QUINT proposal symposium for the conference in Oslo, 2024

Abstract for the entire symposium

Symposium title:

Using classroom videos to improve teaching quality and professional learning in teacher education.

Discussant:
Pam Grossman - Penn Graduate School of Education, National Academy of Education

Presenting authors:

Birna María B. Svanbjörnsdóttir, Sólveig Zophoníasdóttir - University of Akureyri, Faculty of Education, Iceland

Stefan Ting Graf, Hanne Fie Rasmussen - UCL University College, Denmark

Eva Dam-Christensen, Hildegunn Juulsgaard Johannesen, Nadine Malich-Bohlig, Lars Petersen - UC SYD, Denmark

Abstract

In this proposed symposium we approach teaching quality and professional learning from three different studies with the same overall focus on teacher candidates' observation and analysis of their own teaching.

The data presented is collected from studies from QUINT researchers and associates in Denmark and Iceland, all using classroom video and PLATO protocol for coming close to the classroom context for creating opportunity for teacher candidates to observe, analyze and discuss teaching.

With the aim of evaluating and to understand furthermore, the core features of classroom teaching and learning in the diverse situations, the studies also use different methods, such as discourse analyses, coding frames, thematic analysis, and semantic waves.

The background for this symposium is built on that it is widely accepted that students' learning is affected by multiple factors, such as student level, classroom level and school and system level. However, recent reviews have highlighted that teaching quality at the classroom level is more important for student learning than several other factors. On that basis, nations are advised to focus directly on teacher candidates' professional learning and development to improve the quality of classroom practice and in doing so the overall quality of the education system. It has also been argued that a coherence between theory and practice in teacher education is a key factor for the quality of teaching. To link coursework and fieldwork, theory and practice, a close collaboration between teacher education and schools and between researchers and practitioners is needed. In this context, authentic artifacts of practice, such as videos, are beneficial. Classroom video-data is a powerful tool for observing the quality of teaching. It allows the analysis of instructional practices from multiple perspectives and viewpoints, and stimulates discussions about pedagogical choices within classrooms, thereby deepening both educators' and teacher candidates' understanding of the process. Protocol for Language Arts Teaching Observation (PLATO), a standardized observation instrument for quality teaching, has been developed for analyzing such data.

Paper 1 (Svanbjörnsdóttir and Zophoníasdóttir) presents a study investigating the use of classroom videos in the field work of teacher candidates to improve the quality of their teaching to have

meaningful discussions about it and enrich their professional learning.

Paper 2 (Graf and Rasmussen) present results from a two-year development and research project Learning To Notice Quality (LTNQ) using authentic classroom video in the Danish teacher education.

Paper 3 (Dam-Christensen, Johannesen, Malich-Bohlig and Petersen) focuses on how teacher candidates use academic language and concepts in their teaching and conversations with students in Danish, natural sciences, social studies, and history.

Together, the three papers summarize dilemmas and promises in improving teaching quality and professional learning and are relevant for the QUINT ambition as they represent the aim of Theme 4 in QUINT, to support teacher candidates' professional learning and improve teacher education.

Extended abstract/summary
The purpose of this symposium is to present and link three different approaches to using classroom videos as an avenue of improving the quality of teaching and students' learning, by supporting professional learning and understanding among practicing teacher candidates. All three presentations focus on preparing and supporting teaching candidates' ability to enact responsive teaching and scaffold students' learning.

Quality of classroom practice strongly influences student engagement, learning experiences, perceptions of teaching and learning outcomes. Therefore, investing in successful professional learning (PL) activities for teacher candidates is essential for the quality of education.

In many cases, PL efforts for teachers have failed to positively affect classroom practice and student learning as such efforts have underestimated the complexity of teaching (Darling-Hammond et al., 2017; Forde, & McMahon, 2019). Changes are needed when planning PL for teachers, that include shifting the focus from a simple delivery of information to a collaborative inquiry into practice, based on principles of self-regulated learning. Boylan and Demack (2018) claim that effective PL activities involve teachers' agency, adaptiveness to local context and teachers' needs, sustainability over time and collaborative inquiry. This type of PL process is sustainable as it leads to long lasting improvements in practice and enhances schools' capacity for continuous learning. Furthermore, teacher's agency and empowerment are essential for successful professional learning (Boylan & Demack; Sigþórsson, 2020; Tengberg & Wejrum, 2021).

Teacher education has been criticized for being fragmented and lacking coherence between courses taught in teacher education programs and the teachers' actual classroom practices in schools (Smith et al., 2013). When examining teacher candidates' perspectives on the coherence and focus in their teacher education programs, they report on frequent opportunities to work on teaching plans in their studies and reflect on their own teaching in field practice and courses, but less on opportunities to see and analyze samples from real lessons, such as students' assignments and classroom video-data, that can make a difference in preparing them for the teaching profession (Jenset et al., 2018; Gísladóttir, et al., 2023; Penuel et al., 2020).

