Cooperative Learning and Online Assessments
Contact Information

Dr. Bette Catherine Putnam
Assistant Professor of Mathematics
Delta State University

cputnam@deltastate.edu
Presentation Outline

- Co-requisite course/lab design
- Cooperative learning groups
- Online Assessments
  - Just how tech savvy are they...?
  - Finding the gaps
- Preliminary data
Co-Requisite Course & Lab Design
Extended Time: Lecture and Lab

Section A: \( \geq 21 \) ACT Math

Section B: \(< 21 \) ACT Math

Instructor + Supplemental instructor (SI)

Lecture: MWF 50 minutes
Lab: T or R 75 minutes
Cooperative Learning Groups
Group Design

• Instructor's Choice

• Homogeneous vs heterogeneous
  – Pre-tests
  – Course letter grades
  – Student disposition
Group Design

• Re-shuffling Groups
  – After each summative assessment
  – Twice a semester
  – Never...?
Online Assessments
Just how *tech savvy* are they...
From the paper to the platform...

We noticed a significant disconnect!

**Problem:** Can we practice interacting with the mathematics and with the platform separately?
From the paper to the platform...

**Working Solution:**

**Step 1:** Students work in cooperative learning groups to complete **paper-based assignments** before accessing online platform.

*Note: students must have organized and accurate work to progress to the next step!*
From the paper to the platform...

**Step 2:** Student groups practice uploading their solutions into the platform.
From the paper to the platform...

**Step 3:** Exit quizzes conjointly assess **both** content and platform usage.
Instructor Observations

How does this assignment help the student?

- Identify loss of information
- Practice organization
- Encourage math fluency
- Foster student self-efficacy
Preliminary Data
College Algebra Data
Delta State University

- Fall '16/Spring '17:
  - Pass: 52%
  - Fail: 47%

- Fall '17/Spring '18:
  - Pass: 55%
  - Fail: 46%

- Fall 2018:
  - Pass: 68%
  - Fail: 32%
Thank you!

Dr. Bette Catherine Putnam
Delta State University
cputnam@deltastate.edu