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Research paper

Collaborative display of competence: A case study of process-oriented video-based assessment in schools

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A B S T R A C T

This paper presents a case study of process-oriented assessment in a Norwegian secondary school. We investigate the teachers' design of a process-oriented and video-based assessment, shedding light on how student collaboration and competence was displayed and made assessable in video-recorded group assessments. The results reveal that, although this is a highly complex assessment format, student group videos can be integrated within process-oriented assessment in ways that allow for assessing students' collaborative work.

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1. Introduction

The current paper explores the opportunities and challenges of process-oriented and video-based assessment. Studying such assessment formats is important because teachers are increasingly held accountable for reaching national goals, on the one hand, and for designing assessments that support student agency and learning, on the other hand. Teachers are expected to develop assessment formats that both enable students to perform in line with predefined learning outcomes and provide teachers with information supporting their decision making for further teaching and learning (Darling-Hammond et al., 2014; Tolo et al., 2020). Accordingly, assessment is framed by both external requirements (such as the national curriculum) and internal practices (such as teachers' choices of criteria and structuring of the assessment) (Mølstad et al., 2021; Silseth et al., 2022). The choices teachers make regarding assessments affect students' opportunities to show what they have learned. The present paper details an assessment format realised by teachers in a naturalistic classroom setting, offering in-depth analysis and descriptions of the aspects teachers should consider when designing process-oriented and video-based assessment activities.

Assessment occurs in a sociopolitical context. In today's learning outcome-oriented educational systems, assessments are expected to be attuned to the targeted types of competence. Here, competence denotes the institutionally set standards for learning outcomes (Prøitz, 2010, 2013). However, assessment and learning cannot be considered separate processes (Greeno & Gresalfi, 2008;Gilje and Silseth, 2017). Educators' design of assessment activities and practices affects students' learning processes, as well as teachers' opportunities to provide feedback. In addition, students and teachers adapt their learning strategies to the assessment format; thus, the format must be aligned with the types of competence the students are expected to achieve (Hattie & Timperley, 2007).

The case scrutinised in the present paper displays the social construction of a midterm exam in the subject of Norwegian language (L1) in a lower secondary school in Norway. Historically, at this school, midterm exams have been conducted as full-day written exams without peer collaboration or teacher support. The responsible teachers wanted to redesign the assessment format to allow the students to showcase their ability, here with support from each other and relevant resources. Accordingly, they designed an

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exam or ganised over two days with several phases, one of which comprised video-recorded group talks submitted to the teacher for evaluation. Similar to how the teachers labelled the exam, we characterised it as 'process-oriented'. Both subject-specific and generic dialogic and collaborative competencies were targeted in the examined cases. Research in the learning sciences has shown that dialogue is essential to learning (Kumpulainen & Mutanen, 1999; Mercer & Howe, 2012; Resnick et al., 2017), yet this aspect of learning is often excluded from assessment, suggesting a gap between dialogic learning activities and formal assessment formats. Video-based group assessments provide a possible avenue to narrow this gap because they allow for the storage and systematic examination of student dialogues. To explore this, we adopted a sociocultural perspective (Greeno et al., 1996; Vygotsky, 1978) to identify the key opportunities and challenges in process-oriented and video-based assessments. The following research questions guided the analysis:

- To design a process-oriented and video-based assessment, what resources did a focal teacher draw upon?
- How are student collaboration and competence displayed and made assessable in video-recorded group assessments?

To answer these questions, we used interaction analysis (Hall & Stevens, 2016; Jordan & Henderson, 1995) to highlight the assessment activity. In the following section, we present a backdrop for process-oriented assessment before outlining a sociocultural perspective on assessment and learning outcomes. We present the methodology and analyse three key elements of the exam in the results section. Finally, we discuss our findings in relation to prior research and indicate possible implications for future research and practice.

2. Designing assessment formats

Assessment in schools involves configuring activities designed to exhibit particular types of knowledge, which are often defined by the curriculum and formal classifications of learning outcomes. However, policy documents function not as uniform entities that can be directly implemented but rather as situated resources that local actors negotiate and shape into classroom practice (Coburn, 2006); thus, they should be researched accordingly (Little, 2012). Because of the pressure for certification and accountability in schooling, *summative assessment* formats have a strong standing in educational systems. The past decades have brought a sharper focus on *formative assessment* formats, which aim to monitor learning and provide feedback that can aid students in advancing their existing level of proficiency. In some studies, these two formats have been exaggerated as polar opposites on a continuum (Lau, 2016), but the concepts of formative and summative describe different purposes, not different types of assessment (Dolin et al., 2017).

A distinction that cuts across the notion of summative and formative assessment is whether assessment tasks have a high level of validity regarding the ways to solve tasks in out-of-school contexts. A strong core of learning sciences research shows that people's ability to use and adapt what they have learned in new settings differs, so assessment formats need to be designed to meet this challenge (Pellegrino & Hilton, 2012; Shavelson et al., 1991). Accordingly, the notion of *performance assessment* emphasises how assessment can be shaped to capture problem-solving strategies that mimic actual decision situations (Shavelson, 2013). Another relevant conceptualisation that captures students' active use of knowledge—which we will pursue further in the current paper—is *dynamic assessment*. Dynamic assessment stems from the Vygotskian tradition and focuses specifically on the potential of moving beyond one's existing level of proficiency through support from others (Poehner & Lantolf, 2005). Dynamic assessment is designed to capture students' mastery of tools and what they can do when they meet new challenges (Constant Leung, 2007). The advantage of dynamic assessment is that it displays students' ability to engage with their surroundings, use concepts to act on problems and reach beyond their existing level of mastery (Edwards, 2005).

Finally, in the Norwegian context, process-oriented assessment is often used as a more informal term for assessment methods stretching over time and that has several points of contact with the teacher throughout the assessment period. We find that process-oriented assessment within the Norwegian discourse has close ties to the notion of performance and dynamic assessment, even if these links are not always explicit. Thus, the present empirical study sheds light on how these complex matters are handled by teachers and students in classroom interactions, illustrating possible avenues to integrate individual and group assessment by the use of technology. As such, the assessment format scrutinised here represents a process-oriented exam designed to explore what students can accomplish collaboratively with support from teachers, textbooks, digital communication tools and each other.

