

## Collaboration of teachers investigated within three different learning situations in primary schools

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Jannet Doppenberg, Eindhoven University of Technology, Netherlands; Anouke Bakx, Fontys PABO Eindhoven, lectoraat L&I., Netherlands; Perry den Brok, Eindhoven University of Technology, Netherlands

During the last two decades there has been a growing awareness of the potentially strong role of teacher collaboration in relation to teacher learning. However, while theoretical 'ideals' of teacher learning are abundant in the literature, relatively little is known about what teacher learning in collaboration with colleagues actually looks like in everyday work. The aim of this study was to obtain more understanding of teacher learning related to different learning situations in which teachers collaborate with each other. In this study teacher learning was studied within three learning situations, differing in nature, taking into account both the undertaken activities by teachers and learning outcomes. Data was collected through a structured questionnaire completed by 411 teachers representing 49 primary schools. The questionnaire was based on a literature review and results of a prior interview study. Preliminary quantitative analyses showed that, four reliable and independent scales for undertaken activities and three reliable and independent scales for learning outcomes could be identified, which are comparable with categories defined in literature. Variance analyses showed that the undertaken activities and learning outcomes differed between the three learning situations. Moreover, large differences were found between activities and learning outcomes across schools.

**Rationale and theoretical framework** During the last two decades there has been a growing awareness of the potentially strong role of teacher collaboration in relation to teacher learning (Levine & Marcus, 2010). Collaboration with colleagues is seen as a powerful learning environment, which stimulates the professional development of teachers, the innovative development of schools as well as student learning and also characterises professional learning communities (Vescio, Ross, & Adams, 2008). However, while theoretical 'ideals' of teacher learning are abundant in the literature, relatively little is known about what teacher learning in collaboration with colleagues actually looks like in everyday work (Borko, 2004). In this study teacher learning is defined as a process of conscious and unconscious undertaken activities by teachers in collaboration with colleagues, which lead to change in cognition and/or behaviour at the individual and/or group level (Meirink, 2007). Following the literature, in this study we distinguish the context conditions that influence teacher learning in collaboration with colleagues; the organisation (structure, size of group) and topic and nature of collaboration. In a prior interview study conducted by the authors, teacher learning was studied within different collaborative settings in primary schools. Results of this study indicated that depending on the collaborative setting more or less different activities and learning outcomes were reported by teachers and school leaders. However, no direct link could be established between activities and outcomes. Thus, the first aim of the present study was to check if the reported activities and learning outcomes of that study could be confirmed with a larger sample of teachers and schools. The second aim was to investigate the link between activities and learning outcomes across different learning situations and schools. Accordingly, the following research questions were formulated: 1) What activities and learning outcomes do teachers perceive across different learning situations? 2) To what degree do the reported activities and learning outcomes vary between different learning situations? 3) What associations exist between reported activities and learning outcomes?

## Method

To answer the research questions a questionnaire was developed based on a literature review and results of the mentioned prior interview study. The constructed questionnaire consisted of three learning situations referring to a specific topic and nature of collaboration. One situation referred to the implementation of new lesson materials, another to the implementation of a new teaching method and the last to teachers sharing the responsibility for one class. Per situation the same set of questions were asked with respect to the activities undertaken (22 items) and perceived learning outcomes (9 items). Items in the questionnaire scales were constructed as concrete point scales for undertaken activities (never, weakly – yearly) and as a Likert-type five-point scale for learning outcomes (almost not – very much). Data was collected from 411 teachers, representing 49 primary schools in the Netherlands. Thus, across situations the total data set contained 1233 response sets. Gender distribution of the respondents was as follows: 24 % were male and 76 % female. Exploratory factor analyses suggested the existence of four relatively independent scales for activities - labelled exchange and assistance, discussion and joint work, intervision and collegial consultation -, and three scales for learning outcomes - labelled individual outcomes, group outcomes and individual outcomes referring to changes towards colleagues. These scales seemed to align well with categories such as distinguished by literature. Reliability analyses (Chronbach's alpha) showed that these scales were consistent (alphas ranged from .74 to .95). Among the activities and among the learning outcome scales correlations were moderate ( $r=.40$ ) suggesting that they were relatively independent. To answer the research questions we performed descriptive analysis (research question 1), variance analysis (research question 2), and regression analysis and correlations analysis (research question 3).

Since the data analyses are still in progress, at this moment only preliminary result can be reported. Variance analysis showed that the undertaken activities and learning outcomes differ between the three learning situations. Especially for the situation referring to the implementation of a new teaching method, teachers reported more learning outcomes than for the other situations. Moreover, large differences were found in activities and learning outcomes between schools. More precise and elaborate results will be discussed and presented in the poster.

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