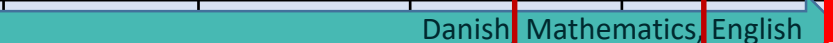

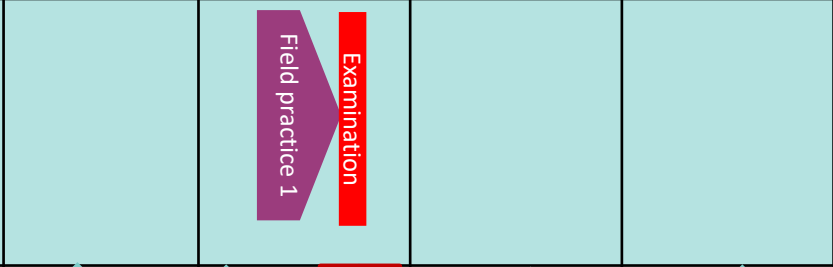

















Adopting a stance of inquiry when using classroom videos in mathematics in teacher education

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Agenda for the presentation

- The project: Learning to notice Quality (Becoming Teacher)
- Research question
- Design, methods and data
- Preliminary results regarding products, interviews and groupdiscussions
- Perspectives

Learning to notice Quality Becoming teacher	2021/22		2022/23		2023/24		2024/25	
Teacher education	 Danish Mathematics English				 Examination			
	 General didactics and Teacher professionalism							
Field practice					 Field practice 2		 Field practice 3	
Selected empirical data			 Interview 3					
Inter-ventions	 LTNQ 1	 LTNQ 2	 LTNQ 4	 LTNQ 5				
	 Field practice 1				 Examination		 Examination	
	 Examination							
	 Interview 1							
	 Interview 2  Data collection 3							
	 Examination							

Former studies: Learning to notice

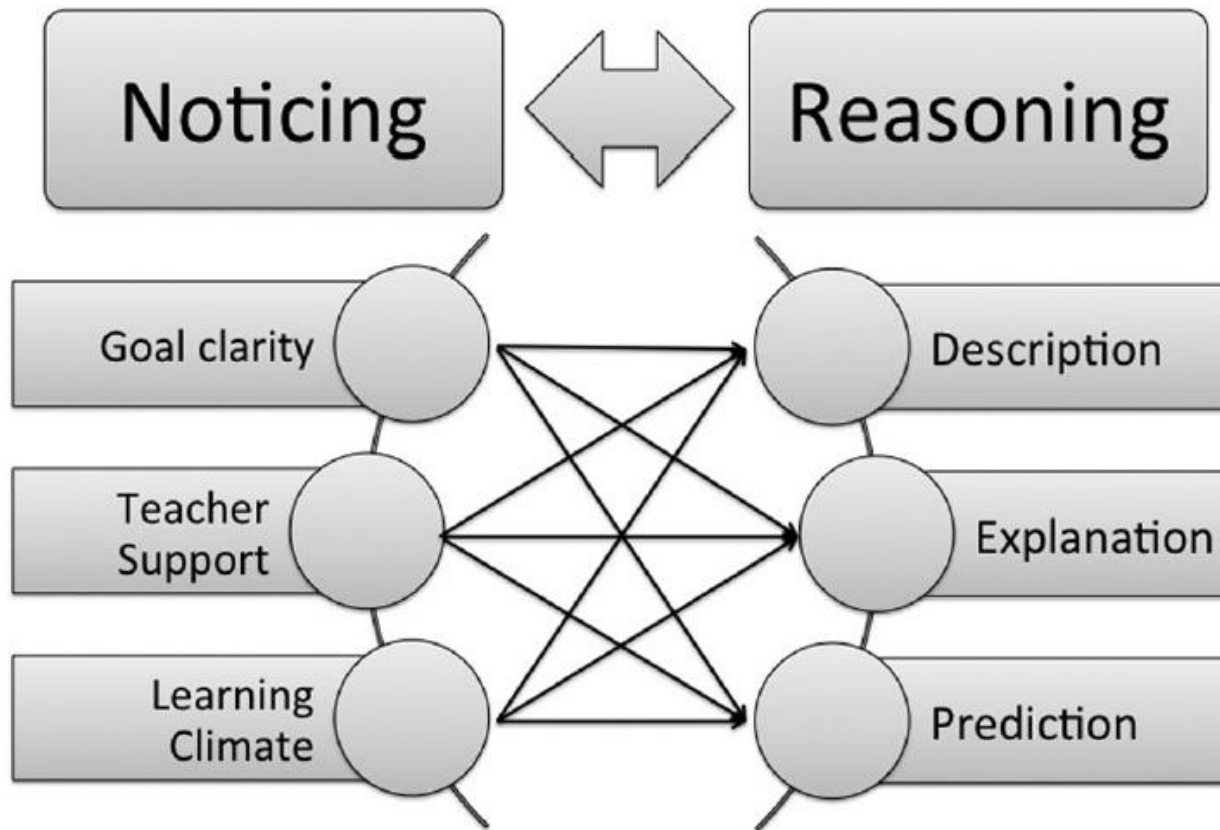


Figure 1. Noticing and reasoning as two components of professional vision, Seidel and Sturmer, 2014, p. 744

Research Question

Which **elements** are essential for student teachers to be able to **describe, analyse and interpret** classroom videos in preparation for them to be able to **develop their own mathematics teaching** and to contribute to the development of the school's mathematics teaching?

