Academic language use in science education in Kindergarten
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This study aims at gaining insight into the academic language use of teachers and their pupils in science education in Kindergarten. Using videotaped classroom observations of a video feedback coaching intervention study (Author Citation, 2012), teachers’ (intervention n = 5, controls n = 5) and pupils’ speech was transcribed and coded for turn-taking, lexical diversity, lexical sophistication and utterance length.

### Results

#### Proportion teacher utterances

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#### Lexical diversity (D)

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#### Lexical sophistication (MLR)

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#### Mean Length of Utterance in words (MLU-w)

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### Research questions

- What are the differences between the intervention and control group regarding the use of academic language?
- What are the similarities and differences over time between teachers regarding academic language characteristics?

### Method

#### Participants

Teachers: N = 10 (5 intervention, 5 control), mean age = 50 years, 3-5 pupils per teacher.

#### Intervention

Video Feedback Coaching for teachers (developed by Wetzels & Steenbeek, 2012). Key elements: motivation of teachers, questioning skills and use of empirical cycle.

#### Design

1. pre-measures
2. information meeting
3. intervention
4. post-measure

### Analyses

First ten minutes per lesson transcribed following the CHAT-conventions (MacWhinney, 2000). Linguistic analyses were performed using Computerized Language Analyses (CLAN) (MacWhinney, 2000):

#### Variables

- Mean length of turn in words (MLT-w)
- Lexical diversity (index D)
- Lexical sophistication (Measure of lexical richness (MLR) – Van Hout & Vermeer, 2007)
- Mean length of utterance in words (MLU-w).

### Conclusion

Results indicated changes in turn-taking and lexical sophistication for both teachers and pupils. There were few similarities in the development of the individual teachers, which reveals the idiosyncratic character of the data. In line with literature on the acquisition of academic language, these results suggest that a greater awareness of the importance of the teacher’s role in stimulating academic language is needed. Science and technology lessons are a good starting point to elicit academic language but should be an important explicit goal for teachers in science education.

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