**Affordable Learning Georgia Textbook Transformation Grants**

**Round One Final Report**

**Date:** 5/29/15

**Grant Number:** 18

**Institution Name:** Valdosta State University (College of Education and Human Services)

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**Project Lead:** Anthony Scheffler

**Course Name(s) and Course Numbers:** ECED 3300: *Mathematics and Technology in Early Childhood Education*

**Semester Project Began:** Fall 2014

**Semester of Implementation:** Spring 2015

**Average Number of Students per Course Section:** 22

**Number of Course Sections Affected by Implementation:** 2

**Total Number of Students Affected by Implementation:** 43

**1. List of Resources Used in the Textbook Transformation**

In addition to having been integrated into the ECED 3300 Syllabus, the resources listed at the URL below have been annotated and made accessible through the VSU Dewar College of Education and Human Services website. As indicated, the list of resources has a “CC BY” license. However, the individual links may vary in license types as/when indicated by the source.

[*http://www.valdosta.edu/colleges/education/open-ed-resources/documents/link-resources-for-k-5-math-and-technology.pdf*](http://www.valdosta.edu/colleges/education/open-ed-resources/documents/link-resources-for-k-5-math-and-technology.pdf)

**2. Narrative**

**A. Key outcomes**

In fall 2014, two faculty members began the process of converting ECED 3300, Mathematics and Technology in Early Childhood, to a course using Open Educational Resources (OER). Previously the John Van De Walle textbook, *Elementary and Middle School Mathematics: Teaching Developmentally* (8th ed.) had been used as the required textbook for the course. This text had been selected because it was used in professional development for teachers throughout the state and many schools had copies available in media centers. The faculty members knew that it would be very difficult to teach this course without the Van De Walle textbook. The faculty members had been exposed to Open Stacks as a resource for online texts, but unfortunately it did not include any textbooks that could be used in teaching a math methods course, math pedagogical content or developmental math.

The first step in the transformation from the text to OER was to divide the course into logical chunks and to search for websites to support ~~our~~ ~~student’s~~ students’ learning. The faculty members also decided to include journal articles as a way of supporting material found online. The decision was to include the following areas:

* NCTM standards/state standards/Common Core overview
* Exploring what it means to do and to understand mathematics
* Teaching through problem solving
* Planning for instruction
* Assessment/monitoring student learning
* Teaching diverse learners
* Selecting and using appropriate technology

The associated faculty and a graduate assistant identified and annotated course related web resources. These websites were integrated into the course syllabus and as a stand alone list for access through the COEHS website to educators at large.

**On the first day of class, the candidates were very excited to learn that no textbook was required for the class. (“*I hate textbooks, so this is exciting.”*)** Many admitted that they never read material assigned from textbooks and some shared that they had “group” purchased a textbook that was shared for particular classes. **The instructor’s weakness was that she was not familiar with some aspects of BlazeVIEW to be comfortable organizing and updating material. *(“Have them more organized by the week in BlazeVIEW…”*)** This was compounded by the fact that, due to a short preparation time, the list of accessible sites was incomplete when the class started.

As candidates began their practicum placements, the instructor had to find material that mirrored what they were seeing in the classroom. One assignment asked candidates to research and provide 10 online resources to begin a “toolkit” for supporting learning in the classroom. Specific InTASC standards on meeting the needs of diverse learners, exploring instructional strategies, and providing an academically challenging environment were reviewed and discussed. Candidates were asked to target resources in these areas and discuss the appropriateness of each resource. The results were disappointing, as most students provided the same list of very basic games and websites that students use in the public schools for Milestones (state assessments) practice.

**B. Lessons learned**

* Identifying quality and easily accessible web-based open educational resources is time consuming and labor intensive.
* Students seemed to welcome the use of OER but can become overwhelmed by the availability of too many resources. Carefully tailoring web resources to the purpose of the courses and the needs of the students is critical.
* The ongoing updates necessary to insure the quality of the collected resources as well as the task of reviewing these resources for quality and appropriateness help to ensure that the instructor stays current in both pedagogy and content.
* While the initial effort to transition from a textbook to an OER based course has been challenging, the feeling the benefits to the students and to the instructor suggest its value. In addition, as the associated OERs are refined and more effectively and systematically integrated into the course preparation time will decrease, the course will be strengthened, and the benefit to the students will increase.

**3. Quotes**

**Pro OER**

* “Overall, there are no improvements I can think of. I really enjoy using other outside resources for this class because I get insights of the relevant material from different perspectives. I also feel like open Education Resources are a better alternative because it is more relatable and comprehensive.”

* “I believe this would be a lot of help to other classes. Many students don’t buy or read the text. “N/A enjoyed it!”
* “Keep doing this!”

**Improvements for OER**

* “I like the idea of having the open educational resources in the course; however, I am more partial to textbook sometimes because I can reference to them more easily when I am teaching. This is a great resource to have as an extra source, and is far more fun than reading a textbook. I would recommend having both in the course though.”
* “ I [would] rather textbooks so that I can physically have resources in one location. I like online help but what if I cannot access it?”
* “ I like the idea of having the open educational resources in the course; however, I am more partial to textbook sometimes because I can reference to them more easily when I am teaching. This is a great resource to have as an extra source, and is far more fun than reading a textbook. I would recommend having both in the course though.”