2.1. Teachers' and students' negotiation of assessment formats

The design of assessment formats is complex and evolves through negotiating processes among key actors in the educational system. Selecting assessment formats involves collaborating with and using textbooks and policy tools in the processes that contribute to unifying and consolidating teachers' conceptions of knowledge (Hermansen, 2014). The choice of assessment formats raises questions of epistemology, which can be defined as 'what knowledge is, and what it means for someone to "know" something' (Knight et al., 2014, p. 24). Thus, 'assessment is always concerned with designing proxies for 'knowledge" (Knight et al., 2014, p. 25). Consequently, a range of traditional testing formats relate to a dominant view of what it means to know something in schools; to learn is to internalise knowledge and be able to replicate it without the help of other students or outside resources (Black & Wiliam, 1998; Collins & Halverson, 2018).

Teachers are responsible for each student's competence development and must balance the inclination to isolate specific areas of competence for thorough evaluation with the danger of losing sight of the contexts to which that competence is relevant. In other words, assessment formats must have internal validity in terms of representing an adequate conceptualisation of knowledge in this setting while maintaining high external validity in terms of presenting assessment tasks in ways that are relevant to the problems students encounter in everyday life (Knight et al., 2014).

For students, assessments provide crucial opportunities to demonstrate their competence. Accordingly, they must learn how various assessment formats affect their opportunities to display their competence. Such knowledge is important not only for solving concrete tasks, but also for decoding what types of competence they are supposed to develop. Despite the increased attention (in both research and policy) paid to learning as a collaborative, situated phenomenon, group work assessment is often described by teachers as complex and challenging (Forsell et al., 2020).

2.2. Affordances of multimodal assessment formats

Multimodal assessment formats can entail ways for students to display to their teachers how they manage to collaboratively solve complex tasks. Digital technology provides opportunities to

distribute tasks across time and space and harness considerable data on student learning (Knight et al., 2014). The advent of digital technology in schools also provides a range of multimodal text genres that enable new types of student production and assessment (Jewitt, 2003). In multimodal texts, several modalities are combined, all of which have diverse affordances, potentials, capacities and limitations for meaning-making (Kress, 2009). In productions in which different modalities are combined by students to achieve a specific purpose, we use the term multimodal composition.

A few empirical studies have highlighted multimodal composition and assessment in primary and secondary education. For example, Silseth and Gilje (2019) analysed a case of students' text production in a school project about advertisement in L1, which involved both multimodal composition and traditional text productions, showing that students tended to focus more on the phases of written text production compared with their work that involved multimodal composition because the former was subjected to summative assessment and not the latter. Silseth and Gilje (2019) underscores the importance of questioning how multimodal products are considered representations of knowledge and how they are recognised in teachers' assessment practices. Fjørtoft (2020) scrutinised three cases of video-based group assessment: creation of mathematics videos, longitudinal self-assessment in L3 instruction and literary fiction interview videos with role-playing. Although Fjørtoft (2020) did not explicitly focus on students' interactive construction of videos, he found that a broader set of modes can expand teachers' assessment practices and that longitudinal and multimodal assessment formats provide a broad picture of student learning. Within higher education, the use of video-based assessments seems more frequent. For example, Pugh et al. (2021) found that the video assessment of surgical performance not only provides opportunities for evaluating training outcomes, but also indicates problems with scalability and creating time-efficient processes for video collection, storage and analysis. Even though the circumstances and learning objectives in higher education studies differ from those dealt with in secondary schools, these findings are relevant for the current study as well.

Thus, video-based group assessment is an emerging practice that involves both affordances and limitations, which call for empirical research. The current study adds to the overall picture by investigating secondary school students' collaborative production of group videos as part of a process-oriented assessment format.

3. Sociocultural perspectives on learning outcomes

A main assumption in the sociocultural perspectives on learning, teaching and assessment is that knowledge is not primarily an aspect of individual cognition but rather a part of activity systems. Studying activity systems involves examining the ways 'individual components act and interact with each other, and also focuses on larger contextualising systems that provide resources and constraints for those actions and interactions' (Greeno & Engeström, 2014, p. 128). A classroom community represents a complex activity system with a material environment (e.g., technological tools, group rooms and blackboards), a written discursive environment (e.g., curricula, local guides and textbooks) and an institutional work environment with specific professional collaborative patterns and responsibilities (e.g., ethics, examiner roles and grading standards), all of which serve as potential resources in situated talk and interaction. Focusing on the activity system and mediating artefacts in this environment allows us to analyse how diverse actors and resources work together in translating political goals into classroom practice and how students make meaning and respond to institutional expectations. Cultural artefacts are important because they influence the way actors perceive their environment and, thereby, how they act and transform the environment (Hedegaard, 2004).

Process-oriented assessment resonates with the sociocultural perspectives on learning in the stance that what is to be learned is inseparably connected to objects and practice. This view differs from the traditional way of conceiving knowing as a matter of internalisation (Sawyer, 2008). However, the traditional view is present throughout the educational system, as well as in the key concept for describing what students are supposed to achieve in schooling: learning outcomes. Although group work is widespread, group work assessment tends to focus on collaboration outcomes (Forsell et al., 2020). In contrast, dynamic assessment considers an individual and the environment as an inseparable dialectical unity that cannot be understood if the unity is broken (Poehner & Lantolf, 2005, p. 239).

From a sociocultural perspective, learners are perceived as active meaning-making actors who are involved in a reciprocal process of interacting with teachers and classmates. Here, the participants also draw on resources beyond words, such as gestures, body placement and physical tools, which can establish specific, situated meanings of the spoken language (Furberg, 2009; Hood et al., 1980; Steier et al., 2019). An important resource for meaning-making in schools is the curriculum. In the Norwegian curriculum, learning outcomes are described in terms of competence goals. However, these should not be conceived of as a set of neutral prescriptions for teaching but rather as artefacts that are negotiated in interaction (Silseth et al., 2022).

