

Conceptualising a framework for the study of students development of teacher noticing when videotaped teaching is used in teacher education

Docent, Ph.d. Stefan Graf & Assistant Lecturer, Ph.d. Hanne Fie Rasmussen

UCL University College

Abstract

Compared with the international state of the art on the use of videotaped teaching in teacher education, research in Denmark is limited to the use of videos in relation to field practice and there is a lack of knowledge, when it comes to connections between teacher students' development of competences in regards to teacher noticing and the use of videotaped teaching in teacher education. On the backdrop of our studies of how videos support teacher students in becoming teachers, we investigated which concepts are relevant to include in a theoretical framework that makes it possible to observe how teacher noticing competences come into being. A theoretical framework is proposed and tested on empirical data from a longitudinal developmental and research project. Finally, the test is critically examined to identify which challenges that can be linked to the framework. Preliminary findings suggest that the development of teacher noticing competences can be observed as a complicated conversation (Pinar, 2012) that mobilises teacher students to engage in the teacher profession. The study is relevant to QUINT theme 4, as it focuses on the development of video-based teacher training.

Introduction

Compared with the international state of the art on the use of videotaped teaching in teacher education (Gaudin & Chaliès 2015), research in Denmark is limited to the use of videos in relation to field practice (Nielsen 2015) and there is a lack of knowledge, when it comes to connections between teacher students' development of competences and the use of videotaped teaching in teacher education. Internationally, the use of videotaped teaching as a mediator for authentic observation and reasoning in campus coursework has shown a range of advantages for teacher students (Blomberg et al. 2014) and University College Lillebælt has launched a longitudinal research and development project where the Learning to notice framework (van Es & Sherin 2002) is introduced as a pedagogical approach throughout the teacher education program in both general- and subject didactic courses. Since teacher education programs differ from country to country, the task is to re-design international inspirations to the national context. The developmental work is done in cooperation between researchers and teacher educators and serves as a promoter for research that revolves around the question of how the teacher education program can support student teachers in developing what with an overarching term can be described as teacher noticing competences (Dindyal et al. 2021). That is knowledge and skills to notice, reason, make decisions and act in the course of currere that includes processes of regression and progression as well as analysis and synthesis (Pinar 2012) and relates to both the preparation, paration and postparation of teaching. This is seen in the context of teacher students' beliefs, personal and professional experiences and forms of knowledge and observed as the students process of becoming teachers.

The research question pursued in this paper is:

Which concepts are relevant to include in a theoretical framework that aims to identify how teacher noticing competences come into being? And which challenges linked to such a framework can be identified?

The study is relevant to QUINT theme 4, as it focuses on the development of video-based teacher training.

Theoretical background

In this paper, the concept of teacher noticing (Dindyal et al., 2021) is applied as a lens to look into theories on teaching and teacher education. The discipline of noticing can be described as an intentional act that is a part of any inquiry (Mason, 2002). While noticing is something we do all the time, Mason purports according to Dindyal et al. (2021) that, as professionals, we are sensitised to notice certain things in professional situations (s. 1.) and adds that “noticing something significant retrospectively, after the event, is how most sensitivities begin” (Mason, 2002, p. 75). Further, Mason (2002) argues that teacher noticing mostly happens retrospective. Dietiker et al. (2018), have proposed the idea of *curricular noticing* and Choy (2016) the notion of *productive noticing*. In both cases, teacher noticing is connected to the ability to identify and align various aspects of teaching. This is challenging as it becomes necessary for teacher students to connect knowledge of qualities in teaching with personal perceptions of what is the best way to act in a concrete educational situation, that is to become educational wise (Biesta, 2011).

Comprehensions of qualitative teaching as either good, successful, effective or *bildung* oriented (Fenstermacher & Richardson, 2005; Grossman et al. 2013; Qvortrup, 2021; Wang, Lin, Spaldng, Klecka & Odell, 2011) are included in this study. With reference to Fenstermacher and Richardson (2005) and Wang, Lin, Spaldng, Klecka and Odell (2011), Qvortrup (2021) distinguishes between good or successful teaching, where good teaching is understood as teaching that maintains standards approved by the teacher profession, while successful teaching is characterised by resulting in the intended learning. Research on teaching effectiveness (Grossman et al. 2013), suggests that teacher education can be improved by the use of systematic evaluation through observation systems. In the light of *bildung*-oriented perceptions of qualities in teaching, it is relevant to design teacher education that focuses on both the formation of teacher students as whole persons and on educational wisdom as an aim. Here, educational judgement can be positioned as a central element, as learning from the virtuosity of other teachers is suggested as desirable (Biesta 2011). Meanwhile, Pinar (2012) has suggested to comprehend teachers' curriculum work as a *complicated conversation* which preferably can consist of both hindsight and visions of the future and an analytical as well as a synthetical processing of the present. Further Illum Hansen (2019) reminds us that when it comes to teaching quality it is also always a decision that is made upon subjective experience and a question of what qualities politicians, schools, parents, students or teachers value when it comes to teaching.