Research on teacher education indicates that a key feature in teacher education is to provide teacher candidates with the opportunities to learn and practice things that are rooted in the actual teaching practice and the context of real teaching situations. Teacher candidates that are provided with such opportunities are more likely to be effective teachers (Boyd et al, 2016; Hammernes & Klette, 2015). To link coursework and fieldwork, theory and practice, a close collaboration between

teacher education and schools and between researchers and practitioners is needed. In this context, authentic artifacts of practice, such as videos, are beneficial (Kavanagh et al., 2022).

Some studies have seen promising results in the use of video-data in teacher professional development and teacher education (Borko et al., 2011: Luna et al., 2017). Classroom video-data is a powerful tool for observing quality of teaching. They allow for the analysis of instructional practices from multiple perspectives and viewpoints (e.g. teacher candidates, teachers, students, and researchers), and stimulate discussions about pedagogical choices within classrooms, thereby deepening both educators' and teacher candidates' understanding of the process. It also facilitates a grounded approach to dialogues between different theoretical positions and paradigms in educational research, that other observation systems do not necessarily allow for, because of a limited overview of classroom activities (Klette at al., 2017).

The three studies in the symposium, from Denmark and Iceland, are all connected to the Nordic Centre of Excellence: Quality in Nordic Teaching (QUINT) https://www.uv.uio.no/quint/english/project, and build on classroom videos, grounded in Theme 4 (Developing video-based teacher training) in QUINT.

They also base their analyses on definitions of quality teaching practices from Protocol for Language Arts Teaching Observations Protocol (PLATO) (Grossman, 2019). The PLATO protocol is well-suited for use with video data. It is adaptable to different subjects and covers a wide range of teacher and student activities in the classroom (Bell et al., 2019). Furthermore, the concept of Learning To Notice Quality (LTNQ) is used in Paper 2 and 3 to enhance teacher candidates' focus on their own teaching situations, while Paper 1 uses students' reports from practical field work.

Overall results of all three papers show that both video observations and PLATO are appreciated by the teacher candidates as a useful method for discussion of teaching quality and focusing on specific aspects, e.g. use of academic language.

The papers summarize challenges and promises in improving teaching quality and professional learning and are relevant for the QUINT ambition as they represent the aim of Theme 4 in QUINT, to support teachers professional learning and improve teacher education. They underline how classroom videos, applying various theoretical approaches, can be used to support teacher candidates.

Paper 1

Authors: Birna María B. Svanbjörnsdóttir, phd. and Sólveig Zophoníasdóttir, phd. student, University of Akureyri, Faculty of Education, Iceland.

Title of presentation: Video-recordings in the field work of teacher candidates

Teacher education programs have been criticized for their lack of coherence between theory and practice. Critics argue for substantial practice, experience, and opportunities for reflection, to promote their professional growth both in faculties and field work in schools. The teacher candidates' mentors who represent the schools have a crucial role in linking schools with universities, thus significantly making an impact on professional learning, as shown in Icelandic studies.

This paper presents a study investigating the use of classroom videos in the field work of teacher candidates to improve the quality of their teaching. The goal of the study was to enhance the coherence between theoretical knowledge and practice and enable teacher candidates to envision their praxis as future teachers. Furthermore, the aim was to make a platform for meaningful

discussions between the candidates and their mentors in schools, and to enrich their professional development and learning with an emphasis on utilizing classroom videos.

The study builds on 34 reports on a video recording assignment from two groups of teacher candidates in field work. The researchers (faculty teachers) ran a workshop for the teacher candidates and their in-school mentors, on selected PLATO elements; then the candidates, video-recorded a lesson and reflected on it with their mentors and finally wrote a report on it. The reports were analysed with a thematic approach. The thematic analysis generated two main themes a) more consciousness of what happened in the lesson, b) video recordings as professional learning tool in field work.

The preliminary findings indicated opportunities for change, and the act of recording was seen as an effective method for reflection and enhancement of teachings skills. The candidates appreciated the opportunity to review recordings with their mentors and engaging in discussions anchored in PLATO's criteria. They recognized the potential of using video recordings for professional development and the mentors saw rich opportunities to use video recordings for improvement of their own practice.

The paper contributes to the overall purpose of the QUINT project. The study was built on the QUINT ambition (theme 4) to improve the coherence between theory and practice in teacher education by using classroom videos. It has a value for all stakeholders as it underscores the value of professional discussion to enhance the quality of practice.

Paper 2

Authors: Stefan Ting Graf, phd. and Hanne Fie Rasmussen, phd., UCL University College, Denmark.

Title: Teacher candidates' noticing teaching quality through video-enhanced campus teaching

In this paper we present results from a two-year development and research project Learning To Notice Quality (LTNQ) using authentic classroom video (Blomberg et al., 2014) in the Danish teacher education.

