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Creative Audio-Visual Approaches Applied in Online and Hybrid Educational Designs

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Abstract: This research deals with creative audio-visual approaches applied in online and hybrid formats to support learning and inquiry in higher education. The objective of this study is to describe, explore and evaluate an educational design in which the students are introduced to creative approaches, to design and to the use of video activities, through visual facilitation, sketching, personal narratives and collaborative video production. The educational design is centred around inquiry processes and project- and problem-based learning. The empirical data consists of teaching observations, students' video productions and students' reflection entries in the Learning Management System during the course and written evaluations after completing the course. The analysis outlines the development of the educational design based on previous online teaching sessions and feedback from students. The findings show that while some students were initially challenged by the unusual teaching format, most appreciated the creative audio-visual approaches and high degree of experimentation. They responded positively to the use of various tools and collaborative activities and expressed that they have applied or plan to apply elements from the educational design to their own practices.

Keywords: visual facilitation, personal narrative, video sketching, collaboration, educational design, online

1. Introduction

The use of video activities for learning and collaboration is growing and is applied in many ways, such as using video as a tool for reflection and dissemination or for video meetings and instructions. For many years, there has been an elective at the master's programme in Information and Communication Technologies and Learning (MIL) that focuses on designing video activities. For the first four years, it was a course solely on video meetings and video conferencing applying creative workshop methods in general (Ørngreen and Mouritzen, 2013). In the following two years, the elective was run (in 2018 and 2020–21), it has become a broader course, which includes new creative audio-visual methods. In this explorative case study, the research-based educational design of the latest iteration of the course was investigated. In this section, the theoretical framework is presented according to the context of the course and the online setting in which it is taught.

1.1 Problem-Based learning

The overall pedagogical thinking of the course was rooted in problem-based learning (PBL). PBL can take many forms: from students working with smaller problems to more complex problem solving, or from problems and contexts provided for students to formats in which students themselves identify the context and the problem they wish to work on. The problem can be real-life problem investigated in collaboration with organisations or a hypothetical problem in an imagined context. PBL can take place in one teaching session or serve as the foundation of a complete teaching programme or even of a university's teaching approach (see, e.g., de Graaff and Kolmos, 2007, Jonassen and Hung, 201, Sipes, 2017, Savin-Baden, 2007).

The course in this research applies several of these PBL aspects. It stems from the master's degree education being rooted in problem-based learning (PBL) and hosted by a PBL university (in collaboration with other universities). The course focuses on real-life settings, such as the students' own work contexts, throughout the course but also allows the students to use imagined problems (if, for example, their work context does not currently use video activity). The purpose is to support a design mode and exploration of opportunities.

Though PBL in this form is based in practice, subject matter theories, models and concepts are needed for students to work reflectively and academically (Jonassen and Hung, 2015). The teachers function as *facilitators* who organise a learning environment, which involves different activities, such as instructions, students' self-directed learning, presentations and feedback sessions (Newman, 2005). From a teacher perspective, the role is

different from instructional design, as the control is given to the students. This means that teachers do not know beforehand which problems the students will tackle, and the theoretical foundations and the theory-practice and theory-empirical inquiries that the students address can therefore take various directions within the framework and learning objectives of the course (Dirckinck-Holmfeld, 2009). The teacher's ability to decipher the students' needs and to improvise is therefore often needed. In an online learning setting, it can be difficult to achieve a sense of where the students are in the learning process (Salmon, 2003), and it becomes vital to have both competences and tools that support students' projects to go in various directions.

1.2 Graphic facilitation for visual-supported video activities

Graphic facilitation is often used to describe what consultants do when visually leading group processes (Sibbet, 2001; Hautopp & Ørnsgreen, 2018). The method was initially inspired by the ways in which designers and architects utilise visualisations and sketching with clients. Analogue drawing techniques in face-to-face (f2f) meetings are referred to as the typical way of doing graphic facilitation, but in recent years, online and digital possibilities have been investigated in the field (e.g. Smith, 2014; Blijie, Hamons and Smith, 2019). Smith (2014) explored how graphic facilitation can be applied with the aim of creating virtual meetings that are effective and increasing engagement among participants. In educational design, this perspective on graphic facilitation was a focus when introducing students to the theme of online meetings and visually supported video activities.

