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MATHEMATICS LESSONS AS STORIES: A REASON TO DO THE MATH

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There is evidence that one way to improve the quality of mathematical instruction is to improve the curriculum decisions of teachers at varying scales, such as how to respond to a student's question during a lesson or the selection and sequence of tasks. Studies of how teachers read and plan with curriculum materials highlight the need for useful conceptual tools for making sense of the content of mathematics curriculum (e.g., Remillard, 1999). Teachers need multiple ways to analyze their curriculum beyond just attention to individual tasks and directions. One way to conceptualize how mathematical ideas unfold in a classroom is to interpret a math lesson as a story (Dietiker, 2015). Similar to a literary story, a *mathematical story* is the ordered sequence of connected mathematical events connecting a beginning with its end. Examining curriculum through the lens of the mathematical story framework enables teachers to see how the posing and resolution of mathematics tasks and mathematical questions over time could shape the experience of the learner.

As part of a three-day professional development in Summer 2015, teachers learned about the mathematical story framework and how it could be used to interpret their curriculum. We collected statements during the professional development and during the following year that captured how they were and were not using the story framework to frame their thinking around curriculum. These statements were analyzed for patterns that reveal how teachers make sense of the story framework and how it informs their practice. In particular, this poster reports our findings regarding how the narrative elements of this framework supported these teachers in thinking about the development of mathematical ideas and curricular goals. In addition, the poster presents examples of mathematical stories the teachers created. Our findings indicate that this framework supports the curricular insight of teachers into how even minor curriculum adaptations can potentially enhance student learning and engagement. Themes of teachers as authors of mathematical stories and the importance of sequence emerged. Several teachers also connected student motivation with mathematical story. One teacher noted that when the mathematical story can grip a student's attention, it "gives [the student] a reason to do the math."

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