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Drijvers, Paul; Doorman, Michiel; Boon, Peter; Reed, Helen; Gravemeijer, Koeno

The teacher and the tool: Instrumental orchestrations in the technology-rich mathematics classroom.

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Summary: The availability of technology in the mathematics classroom challenges the way teachers orchestrate student learning. Using the theory of instrumental orchestration as the main interpretative framework, this study investigates which types of orchestrations teachers develop when using technology and to what extent these are related to teachers' views on mathematics education and the role of technology therein. Data consisted of videotapes of 38 lessons taught by three teachers, who also provided information on their views through questionnaires and interviews. Qualitative analysis of these data led to the identification of orchestration types and teacher profiles. The orchestration preferences of the three teachers proved to be related to their views. A detailed analysis of one exemplary episode suggests how other theoretical perspectives might complement the theory of instrumental orchestration.

Classification: D30 C30 D20 U50 U70 R20

Keywords: digital technology integration; classroom teaching practice; instrumental orchestration; technology; applet; teachers' views; classroom observation; empirical investigations

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