1.3 Personal video narratives

The personal video narratives in this research are inspired by digital storytelling (developed at storycenter.org) and focus on supporting personal voice (Lambert, 2013). Participants explore and produce a personal three-to-five-minute video story. Individual and collaborative reflective processes scaffold the narrative inquiry and video production, including so-called story circles where participants get feedback from peers. Studies identify that digital storytelling-inspired approaches can scaffold learning, collaboration and self-knowledge and support participatory research (Jamissen et al., 2017; Wu & Chen, 2020; de Jager et al., 2017). In online educational environments, where there is a risk of students feeling isolated, the use of personal video narratives can promote well-being and a sense of community (Henningsen & Ørnsgreen, 2021).

1.4 Video sketching

Video sketching draws on various investigative sketching approaches to support inquiry into problem setting, solving and dialogue (Goldsmith, 2003; Schön, 1992; Olofsson & Sjödén, 2007; Barak & Albert, 2017; Ørnsgreen et al., 2017). In a video sketching session, participants use rapid iterative sketching processes that include pen, paper or other artefacts to materialise their ideas. The sketches are recorded, which means the video itself constitutes a form of temporal sketch – a video sketch. The video sketch is revisited, re-recorded and potentially rethought. Participants scaffold their reflective practice by shifting between mindsets inspired by the four different design genres: investigative, explorative, explanatory and persuasive (Olofsson & Sjödén, 2007). In a video sketching session, the different approaches aid explication of ideas, dialogue with peers and interaction with the material, which can lead the participants to new insights.

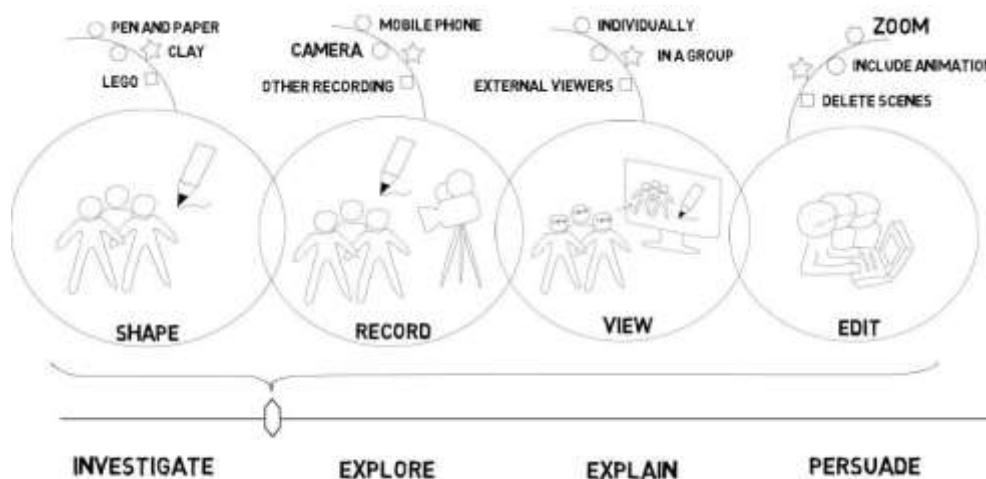


Figure 1: From Ørnsgreen et al. (2017), p.423

2. Research design and context

This is an exploratory case study (Yin, 2017), in which the research objective is to describe, explore and evaluate the educational design, investigating the creative audio-visual approaches mentioned above in online and hybrid formats. The elective course was conducted in the MIL master's programme, which addresses the research, development and implementation of digital learning designs in a range of organisational and educational settings. The students are often enrolled in the master's programme alongside their daily occupation. The study is a continuing research process, with inspiration from participatory action research (Kemmis, McTaggart & Nixon, 2013) and educational design approaches, as framed in the introduction. The authors were both teachers of the course and researchers of the exploratory case.

The educational design was implemented during a 12-week elective course in the winter term of 2020–2021, with 20 students. This title was 'Design and Use of Video Activities for Learning and Collaboration Processes'. Here, the students are introduced to different audio-visual methods, which they explored and reflected upon in different PBL-based settings. The teaching was organised in the learning activities shown in Figure 2, where the numbers refer to the sub-paragraphs in the following analysis (in Section 3).

