

MASTER THESIS

— PROBLEM BASED DIGITISATION —
AN ASSESSMENT OF VIDEO EDUCATION AT AAU

June 6th 2019



Engineering Psychology, Group 1081
Electronic Systems, Aalborg University
19gr1081@es.aau.dk



AALBORG UNIVERSITY
STUDENT REPORT

Authors:

Michael Buss Andersen
Andreas Kaae Jensen

Title:

Problem Based Digitisation:
An assessment of video education
at AAU

Project type:

Master thesis

Project period:

February 1st – June 6th 2019

Email:

19gr1081@es.aau.dk

Supervisor:

Nikita Kharlamov

Number of pages: 59

Number of appendices: 9

w/ **Department of
Electronic Systems**
Engineering Psychology
Fredrik Bajers Vej 7B
9220 Aalborg

Synopsis:

This thesis investigates what specific design and user interaction needs a video platform for educational content should be aligned with to support the pedagogical approach at Aalborg University.

Initially preexisting conditions and measures that AAU had already taken, was mapped. Then four structured expert interviews with students and teachers were conducted to go in-depth with their experiences, wishes and concerns with regards to video education. At last a usability test of three existing video platforms, from which AAU will likely choose one, was conducted.

It is concluded that there are only few PBL-specific considerations to take into account. Instead five general overreaching conditions are isolated that we believe should be met for AAU to most successfully transition from traditional lectures to videos as a means of teaching: 1: Provide easy and capable video tools. 2: Use good audio and video. 3: Elevate student motivation. 4: Be prepared to restructure lectures 5: Digitise in compelling ways.

Contents

1	Introduction	1
1.1	State of the Art & Motivation for Digitisation at AAU	1
1.1.1	Pedagogical Considerations	2
1.1.2	Flexibility to Learn Anytime & Anywhere	2
1.1.3	Helping Teachers Transition to Video	3
1.1.4	Platform Practicalities	3
1.1.5	Status & What's Next	3
1.2	Research Question	4
2	Research	5
2.1	What is Problem Based Learning?	5
2.2	Student Motivation & PBL	6
2.2.1	PBL Oriented Ways to Influence Student Motivation	6
2.2.2	Deadlines and Evaluation as a Motivational Tools	7
2.3	Students' Perspective on PBL Digital	8
2.3.1	Ideas: ONBOARDING	9
2.3.2	Ideas: SOCIAL NETWORKING	9
2.3.3	Ideas: ACTIVITIES	9
2.3.4	Ideas: INTEGRATION	9
2.3.5	Ideas: STRUCTURE	10
2.4	An Overview of Existing Platforms	10
3	Interviews	17
3.1	Selecting Interviewees	17
3.1.1	Interviewee: Kurt — Lector @ Computer Science	18
3.1.2	Interviewee: Stefan — Student @ Medialogy	18
3.1.3	Interviewee: Noomi — Lector @ Communication & Psychology . . .	18
3.1.4	Interviewee: Astrid — Student @ Psychology	19
3.2	Interview Method	19
3.3	Conducting and Transcribing Interviews	20
3.4	Analysis Method — Thematic Analysis	21
3.4.1	Alternative Methods Considered	21
3.5	Our approach to Thematic Analysis	21
4	Interview Analysis	25
4.1	Theme: MANAGING TIME & MENTAL RESOURCES	25
4.1.1	Implications of Theme	26
4.1.2	Code: LECTURE PLANNING & STRUCTURING	27
4.1.3	Code: STUDENT ENGAGEMENT	27
4.1.4	Code: STUDENT MOTIVATION	28

