Looking Inside the Black Box of Mathematics Teacher Noticing

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Research in mathematics teacher noticing, an important component of teaching expertise, has gained traction in recent years (Hunter, Hunter, Jorgensen, & Choy, 2016). Despite the advances in our understanding of teacher noticing as a high leverage practice (Sherin, Jacobs, & Philipp, 2011) and its application across a wide variety of contexts (Amador, 2016; Choy, 2016; Seto & Loh, 2015; Simpson & Haltiwanger, 2016; Wager, 2014), the "complex interactions of cognitive and perceptual processes and activities in dynamic situations (such as classrooms) have never been fully described in research on teacher noticing" (Scheiner, 2016, p. 234). Many of these processes remain hidden in the "black box" of noticing (Scheiner, 2016). This begs the question: How do we look inside the black box of teacher noticing? Scheiner (2016) suggests that researchers should draw on the perceptual cycle model (Neisser, 1976) and blend insights from cognitive sciences and human factors studies. In this short communication, we will present our initial idea of using wearable eye trackers to investigate teacher noticing. More importantly, we will invite feedback from the participants to explore how different video technologies could be used with the FOCUS Framework (Choy, 2015), developed for characterising productive noticing, to build a more comprehensive model of teacher noticing.

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