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Lesson Study Research in North Netherlands: Its Effectiveness and Practicability in the Dutch Context

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Background to the topic Lesson Study (LS) is quickly spreading in the Netherlands. LS is a theoretically powerful professionalization approach (Kooy & Van Veen, 2012), and it also turns out to be a powerful approach for teachers to improve their teaching practice (Cheung & Wong, 2013; Xu & Pedder, 2014). However, this research has often been carried out in non-Dutch educational contexts. Since LS has a lot of potential, we also need empirical foundations in the Dutch educational context. Research questions and methods of the three enquiries

The first research explored the effectiveness and practicability of LS in the Dutch educational context. Therefore, we constructed a theoretical model describing (1) factors influencing participation and implementation of LS (Fishbein, 2008), (2) participation in the LS process itself, and (3) outcomes for teachers and pupils (Lewis, Perry & Hurd, 2009). Our research questions were: what outcomes has participation in LS, what are the crucial elements in the LS process, and which factors hinder or stimulate participation of teachers in LS? The research consisted of two parts: a literature review and a case study. For the literature review, we recorded some 60 international and 20 Dutch studies about LS from seven databases. For the case study, during two years we gathered quantitative and qualitative data from some 30 teachers of Dutch and mathematics from 12 secondary schools in two cross-school PLC's . For the second research , we expanded the theoretical model with the role of a facilitator. During LS, conversations amongst teachers are essential in their learning processes (Avalos, 2011; Horn & Kane, 2015). However, a common failure in teachers' interaction is that they tend to stick to congenial conversation instead of a critical discussion (Nelson, Deuel, Slavit, & Kennedy, 2010). Several studies emphasize the potential added value of an LS facilitator to enhance the quality of the conversations (Horn & Kane, 2015; Linder, 2011). Our research question was: what is the relationship between facilitators' moves and teachers' interactions during LS conversations? Data were gathered from two LS teams of two secondary schools. From both teams, we recorded and verbatim transcribed the LS conversation after the first research lesson. We coded the facilitators' moves and teachers' interactions in two ways: what they talked about and how they talked about it, by building upon earlier research on facilitators' moves and teachers' interactions. In the third research, sustainable LS in schools is the central theme. In Japan, LS occurs in 95% of the schools and teachers consider it an integral part of their work. In new contexts, it is often challenging to spread LS in the school (Takahashi & McDougal, 2016). Besides, national educational systems often work against making continuous learning an integral part of the work of teachers (Hiebert & Stigler, 2017). We argue that LS's potential outside of Japan hinges on the ability of educational systems new to LS to develop the support needed to make LS work in new contexts. Contribution to knowledge Results of the first study confirm the theoretical model: teachers gain new knowledge, collaboration between teachers is fostered,

and the quality of learning and teaching increases. Facilitation was found to contribute to the process. Important promoting factors are school leadership and time. Preliminary results of the second study show that the facilitators' moves are important to deepen the conversation. In our third contribution, we propose a tool with which research can investigate the sustainability of LS from an improvement science perspective; namely by framing it as an organizational routine.