
Geometry Teaching Knowledge: A Comparison Between Pre-Service and High School Geometry Teachers

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Abstract

This study compares Geometry Teaching Knowledge between pre-service and high school geometry teachers. Data was collected via an online MKT-G assessment developed by Herbst and Kosko (2014), a post-assessment survey, and interviews of three pre-service teachers and four high school teachers. Furthermore, this study also investigates where this knowledge is developed. Pre-service teachers did not perform as well as the high school geometry teachers in all of the domains: Geometry Content Knowledge, Specialized Geometry Knowledge, Knowledge of Geometry and Students, and Knowledge of Geometry and Teaching. When comparisons were made regarding experiences in pre-service teacher education courses, pre-service geometry courses, high school teacher professional development opportunities, current geometry classrooms, and ideal classrooms of both pre-service and current high school teachers, there were statistically significant differences. This study provides insight into the domains of Geometry Teaching Knowledge that could be used in making decisions regarding pre-service teacher education programs and high school geometry teacher professional development.