

Prevalent modes of teaching mathematics: Grade 7, Sweden

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Teachers' competence and teaching quality are important factors on student learning (Darling-Hammond, 2017; Hattie, 2009). To be able to link what teachers do in class and what students achieve, we collected video data from 36 classes (grade 7) from 15 schools in Sweden: around 150 hours of classroom observations and 702 students' test results. At this point in our ongoing study, we have just finished analysing our video data and during NORMA the *prevalent modes and features of teaching practices in mathematics at lower secondary school in Sweden* will be presented.

The video data was coded using an observation protocol (The Protocol for Language Arts Teaching Observation (Grossman, Loeb, Cohen, & Wyckoff, 2013)) to capture four domains (12 variables) of effective teaching: classroom climate, cognitive demand, instructional scaffolding and representations & use of content. Four certified rates coded the data in segments of 15 minutes, using a pre-described four point scale for all 12 variables. To ensure reliability, 20% of the segment were coded in pairs.

The analysis includes a descriptive statistics of overall frequencies, local averages per teacher in relation to the twelve variables. Our preliminary results show that mathematics teachers' explanations are clear and a common feature of teacher-student interaction. However, they hardly ever specify, in detail, the purpose for the lesson or classroom activities.

The project is part of a Nordic Network where similar data is collected and analysed from five Nordic countries (Norway, Finland, Iceland, Denmark and Sweden) in three subjects (mathematics, language arts and social sciences). This, eventually, enables comparisons between subjects within the Nordic Model (see Imsen et al. (2016)). Besides a presentation of the Swedish observation data, a comparison with Norwegian data will be presented at the conference.

Acknowledgment

This research is made possible by the Swedish Research Council (DNR 2017:03544).

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