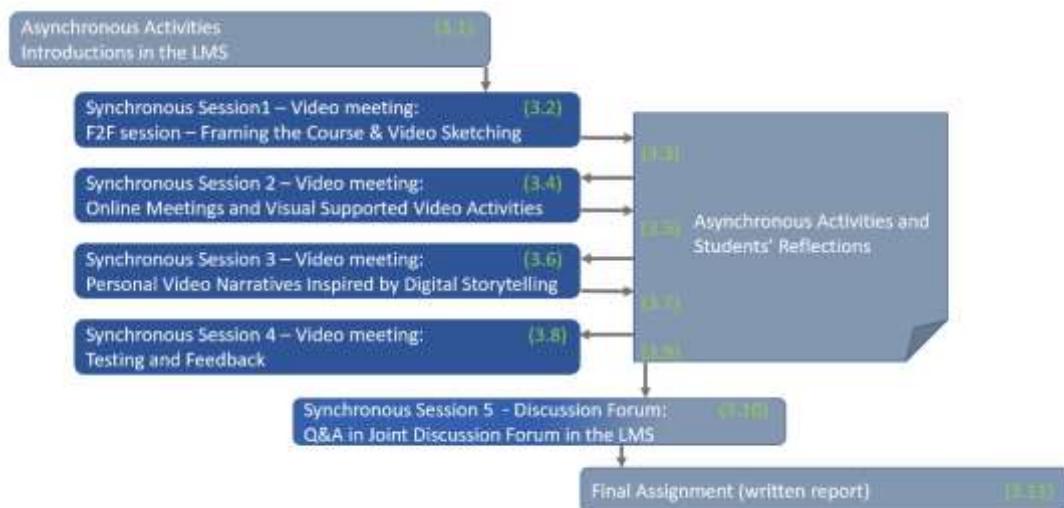


Figure 2: Overview of the educational design (the green font indicates the corresponding analysis paragraphs in the following section)

The educational design was based on the aforementioned theoretical framework of video and dialogical sketching processes, graphic facilitation and personal video narratives. The teachers worked with ways to support students to be reflective, examine situations and practices, break thinking habits and work patterns, and find their own voice through such exploration.

The first session, a five-hour f2f-session, took place during the day on a weekend. The online synchronous teaching sessions was scheduled on weekdays from 7–10 p.m. The students were organised into six groups of four to five participants. Between the online synchronous teaching sessions, the students were tasked with sharing a reflection exercise that took place asynchronously in the Learning Management System (LMS) of the education, the Moodle platform (see Figure 2). The asynchronous activities and reflections took the themes of the synchronous sessions as a starting point, and the students used different modalities in their uploads, such as written text, photos, drawings, videos and animations.

In the following section, the educational design and empirical data are presented and analysed. The empirical data includes participatory observations during teaching sessions and students' reflections on Moodle, as well as the students' PBL reports. Furthermore, a qualitative structured email interview (8 respondents) was collected in the months after the course, as well as a formal evaluation conducted by the university (in SurveyXact, with quantitative and qualitative questions, 11 respondents).

3. Presentation and analysis of the educational design

3.1 Asynchronous activities and students' reflections – introductions in the LMS

Prior to the first synchronous activities, the course commenced with an online period, which took place asynchronously in Moodle. In this period, students could familiarise themselves with the layout of the course, the reading list, and learn the teachers' expectations about active student participation. This involved the students being expected to write comments and reflections on Moodle, deliver hand-ins during and write a final assignment.

Similar to Gilly Salmon (2003) and her five-stage model, in which the first step is access and motivation and the second is online socialisation, this course used resources on scaffolding motivation and 'getting to know each other'. In this period, participants were asked to write a few sentences about their experiences and/or the expectations they had for the course. They often also wrote about where they worked and with what, in relation to the course subject. They were asked to outline what they expected to work on during the course. In the teachers' facilitation (Newman, 2005), it was underlined that this was considered a starting point and that the students could rethink, redesign and be inspired by the subjects of the course, by each other's points of departure and what they find together in groups. Likewise, they were informed that the entries would be read and used at the first synchronous f2f session. The aim of these initial student reflections was to work towards either a cluster of students who could work loosely together on the same problem, but on each individual project, or groups of students who would work jointly on the same PBL-project. The intention was to establish the expectations that things could change during the course, as their problems were formulated, framed and reframed (Schön, 1992). However, the experience was that for some students, it felt quite challenging to decide on subjects and be placed in a group so early in the process, even though it was explicitly written and despite the emphasis given to the possibility of change.