Learning outcomes are part of the educational policy across the Western Hemisphere and an important tool for governing educational systems, which often focus on an understanding of learning outcomes as a static end product of learning rather than parts in a process (Prøitz, 2010). With reference to several studies in education, we argue that assessment in schools should be designed to capture students' active use of knowledge rather than eliciting a learning outcome as a static 'end product' (c.f. Eisner, 2005; Prøitz, 2010; Havnes & Prøitz, 2016; Prøitz & Nordin, 2020). Furthermore, the case scrutinised in the current study illustrates how the meanings of the curriculum and policy tools used in learning and assessment activities are not ready-made but must be realised through the ongoing co-construction of teachers and students in the activities.

4. Methods, data and analysis

4.1. Case study

The present case study reports on data obtained from the Learning Outcomes Across Policy and Practice (LOaPP) project.[1] In this project, we were four researchers who followed teachers and students in three secondary schools over a period of 18 months. The research design involved several phases, moving from participatory observation inspired by ethnography towards more focused video observations in four ninth- and tenth-grade classrooms. The focus was on the complex relationship between policy and classroom practice. During the first semester of participatory observation, we learned about plans for a video-based, process-oriented exam at one of the schools. We found that it represented a novel type of summative assessment and, hence, was a relevant focus area for the current project.

The sociopolitical context of assessment in Norway is, similar to much of Europe, focused on learning outcomes and results; it is characterised by a national curriculum and regulations for assessment, sets of guidelines and a system of national tests and exams. Student grading starts in lower secondary schools (grade 8; 13

years old), and most of the final grades are based on teachers' classroom assessments (Hovdhaugen et al., 2018; Tveit, 2014). Typically, the teachers in Norway adopt a mixed approach that includes several assessment types, such as teacher-made tests and assignments, written hand-ins, reports, oral presentations, pre- and post-tests of skills, reflection notes, informal formative tests, products of practical assignments and teachers' impressions of students' work (Prøitz, 2013; Prøitz & Borgen, 2010). A central feature of Norwegian classroom assessment is teachers' use of midterm exams, which are strongly attuned to the national written exams held by the authorities (Hovdhaugen et al., 2018; Prøitz, 2013).

The idea behind the exam was first observed in a teacher team meeting. One of the teachers, here called Oda, had recently attended a national government-initiated training programme for teachers as a voluntary addition to her basic teaching education. There, she received input on designing process-oriented exams. She presented the idea of a process-oriented, two-day exam to the teacher team, which decided to implement it for two ninth-grade classes in the middle of the spring semester. The teachers decided to administer slightly different versions of the same exam format to two classes. We followed Oda's class.

The topic for the exam was a TV series in Norway called *Shame*. This TV series follows a group of teenagers' everyday lives and is popular among the youth in Norway, as well as the students in the class we followed. During the exam, the student groups were engaged in so-called ‘subject talks’, a relatively new assessment format in Norway, where they would discuss specific episodes from *Shame*. The term subject talk lacks an authoritative definition but has been used in curriculum and policy texts, primarily to describe assessment situations involving a type of subject-specific, topical conversation. We observed subject talk in all three schools but in different forms. Sometimes, the subject talk was organised as a conversation between a teacher and student and, at other times, a talk between the teacher and group of students—or, as in this case, a student group talk being video-taped and submitted to the teacher afterwards. The assessment format of ‘subject talk’ is not given one specific definition in the curriculum, but it is a suggested format for documenting competence in the guidelines from the Norwegian government[2]. In the context of the subject that our case is taken from (L1), the concept has been used in relation to a nationally regulated but locally conducted oral examination. Because the notion of subject talk is new, it is pertinent to investigate examples of how this format is enacted in school practice.

The studied case involved a classroom assessment for which the teacher designed a midterm exam that partly reflected the traditional format of the springtime national exam but with more time for reflection and collaboration and supplemented with group video assessment. This case was chosen because it featured the creation of a novel summative assessment activity that allowed us to scrutinise how assessment activities are created in an institutional context and consider the challenges and opportunities for designing assessment formats that allow students to display their competence.

4.2. Data and analytical procedures

The present case study employed the following data from the larger data corpus: participant observations with field notes from two assessment days at the school, collected teaching materials (such as policy documents, training materials and textbooks) and four video-taped subject talks involving 10 students. During the students’ group work, in which they created the videos, some of them moved out of the classroom into smaller group rooms. Although we observed the groups and their engagement during the subject talk, the four videos made by the groups that were submitted to their teacher became the key data material given special analytical attention.

In the present study, we investigated the overall organisation of the two-day assessment and analysed the students' interactions in the videos they produced for the process-oriented exam. In analysing the exam's overall design, we drew on field notes and discussions between the two observers at the exam and mapped the students' textbooks, digital resources, activities and time schedules, which contributed to our understanding of how Oda together with her teacher team designed the two-day exam. We scrutinised the student videos to explore how the four student groups responded to and engaged with the video-based format to display competence. We employed interaction analysis—a qualitative, video-based approach—to analyse learning and assessment as played out in the interactions between members of a community of practice (Heath et al., 2010; Jordan & Henderson, 1995). Three extracts from the videos demonstrating the possibilities and important aspects to be considered in video-based assessment were chosen for a close analysis. Through detailed transcription and turn-by-turn analysis, we showed how the students collaboratively presented and displayed their competence in their videos.

5. Results

This section focuses on three central aspects of the process-oriented exam: the teacher's mobilisation of key artefacts to design the exam, the trajectory of events during the exam and the production of group videos as part of the exam.

