

Teachers' Practical Knowledge in Novice and Experienced Teachers' Comments on Classroom Interactions

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SUMMARY

In the 1960s, research on teaching mostly focused on the behaviour of teachers and on how this behaviour related to outcomes in student learning. From the 1970s, it became clear that the results of studies on teacher behaviour did not lead to a better understanding of what actually goes on in classrooms. In addition, these results did not seem to improve teaching practice. Schön (1983) described this as a gap between the research done and the actions of practitioners. In the following years research on teaching changed direction and increasingly focused on the cognitions that underlie classroom practice rather than on teacher behaviour (Calderhead, 1996; Carter, 1990; Meijer, 1999; Meijer, Verloop, & Beijaard, 1999; Shulman, 1986). This “cognitive revolution”, which came from the field of psychology, influenced pedagogy in several ways: the topics of the studies now focused on teachers’ planning, their interactive thoughts and their decision-making. New instruments and procedures were developed, such as narrative techniques and stimulated recall techniques (Meijer, 1999). More than four decades after this cognitive change in research on teaching, teacher knowledge and cognitions are still topical issues.

The concept of a teachers’ practical knowledge has been a subject of interest in educational sciences for the last two decades (Calderhead, 1996; Fenstermacher, 1994; Meijer et al., 1999, 2002). Fenstermacher was one of the first scholars to investigate teaching within the framework of the practical reasoning of teachers. He defined personal practical knowledge as the knowledge that teachers themselves generated as a result of their experiences and reflections on these experiences (Fenstermacher, 1994). One of the best-known conceptualisations of what teachers know is written by Shulman (1986), who pointed out the complex nature of expertise in teaching. Meijer (1999) and Meijer et al. (1999) described teachers’ practical knowledge as the cognitions that underlie teacher actions. They considered teachers’

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practical knowledge to consist of knowledge and beliefs on the one hand, and interactive cognitions on the other. Teachers' interactive cognitions is a term used in the context of the teaching situation, and which focuses on the cognitions teachers have while teaching. The knowledge and beliefs of teachers are stored in their long-term memory, and are defined as the frame of reference through which practice is perceived. Interactive cognitions are related to the actual behaviour of teachers and short-term memory – these are the thoughts that occur when teaching (Schepens, Aelterman, & van Keer, 2007).

The current study is based on material from research carried out in Estonian schools with the cooperation of 20 teachers (18 female and 2 male; ten experienced teachers and ten novice teachers) in the 2010/2011 and 2011/2012 academic years. The study aims to analyse teachers' practical knowledge in comments about classroom interactions by novice and experienced teachers. The concept of teachers' practical knowledge was used as a framework for analysing the video recordings and stimulated recall interviews collected for the study. Research question: How do novice and experienced teachers differ in terms of their practical knowledge in comments on classroom interactions?

We videotaped one lesson by each teacher, and 20 interviews were conducted after the videotaped lessons using the stimulated recall method. The videotape is used to aid a teacher's recall of his or her interactive thoughts at the time of the lesson (Calderhead, 1981). In a stimulated recall method for interviewing, teachers explained their interactive thinking while watching a videotape of a lesson they have just given. We stopped the videotape every time the teachers recalled what they were thinking or what was on their minds and encouraged them to say everything they could remember thinking at the time. All interviewees retained anonymity. The aim (according to Meijer's methodology) was to conduct the stimulated recall interview right after the lesson. Sometimes this was not possible because, for example, the teacher was scheduled to teach other lessons. During the watching, we stopped the tape whenever the teacher started to make comments. An audio-recording was made of the teachers' comments, and this recording was then transcribed.

Based on research by Meijer et al. (1999), we analysed the results in the light of ten interactive cognitions (thoughts about the particular class, individual students, students in general, student learning and understanding, subject matter, curriculum, goals, instructional techniques, teacher – student interaction, process regulation) and three types of teachers' practical knowledge (subject matter knowledge, student knowledge and knowledge of student learning and understanding). In this article the content of each

category of teachers' interactive cognitions is described and illustrated using fragments from the stimulated recall interviews. The teachers' interactive cognitions included all three types of practical knowledge. The results showed that practical knowledge in the comments of experienced teachers is more integrated, viewing teaching as developing student potential (the third type of practical knowledge with a focus on student learning and understanding). The practical knowledge of experienced teachers was more complete, while novice teachers focus systematically on material. Previous studies point to comparative results (Krull, Oras, & Sisask, 2007; Sato, Akita, & Iwakawa, 1993; Schepens et al., 2007). Although novice teachers are familiar with teaching theories, they focus on teaching their own subject (the first type of practical knowledge with a focus on subject matter).

This study does not intend to generalise its research findings because it was carried out in a specific context with a relatively small sample of teachers. Besides, the teachers participated in this study on a voluntary basis. Future research not only needs to focus on the use of the stimulated recall interview as a tool to support professional development among teachers, but also on promoting change in teachers' conceptions of reflecting upon and assessing their own work.

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