3.2 Session 1: F2F – framing the course and video sketching

The first session was a f2f session of five and a half hours, which both served the purpose of introducing the pedagogical frame and subject matter of the course and initiated participant collaboration through problem-based learning and inquiry activities. All MIL electives begin at the same time with a f2f event, which takes place at a MIL seminar. At this MIL seminar, the majority had already attended activities for other courses, which meant they were quite 'tired and satiated', as expressed in their own words. Others came to the seminar only for this elective and were not part of the general MIL programme. Furthermore, it was a diverse group of people coming from quite different work practices and from different stages in their education. Establishing common ground and a feel for the culture of this specific course was important but also challenging.

To establish rapport in-between the students, start explorations on the problem space of PBL and commence the process of working with the theoretical and practical aspects of video methods, the video sketching model was used (Figure 1 and Ørnsgreen et al., 2017). The model had been successfully used in the previous year of the course, but there were also challenges with students struggling to draw and sketch. There was a need to provide them with a quick way to establish a language for sketching, visual thinking and graphic facilitation (Smith, 2014; Hautopp & Ørnsgreen, 2018). Through a small interactive drawing session, the participants became acquainted with sketching, drawing variations of figures, situations and process diagrams (e.g. stick figures, star-men, abstractions exercises, etc.; see students' sketches in Figure 3).

After a short presentation and dialogue about the video sketching model, PBL and collaborative design thinking, participants elaborated on their ideas orally while sketching and recoding the video on their mobile phones or computers. They did this in small groups of two to three people. One presented, and the others asked questions about the sayings and drawings. They then individually listened to their own recordings (i.e. their own presentation of the idea and comments from group members). This process sparked reflections on the following questions: *What is important to me? Why? How can I elaborate on this idea? What do I know about this problem or opportunity? What do I need to find out?* Throughout the processes, the students were prompted to switch between different design genres, such as exploratory and explanatory (Olofsson & Sjölen, 2007). The purpose was for the students to experience the iterative process of designing video activities for their own work contexts (Savin-Baden, 2007).

A process of sharing the drawings and thinking took place in a plenary session (see Figure 3). The intention was to use this sharing to show the broad spectrum of design ideas and problems, to give comments on how these can function as PBL projects that explore the course objectives and to find connections among participants and thus commence the clustering of groups. Though originally planned as a 100% f2f seminar, the session took place in the wake of the first Covid-19 wave. A little less than a week before, it was therefore decided to grant permission to those few participants who could not attend, to participate from their home/work, whereas the majority were on campus. The design of the day tried to encompass this, which is also seen in Figure 3.



Figure 3: Montage of two screenshots illustrating the collaborative and plenary f2f/hybrid session and sketches

3.3 Asynchronous activities and students' reflections

Prior to Session 2, the students were prompted to revise their video sketching exercise from Session 1 and post a reflection on their initial expectations about how to design and apply video activities in their own work. When reading the students' reflections on Moodle, it became evident that several were interested in both instructional videos and in the audio-visual aspects of producing videos. Furthermore, in Session 1, some students mentioned that they would like to see teacher-produced videos as part of the course content and discuss these. The teachers found these ideas relevant and adjusted the teaching accordingly. From a PBL perspective, these adjustments to the educational design can be viewed as improvisation from teachers addressing students' interests within the frame and learning objectives of the course (Dirckinck-Holmfeld, 2009).

As preparation for Session 2, students were provided with two videos produced by the teachers about (1) using visual presentation drawings in a PowerPoint presentation with a teacher's talking head and (2) using visual templates and drawings *in situ* by recording the hands with a document camera (see Figure 4). The purpose was to exemplify different ways of working with graphic facilitation in virtual meetings (Smith, 2014) and video activities as a point of departure for pedagogical and didactical discussions in Session 2.



