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Title of your paper: Video as a Tool for Discussion: Teacher Candidates' Reasoning across Coursework and Fieldwork

Abstract (300 words)

Research increasingly highlights the power of video for teacher learning (Borko et al., 2011). Gaudin and Chaliès (2015) find that the use of video gives teacher (candidates) opportunity to learn to *pay attention* to selective classroom events, and to *reason* around these – and they argue that these are decisive abilities for learning to teach. Many argue for a combination of video during coursework and fieldwork (e.g., Borko et al., 2008). In this paper, we report on a case study examining the research question: *What characterizes TCs' reasoning around videos of teaching across coursework and fieldwork?*

This study reports on a case study from a Norwegian teacher education program, targeting courses of pedagogical content knowledge in Norwegian Language Arts in one cohort in 2020. One TE and 30 TCs participated. Six candidates were followed into their fieldwork.

During coursework, we used videos of teaching focusing on specific features of scaffolding techniques (i.e., teachers' use of *modeling*, *strategy use and instruction*, and *feedback* (Grossmann, 2015)). During fieldwork, the candidates videotaped three lessons where they planned to enact the scaffolding techniques, and they made screen recordings of video-based conversations with their mentors after every lesson.

In this paper, we report on five coursework lessons (n=450 minutes), as well as 12 mentor conversations (n=360 minutes). All data are transcribed video data, analyzed using the software NVivo12. We used an analytical framework on reasoning adapted from van Es (2011), in combination with codes on contextual factors (based on arguments from for instance Kennedy, 2016; Zeichner, 2012).

Initial findings indicate that teacher candidates' reasoning around videos during coursework and fieldwork has different characteristics. For instance, at campus, reasoning is largely supported by theoretical terms, whereas the reasoning around videos during fieldwork was far more attentive to contextual factors such as student needs.

Extended summary (1000 words, excluding reference list) Include introduction, theoretical background, methods, aims, preliminary findings/findings, results, theoretical and education significance, relevance to the QUINT ambition and the reference list.

Researchers and policymakers increasingly argue for grounding teacher education and teachers' professional development in the practical work of teachers (Darling-Hammond et al., 2017; Grossman et al., 2009). In that vein, a particular useful tool might be the use of video representations of teaching (Borko et al., 2011; Gaudin & Chaliès, 2015; Santagata et al., 2021). International research indicates that videos have the advantage that they provide easier access to classroom observation, and the authenticity of the situation, closely linked to teachers' practical work (Gaudin & Chaliès, 2015). In their review of the use of video for professional learning, Gaudin and Chaliès

argue that “the most important component of teaching expertise is the ability to identify and interpret relevant classroom events and make instructional decisions based on those interpretations” (2015, pp. 45–46). This ability to identify and interpret can be trained by the use of videos, and is often conceptualized as learning to “notice and reason” (Barnhart & van Es, 2015; Seidel & Stürmer, 2014), or as “reflection” (Brouwer, 2015).

Research also highlights the importance of scaffolding and support for teachers and teacher candidates while using videos for professional learning. Different designs for pre- and post-service professional learning have been suggested, often indicating learning cycles might be effective, and often including a combination of the use of video during coursework, as well as during fieldwork (Borko et al., 2008; Lampert et al., 2013; Santagata & Guarino, 2011). Further, many scholars point to distinct pedagogies for using videos, and emphasize the importance of deliberate choices of videos, having a clear goal and observation focus, as well as connected curricula for using specific videos (Borko et al., 2011; Seidel & Stürmer, 2014; Star & Strickland, 2008;). Researchers also highlight the importance of planned and structured discussions of selected videos (Gaudin & Chaliès, 2015), and frameworks for facilitator moves have been suggested (van Es et al., 2014).

In this paper, we report on a case study examining the use of video across coursework and fieldwork in teacher education, and focus on the research question: *What characterizes TCs’ reasoning around videos of teaching across coursework and fieldwork?*

The study is set within an integrated 5-year teacher education program at a Norwegian university, in the candidates’ 6th and 7th semesters in courses of pedagogical content knowledge in Norwegian Language Arts in one cohort in 2020. One TE and 30 TCs participated. Six candidates were followed into their fieldwork. During coursework, as well as fieldwork, the focus was on three practices for instructional scaffolding; *strategy instruction*, *modeling*, and *feedback*. These three practices for instructional scaffolding have the potential to scaffold students’ learning by making explicit the tacit rules of engagement and the thinking processes that help students approach a text or a task successfully throughout their lives (i.e., explicit instruction, see Cohen, 2018; Archer & Hughes, 2011). However, research steadily finds that Language Arts teachers do not use their full potential (Grossman et al., 2013; Cohen, 2018; Kane & Staiger, 2012; Klette et al., 2017; Magnusson et al., 2018; Tengberg et al., 2021). At campus, to make strategy instruction, modeling, and feedback observable to the teacher candidates, we conceptualized and operationalized strategy instruction, modeling, and feedback in alignment with the Protocol for Language Arts Teaching Observation [PLATO] (Grossman, 2015), and used a simplified version of the PLATO protocol as an observation tool for the teacher candidates. During fieldwork, the candidates were asked to videotape three lessons where they planned to enact the scaffolding techniques, and they made screen recordings of video-based conversations with their mentors after every lesson.

In this paper, we report on five coursework lessons (n=450 minutes), as well as 12 mentor conversations (n=360 minutes), to capture the teacher candidates reasoning around videos across coursework and fieldwork. All data are transcribed video data, analyzed using the software NVivo12. We used an analytical framework on reasoning adapted from van Es (2011), distinguishing noticing *with* evidence and that *without*. High-level noticing indicates reasoning where teacher candidates “described, interpreted, and provided evidence of reasoning for interpretation, with the evidence constituting quotes, paraphrased quotes, or specific line numbers in the transcript” (p. 5). Low-level noticing are responses that lack evidence for their interpretations and are mere descriptions of what happens in videos, or a general response. Further, concerns have been raised about whether foregrounding specific teaching practices in teacher education can come with a loss of attention to the rich contextual issues that shape particular classrooms (Zeichner, 2012; Kennedy, 2016; Philip, et.

al., 2019);. More specifically, whether teacher candidates who are exposed to specific teaching practices in the context of coursework will engage in pedagogical reasoning about for instance pedagogical dilemmas (Kavanagh, Conrad et al., 2020), and whether they will be able to enact and adapt these practices in line with different instructional purposes (Kennedy, 2016), contextual factors (Zeichner, 2012), and student needs (Zeichner, 2012; Kennedy, 2016; Kavanagh, Metz et al., 2020). We therefore included codes on reasoning around contextual factors in our framework.

Initial findings indicate that teacher candidates' reasoning around videos during coursework and fieldwork has different characteristics. During coursework, candidates were able to identify and describe scaffolding practices in the videos. They also reasoned around these events, supported by evidence from the video and theoretical terms related to scaffolding. Still, they seldom connected their reasoning to the contextual factors of the lesson, such as student needs or instructional purposes. This stands in stark contrast to the candidates' reasoning around their own videos during fieldwork, where they were much more attentive to these contextual factors, but seldom used evidence from their videos to ground their interpretations. Our findings indicate the importance of being aware of the different roles that the use of video can play in the two settings of teacher education.

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