

RETHINKING CLASSROOM DATA COLLECTION

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Gathering evidence of teachers' classroom instruction has been a hallmark of data collection in mathematics education research. In-person data collection, though often preferable, has become increasingly challenging in recent years, partly due to COVID-19, but also because of logistical challenges (e.g., cost, travel, time) associated with collecting classroom observation data (Namey et al., 2020). Given that research typically occurs near higher education institutions, voices outside these areas are often underrepresented. These challenges have implications around geographic equity, researchers' resources, and time. We explore the possibilities of remote data collection as a means of capturing key aspects of teachers' mathematics instruction.

Previous research on observation protocols that used video versus live coding primarily utilized quantitative methodologies (e.g., Casabianca et al., 2013; Curby et al., 2016) where researchers looked for significant differences using statistical tests. Gridley and colleagues (2018) found no significant differences between live and video coding for their observation protocol, but suggested there might be qualitative differences that were not captured. For example, the informal conversations between the teacher and researcher, the richness of data from being immersed in a bustling classroom, the ability to pause and rewind video, or having an entire research team together to watch video. Understanding aspects of protocols best suited for video or live observations is needed to develop and refine instruments for remote data collection, in order to ensure coding video captures key aspects of instruction, as if the researchers were in the classroom.

Through mixed methods (Creswell & Plano Clark, 2018) we will identify differences in live and video recorded classroom observations with our goal to revise an existing observation protocol to use with video-recorded lessons so we can diversify participants and decrease logistical challenges. Data collection includes live observations of classroom instruction using the *Flipped Mathematics Instruction Observation Protocol* (Otten et al., 2018; Otten et al., 2021) while simultaneously using a 360° video camera. Two researchers will complete the protocol during a live observation and two different researchers will complete it using the video recording. Then the researchers will come together and identify possible differences in coding between the live and video recordings in order to refine the protocol for video recorded observations. Our ultimate goal is to mitigate the dissonance of in-person versus live recordings and work towards a more harmonious approach for collecting observation data that attends to geographic equity, resources, and time.

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