Figure 4: A screen dump from Video 1 (right) and Video 2 (left).

3.4 Session 2: Online meetings and visual-supported video activities

The themes of this three-hour session were online meetings and how visual approaches can support learning activities. Students were introduced to different video-based approaches, discussing how both teacher and students experience these online activities (e.g. Sablic et. al., 2020). They were also introduced to the use of graphic facilitation in different settings: f2f, remote, online and hybrid (Smith, 2014).

The session started with an overall introduction to online video-based meetings, with a focus on both pedagogical and technical considerations. Concrete examples from the teacher's own experiences were

presented and discussed in relation to theoretical perspectives and the master's students' experiences. Afterwards, the teachers framed a group discussion about different visual approaches to online meetings in relation to the two video examples (Figure 4) and the theoretical perspectives. Awareness about the use of different modalities (e.g. Smith, 2014) as well as teachers' experimentations with hi-fi and low-fi video productions (e.g. Jelsbak et al., 2018) were discussed. The students were tasked with reflecting upon how visual elements were used differently in the two videos as well as to consider the benefits and challenges of applying these approaches in virtual meetings.

After the group discussion, the students were introduced to various aspects of applying film theory, such as camera angles, lightning, sound and other audio-visual perspectives. The purpose was to provide inspiration for both technical and pedagogical choices when students explored different video and sketching techniques in their group work. Thereafter, the students discussed in groups how the themes and activities of the session, the visual approaches to online meetings and video techniques could be applied as further exploration in their groups.

The session ended with an online bingo game: the teacher guided a contest in which students were prompted to show different objects in front of their screen, such as a cup, a book, hand sanitiser, a picture or a snack. The objects should be within reach on their desk, and the first student to reach 5 objects won. The aim of this exercise was to show an example of a relatively easy energizer exercise, which also contributes to building social space online (Salmon, 2003).

3.5 Asynchronous activities and students' reflections

Before Session 3, focused on personal video narratives, the students individually created the outline for a story in the form of text, sound file, video or storyboard. They reflected on the course to an imaginary friend who did not have academic insights into the specific field. They were encouraged to include reflections on why certain subjects were of interest and on issues they found to 'disturb their thinking' or were puzzled by. The purpose of this was to prompt personal reflections and investigative story work, exploring possible subject-specific challenges and obstacles usable in their upcoming assignment. The analysis showed that this also aided in bridging the course context with outside contexts (Savin-Baden, 2007). As preparation, the students were also tasked with finding an object symbolising a specific personal experience of the year 2020 and to watch a video produced by the teacher introducing the method of digital storytelling.

3.6 Session 3: Personal video narratives inspired by digital storytelling

The theme of this online session was personal video narratives inspired by digital storytelling (Lambert, 2013), and investigative sketching approaches were used to support inquiry in the story work (Henningsen & Ørngreen, 2021). To prompt personal stories and the social and learning experience of sharing, the students initially shared a photo from their mobile phone in pairs in separate online rooms by holding their phone up to the webcam. They also shared their artefact symbolising an experience in the year 2020. Then followed:

- 1. A 15-minute presentation on narrative approaches by one of the teachers.
- 2. A 15-minute workshop (#1) developing a storyboard or manuscript individually. The students were encouraged to explore their story by uncovering narrative elements (e.g. potential helpers, opponents, and moments of change) and/or using Systematic Inventive Thinking categories (Barak & Albert, 2017) enlarging or removing certain aspects, change relations and centres of attention. Their inquiries were scaffolded by sketching or using artefacts or Post-It notes. Post-Its made it possible to change dependencies and various dramaturgies and thereby explore different understandings. The students were encouraged to tell their stories in a first-person narrative.
- 3. A 20-minute 'story circle' session, in which students shared and received peer feedback. The students were organised into clusters of four students in separate online rooms. The students were encouraged to explore the stories by asking for alternative helpers or opponents, other structures, concrete situations from which the story could depart, emotional elements (to clarify the point of view), describing elements (to 'expand' the story) and actional elements (to drive the story forward) and overall explore what they experienced was at stake in the story.
- 4. A 10-minute introduction to video editing for students interested in the topic.