5.1. The teacher’s mobilisation of key artefacts to design the process-oriented video-based exam

The teacher mobilised several key artefacts to design the exam:

- The webpages of the Norwegian Directorate for Education and Training (Udir). Udir is the executive authority of government education policies and provides authoritative explanations, guidance and inspiration when it comes to interpreting and implementing national policy. The year before this exam was conducted, the directorate published ‘Three good reasons for *Shame* to be used in class’ on its Facebook page.[3] It also published on its official website a didactic design similar to that used in this case[4] and provided guidance on writing and peer assessment.[5] In several such contexts, the subject talks were explained as a specific format of assessment and as a self-assessment method.[6] On its webpage, it also promoted the ‘two stars and a wish’ structure for giving peer feedback, which means that students highlight two things they see as positive (the ‘stars’) and one idea for how to progress their work (the ‘wish’). This was one of several strategies that relates to the literature on feedback and formative assessment (e.g., Black & Jones, 2006).
- *The national curriculum.* In the teachers' introduction to the writing assignment, the Norwegian curriculum is explicitly cited through aims such as ‘pupils giving feedback on other pupils’ texts based on scholarly criteria’ and ‘adjusting texts to target specific groups of readers’. The assessment format, subject talk, has no specific definition in the curriculum, but the term is used in relation to several subjects and assessment forms.
- *Textbook materials.* On its website, the publisher of the class's textbook provides a suggested design for the process-oriented writing day, serving as inspiration for the process-oriented exam. Here, the criteria for assessing a subject talk were introduced.

- *Shame.* This TV series won great popularity among the youth in Norway because of its realistic portrayal of teenagers' everyday lives, including topics such as love, sex, friendship, grades, peer pressure and young people caught between cultures. This series also has a substantial presence on social media; for example, its characters can be followed on Instagram and Facebook. *Shame* has been widely used in schools, and the state-owned NRK TV network has made it available free of charge and without commercials on its web TV platform.
- *Students' mobile phones.* Mobile phones are among the youth's most intimate possessions, but their role in school is debated (Silseth & Gilje, 2017). On the one hand, many Norwegian schools have banned mobile phone usage during school hours, and there has been much concern about students' privacy, especially regarding the danger of surreptitious photography and video filming. On the other hand, almost all teens in Norway have smartphones, which have a range of functions and potentials as tools for learning, collaboration and finding information.

These key artefacts were brought into the teaching design and drawn upon by the teacher and students as resources during their work on the exam. Some of these artefacts can be characterised as discursive/textual and some as technological/material (Hedegaard, 2004). All of them have specific institutional, historical and social origins and contributed to establishing what we characterise as the 'activity system' in which the process-oriented exam was constructed.

5.2. Trajectory of events during the exam

On the first day of the exam, the class started at 9:00 a.m., with the teacher introducing the plan for the two days, as shown in Fig. 1.

The teacher explained the students' tasks and relevant criteria for assessing their work (Figs. 3 and 4) and said that they would receive guidance from her and their fellow students during the day (see Fig. 2). She informed them that they would receive individual grades and explained how to perform the self-assessment. After this introduction, the students were asked to watch a 7-min video clip of an episode of *Shame* together on the classroom SmartBoard. They were encouraged to take notes while watching, which they could use later during group work.

The clip shows a conversation between Noora and Nicolai in a cafe. Nicolai is the elder brother of Noora's boyfriend and has taken nude photos of Noora when she was asleep at a party. At the meeting, Nicolai seems confident, buys beer for both of them (although Noora is underaged and declines) and issues a somewhat subtle threat to Noora: he will publish the photographs he took if she does not do what he wants. The clip shows an unexpected development for Nicolai, as Noora leads him to admit that the photos were taken without her consent and then reveals that she has audio-taped his threat. She delivers a detailed lecture on the various criminal charges he would face by publishing the photos and says that he would go to jail for sexually abusing a minor. The scene ends with Noora confidently walking out on Nicolai, who remains passively at the table.

Fig. 2. Screenshots of the dialogue between Noora and Nicolai in *Shame*.

After the class watched the clip, the teacher put subject-relevant keywords on the blackboard (e.g., ethos, pathos and logos) and facilitated a whole-class conversation about the concepts and how they can be used in analysing the episode. The students were then split into groups; some stayed in the classroom and others in breakout rooms or sitting in the hallway. The groups prepared their subject talks on a topic of their choice related to the episode and wrote a manuscript for use in the talk. After this writing and discussion session, the groups recorded videos of their group talk on their mobile phones and submitted them to the teacher, along with the written self-evaluation 'two stars and a wish'.

On the second day, the students met at 9:00 and sat individually at their desks. They chose one out of four writing assignments and,

Day 1. Students were to:
- Watch a clip from *Shame* and take part in a whole-class discussion about relevant concepts for analysing the TV show
- Work in groups and prepare a group-based subject talk
- Video-record the prepared subject talk with one of their mobile phones and submit the video to the teacher, along with a self-assessment following the structure 'two stars and a wish'

Day 2. Students were to:
- Choose between four writing assignments. All tasks were connected to the overall theme of taking someone else's perspective. One of the tasks was specifically connected to the episode of *Shame* discussed on Day 1
- Prepare a written essay and participate in peer feedback groups
- Seek the teacher's help and guidance as a cowriter in the OneNote text processor programme

Fig. 1. Plan for the two assessment days.

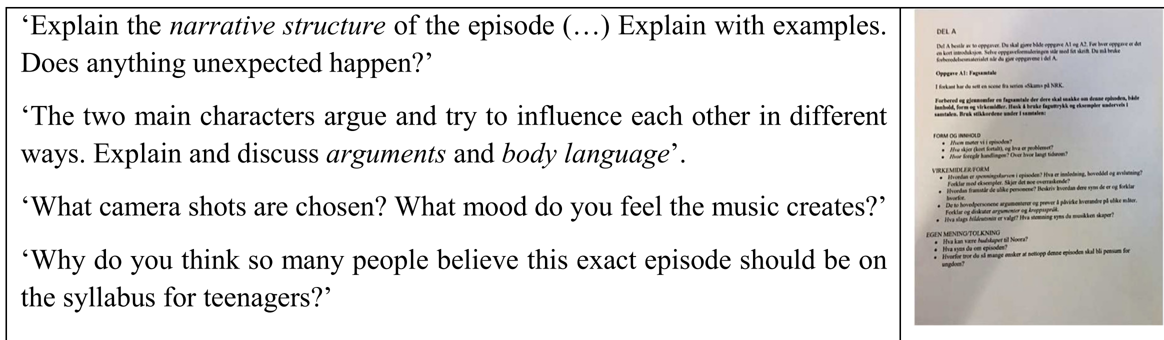

Fig. 3. Task sheet. See Appendix A for an English translation of the full task sheet.