4.1.5	Code: STUDENT RESOURCE PRIORITISATION	28
4.1.6	Code: TEACHER RESOURCE PRIORITISATION	28
4.2	Theme: CROSS DOMAIN DIGITAL CONSIDERATIONS	29
4.2.1	Implications of Theme	29
4.2.2	Codes: FRUSTRATION WITH EXISTING SYSTEMS + CONSOLIDATING SYSTEMS	30
4.2.3	Code: ONBOARDING EXPERIENCE	30
4.2.4	Code: UI+UX CONSIDERATIONS	31
4.3	Theme: EDUCATIONAL PLATFORM DIGITAL CONSIDERATIONS	31
4.3.1	Implications of Theme	32
4.3.2	Code: DIGITISATION PERKS	33
4.3.3	Code: DIGITISATION CONCERNs	33
4.3.4	Code: THOUGHTS ABOUT ANALYTICS	34
4.3.5	Code: KNOWLEDGE BASE RESPONSIBILITIES	34
4.3.6	Code: SPECIFIC PLATFORM WISHES	34
4.4	Theme: PRODUCING EDUCATIONAL VIDEOS	35
4.4.1	Implications of Theme	35
4.4.2	Codes: VIDEO QUALITY + AUDIO QUALITY	36
4.4.3	Code: CONTENT STYLE	36
4.4.4	Codes: VIDEO PLANNING + VIDEO EDITING + VIDEO MANAGEMENT	37
4.5	Theme: PEDAGOGICAL METHOD & LECTURING	38
4.5.1	Implications of Theme	39
4.5.2	Code: THOUGHTS ABOUT LECTURES	39
4.5.3	Code: FLIPPED CLASSROOM	39
4.5.4	Code: EVALUATING & TUTORING STUDENTS	40
4.5.5	Code: MANAGING STUDENT DISCUSSION	41
4.5.6	Code: KNOWLEDGE SHARING	41
5	Usability Test	43
5.1	Test Design	43
5.1.1	Rating Individual Platforms on VAS — Test Design 1	43
5.1.2	Ranking Platforms Against Each Other — Test Design 2	44
5.1.3	Equipment	44
5.1.4	Pilot Tests	45
5.1.5	Pilot Test 1	45
5.1.6	Pilot Test 2	45
5.1.7	Pilot Test 3	46
5.2	Data Analysis	46
5.2.1	Rating Individual Platforms on VAS — Analysis 1	46
5.2.2	Ranking Platforms Against Each Other — Analysis 2	48
6	Discussion	51
6.1	Findings and Recommendations with regards to educational IT	51
6.1.1	Recommendation 1: Provide Easy and Capable Video Tools	51
6.1.2	Recommendation 2: Use Good Audio and Video	52
6.1.3	Recommendation 3: Elevate Student Motivation	53

6.1.4 Recommendation 4: Be Prepared to Restructure Lectures	53
6.1.5 Recommendation 5: Digitise in Compelling Ways	55
6.2 The Interviews	56
6.3 The Thematic Analysis	57
6.4 The Usability Test	57
7 Conclusion	59
Bibliography	61
Appendices	63
A Screenshots of All Three Platforms	65
B Usability Test Resources	73
B.1 Task List	73
B.2 Platforms	74
B.3 Stimuli Presentation Order	76
B.4 Danish Consent Agreement	77
B.5 SurveyXact Evaluation	77
B.6 Scripts	78
C Interview Questions	81
C.1 Questions for Kurt Nørmark	81
C.2 Questions for Jakob Stoustrup	82
C.3 Questions for Stefan Nordborg Eriksen	82
D Interview Transcript: Kurt Nørmark	83
E Interview Transcript: Stefan Nordborg Eriksen	103
F Interview Transcript: Noomi Christine Linde Matthiesen	113
G Interview Transcript: Astrid (pseudonym)	121
H Ny Videoplatform til AAU - Præsentation af Mulige Kandidater	127
H.1 Panopto	127
H.2 Mediasite	128
H.3 Kaltura	128
H.4 Øvrigt	128
H.5 Alt det Udenom	128
I Notes: State of the Art Interview	131

Introduction 1

Many major Danish public institutions are currently undergoing a large digitalisation transformation initiated by the Danish government (Mikkelsen, 2018; Riisager, 2017; Ahlers, 2018) that can reasonably be expected to be a reaction to increased demand for technology skills from the industry (Dansk Industri, 2018) and a general desire to position Denmark as a leader in an increasingly lucrative technology sector.

