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Diversity, variability and commonalities among teaching practices.

Vandebrouck, Fabrice (ed.), Mathematics classrooms. Students' activities and teachers' practices. Rotterdam: Sense Publishers (ISBN 978-94-6209-279-2/pbk; 978-94-6209-280-8/hbk; 978-94-6209-281-5/ebook). 75-89 (2013).

Introduction: Researchers in mathematical didactics aim to understand and improve the teaching and learning of the discipline. However, the weak diffusion of research results into teaching practices prompts us to look closer at various teaching practices. Do institutional constraints and professional norms render these practices mostly homogenous? Do teachers have some amount of leeway, resulting in individual differences in styles? Are students' classroom activities completely determined by their teacher, or are teachers reciprocally affected by their students? And could this mean that students are themselves responsible for variation in their teachers' practices? We will address these questions through the case of teaching decimal multiplication to French sixth graders (age 11), beginning with a study of the regularity and variability of mathematics teachers' practices. The "double approach" presented in [*A. Robert* and *C. Hache*, ibid., 23–73 (2013; ME 2014a.00303)] consists of understanding teachers' work as involving goals beyond student learning, taking into account their own professional objectives as well. We will analyze the practices of four teachers who work under similar professional conditions. By examining commonalities in their practices, we will analyze the constraints under which these teachers work. This will allow us to both determine if all the originally anticipated scenarios are feasible, and to understand teachers' pre-class and in-class constraints. By examining the variability in individual practices, we intend to present coherences in teaching practices. It is the internal coherence in a teacher's practice that forbids the spontaneous adoption of another way of operating. After specifying the research topic and the methodology adopted for the "double approach," we will present our results regarding the originally anticipated scenarios, the institutional constraints in place, and finally the scenarios deemed realizable under these constraints. We will then describe our observations of teachers in terms of the regularity, variability, and coherence of their teaching practices.

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