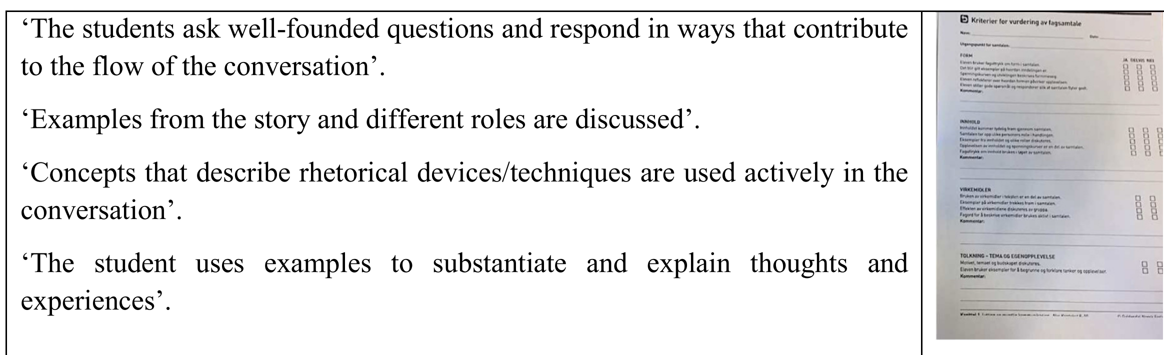

Fig. 4. Assessment criteria. See Appendix B for an English translation of the full list of criteria.

while working, received feedback on OneNote from the teacher (who had watched the videos they had sent her the day before). One of the writing assignments was closely related to *Shame* and instructed the students to expand the story of Noora or Nikolai by imagining and writing text messages that the characters could have written to their friends after the meeting at the cafe. The other three assignment options were not directly related to *Shame* but were thematically connected to media and communication analysis in different ways.

Once during the two days, the school leader visited the classrooms to observe how the plan played out. He expressed enthusiasm for the teachers' creativity. This visit shows his curiosity regarding the innovative element of the new exam and can be interpreted as the school leader supporting the teachers’ work in developing the exam format. Such backing is important because school leaders play a key role in the framing and development of policy in the classroom (Coburn, 2006).

So far, the analysis has scrutinised the teachers’ assessment design and how the exam unfolded. It has been shown that people and resources in the activity system were mobilised to design an assessment situation in which the students were positioned to document what they could achieve collaboratively with support from teachers and peers.

5.3. Construction of group videos as part of the exam

In this third part of the analysis, we focus on the group videos and how the students displayed their competence and interacted in ways that enabled shared participation. At this point, it is appropriate to provide task details and some of the relevant criteria from the students’ assessment sheets.

The task was to prepare and conduct a subject talk about the clip from *Shame*. Additional bullet points were organised under three headings: ‘Form and content’, ‘Techniques/Form’ and ‘Interpretation—theme and self-experience’. Some especially relevant bullet points included the following:

In addition to the task sheet, the students also received a sheet stating the assessment criteria. Fig. 4 shows examples of especially relevant assessment criteria that were handed to the students on a sheet with boxes to tick and lines to fill in:

The tasks and criteria were distributed and observed to be at the centre of the students' work, as well as the teachers’ assessment. Such active use of criteria in collaborative work is consistent with other findings in the project (e.g., Wiig et al., 2020). In line with our second research question, we were concerned with how student collaboration and competence were displayed and made assessable in these videos. In this regard, these criteria are part of the situated resources for the teacher and the students during the assessment activity.

5.3.1. Excerpt 1: challenge of balancing individual and collective goal achievement

This excerpt is drawn from a group of three students who prepared a dialogue lasting approximately 5 min. In several ways, this clip demonstrates how the students collaborate on a joint product while displaying their individual competence to the teacher. They discuss the clip from *Shame* and how Nicolai experiences role reversal when Noora reveals that she has audio-recorded his threats and says that this is evidence of his blackmail and his illegal photographing. As we enter the talk, about 3 min have passed. Teo turns to his fellow students and asks a question. This passage of dialogue shows how the subject talks are collaboratively constructed and illustrates how the students’ enactment of diverse roles when creating the subject talk affects their opportunities to

show competence. See Appendix C for descriptions of the transcript symbols.

```
1         ((Teo turns to Ty))
2   Teo:  how (.) um what does she make Nicolai think several times?
3   Ty:   Nicolai probably believes he is going to jail (.) if he
4         doesn´t answer what Nora asks him about
5   Teo:  and when she puts on her jacket and so on
6   Ty:   that I believe actually scared him and he ((Nicolai)) probably
7         wonders what to do next [because if]
8   Teo:                          [yes she] was leaving [right]
9         ((Teo lifts his hands and looks to the camera))
10  Ty:                                                 [yes]
11  Tim:  yes
12  Teo:  so::
13  Tim:  yes but=
14  Teo:  she threatens him that he doesn´t get to know much about what
15        happens afterwards
16  Tim:  yes since he he (.) she said you know what happens to those that
17        goes to jail
18  Teo:  mm ((nods))
19  Tim:  for child pornography since he took (.) he has nude photos of
20        someone under eighteen and that counts as child pornography
21        that´s quite (.) really serious
22  Teo:  yes
23  Tim:  two years (.) in jail if you´ve got a good lawyer
24  Teo:  mm
```

the dialogue between Noora and Nicolai (line 14). During the talk, all students actively listen by nodding, making confirmative sounds and maintaining eye contact, but this is ambiguous. Tim's quick reaction to Teo's prompt about putting on the jacket (line 9) can be interpreted as indicating that this analytical point was not spontaneous but something the group had discussed prior to the filming (i.e., a collective achievement). However, a somewhat competitive tendency might emerge when video-filming the conversation, as illustrated in lines 18–23. Here, Tim speeds up his pace, presumably to keep Teo from interrupting and taking away his chance to make his point.

