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Robert, Aline; Hache, Christophe

Why and how to understand what is at stake in a mathematics class.

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). 23-73 (2013).

From the text: The goal of this chapter is to describe, from a theoretical and methodological point of view, the use of this analysis process to examine the teaching of mathematics in school. All research presented here concerns the teaching of mathematics in middle school and high school (students age 11–18). Our research has two goals. First, we aim to give researchers access to student learning for a given topic, in relation to the instruction they have received, within a specific school system, from a diagnostic viewpoint (analysis to understand what there is) or a prospective viewpoint (experiments to learn how to enrich the existing situation). Second, we aim in the long term to work on teacher education, particularly based on conclusions from previous analyses and on hypotheses allowed by the theoretical framework (see end of volume). The goal of this chapter is therefore to describe the specific theoretical frameworks that we use and the general methodologies that follow from these frameworks.

Classification: C73 C74 D43 D44 C33 C34

Keywords: activities; classroom; teachers' practice; students' learning; conceptualization; mathematical tasks; lesson analysis