Design, methods and data



"Battery Hens"
Measuring, IBL
Intention: Evidence from description

1. Try the task yourself
2. Watch the video (4 min)
3. Individual notes
- 4. Describe the situation in groups**
- 5a. Explain (measuring)**
- 5b. Explain IBL**
- 6 Summary
- 7a Evidence Measuring, Redescribe**
- 7b Evidence IBL, Redescribe**


Written descriptions
(and re-descriptions) of
a classroom video
(n=11 student teachers, n=3 groups)

Group discussions of
descriptions and explanations
(transcribed audio files, n=15)

Interviews (the students were
randomly selected)
(transcribed audio files, n=4)


Explorative and preliminary analysis of two
competent students

Products

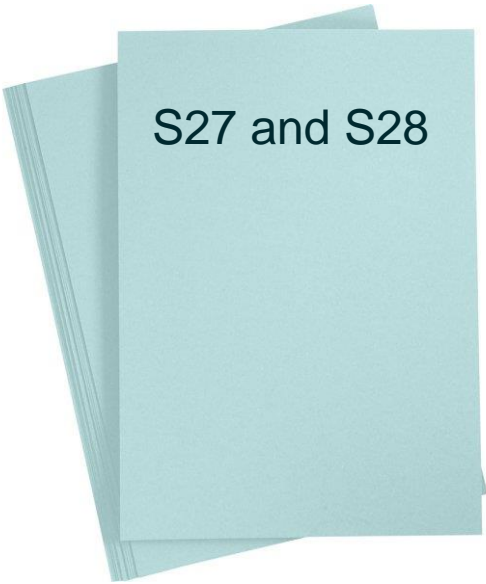


S22

a mix of a description
and explanations
without justification.



S08



S27 and S28

a very thorough
description, which is
the foundation for a
justified explanation.

Patterns of participation

Situated social
phenomenon

participation
contributions
engagement
responsibilities
language

Observations
interactions in
discussions
**verbal
accounts**
written essays
interviews

(Skott, Larsen, & Østergaard ,2011)

Social meaning
making

Patterns of participation

S22

..and I have a high professional level (01.30, Interview 1)

I have experienced a lot, okay, I knew that already(03.05, Interview 1)

She is prepared and committed. She perceives herself as significantly more competent than the other students. She mentions several times that everyone (should) get "the same basic foundation" from teacher training

S08

It is cool to hear what other students find important.... (07.00,Interview 1)

I love to share my thoughts with other students (07.00 and 15.59, Interview 1)

She is prepared and committed and she is flexible, she is willing to challenge her understanding in collaborative situations. She is interested in the professional community, she thrives in professional discussions

Revised framework for teacher noticing

Attending	Identify noteworthy features of classroom interactions Disregard selected features of classroom interactions
Interpreting	Use one's knowledge and experience to make sense of what is observed Make connections between what is noticed and broader principles of teaching and learning Adopting a stance of inquiry
Shaping	Construct interactions and contexts that provide access to additional information

TABLE 3
Types of Roles Participants Played in the Video Club Meetings

<i>Type</i>	<i>Role</i>	<i>Definition</i>	<i>Example</i>
Organizational roles	Coordinator	Informs group what clips will be viewed and presents agenda for meeting	“Today, we’ll take a look at a clip from Drew’s class.”
	Clarifier	Ensures all participants have access to same information	“Isn’t that the boy in the blue shirt?”
	Mediator	Diffuses tension among group members or keeps climate of meeting comfortable	“I’m sorry. I didn’t mean to belabor the point there.”
Discussion roles	Prompter	Invites participants to discuss video clip and initiates issues to explore	“So, what did you notice?” “What does he mean when says, ‘I was counting?’”
	Proposer	Offers issue, explanation, or claim to discuss	“Maybe she thought the value of each side was 1, instead of 6.”
	Supporter	Supports a participant’s interpretation	“That’s what I was thinking too.”
	Critic	Challenges claim or explanation	“I don’t think that’s what he was doing there.”
	Builder	Provides additional information to develop an idea	“Then he had two lines [with 10 blocks in each] that he didn’t split, so that would mean he knew he needed two rows of 10.”
	Summarizer	Synthesizes ideas under discussion	“Are you saying that the mathematical language is what’s hard for kids?”
	Blocker	Disregards issues raised and closes the discussion	“I’d rather hear what others have to say ...”

Van Es (2009), p. 112

The role of participant S22

Let us start with one of our descriptions, and then you can supplement mine: now I have descriptions that you didn't include in yours [she writes in the shared document] (00.00, step 4)

Do we really need to include this? Let us move on.. (02.00, step 5a) [she doesn't write anything in the document]
OK, does it matter? (08.30, step 5a)

S22: Do you understand me?
S04: I don't think so
S22: Still not? (10.13, step 5a)
[she doesn't write S04's perspective in the document]

...it was very much me and my thoughts and the others were more like "nodding dolls" (05.51 Interview 2).

The role of participant S08

S08: Okay, what type of question could she [the teacher] have asked? What do we think needed to be asked? (01.30, step 5b)

S08: Do you think we need to elaborate? (05.00, step 7a) [they discuss in 6 more minutes, even if they agree that they are done]

S08: Should we include some quotes in the last paragraph (25.05, step 4)

S01: Oops! Did you just delete my sentence? (09.00, step 5a) [addressed to the others]

S08: Who copied this? Or was it myself? (15.00 step 5a)

S08: Yes, just a minute[laughs]. You're the one "standing" there in the document.

S06: Should we include more than that?

S08: No, I think it's fine. (03.00, step 5a)

Preliminary results and perspectives

Adopting a Stance of Inquiry when describing and explaining classroom videos is a core competence for students ability to develop their own mathematics teaching. How can this be supported in future designs?

Students need to be aware of supportive roles and how the roles affect their ability to analyse classroom videos in a more investigative way. How can this be supported in future designs?

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