A part of the larger initiative is to digitise university activities, including teaching, which has manifested as digital strategies like Aalborg University’s “Knowledge for the World” by Lykkegaard (2018). Comparable strategies exists for other Danish universities. The initiative is positioned as a modern alternative to lecturing that provides more flexible educations where time with the teacher is better spent, the students more able to dig into topics on their own, and lastly to equip students with digital skills (Uddannelses- og Forskningsministeriet, 2018). This is of special interest to us, the authors, given our current occupation as students at AAU and our concern for future generations.

Digitised education is still a relatively young discipline, and while various administrative and governmental units praise its potential to better education, it is not difficult to imagine alternate motives for wanting to replace conventional teaching. The prospect of saving money by automating and cutting staff comes to mind.

There is little doubt that politicians and AAU will go through with digitisation, given the industrial and, to a lesser degree, popular opinion push. Therefore, and in the service of guiding a propitious transition to digital teaching, this thesis aims to map the best possible digital solution for educational video content and tangential features in a way that is tailored to the needs of teachers and students at AAU, with Problem Based Learning (PBL) in mind.

1.1 State of the Art & Motivation for Digitisation at AAU

Digitalisation efforts began well before our involvement, and AAU has already extensively utilised digital solutions for administrative tasks and student-facing products for many years, most noticeable Moodle (2019). Therefore, before we begin to discuss how best to implement it, it seems appropriate to establish a sense of what this newest digitisation push actually means and how it is different from existing digital solutions and initiatives.

To help us understand this, we interviewed Per Mouritzen, Master of ICT and Learning, and Jakob Cloos Bojesen, digitisation partner, both employed by AAU and involved with the digitisation project. They were referred to us by Line Vinterberg, a digital teaching consultant, also employed by AAU as part of a newly established digital knowledge base initiative. Per described three user scenarios that the video project aims to support, that Thorkild Jensen, a representative from DeiC (see subsection 1.1.4 for a

brief description of DeiC), later elaborated upon:

Teachers	Students	Employees
<ul style="list-style-type: none"> • Record screen + audio) • Upload video • Publish to students via Moodle 	<ul style="list-style-type: none"> • Record via PC & Mobile • Upload Video • Publish to other students via Moodle 	<ul style="list-style-type: none"> • Record video conferences • Record meetings • Record without need for extra/new hardware

Table 1.1. User scenarios of the video platform, as envisioned by Thorkild Jensen from DeiC

The information in this section, if not credited otherwise, is based on notes from the interview that can be found in Appendix I.

1.1.1 Pedagogical Considerations

When asked which pedagogical considerations are going into the platform design Jakob emphasised the importance of being grounded in PBL, but did not have any specifics to share. For that we were redirected to read about “PBL Future” Kofoed (2019) — an initiative that aims to develop AAU’s PBL flavour and make sure it keeps up with the times. At the time of writing questions are being asked, but have yet to be answered on the accompanying web page.

A concept that came up multiple times in the interview is that of the *flipped classroom*. A flipped classroom approach to teaching is one where activities traditionally conducted in the classroom, like lectures, become home activities, and activities normally constituting homework become classroom activities (Akçayr & Akçayr, 2018). This approach is also mentioned in AAU’s digital strategy, “Knowledge for the World” (Lykkegaard, 2018).

1.1.2 Flexibility to Learn Anytime & Anywhere

Another motivation for the digitisation project is to provide more flexible educations and providing students the ability to take courses, or research a given topic, at a time that fits their schedule and project work progress.

Ideally course activities supplements project work, but this is often not the case, and we can personally attest to this asynchronous relationship between courses and project work. Videos are not bound to an instance in time, unlike lectures that happens at a scheduled time, once. Even better videos are also not bound by scale, meaning that many more students can watch the same video than can feasibly fit in an auditorium. In practice this means that students can cherry pick topics relevant to their project work, even across study programmes, giving them a broader range of possibilities. Students currently utilise third party videos that they find online on their own for this — videos that might not be up to the standards of AAU, fit the curriculum only tangentially, have a different teaching style or use different terminology etc. It seems only logical that it’d be better if this content was made and distributed inside AAU. Especially considering that the knowledge and expertise is already here for the most part, just not readily available to everyone.

