

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

QUINT proposal symposium for conference in Helsinki, June 2023

Abstract for the entire symposium

Symposium title: Using classroom videos to improve teaching quality and professional learning in teacher practice and teacher education.

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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 teachers' 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. In order to link coursework and fieldwork, theory and practice, a close collaboration between universities and schools and between practitioners and researchers are needed. In this context (see above), authentic artifacts of practice, such as videos, are beneficial. Classroom video-data is a powerful tool for observing quality of teaching. It allows for the analysis of instructional practices from multiple perspectives and viewpoints, and stimulates discussions about pedagogical choices within classrooms, thereby deepening both educators' and teachers' 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.

In this proposed symposium we approach teaching quality and professional learning from two different but closely related angles with the aim of pinpointing their interconnection. That is, teacher candidates' fieldwork experiences and experienced teachers professional learning. The data draws from studies from QUINT researchers and associate in Norway, Denmark, and Iceland, all using classroom video and PLATO protocol for coming close to the classroom context for creating opportunity to observe, analyze and discuss teaching. With the aim of evaluating and to understand further, the core features of classroom teaching and learning in the diverse situations, the studies also use methods as, interviews, discourse analyses, peer to peer dialogues, reflective logs and evaluation reports.

Paper 1 (Brataas) reports on teacher candidate and mentor teacher perspectives on a video innovation in teacher education designed to systematically support teacher candidates' abilities to scaffolding student literacy learning in language arts.

Paper 2 (Malich-Bohlig and colleagues) 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.

Paper 3 (Svanbjörnsdóttir, Sigurðardóttir, and colleagues) discuss researcher-practitioner collaboration and the account of professional learning courses, involving groups of Icelandic lower secondary teachers in Iceland.

Together, the three paper 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 3 and 4 in QUINT, to support teachers professional learning and improve teacher education.

Using classroom videos to improve teaching quality and professional learning in teacher practice and 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 teachers and teacher candidates. Two of the presentations focus on preparing and supporting teacher candidates' ability to enact responsive teaching and scaffold students' learning, while the third addresses collaborative *researcher-practitioner* action research for professional learning and development among practicing teachers.

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 teachers 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 involves 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 & Wejrums, 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). In order to link coursework and fieldwork, theory and practice, a close collaboration between universities and schools and between practitioners and researchers are needed. In this context (see above), authentic artifacts of practice, such as videos, are beneficial (Kavanagh et al., 2022).

Action research is strongly linked with professional learning, reflection, professionalism, and the development of professional learning communities (Johannesson, 2020; Kemmis, 2010). The primary aim of such research is to create links between research and practice to develop a process in the hands of practitioners, where they undertake an inquiry and critical reflection of their own practice, plan actions for change, and investigate the progress and success of their actions as they unfold.

Action research can be carried out by experienced individuals or groups of colleagues but normally – at least while they are introduced to a school community or used in teacher education – they involve close collaboration between practitioners and outside consultants, researchers or teacher educators (Johannesson, 2020; Svanbjörnsdóttir, 2019). In such cases action research becomes a collaborative enterprise that has the potential to empower teachers and give them the agency to engage actively

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

in professional learning, research and development of their own teaching and the learning of their students.

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. teachers, students and researchers), and stimulate discussions about pedagogical choices within classrooms, thereby deepening both educators' and teachers' understanding of the process. It also facilitates a grounded approach to dialogues between different theoretical positions and paradigms in educational research, that other observations systems do not necessarily allow for, because of a limited overview of classroom activities (Klette et al., 2017).

The three studies in the symposium, from Norway, 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 3 (Videos to support teachers' professional learning) and 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).

For further and more specific analyses, interviews are used as a method in paper 1. In paper 2, social cultural discourse analysis is used as a framework along with peer-to-peer dialogues and interviews. In paper 3, written reflective accounts and evaluation reports were used.

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 3 and 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 different groups, such as teacher candidates and practicing teachers.

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

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

Paper 1

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Using Video to Foreground Core Practices for Instructional Scaffolding during Fieldwork: Teacher candidate and mentor teacher perspectives

Background and aims

Practice-based pedagogies (e.g., Grossman et al., 2009; Kavanagh et al., 2020) have reached the forefront of discussions about preparing and supporting teacher candidates to enact responsive teaching. In this context, many researchers position video as a powerful tool in offering authentic representations of high-quality teaching practices that can be analyzed, decomposed and approximated, both in the context of coursework and fieldwork. While there is a burgeoning body of research on teacher candidates' opportunities to learn from practice-based pedagogies in coursework (e.g., Gotwalt, 2023; Kavanagh et al., 2020), research on such opportunities in fieldwork is still scarce. This paper contributes, in that respect, by reporting on teacher candidates' and mentor teachers' perspectives on a practice-based video innovation in fieldwork designed to systematically support teacher candidates' abilities to scaffold student literacy learning in language arts. Prior to their fieldwork, the candidates had worked with video representations and decompositions of experienced teachers' strategy instruction, modeling, and feedback – as defined and operationalized by the Protocol for Language Arts Teaching Observation (Grossman, 2015), in coursework in subject didactics of language arts. During fieldwork, the candidates recorded lessons in which they planned to enact any of these three practices for instructional scaffolding and selected and discussed video clips with their mentor teacher and peer. Against this backdrop, this paper aims to identify what factors the teacher candidates and mentor teachers perceived as critical for candidates to use these practices in responsive ways.