A particular characteristic of this group is that the students regularly switch off the camera; thus, the completed film is an edited version in contrast to the other groups' ‘one-take’ strategy. As in some TV formats, they talk to each other but seldom directly to the viewer and the camera. As the excerpt shows, Teo leads the talk. This is already a well-established pattern by this point; Teo asks questions of Tim and Ty and plays the role of a TV talk show host. This format provides opportunities for all to participate and share their thoughts and interpretations of the *Shame* clip; however, the asymmetrical roles also create challenges for Ty. Line 8 shows how Teo prompts Ty to elaborate on what Noora signals by putting on her coat. However, soon after (line 11), he cuts off Ty and makes the point himself: by putting on her jacket, Noora scares Nicolai because she signals that she is leaving and he cannot control what she might do next. Teo sums up this rather subtle act as ‘a threat’ to Nicolai and an example of how the tables have turned in

This excerpt illustrates several important concerns that should be considered when considering group videos as an assessment activity. First, it reveals how performance is closely related to situated meaning-making and participation structures. Furthermore, it shows how the assessment criteria that the students have been given as part of the exam involve various knowledge types, some of which can be considered joint achievements. For example, the

assessment criterion ‘The students ask well-founded questions and respond in ways that contribute to the flow of the conversation’ (Fig. 4) is, by definition, a collective phenomenon. Throughout the excerpt, we see signs of such shared competence. However, another goal of competence established for the students—‘The student uses examples to substantiate and explain thoughts and experiences’—has a more individual character. This implies that subject talk is also a context for the students to display their individual performance. Thus, it provides an occasion in which the students display joint competence and represents a platform for individual performance. This excerpt illustrates the challenge—to both the students and teacher who will assess them—of balancing individual and collective goal achievements.

5.3.2. Excerpt 2: the subject talk is delivered as a scripted presentation

The second excerpt is from a group in which two students video-recorded a prepared subject talk that lasts approximately 6 min. This excerpt is shown because it represents a different strategy than displaying competence and a different participation structure. Unlike the group in the first excerpt, who organised the subject talk as a dialogue between them, these students face the camera and take turns talking about the *Shame* episode and what they believe is its main message. Their talk appears scripted, and it seems that they place notes with the camera so that they can read them while looking into the lens. The episode also displays one of the few instances of trouble. One of the students forgets what to say, which creates a breach in the activity context that illustrates how they move in and out of a formal assessment situation.

This excerpt shows two students giving an account of the most important lessons that can be drawn from the clip. In lines 1–6, Adin uses the second-person singular pronoun ‘you’ in singular form (Norwegian: *du*). This creates a rather personal tone in which he underscores to the viewer what ‘not to do’. His prepared points are told in a persuasive voice with distinctive pauses, which function to underline the message. In line 7, the pause lasts for over 2 s before he breaks out in a frustrated laugh and curses ‘DAMN’. Another pause lasts over 4 s before Alex states, ‘You're kidding now, right?’ In lines 10–11, Alex expresses further criticism before Adin eagerly says that they will edit it out. He pulls himself together, resumes the original tone of his voice and continues his talk about what to learn from the episode (lines 12–16). Apparently, they planned to edit this out, but their failure to do so shows the contrast between the activity context they create during the subject talk and their informal tone when ‘out of character’.

This extract reveals how the videos are products of multimodal composition and that the students use different resources to construct the group videos. Adin and Alex's video can be directly related to one of the task's bullet points: ‘Why do you think so many people believe this exact episode should be on the syllabus for teenagers?’ This task has more of an evaluative and normative character, and the students assume an expostulatory tone to explain how teenagers can avoid being in Noora's situation. This shows a different take on answering the task than in Excerpt 1, implying that the students do not regard their dialogic interaction as a crucial part of the assessment because they do not direct their utterances towards each other. Even when Adin freezes during his

```
1   Adin:  what I heard about this episode, was that many have wanted to
2          put it on a syllabus for teenagers (.) and when you´ve seen the
3          episode several times you know it is useful (.) you can learn
4          (1.0) for example do not take nude pictures of people without
5          consent (.) do not give alcohol to minors and don´t threaten
6          people no matter what (2.0) hehe h he he ((breaks into laughter))
7          (4.0) DAMN is it possible? o:h ((holds his hands in front of his
8          face))
9   Alex:  you´re kidding now, right?
10  Adin:  no I´m not kidding okay okay >relax relax<
11  Alex:  how did you manage
12  Adin:  we´ll cut it >relax relax it´ll work< (0.5) Nora is sixteen
13         years old from Jessheim, Nicolai is from western Oslo and is
14         eighteen plus and the storyline spans a short period of time (.)
15         and lastly, even storing naked photos is illegal
```

talk, Alex keeps staring into the camera and waits for him to get back on track rather than orienting to Adin and attempting to get the conversation going.

In contrast to Excerpt 1, in which the students address each other without looking directly at the camera, the students in this video face the camera and, in a way, explain the situations directly to the viewers in a more scripted manner. The different ways in which the groups interpret and complete this task affect what they make available for assessment. Alex and Adin do not ask questions, respond to each other's utterances or aid each other in making the conversation flow, which are among the assessment criteria. However, their video allows the teacher to assess the students' evaluation of the clip's significance for teenagers. Thus, the excerpt also demonstrates how the students' communicative strategy enables or hinders their meeting of specific assessment criteria. Consequently, group video presentations as part of a formal assessment represent a complex, multilayered talk situation in which small nuances in task design and group composition might have significant consequences for students' opportunities to display competence.

