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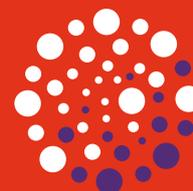
Connecting teachers, schools and systems:  
Creating the conditions for effective learning

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Abstracts

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## PAPER 2 ABSTRACT

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*Tell me everything! Boundary Crossing in Schools with a (networked) Data Use PLC*, Mireille Hubers, Kim Schildkamp and Cindy Poortman (University of Twente) – the Netherlands

### Issue

Data use has become increasingly important in education, as it may improve student achievement (Datnow, Park, & Kennedy-Lewis, 2013). However, teachers often do not use data effectively (Ingram, Louis & Schroeder, 2004). To support schools in data use, the data team procedure was developed (Schildkamp & Poortman, 2015). A data team is a (networked) PLC in which 4-6 teachers and 1-2 school leaders collaboratively learn how to use data to solve an educational problem, e.g., grade retention. The question is how team members can increase their school's overall level of data use.

### Theoretical framework

The schools' level of data use can be increased when team members diffuse their newly gained knowledge to their colleagues (Coburn et al. 2009). In doing so, they act as boundary crossers, because they transfer their data use practice to their colleagues' practice (Akkerman & Bakker, 2011). There are two strategies in boundary crossing: using artefacts and personal communication (Wenger, 1998). Both need to fulfil several requirements to be successful (Wenger, 1998). For example: artefacts can neither be too specific or too generic, and difficult terminology needs to be translated into easier phrasing for personal communication. Previous research hardly explicated what kind of learning takes place in boundary crossing (Akkerman & Bakker, 2011). The present study therefore focuses on the following questions:

1. How do data team members use artefacts and personal communication to cross boundaries between their (networked) PLC and their colleagues?
2. What knowledge do their colleagues gain from this?

### Method

We conducted case studies at two schools with a within-school PLC, and two with a networked PLC of teachers from different schools. These PLCs met with a coach from the university twice a month for two years, during which they worked with an eight-step cyclic procedure (Schildkamp & Poortman, 2015). All team members were interviewed twice, and their artefacts were collected. Colleagues' knowledge gains were assessed with a data-use questionnaire, administered before and after the data team project.

### Main findings and conclusions

The findings suggest that networked PLC-members did not collaborate in boundary crossing. This made one of the networked PLCs particularly vulnerable regarding their progress and continuation in the school. Although both within-school and networked PLCs varied in meeting the requirements for boundary crossing, colleagues of one of the within-school PLC members learned more about data use and were more involved in the process. However, all four teams faced difficulties, for example in translating their knowledge to their colleagues' practice. This shows that both within and across schools, boundary crossing is challenging. The results provide insight in the concept of boundary crossing and its challenges for educational practice. They can be used to further support effective and sustainable data use in and across schools, e.g., by providing educators additional guidelines for boundary crossing.