There is a respectable body of studies (Dindyal et al., 2021), but in Denmark, the teacher noticing approach (König et al., 2022) is still in its infancy. On one hand, the purpose of our study is to integrate teacher noticing into the regular campus teaching (Amador et al., 2021) and, besides mathematics, include the L1- (Danish) and L2-program (English). On the other hand, the purpose was to challenge the current conception of teaching quality in Danish teacher education by introducing criteria from PLATO (Grossman, 2015).

The five developed LTNQ-course designs are inspired by Seidel & Stürmer (2014) applying the phases of describe, explain and predict, while PLATO-elements are introduced in LTNQ course 2, 3 and 5.

Our research question is: *What characterizes the development of teacher candidates' noticing of teaching quality when exposed to video-enhanced course designs in the first two years of Danish teacher education?*

Our data consist of 30 teacher candidates' group discussions during the LTNQ course 1 (quasi baseline) and the final LTNQ course 5 (quasi endline) in the three subjects. The data is coded with a coding framework (Auerback & Silverstein, 2003) partly inspired by van Es (2011) and partly by PLATO-elements. In a first step, we counted the frequencies of utterances that can be connected to

PLATO-elements (Jacobs, 2017). In a second step, we analysed by functional weight and thematic condensing (Braun & Clarke, 2019) each group's discussion of videoclips in context to identify the teacher candidates' language of quality in teaching related to what is meant by the PLATO-elements.

Preliminary results show that novice teacher candidates, (Stahnke & Blömeke, 2021) with little professional knowledge, discuss highly relevant teaching situations, show a good intuition of what is meant by PLATO-elements, but mostly lack a differentiating and connecting professional language (Rotem & Ayalon, 2023). Classroom discourse and Representation of content are intensively discussed, Purpose, Connection to prior knowledge, Feedback, Behavioural and Time Management are discussed moderately, while Use of strategies and Modelling are almost ignored. Two years later, the teacher candidates not only discuss in general more quality criteria, and they discuss them more intensively also including Use of strategies and Modelling. Further, it appears that the teacher candidates stick to the professional language based on what theory and concepts that are taught in Danish teacher education, while the PLATO-language is still conceived as an add-on. Finally, we discuss in which ways the two languages used by teacher candidates are compatible, and what is the surplus of the Danish didactics languages on one side, and the PLATO-language on the other side.

Paper 3

Authors: Eva Dam-Christensen, phd., Hildegunn Juulsgaard Johannesen, phd., Nadine Malich-Bohlig, phd., Lars Petersen, phd., UC SYD, Denmark.

Title of presentation: Interdisciplinary Collaboration in Videographic Teaching Observation (InCoViTO)

Research indicates that the use of scaffolded reflection through video recordings of teaching situations can develop teacher candidates' interpretation and professional understanding of the subject they teach in relation to the students' learning prerequisites (Blomberg, Stürmer & Seidel, 2011; Borko, Liston & Whitcomb, 2008; Santagata & Antelici, 2010). Several QUINT studies (Blikstad-Balas, Klette & Tengberg, 2019) have focused on how teacher candidates use video recording in teacher education to qualify their own studies.

This paper presents preliminary findings of analyzing video recordings and audio recordings from school and teacher education classes, looking for the use of academic language in four subjects.

The purpose of this study is to explore teacher candidates' understanding of subject academic language and concepts in their teaching practice and their reflective group dialogues when analyzing video. Furthermore, the question is if this focus contributes positively to academic awareness and quality of the teacher candidates' professional understanding of language and concepts in the subjects Danish (L1), natural sciences, social studies, and history.

Our data consist of 16 video recordings of teacher candidates' teaching in each of the four subjects in upper primary and lower secondary school; furthermore, 16 audio recordings taken in teacher education classes of teacher candidates analyzing their own teaching in the video recordings; finally, posters produced by the teacher candidates showing their results and reflections.

The analytic framework utilizes Sociocultural Discourse Analysis (Mercer, 2004) and Semantic Waves (Maton, 2020) for analyzing field observations of teacher candidates' own video observations and group dialogues. The framework scaffolds collaborative meta dialogues, through a Learning To Notice frame (Es &Sherin, 2002), by using Jacobsen & Mulvad`s theory of academic language (2022)

and several PLATO elements (Grossmann, 2015) as mediating tools. Findings show that this framework qualifies the four subject academic languages.

The study opens for a larger complexity for the students´ challenge of translating theories and academic language into actual teaching practice. Our results also indicate that teacher candidates' video analysis and collaborative reflections of their own teaching practice lead to increased awareness in relation to developing a reflected use of academic language in their teaching practice.

The study provides important insights to the QUINT project´s theme four; development of video-based teacher training - in relation to subject specific academic linguistic and conceptual awareness in a teaching context.

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