

In teaching informed by Brousseau’s *theory of didactical situations in mathematics* (TDS) (Brousseau, 1997) the roles of the pupils and the teacher is rigorously regulated in different phases. After choosing the target knowledge and designing the *milieu* needed to develop this knowledge, the teacher devolves the planned task to the pupil. In the next phase, described as adidactical, the teacher is supposed to take a less active role until the pupils have done a planned activity and formulated and shared their strategies, before the knowledge is institutionalized. This didactical contract might be difficult to keep from what we know about the communication pattern in Norwegian mathematics classrooms. Skorpen (2006) finds that in general there tends to be little time for dialogues between pupils). Recent research on teacher-pupil-dialogues also shows that most pupil-utterances in mathematics are part of sequences where the teacher controls the process and the pupil responds to the basic tasks that look like mere control questions (Drageset, 2015). In many cases the teacher also reduces the complexity of the task to such an extent that the target knowledge disappears (the Topaze effect described by Brousseau in 1997). In early mathematics such a didactical contract might be even harder to keep as the pupils expectedly will be less self-regulated than older pupils. As a classroom researcher I have experienced how difficult it is to hold back when pupils ask for hints or feedback. I have also observed an experienced teacher’s, Pam’s, behaviour and how she managed to keep the pupils on task without depriving them of the ownership to the problem very often replying with a positive but also asking “okey?” To get further insight into the competence needed in the adidactical phases of TDS I ask: *What characterizes the communication of a skilled teacher in early mathematics when pupils are solving tasks?*

The data material for the study is audiotapes from Pam’s communication with pairs of second- and later third-graders during the adidactical phase in three lessons. In these lessons the pupils are working with the concept ‘a half’ (halving the numbers 7, 11 and 13), subtraction understood as difference and multiplication (a two-digit number multiplied with a single-digit number). To analyse the teacher’s utterances, I used a framework developed by Drageset (2015) for detailed studies of mathematical discourse on a turn-to-turn basis. In the analysis I found it necessary to add classroom management actions as an additional category to Drageset’s framework.

The findings of the deductive analysis are that Pam mostly scaffolds the pupils’ work through open progress initiatives and a variation of focusing actions, most often by asking for justification, by asking the pupils to recap what they have done, or by focusing their attention to something in the task. Redirecting actions and progressing actions like demonstrations or simplifications are rarely used. There are a number of closed progress details, rhetoric questions with a fixed answer. However, further analysis shows that such utterances are part of Pam’s modelling of how the pupils should compare their work. I also found that the need for classroom management actions seems to decrease as the pupils got familiar with teaching informed by TDS. Through further interpretation using Langer’s (1995) theoretical construct ‘envisionment-building’ as a lens I will explore how Pam’s communication support the pupils’ agency.