forward to providing support for it.

Sincerely,

Denise Overfield
Denise Overfield (Apr 14, 2020)

Denise Overfield, Ph.D.
Associate Vice President for Research and Dean of the Graduate School

Sykes_ALG_LETTER OF SUPPORT

Final Audit Report 2020-04-14

Created:	2020-04-14
By:	Dixie Curley (dcurley@westga.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAAEf15kM62GQqWP_H8IzUrHFuTu3UpF2I7

"Sykes_ALG_LETTER OF SUPPORT" History

Document created by Dixie Curley (dcurley@westga.edu)
2020-04-14 - 6:46:29 PM GMT- IP address: 107.126.99.13

Document emailed to Denise Overfield (doverfie@westga.edu) for signature
2020-04-14 - 6:47:07 PM GMT

Email viewed by Denise Overfield (doverfie@westga.edu)
2020-04-14 - 6:51:42 PM GMT- IP address: 66.249.88.211

Document e-signed by Denise Overfield (doverfie@westga.edu)
Signature Date: 2020-04-14 - 6:52:03 PM GMT - Time Source: server- IP address: 108.81.94.180

Signed document emailed to Dixie Curley (dcurley@westga.edu) and Denise Overfield (doverfie@westga.edu)
2020-04-14 - 6:52:03 PM GMT

Textbook Transformation Grants, Round Seventeen (Summer 2020 – Summer 2021)

Proposal Form and Narrative

Notes

- The proposal form and narrative .docx file is for offline drafting and review. Submitters must use the InfoReady Review online form for proposal submission.
- The only way to submit the official proposal is through the online form in Georgia Tech's InfoReady Review. The link to the online application is on the Round 17 RFP Page.
- The italic text provided below is meant for clarifications and can be deleted.

Applicant, Team, and Sponsor Information

*The **applicant** is the proposed Project Lead for the grant project. The **submitter** is the person submitting the application (which may be a Grants Officer or Administrator). The submitter will often be the applicant – if so, just list the applicant as the submitter.*

Institution(s)	University of West Georgia
Applicant Name	Scott R Sykes
Applicant Email	ssykes@westga.edu
Applicant Phone #	678-839-4125
Applicant Position/Title	Associate Professor of Mathematics and Director of Freshmen Mathematics
Submitter Name	Dixie Curley
Submitter Email	dcurley@westga.edu
Submitter Phone #	678-839-5354
Submitter Position	Pre-Award Coordinator

Please provide the first/last names and email addresses of all team members within the proposed project. Include the applicant (Project Lead) in this list. Do not include prefixes or suffixes such as Ms., Dr., Ph.D., etc.

	Name	Email Address
Team Member 1	James Bellon	jbellon@westga.edu
Team Member 2	Rob Burnham	rburnham@westga.edu
Team Member 3	Kyle Carter	kylec@westga.edu
Team Member 4	Wesley Gay	wgay@westga.edu
Team Member 5	Nathan Rehfuss	nrehfuss@westga.edu
Team Member 6	Scott Sykes	ssykes@westga.edu
Team Member 7		
Team Member 8		

If you have any more team members to add, please enter their names and email addresses in the text box below.

Please provide the sponsor's name, title, department, and institution. The sponsor is the provider of your Letter of Support.

Dr Denise Overfield, Associate Vice President and Dean of the Graduate School, Professor of Spanish, University of West Georgia

Project Information and Impact Data

Priority Category / Categories	*NONE*
Requested Amount of Funding	*$30,000*
Course Names and Course Numbers	MATH 1001: Quantitative Skills and Reasoning MATH 0997: Support for Quantitative Skills and Reasoning
Final Semester of Project	Summer 2021
Total Number of Student Section Enrollments Affected by Project in One Academic Year	*1100*
Average Number of Student Section Enrollments Affected per Summer Semester	*50*
Average Number of Student Section Enrollments Affected per Fall Semester	700
Average Number of Student Section Enrollments Affected per Spring Semester	350
Original Required Commercial Materials	*Thinking Mathematically, Blitzer, ISBN:* 9780134683713 *https://www.pearson.com/us/higher-education/product/Blitzer-Thinking-Mathematically-7th-Edition/9780134683713.html*
Average Price of Original Required	*$213.32*

Materials Per Student Section Enrollment	
Average Post-Project Cost Per Student Section Enrollment	*$0*
Average Post-Project Savings Per Student Section Enrollment	*$213.32*
Projected Total Annual Student Savings Per Academic Year	*$234,652*
Using OpenStax Textbook?	*NO*