- 5. A 20-minute workshop (#2) producing a three-minute personal video narrative individually, in which the students included the feedback. Some students created their story in a one-take video on their mobile, which they recorded with a voiceover. They did no editing but rerecorded the story if they wanted to make changes. Others used video editing software.
- 6. A 60-minute sharing and feedback from the plenary group.

3.7 Asynchronous activities and students' reflections

Prior to Session 4, the students were asked to work together in their groups on planning a presentation or testing of their video activity designs with another group. The group could use the other participants as guinea pigs, as if they were part of the target group of these video activities, or they could present and receive comments on their designs. While planning this feedback session, the students could discuss it with their supervisor in a meeting or via written comments. Before the session, the students had to inform the other participants and supervisor about whether there was a specific role they had to imagine or take into consideration, if there were prior preparations, and where they wanted the activity to take place.

3.8 Session 4: Testing and feedback

This online session focused on students testing out designs in progress and receiving feedback. Other groups acted as guinea pigs and gave feedback drawing on course literature and their own experiences. The synchronous session was a three-hour gathering in which the six groups met up pairwise with one of the three teachers, who was also their supervisor. One group facilitated their testing and received feedback during a 45-minute session, then switched roles with the other group. After this, all six groups met in a plenary room and had a joint dialogue on their feedback and experiences during their testing.

The groups brought their various problem orientations to the table. One group tried a series of small two-to-three-minute instructional design videos, in which they had experimented with different genres and audio-visual effects with the same content of explaining planetary orbit. Another group tried out a design for motivating students to make their own videos as a way of learning specific concepts and words in Ancient Greek. Others were interested in how to, for example, moderate online meetings in the pairwise activity. All three teachers found it had been a lively session, with a good atmosphere and academically relevant discussions in the feedback sessions, and this corresponded with experiences from previous years. At the return to plenary, however, the session lost its momentum. The liveliness was replaced with a bit of fatigue and a one-person-speaks-at-a-time setting.

3.9 Asynchronous activities and students' reflections

Students posted individual reflections as a written post, short video sketches, a sound file or an animation in relation to their upcoming assignment, experiences from the course or comments on literature or on another student's previous posts.

3.10 Session 5: Q&A online chat in the joint discussion forum

During this online session, students could chat in written text with the teachers in real time in a 3-hour time slot. They could also choose to post questions the weekend prior, which were answered in this time slot. Students asked questions relating to the upcoming assignment and could follow the different threads of reflections in the joint online discussion forum.

3.11 Final assignment

The course ended with the students submitting a final written group assignment as a summative evaluation. They submitted their assignments to the joint discussion forum so each group could see each other's submissions and be inspired by each other's work for future use in their own practices (Dirckinck-Holmfeld, 2009). Much of the written assignment took its point of departure in the Moodle post reflections on a personal note, on the video activities explored, on literature or on general course discussions.

4. Findings and discussion

The educational design consisted of the above-presented sessions and activities. The formal evaluation immediately after the course showed that the students evaluated the course as academically meaningful. In the structured email interviews some months after the course, students expressed that the workshop approach resonated well with them, and several highlighted the hands-on creative productions qualified by feedback sessions. Analysis of their reports found that they had adopted the methods in their own work practice, applied the theories, and worked PBL-informed. Some comments included: 'I learned something every single time' and 'Overall, I've learned a whole lot.' The analysis also showed that the high degree of variation, including the creative audio-visual approaches combined with a pedagogical PBL-framing, supported inquiry and a 'form of voyage of discovery', as one student expressed it.

However, there were also challenges identified, which relate to those identified in the PBL and online learning literature (section 1.1). Several students struggled at the beginning with the structure of the course, as it seemed chaotic to follow, until they found their personal focus and problem orientation. One student commented, 'It seemed somewhat messy [...] After completing the elective course, things feel much better connected'. The analysis showed that these initial challenges stem from insufficient insight into the purpose of the initial exercises, the variety of unfamiliar creative approaches (see Sections 1.2–1.4 and the literature referenced therein) and due to the nature of the educational design including ongoing adjustments. For some students, these adjustments were a motivating factor, as they experienced their specific problem orientation being acknowledged. For others, it created challenges. One student stated that his learning preference was a more linear and instructional pedagogy, not the collaborative and PBL approach. As the PBL approach in this course demanded complex inquiry and hands-on processing, students with other learning preferences can be challenged pedagogically or simply irritated and find it difficult to navigate.

