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Geometric Thinking in Australia 08-09

(Curriculum and Instruction / Education)

The National Council of Teachers of Mathematics (NCTM) (2000) and the National Council for Accreditation of Teacher Education (NCATE) (2004) both advocate the need for teacher education programs to not only prepare future teachers with strong content and pedagogical knowledge but also have them participate in significant, long-term field experiences in K-12 classrooms that engage them in actual teaching and learning situations and engage in researching teaching and learning. The Baylor School of Education in partnership with local school districts and its Study Abroad Programs (Australia, London, & Costa Rica) has designed just such a program.

This proposed study is to examine the geometric thinking of 25 young children in a primary grade for 5-6 year olds in Brisbane, Australia at Camp Hill State School. where Baylor University conducts a study Abroad program for our teacher education students in their senior (intern) year. It will also examine the impact on Baylor Interns. The 13 Baylor Interns will spend 3 weeks at the school teaching an assigned grade level and learning about the educational system in Australia. Students and faculty from Baylor University have partnered with the Parkdale Elementary and Hillcrest Professional Development Schools in the BU Teacher Education Program. In this partnership Baylor students work with University faculty in coursework in conjunction with classroom teachers in the local schools to connect learning theory, instructional practice, and teaching approaches. Together in mathematics we have conducted 3 studies related to geometric thinking and one on fraction understanding. Both undergraduate students and graduate students have been integrally involved in the studies allowing our students to actively participate in research. Additionally we have had a study abroad program with schools in Brisbane, Australia for over a decade where our education students engage in enriching teaching experiences. What we would now like to do is provide an opportunity for BU students to engage in research similar to the PDS experiences but extend to Australia giving them a unique perspective to contrast teaching and learning here in the US with Australian students. This study replicates previous studies we have done and thus provides a cultural comparison.