Flexibility is also at the core of the Danish government’s report on the future of education (Uddannelses- og Forskningsministeriet, 2018), citing, among other goals and

benefits: Higher interdisciplinarity, combining education with work, reacting faster to market needs, reducing risk of regretting ones choice of study, and continuous specialisation on bachelor degrees.

1.1.3 Helping Teachers Transition to Video

Thus far mainly positive aspects of the digitisation project has been discussed, but the project also face a very large road block: getting teachers started with producing videos. Most teachers have little to no experience in the field and it requires a very different skill set than preparing a lecture. A few enthusiastic teachers has experimented with video on their own, like Nørmark (2018), who has built and used his home grown video solution for several years and gathered valuable first hand experience that we explore in subsection 3.1.1.

In an attempt to streamline and standardise the video creation/editing/hosting process, both in terms of tooling and guidance, AAU has hired five digital teaching consultants as of January 1st 2019, of whom Line Vinterberg is one. This knowledge base oversees the raise of technical competency of the teachers at AAU and acts as a centralised hub of knowledge and strategies. There are currently no plans to have a central video team, and it will be up to the individual teacher to produce the videos. This also means that the videos are intended to be low cost and visually simple. Pen casts and video recorded lectures are obvious candidates. One possible advantage of this, apart from shorter production time, is that they promote a personal connection teacher and student between as opposed to a highly polished professional looking video.

1.1.4 Platform Practicalities

There are certain constraints imposed on the video project that influences the content of this report as well. Firstly the platform must integrate with existing systems at AAU, most prominently Moodle. It must also operate as a separate module so that it is possible, if need be, to replace Moodle in the future without changing the video platform, and vice versa.

AAU does not intend to develop their own platfrom from the ground up — instead they will buy access to an existing solution. This has some obvious advantages: It is cheaper, proven to work, less fragile as other institutions depend on it as well. There are also some disadvantages: It will be less customisable and the distributer of the platform could go out of business before AAU is ready to transition to something else.

In practice a decision will have to be made between three options provided by the Danish eInfrastructure Cooperation (DeiC, 2019), a cooperation established under the Danish Ministry of Higher Education and Science. DeiC has pre-approved supply contracts with each of the three platform vendors. They collect feedback and expertise from Danish universities to guide their work. A lot of the practical work with regards to the platform will be on their shoulders, including quality control, approving vendors, and more.

1.1.5 Status & What's Next

The general consensus from the interview was that the video platform project is currently somewhere between infancy and childhood, and also just a small piece in the larger

digitisation strategy. Ambitions are large, but little is settled and less yet tried. There is a clear lack of experience with video on the part of the teachers, although AAU is attempting to address this with the aforementioned knowledge base. Only a few teachers and students have yet had a chance to influence the project, despite being the reason for, and primary users of it, when it is introduced. Neither teachers nor students have actually tried either of the three potential platforms either.

PBL Future is currently exploring future directions with regards to the AAU PBL model, but the fruit of that work will not be ready before the scheduled implementation of the video platform, summer 2019.

This leaves present thesis with the opportunity to fill in some of the holes. A part of this will be exploring how studying and teaching strategies can inform the design of the video platform, with a special focus on integrating PBL and making sure AAU specific needs are met. Speaking with, and placing the three platforms in the hands of end users will also play a large role in the thesis as well.

In the end a comprehensive body of knowledge have been accumulated from literature, interview and user tests that encapsulates a wide range of views, especially from a design and interaction perspective. From this we conclude the thesis with concrete recommendations to help ensure a prosperous introduction of an educational video platform at AAU.

1.2 Research Question

What specific design and user interaction needs should a video platform be aligned with to support the pedagogical approach of problem-based learning (PBL) at Aalborg University?

Research 2

In this chapter we cover literature relevant to teaching and learning with a strong focus on PBL and tangential topics. We also try to make sense of and compare three video platforms designed for teaching.

