

Michelle Brye

Emma Holmes Fellowship Award – Final Report

1) How this work has impacted your practice?

This semester I learned more about the Mathematics Classroom Observation Protocol for Practices (MCOP2) and how this relates to mathematics instruction. I examined both student engagement and teacher focused indicators utilized in the observation protocol. The MCOP2 tool is used to measure activities occurring in mathematics classrooms during lessons. I explored how each indicator relates to mathematical practices as outlined into the Common Core State Standards. As a result of this fellowship, I developed a total of 6 modules that support teacher candidates, mentor teachers and clinical coaches to understand how MCOP2 relates to mathematics education. Two modules focus on student engagement indicators. These modules are followed by a lesson study module building on the use of the MCOP2. Two more modules were constructed based on the teacher focused indicators. Again, a final lesson study module is use for a second iteration of mathematics instruction.

2) How this work will impact work of the College of Education?

This work impacts the work of the College of Education because it supports Just Equitable and Inclusive Education (JEIE) through three different ways: 1) school culture and professionalism, 2) school population and 3) high impact practice.

Because teacher candidates in Titan EDUCATOR are on the elementary campus for the duration of a year, they are better able to understand how to prepare for creating a positive mathematics learning environment. Teacher candidates work closely with mentor teachers to design, implement and reflect on mathematics practice. By utilizing the MCOP2 and modules, both teacher candidates and mentor teachers were able to focus on student engagement in mathematics instruction, thus promoting a focus on student centered mathematics instruction. Teacher candidates are seen by elementary students as professional and become role models for these children. As a result, elementary students are encourage to pursue college because of these role models.

West Orange Elementary is a high-impact community which serves many low-income and emerging bilingual families. Titan EDUCATOR allows our teacher candidates the opportunity to work with underserved populations of students beginning from day one. The teachers and staff work tirelessly to provide students with meaningful learning experiences. This is unique to Titan EDUCATOR as not all preservice teachers have the opportunity work closely with high-impact communities for the durations of a complete school year.

Teaching in the Titan EDUCATOR program provides “opportunities to discover relevance of learning through real-world application (HIP practice – key element)” as it take place

at identified at-risk elementary school sites and focuses on STEM education. By organizing, planning, teaching, and reflecting at the elementary site, my role as the EDEL 435 instructor allowed me to be part of the school culture and impact the learning experience in the mathematics classroom with teachers, teacher candidates and the elementary students. Learning is authentic because it is situated in a real-world context.

3) How this work renewed your engagement in the field?

This work has renewed my engagement in the field because I was able to be part of the West Orange elementary school community since the beginning of the school year. It has been 15 years since I taught elementary school, so my involvement in this work allowed me to spend multiple hours weekly working with school administration, instructional assistants, teachers and teacher candidates in the field. By immersing myself in the school culture, I was able to build relationships with all members of the community. My commitment to teaching was renewed as I was able to focus on the dynamics of mathematics education that centers directly on students' needs. Using the MCOP2 as a tool for planning, implementing and reflecting on math instruction was purposeful for student engagement. By sharing the constructed modules with other EDEL 435 instruction, mentor teachers and clinical coaches in Titan EDUCATOR, I was able to strengthen my understanding the needs of all members of the larger education community. This would not have been possible if this class and program was taught outside of the elementary school community.

4) How you met your stated goals?

My goal was to educate teacher candidates about best practices in mathematics instruction. This was accomplished in three specific areas: 1) to develop modules that emphasize Mathematical Practices (CCSSM) during coursework, 2) to implement the Mathematics Classroom Observation Protocol for Practices (MCOP2) as a means of evaluation for mathematics teacher, and 3) to work with the elementary school community at West Orange Elementary to support mathematics instruction in the classroom. The fellowship allowed me to construct modules for EDEL 435 that focus on the connection between Standards for Mathematical Practice and the MCOP2 indicators. These modules were integrated into the mathematics methods course. Through multiple meetings with elementary school teachers and administrators, I constructed a model for actualizing use of the MCOP2 in practice. Teacher candidates met with classroom teachers at West Orange to analyze math test scores of the elementary students. This data was considered as the teacher candidates constructed math lessons that focused on student engagement indicators (MCOP2). Teacher candidates co-taught math lessons in actual elementary classrooms and used the MCOP2 as a means to reflect on the lesson. This information was then used to construct another lesson (lesson study model) in the same classroom. The second lesson was co-taught with a focus on teacher focused indicators (MCOP2). The MCOP2 was again

utilized as a means of reflecting on the lesson. I developed a total of 6 modules that are used to support teacher candidates, mentor teachers and clinical coaches understanding how MCOP2 relates to mathematics education. Two modules focus on student engagement indicators. These modules are followed by a lesson study module building on the use of the MCOP2. Two more modules were constructed based on the teacher focused indicators. Again, a lesson study module is use for a second iteration of mathematics instruction. Furthermore, professional development was offered to teachers at West Orange to understand the MCOP2 and how it relates to effective mathematics instruction. The knowledge gained from using the MCOP2 was expanding upon during student teaching as all teacher candidates taught mathematics lessons and were evaluated by clinical coaches using the MCOP2.