Narrative Section

1. Project Goals

With an average cost of $213.32 from the most readily available sources to students, the textbook for Quantitative Skills and Reasoning (Math 1001) represents a hurdle in learning and student success. Each year, approximately 1100 students take Math 1001 at the University of West Georgia. Based on the most recent data available, approximately 50% of UWG students are Pell eligible, and thus the excessive cost of textbooks and supplies for classes is a real issue. Having the materials for a class on the first day or even within the first week is extremely important and linked to overall student success. One study found that having access to course materials from the first day vs. 14 days into the semester resulted in a 13.5 percentage point difference in grades ("Impact of Student Choice of Content Adoption Delay on Course Outcomes," Baker). Our goal for this project is to alleviate this financial burden from Math 1001 students at UWG. We would like to reduce the cost of the text for Math 1001 from $213.32 to $0 by adapting existing open resources as well as creating our own. In the process, we would also present students with all necessary course resources (other than a calculator) from day one of the class. Our ultimate goal is to improve student success in Math 1001, and we believe transitioning to free text materials will strongly support this cause.

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Dr. Sykes will primarily take on the role of managing the team. He will also act as a content expert and liaison to the Math Department as he is the Director of Freshmen Math. He will also act as a reviewer of any created or adapted resources ensuring that the materials are consistent across units.

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Each of these faculty has experience teaching MATH 1001 in the past. They will use this experience to develop the materials for one unit of the course, including the textbook sections, video tutorials, quiz resources and MyOpenMath assignments.

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Mr. Gay is currently a member of the Faculty Reading group on brain-based learning. He will use the knowledge he has gained from that as well as his experience teaching MATH 1001, to develop materials that can be used in the MATH 0997 course.

4. Quantitative and Qualitative Measures

As mentioned before, we will pilot what we create in several sections of Math 1001 in Spring 2021. Immediately following the pilot, we wish to measure student satisfaction, student performance and course-level retention.

Student Satisfaction - We will rely on surveys to understand the student's satisfaction with the created materials. Students enrolled in the pilot sections will be asked to rate the course on a variety of measures including but not limited to the helpfulness of the online materials, the ease of use of those materials, whether those materials were clear, and the convenience of using the online materials. We will also compare student responses on standard course evaluations between the pilot sections and non-pilot sections in Spring 2021 to see if any trend in comments occur and update the materials if necessary.

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5. Timeline

Summer 2020 – During the Summer of 2020, the team led by Dr. Sykes, the Director of Freshmen Mathematics at the university, will complete reviewing all open resources we wish to use for this project. We have already looked fairly extensively at Lippman's "Math in Society," as well as suitable sections from various OpenStax resources. The Lippman text is accompanied with 190 supplementary videos that need to be reviewed fully as well.

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Summer 2021 – Any final updates will be completed and materials will be available to all faculty teaching MATH 1001 and MATH 0997 in the future at the University.

6. Budget

We are requesting a total of $30,000 for this project to be used as follows:

- $30,000 -Faculty salary and fringe to be divided evenly between the start of the project in Summer 2020 and the end of the project in Summer 2021. Since each team member is taking on an equal share of the responsibilities of the work, the grant funds will be evenly distributed to each member of the team. The salary will be divided as follows, with half payable each summer:
    - Scott Sykes ($3968 salary + $1032 fringe = $5000 total) to serve as the project lead and to coordinate and lead the team
    - Jim Bellon ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001
    - Rob Burnham ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001
    - Kyle Carter ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001
    - Wesley Gay ($3968 salary + $1032 fringe = $5000 total) to develop the content for MATH 0997
    - Nathan Rehfuss ($3968 salary + $1032 fringe = $5000 total) to develop the content for one unit of MATH 1001

7. Sustainability Plan

The result of this project will be having the created materials used in the pilot sections of Math 1001 in the Spring 2021. If we have high student satisfaction and course-level retention, we will seek to get departmental faculty approval to begin to use the materials in all sections of MATH 1001 and 0997.

We do not expect there to be much maintenance in keeping the course materials up to date, but the team will monitor the course materials after completion of the project and adapt according to student feedback.

We plan to present our results after the project at the Innovations in Pedagogy Conference at UWG in order to inspire inquiry into low-cost or no-cost options from fellow UWG faculty.

Note: Letter of Support