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A framework for examining student learning of mathematics: tasks using technology.

Ubuz, Behiye (ed.) et al., CERME 8. Proceedings of the eighth congress of the European Society of Research in Mathematics Education, Antalya, Turkey, February 6–10, 2013. Ankara: Middle East Technical University (ISBN 978-975-429-315-9). 2584-2593 (2013).

Summary: This paper, taken directly from the author’s doctoral thesis, [Classroom mathematical learning with computers: the meditational effects of the computer, the teacher and the task. Bristol: University of Bristol (PhD Thesis) (2007)] develops a theoretical and methodological framing for examining student learning in the context of mathematics classrooms where computers are used. The framing, drawing particularly on the *G. Brousseau*’ theory of didactic situations [Theory of didactical situations in mathematics: didactique des mathématiques, 1970–1990. Dordrecht: Kluwer (1997; ME 1998a.00152)], takes into account not only the student interactions with the environment but also the crucial role played by the feedback from the computer. This approach focuses on the processes in which the students are engaged and suggests the sorts of interactions that might provide evidence of student mathematical learning. The paper concludes with a section which analyses an episode of student mathematical activity using this framing.

Classification: C30 U70

Keywords: modes of production; computer; feedback; task; graphing