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Measuring Teaching Quality of Secondary Mathematics and Science Residents: A Classroom Observation Framework

This study assesses the reliability of two observation rubrics, one in math and the other in science and documents how the rubric data were used to inform a teacher education program. Classroom observations are typically considered essential for assessing teaching practice, yet many popular observation frameworks while comprehensive in aim, do not appropriately capture key features of teaching valued by teacher education programs. Many of these tools do not attend to issues of equity, humanizing pedagogy and thus, social justice. We report on the development of two observation rubrics—secondary math and science—that embody the aims and values of our teacher education program, specifically, equity and humanizing pedagogy, and the results of our examination of the reliability of ratings of teaching practice generated using these rubrics. We discuss the various sources of measurement error and the implications for further developing and using the observation rubric in our program.

中学科学和数学的教学□量□量：□堂□察框架

本文□估数学和科学□堂□察□准的信度，以及□些数据如何被用来改善教□教育。□堂□察一直被□□是□估教学□践的代表性方式。但是，□多眼下流行的□堂□察框架并没有恰当的捕捉到教□教育□目所重□的教学特征，虽然□些框架旨在□合性教学。□多相关□察手段没有关注公平□□、人性化教学以及社会正□。我□□□数学、科学两种□察□准的开□□程。□两种□准体□了教□教育□目的目□和价□□：公平和人性化教学。同□，我□□□□□通□使用□些□察□准来□教□的教学□行□量的信度。我□□□□量□□的多种来源，和未来开□使用□堂□察□准的意□。