MATHEMATICS INSTRUCTION DURING PROSPECTIVE TEACHERS' PERFORMANCE-BASED ASSESSMENT IN SPECIAL EDUCATION CLASSROOMS

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This research project examined the perceived tensions of prospective teachers' (PTs) between their university coursework centered on student-led mathematics instruction and their internship placements' scripted mathematics program for students with disabilities in special education settings. The scripted program was a mandated district initiative featuring a mathematics curriculum with set pacing, required daily lesson materials, and a teacher script. A yearlong case study followed five PTs enrolled in a dual major Elementary Education and Special Education program. All participants were completing student teaching internship requirements in K-5 special education classrooms: four traditional resource classrooms (children with disabilities received instruction in a pull-out setting), one autism spectrum disorder classroom. Participants were also completing their performance-based teaching assessment called the edTPA, which focused on the instructional needs of one student with a disability in the area of mathematics.

The edTPA is a performance-based assessment intended to determine if beginning teachers are prepared to enter the classroom. This performance-based assessment was developed by Stanford University and the Stanford Center for Assessment, Learning, and Equity (SCALE). The Special Education edTPA is evaluated across 15 scored rubrics in areas of planning, instructing, and assessing. Currently, 920 Teacher Preparation Programs in the United States complete the edTPA (SCALE, 2019). The edTPA faces critique (Behizadeh & Neely, 2018; Gitomer et al., 2019), however, specific to this case study, it required that the PTs justify how their instruction integrated the personal, cultural, and community assets of their students. This focus on students' assets was emphasized in PT coursework that urged them to follow their students' mathematical contributions rather than follow a lockstep curriculum (Carpenter et al., 2014).

The study's qualitative PT data sources included: (a) focus groups pre, during, and post completion of the edTPA, (b) interviews, (c) written responses to the edTPA prompts, (d) written reflections about the process, and (e) open-ended survey responses from the teacher preparation program's feedback survey about the edTPA. Grounded in theory and literature around teacher preparation assessments (Darling-Hammond, 2020), qualitative data was analyzed to note emergent codes which resulted in persistent themes of PTs' perceptions of math teaching and perceptions of teaching self, contextualized in the tension of their setting and the edTPA. edTPA scores were included as quantitative data sources whose analysis produced descriptive statistics of the overall case and revealed edTPA subsets of challenge or above-average performance that provided insight into why certain tensions may have been magnified. Findings indicated that the PTs expressed tension between following the scripted program versus following their learner was exacerbated by the edTPA. Although the edTPA could have been used as a PT's catalyst for rejecting the scripted program, the PTs instead settled with a disjointed compromise among their perceived demands of the edTPA, their Clinical Educators, the scripted program, and their own expressed beliefs about teaching and learning.

References

Behizadeh, N., & Neely, A. (2018). Testing injustice: Examining the consequential validity of edTPA. *Equity & Excellence in Education*, 51(3-4), 242-264.

Mathematics instruction during prospective teachers' perfoRmance-based assessment in special education classrooms

Carpenter, T. P., Fennema, E., Franke, M. L., Levi, L., & Empson, S. B. (2014). *Children's mathematics: Cognitively guided instruction* (2nd ed.). Heinemann.

Darling-Hammond, L. (2020). Accountability in teacher education. *Action in Teacher Education*, *42*(1), 60-71.

Gitomer, D. H., Martinez, J. F., Battey, D., & Hyland, N. E. (2019). Assessing the assessment: Evidence of reliability and validity in the edTPA. *American Educational Research Journal.* https://doi.org/10.3102/0002831219890608

Stanford Center for Assessment, Learning, & Equity [SCALE]. (2019). *Participation map*. edTPA. https://edtpa.aacte.org/state-policy