Methods

The study reports on seven teacher candidates and four mentor teachers and draws on interview data (N = 11) from individual semi-structured interviews with each participant. The data were analyzed thematically, following Braun & Clarke's (2006, 2012) six-phased approach to thematic analysis and using Schulman's (1987) notion of *pedagogical content knowledge* as further developed by Grossman (1990) as a theoretical lens.

Preliminary findings

We identified five critical success factors, three of which correspond to knowledge domains and two that refer to the role of video and a common language in enhancing knowledge and situation-specific skills. The participants expressed that in addition to knowledge about the three core practices for instructional scaffolding, specialized subject matter knowledge and knowledge of student understanding were critical for responsive enactment of the practices for instructional scaffolding. Both candidates and mentors pointed to the crucial role of video in mentoring conversations, notably to support responsive in-the-moment decision-making. Candidates who experienced that their mentors shared a common conceptual understanding of the practices for instructional scaffolding

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

emphasized that they gained a deeper understanding of the relationship between subject matter, student understanding, and their own enactment of the practices for instructional scaffolding.

Significance

The paper contributes to the overall purpose of the QUINT conference by highlighting how candidates and mentors perceived the systematic use of practice-oriented video pedagogies in fieldwork. The critical success factors identified in this study link targeted video discussions during fieldwork to the candidates' development of pedagogical content knowledge and situation-specific skills and underscore the crucial role of a common conceptual language in these discussions.

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

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Title of your paper: Interdisciplinary Collaboration in Videographic Teaching Observation – InCoViTO

How can video observations contribute to increasing quality in social sciences teaching?

Research indicates that the use of scaffolded reflection through video recordings of teaching situations can develop pre-service teachers' interpretation and professional understanding of the subject they teach in relation to the pupils' learning prerequisites. However, few studies have focused on how pre-service teachers use the subjects language and concepts in their conversations with pupils, and whether scaffolded video reflection through coding of the recordings of students own teaching contributes to the quality of their use of orality and subject concept formation in their teaching practice.

The purpose of this study is to explore pre-service teachers understanding of subject language and concepts in their teaching practice, their peer to peer discussions when analyzing video and whether this focus contributes positively to academic awareness and quality of the student teacher's professional understanding of language and concepts in the subjects Danish, natural sciences, social studies and history. By using social cultural discourse analysis as a framework for analyzing field observation of pre-service teachers peer-to-peer dialogues, interviews and PLATO as a videographic tool in the scaffolding process of the students' analytical work, as well as in the research analysis, the preliminary findings show that it requires a concrete common categorization platform of what academic language and concepts contains in the project's associated subjects. The study also points to a challenge for the students in translating theories and academic language into actual teaching practice. However, our preliminary results also indicate that student teachers' videographic coding and video analysis of their own teaching practice leads to increased awareness in relation to developing a reflected use of academic language in their teaching practice.

The study contributes with important insight to the QUINT projects' theme four; development of video-based teacher training - in relation to subject specific academic linguistic and conceptual awareness in a teaching context

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

Paper 3

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Professional learning through classroom videos and researcher-practitioner collaboration

The aim of this paper is to give an account of two professional learning courses, involving two groups of Icelandic lower secondary teachers (15 participants in total), and present the preliminary results of an investigation of how a *researcher-practitioner collaboration, built on the use of classroom videos can generate effective forms of collaborative professional learning to improve teaching quality.*

Both courses were designed as university courses, credited to 5 ECTS, organised as three online sessions. The first session involved an introduction of the PLATO protocol, after which participants' identified an area for improvement of their teaching, and planned a small scale action research project in collaboration with colleagues, with consultation from the researchers/course organisers. Each project was required to include classroom video recordings and the collaborative reviewing of the videos. To conclude the course the participants presented their development projects at an open on-line seminar.

The data used for the inquiry presented here was mainly participants written reflective accounts from the first course (n = 9), and evaluative reports from the second (n = 6). Other available data is participants' action plans, their reflective logs, minutes from participants'-researchers' meetings, and video recordings of the on-line presentations. The reflective accounts and evaluation reports were read and assessed by the researchers and thematic analysis was applied to identify main themes arising from them.

The thematic analysis generated three main themes: 1) course organisation, 2) the professional learning tools, and 3) the outcomes of the professional learning. The analysis revealed generally positive views towards the organisation of the courses. The participants particularly appreciated the collaboration and feedback from researchers and thought the open seminar was a challenging, but an exciting and meaningful event. As regards the professional learning tools the participants welcomed PLATO as a basis for their discussion and reflection about teaching and regarded the videos and the collaborative analysis of them as a valuable opportunity to analyse themselves as teachers and their students at work. Four main outcomes of professional learning were identified as: a) more consciousness of the quality of teaching and aspects of effective teaching (deriving from PLATO), b) increased empowerment and clarity of teaching conceptions and enhanced professional strength, c) awareness of students' experiences and reactions, and d) the importance of collaborative reflection on teaching.

The courses were built on the QUINT ambition of improving teaching, using classroom videos as an important tool for professional learning. The background to their organisation and emphases, is definitions of professional learning and development as a collaborative, job embedded enterprise, taking place in a professional learning community, primarily aiming at improving the quality of education and educational outcomes. Another facet of their background is the idea of empowering teachers and giving them the agency to become able researchers of their own practice, to notice and react effectively to the needs of their students.