# VISION OF HIGH-QUALITY MATHEMATICS INSTRUCTION: WHAT SHOULD ELEMENTARY SCHOOL PRINCIPALS NOTICE?

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Principal leadership plays a significant role in improving teachers' mathematics instructional practices. This requires a vision of high-quality mathematics instruction– the discourse that principals use to describe ideal classroom practices that are not necessarily mastered yet (Munter, 2014). We hypothesize that for principals to develop their vision and then support their teachers' learning effectively, their noticing skills are key: to attend to specific aspects of mathematics instruction, interpret them using frames of reference that characterize high-quality practices, and discuss the teacher's instructional decisions (Sherin et al., 2011). Hence, we ask: How does the principals' noticing of student mathematical thinking evolve in the context of observing and debriefing fourth-grade mathematics lessons? How is the noticing of each principal related to their instructional vision of high-quality mathematics instruction?

We report on a research-practice partnership with six elementary school principals that aims to develop their instructional leadership practices, so they can support their teachers in creating more socially just mathematics classrooms for a predominantly Latinx population. Principals engaged in five monthly visits to a fourth-grade math classroom. We draw on four sources of data to examine principals' learning process: audio transcripts of the sessions, a noticing task at the end of each session, field notes, and interviews. A coding system informed by teacher noticing research was applied to the data, allowing emergent codes and then triangulating the data. Twenty percent of the data were double coded by independent researchers.

Initial findings suggest that principals' noticing became more sophisticated across visits from attending to general aspects of the lesson toward noticing specific elements of students' thinking and of instructional moves. The discussion rarely included the breakdown of conceptual underpinnings of mathematics ideas. Final interview data on participants' vision will be analyzed alongside responses to the noticing task to examine relationships between the two constructs. These results contribute to the scarce existing research on principals' noticing and on how noticing might contribute to effective instructional leadership.

## References

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