5.3.3. *Excerpt 3: students show their competence through dialogue*

In the third excerpt, three students discuss the clip from *Shame*. This student video is over twice as long as the others we have presented, lasting approximately 15 min. Some parts of the discussion are scripted in detail, while others are characterised by spontaneous dialogue. As we enter the dialogue, the students are particularly concerned with how the *Shame* episode is constructed and how this affects their viewer experience. The student groups are oriented towards the following task: 'The two main characters argue and try to influence each other in different ways. Explain and discuss *arguments* and *body language*'.

```
1   Sofi:  I find that the body language (.) at least for Noora, is so
2          relaxed but still so determined that it sort of affects so
3          strongly the arguments she uses
4   Sia:   I [fee... ]
5   Sara:     [I bel..] heh
6   Sia:   ok if I?
7   Sara:  yes (.) just
8   All:   he heh he
9   Sia:   I feel that at the end she got really close to him, like face
10         to face (.) Then I felt like she knew that she had that sort of
11         power over him, and then I felt that she sort of became this
12         strong person (.) in general (.) and I liked that very much
13  Sara:  I think she was pretty brave, she who dared to stand in front
14         of a boy and speak what was right or wrong (.) I think that was
15         pretty brave on her part
16         (2.0)
17  Sia:   so what do you think of the camera shots? ((reading))
```

This excerpt shows the three students emphasising subject-specific concepts during their conversations, both as resources for reflection and to provide structure and progress in the argumentation. Two of the assessment criteria for this specific assignment are ‘The student uses subject-specific concepts in talk’ and ‘The student reflects on how cinematic techniques shape the experience’. In line 2, Sofi explains that she finds Noora's body language as projecting a sense of determination and calm and that this affects Noora's arguments. Here, in contrast to Excerpts 1 and 2, the students describe how the episode makes them feel and how it has affected their state of mind.

The excerpt also shows how the distributed criteria sheet serves as a structuring artefact to advance the dialogue when it pauses. In the final line, Sia looks down and asks in a flat tone, ‘So what do you think of the camera shots?’ which indicates that she has returned to the papers they had with them as support. This shift and orientation to their written preparation or task sheet shows that the students are aware of the criteria and use the video to communicate their competence to the teacher.

This third extract adds to the overall picture of how the student groups interpret the genre and employ different strategies to compose the video. Here, it is evident that it is a prepared talk, but we also see how the students negotiate whose turn it is to display what they have thought and learned. Something we find interesting in this clip is how the concepts based on the subject's criteria are used and intertwined with other aspects, such as feelings and participation structures, because the criteria also involve this combination of feelings, concepts and framing of the talk. The learning outcome cannot be seen as a property outside of the talk because the interactive dialogue is, in and of itself, the learning outcome.

6. Discussion and conclusion

6.1. Discussion

In the present study, we have examined how the teachers designed a process-oriented video-based assessment activity and how the students participated in the activity of collaboratively displaying competence through video-filming group discussions about the subject matter. Our unpacking of the exam about the TV series *Shame* and our analysis of how the students engaged in the group talk as contexts for assessment have inspired several responses to the initial research questions.

- *To design a process-oriented and video-based assessment, what resources did a focal teacher draw upon?*

When we learned about this case of process-oriented assessment during our field work, we were intrigued by the opportunity to observe a traditional one-day exam being replaced by a trajectory of collaborative activities and the use of multiple resources. Like Coburn (2006), we found that various policy resources were employed as situated resources for negotiating and shaping classroom activities. In our case, these included government websites, the national curriculum (with regulations and guidance materials), textbooks, the students' mobile phones and a TV series. Even though the teachers closely aligned the assessment design with policy directives, these were interwoven with other resources, producing an assessment format that involved a high level of student agency. Our study adds to the prior research by showing how assessment formats are developed and shaped in interaction with institutional principles and artefacts (see, e.g., Fjørtoft, 2020; Gresalfi et al., 2009; Meyer-Beining et al., 2018; Mølstad & Prøitz, 2018).

During the planning meeting, the teachers were oriented towards assessment objectives and criteria—and several of these emphasised collaborative competence (see Appendixes A and B). The detailed work the teachers and students showed when working with the learning outcome formulations from the curriculum underscores the significance of the wording of such goals and relation between curriculum and assessment methods. By integrating self-assessment, group videos and teacher feedback in OneNote, the teachers designed an assessment format that comprised the students' interaction and meaning-making.

The work of the focal teacher, Oda, on realising the process-oriented exam displays possible strategies for uniting collaborative and subject-specific types of competence into a formal assessment. Even though the assessment contains collaboration and feedback, the assessment format is not primarily formative. Formative assessment is often positioned with an instructional purpose, unlike summative assessment, which is designed to measure the current level of mastery. As indicated by Poehner and Lantolf (2005), this conception of formative and summative assessment builds on an underlying epistemological assumption that the end product—the knowledge that has been aimed for—has a ‘static’ nature. Prior research has underscored that assessment needs to go beyond factual recall and capture students' understanding, active reasoning and problem solving (Shavelson et al., 1991). The *Shame* case shows that exams can be designed to show what students can do in collaboration with and through support from each other, the teacher and relevant artefacts. Oda's work in changing the exam format displays how teachers and students mobilised a range of conceptual, digital and material resources so that the students could display their knowledge both individually and collectively.

- *How are student collaboration and competence displayed and made assessable in video-recorded group assessments?*

A video-based group assessment allows teachers to capture student dialogue for assessment. Although the national curriculum frequently mentions collaboration, collaboration skills are difficult to assess in individual assessment formats, such as individually written texts. Student collaboration is often assessed informally by teachers, but the group video analysed in this article materialised student collaboration in a way allowing it to be transported, replayed and subjected to a more fine-grained assessment. As shown in our analysis, video-taped group talks created a specific setting for enacting competence through participation in dialogues. However, the videos cannot be regarded as ‘windows’ into the students' collaboration: they are the results of purposeful multimodal composition. Therefore, it is important to scrutinise how students master this format—or not—to show the teachers their competence.

All three excerpts show that the group video created a format for displaying competence that brings both distinct challenges and opportunities. Similar to Fjørtoft (2020), our analysis shows that video can provide a range of resources for meaning-making. For example, the participation structures that the students enact and their physical positioning in the video affect what competence they can display and, thus, what their teacher can assess. However, Excerpt 1 also makes clear that the students' opportunities to show what they have learned depend on others. Teo assumed a host's

role, and even though his peers could talk and the video was a joint product, his role gave him some advantages for making good points. This might not be a problem per se, but it shows the dilemmas teachers might face when weighing individual contributions in such videos; it is difficult to single out individual contributions in dialogues. In dialogues, people respond to others' utterances, so when students interact in groups, they create a context for each other's participation and influence opportunities to enact and display competence (Hood et al., 1980). This phenomenon of laying the groundwork for mutual participation while interacting within an institutional frame is evident in Excerpt 3, in which the students actively build on each other's utterances (as in ordinary talk situations) but return to the criteria for structuring the conversation when a topic is exhausted.

