Evaluation of primary school teachers' exemplar-based linguistic communication based on structured observation

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Summary

Introduction

Besides forming concepts and giving feedback, the exemplar-based linguistic communication is one of the effective ways to influence the learning process (Pianta & Hamre, 2009; Salminen, 2014). Teachers use speech not only to convey information but also to communicate, as well as to control and mediate cognitive actions (Mercer, 2013; Vygotski, 2014). The learning process is multi-modal i.e. the verbal interaction between a teacher and a pupil is supported by non-verbal communication, such as gestures and prosody (Mercer, 2013). Studies, conducted during the last decades, have shown that dialogue that directs thinking and facilitates discussion, the feedback that models studying, and the teacher's language use that is appropriate to the level of development of a pupil, have a positive effect on the development of students' speech comprehension, as well as academic achievement in general (see Gosse et al., 2014; Mashburn et al., 2008; Salminen, 2014). Teachers support the development of comprehensive learning, meta-cognition and self-reflection skills by the deliberate choice of questions in dialogues, by repeating and re-phrasing the pupils' answers as well as explaining the meaning of words and connecting them with previous knowledge (Nystrand et al., 2003; Pianta & Hamre, 2009).

There is a common consent among researchers that teachers should be able to analyse their own use of language and communication skills in the classroom environment. However, the potential of the exemplar-based linguistic communication is not sufficiently applied, and in teachers' training too little attention is paid to the methods to improve it (Lyle, 2008; Mercer & Dawes, 2014; Pentimonti & Justice, 2010). No studies have been carried out in Estonia to find out how teachers shape the discourse in a classroom

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by their use of language and non-verbal communication, and what influence it has on the development of their pupils.

The aim of this study was to evaluate the exemplar-based linguistic communication of Estonian primary school teachers in Estonian language lessons, and to ascertain what influence it had on their pupils' language proficiency. The following hypotheses were formulated for the research:

1. We assumed that teachers use different verbal communication means in different proportions (Mercer & Dawes, 2014; Salminen, 2014).
2. We supposed that Estonian teachers use a limited amount of conversation in their classroom and the questions to support conversation are random. Teachers pay little attention to the meanings of words, and do not use language to comment on their own, and pupils' actions.
3. We assumed that teachers with different linguistic communication profiles differ from each other also by the use of non-verbal communication means. We expected that the group of teachers who use a wider range of verbal communication means, use more actively different non-verbal communication means.
4. On the basis of previous studies, we assumed that pupils achieve better results under teachers who involve them more in the learning dialogue, and use different communication means in a flexible manner.

Method

The study evaluated teachers' exemplar-based linguistic communication used by 46 Estonian primary school teachers in the Estonian language lessons and analysed its influence on pupils' ($N = 611$) linguistic achievement in Grade 3. A measuring system for structured observation, the *Classroom Assessment Scoring System* (CLASS; Pianta et al., 2008), was used to evaluate the teachers' verbal communication. This measuring system allows the evaluation of the following verbal communication means on five scales: 1) *Conversational frequency*, 2) *The choice of questions*, 3) *Repeating and completing* pupils answers, 4) *Commenting actions*, 5) *The level of complexity in the use of language*.

The native language proficiency of pupils was measured by a *Native language test* in Grade 3. The test measured students' text comprehension and vocabulary skills, basic knowledge of spelling and grammar rules, knowledge of word classes and a basic knowledge of syntax. The general score of the Estonian language test was calculated on the basis of the right answers given by pupils. Both variable- and person-oriented approaches to the data

analyses were used (Bergman et al., 2003; Cohen et al., 2007). The non-verbal modalities of teachers were analysed by the method of multi-modal video analysis (Goodwin, 2000; Mondada, 2006).

Major results and discussion

In line with the assumption that teachers do not comment on their own, or pupils' actions in a classroom, it appeared that teachers expressed their thoughts audibly, or added explanatory comments to their own or pupils' actions substantially less than used by other options of verbal communication means. The conversational frequency and the level of complexity of language use by primary school teachers was rated as average i.e. the teachers talked regularly to pupils but the conversations were typically limited to one or two turn-taking. The initiative of pupils was not always taken into account (Pianta et al., 2008). As to the choice of questions, the closed-ended ones dominated and they were mainly used to check on how much the pupils knew (cf. Mercer & Dawes, 2014). However, teachers explained the meaning of new words to pupils relatively randomly. Howes et al. (2008) have argued that the ability of a teacher to formulate concepts is the most important pre-condition for academic achievement, while giving feedback does not seem to have the same influence.

For analysing teachers' habitual classroom communication styles, four communication profile groups were identified. The teachers belonging to the group of *Average variety* were characterised by the steadily uniform use of all components. The teachers with high level language use (*High variety*) were characterised by a flexible and varied use of different communication means that helps pupils learn comprehension, awareness of their own thinking process, and learn to argue (vt Pianta et al., 2008; Salminen, 2014). In the classes of these teachers, dialogue was often used and encouraged by regularly asking open ended questions. A quarter of teachers were very lowly rated in all components (*Low variety*). They were characterised by asking closed ended questions that presumed short answers, and were asked mainly to check the pupils' knowledge. These teachers did not comment on their actions and were not aware of the influence of their language use as a means of support to the learning process. Earlier studies on teacher–pupil interaction have revealed that teachers do not support pupils evenly in all observed areas (see Howes et al., 2008). It can be assumed that due to the strong connections between verbal communication means, the level of teachers within the profiles was quite homogeneous. Besides, the

Mixed profile (~16% of teachers) was detected that it consisted of teachers whose verbal communication was either average or at a higher level in different components. These teachers stood out because of the lower level choice of questions and linguistic complexity of their language use, but as to other components they were given the highest ratings.

The analysis of non-verbal communication of the teachers belonging to the above-mentioned profile groups revealed that the non-verbal components carried out by teachers of four profile groups varied by the intensity of certain type of gestures and prosodic means used by teachers. The study confirmed the assumption that the teachers who used verbal communication means more diversely and in a more flexible manner were also more active in non-verbal communication.

Then we analysed how much the pupils of teachers with different communication profiles differ in their level of the Estonian language proficiency. The number of pupils with high language proficiency was bigger in the groups of teachers who did not use different communicative components that frequently (*Low variety*). Teachers with this profile also had fewer pupils getting lower results in the Estonian language test than expected. It may be because children's linguistic capabilities do not depend only on the action of teachers but also in the genetics, environment and other factors (Huttenlocher et al., 2002; Vygotski, 2014). Opposite results appeared in the teachers' profile group *High variety*, which included more children with low language proficiency than expected. The high level language use of a teacher does not compensate for the inadequacy of teaching material and curriculum with the level of weak pupils. Although, it has been found that teacher's activities that support the learning process influence pupils' development more directly than, for example, the organisation of studies (Mashburn et al., 2008; Pianta et al., 2008). Thus, the teacher's high level of communication skills does not guarantee higher study results in native language proficiency (Salminen, 2014).

It also appeared that within the group where teachers varied the communication means at the average or higher level (*Mixed profile*), the number of pupils that passed the native language test very well, was smaller than expected. It should be remembered that a teacher's communication style is only one of the ways to support the learning process (Pianta et al., 2008). It is possible that the method a teacher uses to organise learning activities and gives instructions to pupils, may be more important than the teachers' exemplar-based linguistic communication (Howes et al., 2008; Salminen, 2014).

Acknowledgements