Workable solutions to address these initial frustrations were pinpointed by the students through the evaluation. This included clear communication around the purpose and structure behind the investigative processes and continuous activities to scaffold a consistent focus. One student wrote, 'We were kept to the bonfire [with ...] activities to be done for each week.' These continuous activities included regular sharing of reflections among the students. This scaffolded a sense of community and inspiration when frustration occurred. As one student expressed, 'It was enriching to read the thoughts and reflections of others, just as it was hugely inspiring to watch the videos of others.' Such findings may be relevant for other learning designers when working with establishing social ties in online communities and e-learning settings.

The educational design was built on a logic of hands-on experiences with creative audio-visual and video methods through a workshop format. Students in the mail interviews mentioned that they appreciated these approaches, which opened their mind so they could see teaching as a 'playground'. The videos and audio-visual elements were also motivators for the more traditional course activities, such as reading and giving feedback, as they felt they needed this knowledge to do the workshop. Some students were first surprised and others sceptical about the act of sketching, but many saw it as a useful experience later: 'It was surprisingly productive to be allowed to think with your hands in a new way. The experience made me very curious about it, and I have worked with it a lot since then [...] I have used all elements several times subsequently in my own teaching.'

The educational design strives to frame an experimental space with sufficient disturbance (from a Deweyan perspective). A student experienced it as 'organised chaos, kaleidoscopic, inspiring and exciting. At first, I was extremely confused; later, I was confused on a higher level. I actually see this as very positive. That's what I want to achieve with my own students. Not to give a whole lot of results, but to animate to think further.' This showed that teaching of this kind demands awareness from the teachers to navigate in chaotic open processes and create safe settings in which students can explore, push boundaries and share. As one student stated, 'It was with trembling heart that I shared on Moodle, as the video was far from perfect.'

All three teachers chose to be present during the online sessions, which meant there was always the necessary professional knowledge and overview present. The students experienced this as a 'luxury', but as teachers, it was also a positive experience both in planning and execution. Thus, it was not necessary to work to a very tight form, and it supported a looser atmosphere, with room for different opinions and laughter. However, there was also organisational framing with division of tasks. For example, there was always one teacher who had the main responsibility for specific tasks or subjects during the synchronous sessions, and the groups had each a specific

teacher assigned as supervisor. In general, the students reported that they found the atmosphere pleasant, and given the very honest but decent comments during the video meetings and in the post, the course seemed to have established a room of confidence. Two students commented: 'There was a pretty cool relational energy on the course' and 'There was an extremely good atmosphere'. In settings with larger class sizes, other organisational setups may be needed to ensure everyone is heard and to navigate the many asynchronous activities taking place. The research indicates that teachers need competencies in how to navigate in both the social and subject matter utterings in a sensible manner and they need to obtain a focus on establishing and keeping the good atmosphere in both the synchronous and asynchronous activities. Teaching in a team may help with this, and teaching a couple of such courses, may, for some teachers, be less demanding than having to teach a full course of their own. The feeling of 'having each other's back' and 'having someone to exchange ideas, experiences and subject matter knowledge with' can be a powerful and motivational part of the teaching experience, even when the needed coordination resources rise somewhat.

5. Conclusion

This empirical study explores an educational design in which creative audio-visual approaches were applied and continuously developed throughout an online and hybrid format in higher education. The objective was to describe, explore and evaluate the educational design, and specifically the use of video activities, through visual facilitation, sketching, personal narratives and collaborative video production through inquiry processes and project- and problem-based learning. The findings showed that most of the students appreciated the creative audio-visual approaches and high degree of experimentation but that some students were initially challenged by the unusual teaching format. To navigate and facilitate the emerging frustration into workable learning inquiries was sometimes a challenging task for both the teachers and the students. Students responded positively to the use of the various tools and the collaborative activities in the evaluation and explained how they had applied or planned to apply elements from the educational design to their own practices. This paper described and analysed the educational design in detail with the aim of inspiring researchers and teachers teaching these approaches to students in online/hybrid educational contexts.

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