The Power of Collaboration: A Taste of Improvement Science

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Through a collaborative partnership between Georgia State University and Atlanta Public Schools, we sought to develop the practices of our secondary mathematics pre-service teachers to increase their students’ conceptual understanding and engagement in the mathematical practices. Although our pre-service teachers passed edTPA, a performance-based, subject-specific assessment for teacher candidates, they did not always meet the standard on key rubrics that addressed conceptual understandings. Additionally, when observed with the MCOP², they also struggled to engage students and promote conceptual understanding (Gleason, Livers, & Zelkowski, 2015). Using the Plan-Do-Study-Act Cycle on co-planning and co-teaching during the internship (Sears, et al., 2017; Bacharach, Heck, & Dahlberg, 2010) to monitor the developments, we reflected on the following questions: Where are the pre-service teachers struggling? What experiences are we providing through our current courses to support their development? What can we do better to improve our outcomes?

Collaboratively, we decided to work with the Standards of Mathematical Practices and Co-Planning and Co-Teaching interventions. Our process involved:

1. Familiarization – identifying mathematical practices in sample teaching videos.
2. Internalization and Application – using new understandings to plan and implement in their own practice.
3. Reflection – view their own teaching to assess their practice.
4. Feedback – receive feedback from others, including the cooperating teachers, university supervisors, and professors. At a roundtable session, participants will be presented with a comparison of strategies used in the past and in this cycle. We will also discuss our next steps to refine our process for continuous improvement.