

ACTIVITY THEORY IN FRENCH DIDACTIC

FABRICE VANDEBROUCK

Université Paris Diderot, Laboratoire de Didactique André Revuz

Activity theory is a cross disciplinary theory adopted for studying teaching learning practices in ordinary classrooms. The methodological tools it provides were particularly expanded during the two past decades in a French sub-community of didactic of mathematics. In our talk, we will focus on pupils' activities, mediated by teachers and artefacts, where individual and social levels are simultaneously interlinked. The work of teachers and the relationships with the realities of situations and contexts are central to the methodology employed. I will explain our analyses concerning classroom environments, teaching scenari, mathematical contents and tasks, teachers' implementations and in fine students' activities. Our problematic is always to identify, understand and even interpret the links between the teaching of a given mathematical content and the corresponding students' possible activities. I seek to highlight regularities as well as variations in these links in order to improve our understanding about students' mathematical learning skills. The specificity of our approach consists in the association of Piaget and Vygotski's theories linking epistemological analyses in some mathematical topics, didactical analyses related to the design and implementation of the teachings and also cognitive perspectives. These developments include results aiming at understanding the complexities of attempts to integrate technologies into ordinary classrooms. For instance, they encompass the well known notion of instrumental geneses.

References

- Robert A. (2012) A didactical framework for studying students' and teachers' Activities when learning and Teaching Mathematics, *IJTME*, 19 (4)
- Vandebrouck F. (Editor) (2013) *Mathematics Classrooms: students' activities and teachers' practices*, 264 pages, Rotterdam: Sense Publishers
- Vandebrouck, F., Chiappini, G., Jaworski, B., Lagrange, J-B, Monaghan, J. & Psycharis, G. (Eds.) (2012/13). Activity theoretical approaches to mathematics classroom practices with the use of technology (Part 1 & Part 2). *International Journal for Technology in Mathematics Education*, 19(4) & 20(1).