

THE UTE MODEL: ANIMATING PRE-SERVICE TEACHERS' VISIONS FOR STUDENT ENGAGEMENT

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Study Overview and Methods

The UTE model affords secondary mathematics PSTs with the chance to combine their first methods course with an early field experience in a first-year undergraduate mathematics course, learning about teaching strategies while attempting to implement them in the classroom (Author et al., 2019). During the UTE, PSTs plan, execute, and receive feedback as they teach a series of lessons in the undergraduate mathematics course while being supported by mentor teacher educators. PSTs participated in pre- and post-UTE interviews that followed Munter's (2014) protocol for assessing PST's vision for high-quality mathematics instruction (VHQM). These interviews allow for insights into the experience of these PSTs and reveal evolutions in their shifting beliefs about the role of the teacher in the classroom, the use of mathematical tasks, the nature of classroom discourse, and the level of student engagement. All interviews were transcribed and then analyzed using Munter's (2014) rubric as a guide.

Results

While findings across all four VHQM categories have been noteworthy, of particular interest to this study has been PST responses that fall into Munter's 'student engagement' category. Codes in this category refer to "non-content-specific characterizations of student behavior", making this category a way to capture PST thoughts that describe a generic vision for the classroom that lack sufficient specificity regarding the role of the teacher, the nature of classroom discourse, or the use of mathematical tasks. Tracking the presence or absence of these generic responses has been helpful in revealing the places where PST visions gain specificity, shifting from the ambiguous to the explicit, from broad sweeping claims to detailed articulations of classroom practice. For example, consider the comparison of a PST's pre-interview answer: "If [the students] are engaged in instruction, I think is a big indicator if they are actually grasping the concept" to the same PST's post-interview answer: "I would pay attention to the types of questions [the teachers] are asking students and how that's eliciting responses." This shift in thinking may suggest an early field experience can promote high-leverage teacher questions as a concrete, specific means of enacting a previously generic vision for student engagement. This study tracks these movements from the generic to the specific, looking for insights into the development of PST thought that might inform our understanding of teacher preparation.

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References

- Beida, K., Visnawathan, A., McCrory, R., & Sikors, P. (2019). The UTE model: enhancing learning in Developmental mathematics and preparing mathematics teachers of the future. *PRIMUS*, DOI: 10.1080/10511970.2019.1626958.
- Munter, C. (2014). Developing visions of high-quality mathematics instruction. *Journal for Research in Mathematics Education*, 45, 584-635.