Methods

Based on a delimited phenomenological review (Randolph, 2009) of literature on respectively the concept of teacher noticing and video based teacher education (N= 38 articles), we study the

literature by perspectivating them to litterature on respectively bildung centret teaching (Biesta, 2018) effective teaching (Grossman et al., 2013) and good or successful teaching (Fenstermacher & Richardson, 2005 and Wang, Lin, Spaldng, Klecka & Odell, 2011). Our analytical approach involves what Bryman (2016), and Schwartz-Shea and Dvora (2012) describe as an abductive strategy, where identified 'disturbances' in the theories on teaching, are used to suggest a framework for identifying if and how teacher noticing competences emerge, when teacher students are introduced to videotaped teaching as a course activity. The framework is then tested upon data - field notes and transcriptions of student group dialogues (N=12) - from the first learning to notice course activities.

Preliminary findings and theoretical and educational significance

Preliminary findings suggest that teacher noticing competences emerge continuously throughout teacher education, but that the learning to notice activities functions as a catalytic converter that promotes and enhances the development. We suggest that the development of teacher noticing competences can be observed as a complicated conversation (Pinar, 2012) that mobilises teacher students to engage in the teacher profession.

References

- Biesta, G. (2011). *God uddannelse i målingens tidsalder*. Forlaget Klim.
- Biesta, G. (2018). *Undervisningens genopdagelse*. Aarhus: Klim.
- Blomberg, G., et al. (2014). Understanding video as a tool for teacher education: investigating instructional strategies to promote reflection. *Instructional Science*, 42(3), 443-463.
- Bryman, A. (2016). *Social research methods*. Oxford university press.
- Choy, B. H. (2016). *Snapshots of mathematics teacher noticing during task design*. *Mathematics Education Research Journal*, 28(3), 421-440.
- Dietiker, L., Males, L. M., Amador, J. M., & Earnest, D. (2018). *Curricular noticing: A framework to describe teachers' interactions with curriculum materials*. *Journal for Research in Mathematics Education*, 49(5), 521-532.
- Dindyal, J., Schack, E. O., Choy, B. H., & Sherin, M. G. (2021). Exploring the terrains of mathematics teacher noticing. *ZDM – Mathematics Education*, 53(1), 1-16.
- Fenstermacher, G., & Richardson, V. (2005). On making determinations of quality in teaching. *Teachers college record*, 107(1), 186-213.
- Gaudin, C., & Chaliès, S. (2015). Video viewing in teacher education and professional development: A literature review. *Educational Research Review*, 16, 41-67.
- Grossman, P., et al. (2013). Measure for Measure: The relationship between measures of instructional practice in middle school English Language Arts and teachers' value-added scores. *American Journal of Educational Research*, 119(3), 445-470.

Hansen, T. I. (2019). *The quality of quality: Toward a semiotics of quality in learning materials*. Learning Tech, (8), 40-61.

Mason, J. (2002). *Researching your own practice: The discipline of noticing*. Routledge.

Nielsen, B. L. (2015). Pre-service teachers' meaning-making when collaboratively analysing video from school practice for the bachelor project at college. *European Journal of Teacher Education*, 38(3), 341-357.

Pinar, W. F. (2012). *What is curriculum theory?*. Routledge.

Qvortrup, A. (2021). Elevcentrerede og undersøgelsesbaserede undervisningsformer som god og succesfuld undervisning. *Kvan-et tidsskrift for læreruddannelsen og folkeskolen*, 119.

Randolph, J. (2009). A guide to writing the dissertation literature review. *Practical Assessment, Research, and Evaluation*, 14(1), 13.

Schwartz-Shea, P., & Yanow, D. (2012). *Interpretive research design: Concepts and processes*. Routledge.

van Es, E. A., & Sherin, M. G. (2008). Mathematics teachers' "learning to notice" in the context of a video club. *Teaching and Teacher Education*, 24(2), 244-276

van Es, E., & Sherin, M. (2002). Learning to Notice: Scaffolding New Teachers' Interpretations of Classroom Interactions. *Journal of Technology and Teacher Education*, 10.

Wang, J., Lin, E., Spalding, E., Klecka, C. L., & Odell, S. J. (2011). Quality teaching and teacher education: A kaleidoscope of notions. *Journal of teacher education*, 62(4), 331-338.