C33. RAISING PRESERVICE TEACHERS' UNDERSTANDING THROUGH REVISION: A STUDY OF A MODIFIED MOORE METHOD GEOMETRY COURSE

Janessa Beach, Texas A&M University, Commerce

Geometry is under-researched and students consistently underperform in this area. We discuss preservice secondary teachers in a Modified Moore Method geometry course, and how they improved geometric reasoning and proof construction skills through open-ended problems and revisions of their proofs.

C34. SHIFTS IN PROSPECTIVE SECONDARY MATHEMATICS TEACHERS' BELIEFS ABOUT TEACHING PROOF

Hyejin Park, University of Georgia
AnnaMarie Conner, University of Georgia

We surveyed prospective secondary mathematics teachers' beliefs before and after three semesters of mathematics education coursework. We found their beliefs about mathematics and proof remained stable and their beliefs about teaching and teaching proof shifted in productive directions.

D35. STRENGTHENING MIDDLE SCHOOL MATHEMATICS TEACHERS' KNOWLEDGE OF STATISTICS AND PROBABILITY VIA PROFESSIONAL DEVELOPMENT

Lina DeVaul, University of Nevada, Las Vegas
Travis Austin Olson, University of Nevada, Las Vegas

The design and outcome of a six-day long Common Core State Standards-aligned statistics and probability professional development with 29 inservice middle school teachers will be shared. Designers included both researchers and AP statistics teachers.

D36. SUPPORTING THE DEVELOPMENT OF MATHEMATICAL KNOWLEDGE FOR TEACHING THROUGH A YEAR-LONG PROFESSIONAL DEVELOPMENT INITIATIVE

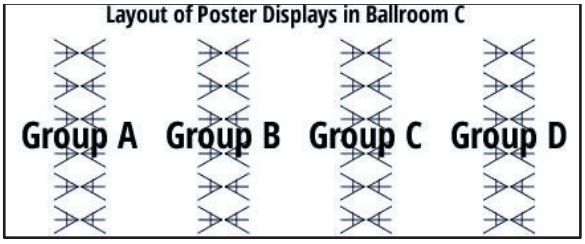
Tracey Holliday Howell, University of North Carolina, Greensboro
Stacey Chanelle Zimmerman, University of North Carolina, Greensboro

We focus on one component of a year-long study implemented with secondary mathematics teachers. We build on the Mathematical Work of Teaching Framework developed by Ball and colleagues to create an assessment suitable for measuring secondary teachers' MKT.

D37. TEACHING MATHEMATICS TEACHERS TO "WALK THE WALK" IN ORDER TO "TALK THE TALK"

Denise L Chenoweth, University of South Florida

Classroom discourse is an effective tool for increasing student understanding of mathematics concepts. This presentation provides key features of effective professional development aimed at increasing the ability of teachers to facilitate meaningful classroom discussions that promote student understanding of mathematics.



D38. TRANSFORMING REMEDIATION IN MATHEMATICS CONTENT COURSES FOR PRESERVICE TEACHERS

Ewelina McBroom, Southeast Missouri State University

This poster will present results of implementing a corequisite model, in which preservice teachers who needed remediation took the developmental course (a 1-hour lab) and an introductory college-level mathematics course for preservice teachers at the same time.

D39. USING 5 PRACTICES AS A FRAMEWORK FOR PRESERVICE TEACHERS

Megan K. Murray, University of Hull

Smith and Stein's *5 Practices for Orchestrating Productive Mathematics Discussions* is used as a framework at the University of Hull (UK) to develop content and pedagogical knowledge of preservice elementary teachers. This poster session presents successes and challenges of this approach.

D40. USING AN ARTIFICIAL INTELLIGENCE SIMULATION TO IMPROVE PROSPECTIVE MATHEMATICS TEACHERS' QUESTIONING SKILLS: AN EXPLORATORY STUDY

Sandy Spitzer, Towson University
Christine M Phelps, Central Michigan University

In this poster, we will describe our creation of an artificial intelligence tool, which aims to develop prospective teachers' questioning skills through simulated student interviews, and share our initial findings about prospective teachers' interactions with the tool.

D41. USING BRANCHING EXPERIENCES IN LESSONSKETCH TO OPEN DISCOURSE ABOUT PRESERVICE TEACHERS' PEDAGOGICAL DECISIONS AND JUSTIFICATIONS

Karl Wesley Kosko, Kent State University

This poster presentation discusses the use of Branching Experiences (a form of teaching simulation on LessonSketch) to launch discussions with preservice teachers about pedagogical decisions in elementary mathematics teaching.

D42. USING DIGITAL PRACTICES TO CREATE EQUITABLE LEARNING ENVIRONMENTS IN AN ONLINE MATHEMATICS COURSE

Julian Viera, University of Texas, El Paso
Olga Kosheleva, University of Texas, El Paso

The digital divide has been defined as the inequalities in internet access based on socioeconomic status, gender and other cultural identifiers. This qualitative pilot study addressed how ELs engage in an online mathematics course to find culturally relevant help.

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