



Mathematics Education Research Unit
Unité de Recherche Éducationnelle en Mathématiques
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Between Words and Concepts: How two Algebra Teachers Introduced Slope and Rate in their Linguistically Diverse Classes?



Professor William Zahner
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November 19th 2013 4:00–6:00pm LMX 477
(en anglais seulement)

I present an exploratory analysis of how two teachers, who differed in their years of experience and language background, taught the same unit introducing the concept of the slope of a linear function as a rate of change. Both teachers used the same text and taught in the same school with a high proportion of students classified as English Learners. The primary analysis involved examining the teachers' use of technical vocabulary during two key lessons. This analysis showed that the less experienced teacher used far more technical terminology than her more experienced colleague. A follow up analysis focused on how the teachers introduced new terminology, and it revealed that the more experienced teacher spent more time developing meanings through the use of non-technical terminology before introducing new technical terminology. Finally, looking at development in the students' reasoning, a relatively broad swath of the students in the more experienced teacher's class appeared to appropriate some of the teacher's terminology in their subsequent reasoning. Implications for research and practice will be discussed.