The interaction in the group videos comprises complex social situations in which the resources and tools used for assessment—such as assessment criteria and subject-specific concepts—are entwined with other resources, such as feelings, personal stances and participation structures. Excerpts 1 and 3 also show that group dialogue provides opportunities for peer support and displays competence that is difficult for students to show individually. Excerpt 2 differs from the other two examples in addressing this task as the students prepare a more coherent argument that is passionately presented to the camera. In all three excerpts, one recognises how the students respond to the assessment criteria and how their responses become accessible to the teacher. However, the products are rather different, and the task might perhaps be made more specific to elicit more targeted types of competence.

Our data show how the students distinguish between what should and should not be displayed in the assessment situation (e.g., when a student forgets what to say and the group plans to edit the video later (which, for some reason, they do not)). Our data do not, however, explain why the groups submit videos of such varied lengths or why they take different approaches to the assignment, ranging from purely descriptive accounts of the *Shame* episode to in-depth analyses of the actors' body language and use of camera shots. These differences may indicate differences in the level of competence or that the students had varied understandings of what competences should be displayed.

Together, the videos show that making one's competence assessable for the teacher requires much effort and consideration. The video format itself facilitates shared standards of student achievement for both students and teachers. However, decoding what is expected from teachers requires a complex type of competence, and students need training and support to demonstrate what they have learned.

6.2. Conclusion

Our analysis details a process-oriented exam and finds that this case touches on some key questions regarding conceptions about knowledge and what constitutes valid summative assessment in schools. The process-oriented exam (and group videos in particular) constitutes an assessment format that allows students to show how they advance through different individual and collaborative assignments throughout a two-day period. We see this as a dynamic assessment format that combines collaborative work with assessment and displays learning outcomes that are different from traditional assessment formats.

By analysing three excerpts from student videos, we highlight this interactive part of the exam and show the students' collaborative interpretation and understanding of the assignment and their collaborative efforts to complete it. The students assumed diverse roles and responsibilities, ensuring that everyone participated and demonstrated competence, but they also had difficulties balancing the collaborative aspects of group work with individual urges to demonstrate their own competence. Overall, the paper shows that an assessment involving a combination of collaborative and subject-specific goals has rich opportunities to display competence. However, it also adds complexity to the assessment situation, which both teachers and students must understand and master to succeed.

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Data availability

The authors do not have permission to share data.

Appendix A

Task sheet for subject talk .

You have seen a scene from the TV series *Shame* on NRK.
Prepare and have a subject talk in which you discuss this episode, both content, form and techniques. Remember to use subject-specific concepts and examples during the conversation. Use the following key points:

FORM AND CONTENT.

- *Who* do we meet in the episode?
- *What* happens (in short), and what is the problem?
- *Where* does the story happen? For how long a time?

TECHNIQUES/FORM.

- Explain the *narrative structure* in the episode? What is the intro, main part and ending? Explain with examples. Does anything surprising happen?
- How do the different persons appear? Explain how you feel the different persons are.
- The two main characters argue and try to influence each other in different ways. Explain and discuss their *arguments* and *body language.*
- What *camera shots* are chosen? What mood do you feel the music creates?

INTERPRETATION – THEME AND SELF-EXPERIENCE.

- What can Noora's *message* be?
- What do you think about the episode?
- Why do you think so many people believe this exact episode should be on the syllabus for teenagers?

Appendix B

Assessment criteria for subject talk.

Name________________________ **Date**______________________

Starting point for conversation:

FORM	**YES**	**PARTLY**	**NO**
Student uses subject-specific concepts about form in the conversation	☐	☐	☐
It is given examples on the structure	☐	☐	☐
The narrative structure and development are described in relation to form	☐	☐	☐
The student reflects on how form shapes the experience	☐	☐	☐
The students ask well-founded questions and respond in ways that contribute to the flow of the conversation	☐	☐	☐

Comment: ____

CONTENT	**YES**	**PARTLY**	**NO**
The content is made clear throughout the conversation	☐	☐	☐
The conversation takes up different persons' roles in the story	☐	☐	☐
Examples from the story and different roles are discussed	☐	☐	☐
The experiences of the content and narrative structure are part of the conversation	☐	☐	☐
Subject-specific concepts about content are used during the conversation	☐	☐	☐

Comment: ____

TECHNIQUES	**YES**	**PARTLY**	**NO**
The use of techniques in the text is part of the conversation	☐	☐	☐
Examples on techniques are made explicit in the conversation	☐	☐	☐
The effect of the techniques is discussed in the group	☐	☐	☐
Concepts that describe techniques are used actively in the conversation	☐	☐	☐

Comment: ____

INTERPRETATION – THEME AND SELF-EXPERIENCE	**YES**	**PARTLY**	**NO**
Motive, theme, and message are discussed.	☐	☐	☐
The student uses examples to substantiate and explain thoughts and experiences.	☐	☐	☐

Comment: ____

Appendix C

Transcription symbols, drawn from Jefferson's transcription system for conversation analysis (2004).

(.)	Brief interval of silence between or within utterances
(0.2)	Numbers in parentheses indicate elapsed time by tenths of seconds
[ ]	Overlapping talk
[ ]	
(h) he	Indicates laughter
word,	Underscoring indicates stress via pitch and/or amplitude
WORD	Uppercase indicates especially loud sounds relative to the surrounding talk
>word<	Left/right carats bracketing an utterance indicates that the bracketed material is either speeded up or slowed down compared with the surrounding talk
<word>	
=	Equal sign indicates no break or gap
((sniff))	Doubled parentheses contain the transcriber's descriptions

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