

QUINNIPIAC UNIVERSITY

The Praxis II Multiple Subject Test is currently used as evidence that Connecticut teacher candidates are prepared to be highly effective elementary teachers in the classroom. Last year, I was invited to be part of a review committee to take and offer feedback on the newest version of the mathematics subtest. I was told the test had been revised to reflect the Connecticut Core Standards. Unfortunately, it had not been revised. The Connecticut Core Standards are focused on math reasoning, justification, and higher-level thinking. The math subtest for the Praxis II is merely a collection of problems reflecting rote skills and algorithms.

I understand and support the need for assessment of elementary teacher candidates. I support assessments that measure learning. I support the idea that elementary teachers must have a deep understanding of the content they teach. What needs refinement is the meaning of deep understanding of mathematics and what it means to be an elementary teacher of mathematics. If the test is to be reflective of a highly effective elementary teacher, it should provide opportunities for the teacher candidate to show what they know about teaching mathematics. For example, candidates might be given various scenarios to respond to that would reflect their deep understanding of mathematics or require different perspectives on instruction through the use of various strategies, manipulatives and formative assessments. After all, an effective elementary math teacher is one who has flexibility in thinking about mathematics and instruction. Being successful at rote skill does not represent a highly qualified teacher. Rote skill in math assessed as an entrance requirement to a teacher education program, not an exit assessment.

Elementary mathematics teachers need to know how mathematics works. They need to be flexible in their thinking and possess tools and strategies to employ to support a wide range of learners. They need to be able to do an error analysis of student responses and apply instructional strategies that support students in effective mathematical problem solving. Effective math teaching includes using manipulatives, drawings, diagrams, and role-plays to illustrate

mathematical operations. Effective math teaching supports students in thinking mathematically. Effective math teaching provides students multiple opportunities to reason and explain their thinking. Mere skill in computing was a single priority in the industrial age for shopkeepers. We need to have our teacher candidates support students in making connections, observing patterns, computing accurately, and making reasonable estimations. We want our students to be able to succeed in achieving the CCSSM, which includes reasoning, justifying, and explaining a response through the use of models, pictures, words and numbers.

As mathematics education moves away from a fragmented, component skill sets that was necessary in the Industrial Age, our assessments need to shift to an approach that is conceptual as well. This should be illustrated in a manner in which mathematics is taught in a constructivist framework. The shift in pedagogy emphasized must center on the student's ability to make meaning, reason, communicate, and problem solve. Today students should be required to demonstrate deeper conceptual understandings of mathematics and a reformed approach for teaching. The current Praxis II multiple subject test does not measure how well a teacher candidate understands mathematics nor does it measure how well they will be able to teach mathematics. Therefore the current Praxis II multiple subject test does not belong in the certification process.



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