**4. Quantitative and Qualitative Measures**

See attached survey and results summary.

For Statement 4 “The Open Educational Resources specific to this course are more interesting than a single textbook,” the Initial – Final average dropped from 4.38 (Initial) to 4.21 (Final).   
  
For Statement 12 “Open Educational Resources are valuable alternatives to textbooks,” the average dropped from 4.31 (initial) to 4.21 (final).  
  
For Statement 13 “I am willing to consider that Open Educational Resources could be used as an alternative to textbooks in other courses,” the average dropped from 4.41 (initial) to 4.34 (final).

These results seem to be contradictory because of the high ratings on the initial survey in the areas of “aligned and help me meet the objectives for the course,” “Open Educational Resources specific to this course are of high quality,” “Open Educational Resources specific to this course keep me engaged and focused,” and “Using Open Educational Resources specific to this course has positively impacted my learning for this course.”

The following data are reported for the past three academic years (2012, 2013, 2014) and Spring 2015 (Notes: Semesters are not consecutive due to adoption of single entry into the program which began in Fall 2012; data for Spring 2015 will not be available until the end of the semester after final grades are posted.):

1. **Drop, fail, withdraw (DFW)**

Fall 2012: 0 Drops, 1 Fail, 0 Withdrawals

Spring 2013: 0 Drops, 0 Fail, 3 Withdrawals

Spring 2014: 0 Drops, 0 Fail, 0 Withdrawals

Spring 2015: 0 Drops, 0 Fail, 1 Withdrawal (OER)

1. **Course retention and completion rates Spring 2015**

Completion rate for the course was 100%

1. **Average GPA for students enrolled in ECED 3300 Spring 2015**Mean overall GPA - 3.33  
   Median overall GPA - 3.35
2. **Pre-and post-transformation DFW comparison Spring 2015**

A comparison of the pre- and post-transformation DFW rate indicated no difference.

1. **Student success in learning objectives**

As reflected in the class grades (see below) the course learning objectives were realized.

Grade distribution ECED 3300 Spring 2015:

Number of Students who Received an A: 38

Number of Students who Received a B: 2

Number of Students who Received a C: 0

Number of Students who Received a D: 0

Number of Students who Received a F: 0

Number of Students who Received a W: 1

Total Number of Students Enrolled in ECED 3300 in Spring 2015: 41

1. **Surveys, interviews, and other qualitative measures (attached)**A copy of the survey used as the initial and final measure along with the results by item is attached. Averages for the two administrations of the survey and a delta average are also included on the survey.

**5. Sustainability Plan**

* As in the past, the courses will be offered at least once a year using open educational resources.
* The OER course materials will be reviewed by the associated faculty member(s) prior to the beginning of the semester in which the course is taught.
* Based on student survey results, changes in the content and organization of the OER materials will be implemented as needed.
* Alignment with the OER materials and the associated course objectives and activities in the course syllabus will be reviewed by the program faculty annually and adjustments will be made as appropriate.

**6. Future Plans**

**Project Impacts or Influences**

As evidenced in the results of the grant effort, the use of OER has shown to have positively impacted both the quality and breadth of the classroom experience. However, the absence of a single organized source of materials such as an OER textbook poses challenges to both student and faculty. Organizing resources and insuring their continued availability before and during the course is burdensome. As a result of the grant related experience the plan is to more carefully define a stable, relevant but pared down set of resources that are effectively integrated into the course and more easily maintained and readily accessible. As the process of selection and maintenance of educational resources is refined the intent is to work with other faculty in the college to employ OER in courses within a variety of programs.

**Associated Scholarship**

*A Research Study Using Open Education Resources in a Pre-Service Math Course,* 62nd Annual Southeastern Regional Association of Teacher Educators Conference (SRATE) October 8-10, 2015, Jekyll Island, GA. (To be presented)

Gant, J., Cozart, D., Payne, C., Scheffler, A. J., (2015, April). *Textbook Transformation: Options and Outcomes.* Invitedpanelist at the USG Teaching and Learning Conference., Athens, GA.

**7. Description of Photograph**

ECED 3300: Mathematics and Technology in Early Childhood Education, Section A

**Front Row:** Jasmine Rozier, Rhond Herb, Carley Craft, Becca Hasty, Kia Hill, Curtis Watson, and Kelci Adkins; **Second Row:** Nancy Guerrero, Serena Martin, Elizabeth Pearce, Haley Scarbor, Andrea Joiner, Haley Morris, and Jordan Rackley; **Third Row:** Melinne Moon, Shanega Prise, Lexi Simmons, Brittany Welch, Kaala White, Kameron Flanagan, Schuyler Kenzel, and Greg Vaughn; **Not Pictured:** Instructor – Ms. Nancy Sartin and Faculty Content Expert – Dr. Shirley Andrews