

# Lessons Learned from North Carolina

Kansas Mathematics Faculty Professional Development

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# Study Structure

- ▶ Dr. Brianna Bentley, North Carolina State University (Currently William Peace College)
- ▶ “Exploring the Experiences, Mindset, Math Anxiety, and Math Self-Efficacy of Community College Students and Instructors in a Corequisite Mathematics Course” (2023)
- ▶ Surveys and interviews with 5 Community Colleges in the North Carolina system

# Pedagogical Decisions

- ▶ Creation of a collaborative learning environment
  - ▶ Effective for learning, but did not influence mindset, math anxiety, or math self-efficacy
- ▶ Use of real-world contexts
  - ▶ Helps reduce math anxiety and increased student math self-efficacy
- ▶ How instructors worked through problems
  - ▶ Effective learning tool
- ▶ Incorporation of study skills lessons
  - ▶ Helps with mindset and math self-efficacy

# Lessons: Purpose and Benefits

- ▶ “Students in this study were often worried when they signed up for their corequisite courses, specifically, that they would fall behind and that they would not be able to keep up with the material. These concerns quickly disappeared when taking corequisite courses because they realized that the point of these courses was to help them be successful students and to give them time to develop their understanding of the material. If advisors and instructors help student understand the benefits and purpose of corequisites, they could enter the course with a more positive attitude. Having a more positive attitude when beginning their corequisite course could impact student success in the early weeks of the semester.”

# Lessons: Communication

- ▶ “When there are two instructors teaching the corequisite and gateway course, frequent communication is imperative. This ensures that the two courses are aligned and that students are receiving just-in-time instruction. These two instructors should communicate at least once a week, and this communication should involve the content being covered, how it is being taught, and any changes to the original course pacing guide.”

# Lessons: Just In Time Learning

- ▶ “it is imperative that colleges understand the importance of just-in-time learning and work to make sure that this characteristics of corequisite courses is never threatened. One college used to pair one corequisite instructor with multiple gateway instructors, which ensures just-in-time learning never happens for the corequisite students. Thus, this course design should not be considered by colleges because then one of the most effective influences on students is being removed. In addition, colleges and departments can automatically list corequisite instructors as observers in their paired gateway instructors Blackboard shell. This helps ensure that the corequisite instructor knows what pace the gateway course is moving so that they would be able to plan their course lessons more effectively.”

# Lessons: Instructor Disposition

- ▶ “Students responded well to instructors who obviously cared about them, praised them, and encouraged them. In addition, students liked instructors who considered mistakes to be a part of the learning process and did not make them feel discouraged when they made a mistake. In addition, instructors should consider how to create safe learning environments for their students and should reflect on how to create this safe space in their classroom. One way this was accomplished by the instructors in this study was through their use of positive reinforcement. Surveying students throughout the semester could help instructors reflect on if a safe learning environment has been created for their students.”

# Instructor's Disposition and Classroom Environment

- ▶ Students cited that the instructor's disposition had a major impact on their learning and comfort in the classroom
  - ▶ Positive and encouraging
  - ▶ Cheerleading
  - ▶ Encouraging mistakes as learning opportunities
  - ▶ Caring about the student's learning
  - ▶ Positive approach to questions
  - ▶ One-on-one instruction