

THE BELIEFS AND PRACTICES OF GRADUATE STUDENT TUTORS ENGAGED IN ONLINE TUTORING DURING THE PANDEMIC

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Many higher education institutions in the United States provide mathematics tutoring services for undergraduate students. These informal learning experiences generally result in increased final course grades (Byerly & Rickard, 2018; Rickard & Mills, 2018; Xu et al., 2014) and improved student attitudes toward mathematics (Bressoud et al., 2015). In recent years, research has explored the beliefs and practices of undergraduate and, sometimes graduate, peer tutors, both prior to (Bjorkman, 2018; Johns, 2019; Pilgrim et al., 2020) and during the COVID-19 pandemic (Gyampoh et al., 2020; Mullen et al., 2021; Van Maaren et al., 2021). Additionally, Burks and James (2019) proposed a framework for Mathematical Knowledge for Tutoring Undergraduate Mathematics adapted from Ball et al. (2008) Mathematical Knowledge for Teaching, highlighting the distinction between tutor and teacher. The current study builds on this body of work on tutors' beliefs by focusing on mathematical sciences graduate teaching assistants (GTAs) who tutored in an online setting during the 2020-2021 academic year due to the COVID-19 pandemic. Specifically, this study addresses the following research question: What were the mathematical teaching beliefs and practices of graduate student tutors participating in online tutoring sessions through the mathematics learning center (MLC) during the COVID-19 pandemic?

The graduate students in this study were part of a multi-institution implementation of a multiple component graduate teaching training program, Promoting Success in Undergraduate Mathematics through Graduate Teaching Assistant Training (PSUM-GTT; Harrell-Williams et al., 2020), which was developed with the intent to strengthen the teaching skills of mathematical sciences GTAs to help the undergraduate students they currently serve as GTAs and to position them to become more effective instructors if they become faculty. GTAs at three institutions participated in a teaching seminar offered by their department and a Critical Issues in Undergraduate STEM Education seminar and received peer mentoring from more advanced graduate students and support from a peer TA Coach.

During the Spring 2021 semester, ten GTAs who had tutoring assignments instead of teaching assignments participated in structured interviews about their beliefs and practices. These GTAs had completed the teaching seminar and MLC-specific training. The interview protocol used modified items from the Pilgrim et al. (2020) tutor-focused survey based on The Teacher Beliefs Interview (TBI; Luft & Roehrig, 2007). The interview data are being coded using the modified coding scheme from Pilgrim et al. (2020), which involves using categories describing the responses on a continuum from more tutor-focused to more student-focused

experiences. Results regarding graduate student tutors' beliefs will be summarized and presented in this poster.

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