2.1 What is Problem Based Learning?

Problem Based Learning (PBL) as opposed to Lecture Based Learning (LBL), is an educational approach that Barrows and Tamblyn (1984, p. 18) describe as “the learning that results from the process of working toward the understanding or resolution of a problem”. They go on to describe, over the course of their fairly influential book on the matter, *Problem-Based Learning*, the role of the teacher as a facilitator rather than a dispenser of knowledge, the benefit of working in small groups, and PBL’s intertwined relationship with what they call student-centered learning.

In student-centered learning, as opposed to teacher-centered, it is expected that students eventually take full responsibility for their own learning (Barrows & Tamblyn, 1984, p. 9). The teacher then becomes a provider of guidance instead of dictating the curricula and dispensing information — especially until the student gains full self-reliance.

The approach is meant to better prepare students for the rest of their life by teaching them to learn and evaluate their own learning in a safe environment. This makes students more able to adapt to new knowledge, challenges, and problems that they encounter in the future. The most significant benefit of student-centered learning may be the intrinsic motivation that emerges in students from being active participants, as opposed to artificial extrinsic motivation like grades (Barrows & Tamblyn, 1984, pp. 9–10).

Critics of the method worry that (some) students are not up to the task of planning, executing, and evaluating their own learning. Students are not uniformly known for their high work moral, and most teachers will even have experienced students falling asleep during lectures, so it is easy to conclude that students are too irresponsible or lazy do direct their own learning. However, a situation like that is quite different from the ideal of PBL and student-centered learning. For one the teacher is the only one who is active while the students sit in silence and listen. So while criticism may be warranted, it may also be based on wrong data.

The real competencies needed by students in teacher-centered, subject-based learning are to listen attentively, take careful notes, read rapidly with comprehension, predict examination questions, and be able to cram.

— Knowles (1975, p. 23)

PBL was initially developed by the McMaster University Faculty of Health Sciences in the late 1960s and quickly spread to other medical schools, (Barrows, 1996, pp. 3–4). It

started its life in medical schools because of a need for better medical reasoning that was hard to obtain from traditional LBL, due to the practical nature of the work.

PBL is widely used and discussed, but most relevant to present thesis, it is *the* defining characteristic of Aalborg University. It is in fact so well known that the specific flavour that is used here has a name, the Aalborg Model. The *P* in PBL is sometimes confused for meaning *Project*, and although problem-based learning is sometimes utilised for projects, as is the case at AAU, it is not a given. It can be assumed that unless otherwise indicated, when we mention BPL, we also implicitly include the Aalborg Model.

2.2 Student Motivation & PBL

This section investigates why motivation is one of the key factors to consider in relation to learning and by extension what affects student motivation positively and negatively. Since early days, the field of psychology has focused on two primary explanations for behaviour: Biological needs like procreation, and extrinsic factors like rewards and punishments (Sansone, Harackiewicz, & Judith, 2000, p. 1). Both suggests that behaviour is motivated by a desire to achieve an outcome. This translates well to education where high motivation is desirable for students in order for them to achieve the goal of learning (or graduating), and for teachers who want engaged students (McKeachie, 2010, p. 140).

While people vary in both level and type of motivation (Ryan, Richard, Deci, & Edward, 2000, p. 54), everybody depends on it to get things done, and general strategies for positively impacting it exists. Ryan et al. (2000, p. 55) describe the two most basic distinctions of motivation as:

1. *Intrinsic motivation*, which refers to doing something because it is inherently interesting or enjoyable
2. *Extrinsic motivation*, which refers to doing something because it leads to a separable outcome.

A student can be motivated to participate just for the value of the activity; intrinsic motivation, or engaged by the prospect of external rewards, such as grades, recognition, or approval (McKeachie, 2010, p. 142). It is easy to believe that intrinsic motivation in students is always preferable, but according to Sansone et al. (2000, pp. 294–295) this might be an unattainable and perhaps even undesirable goal due to the intrinsic value of an activity often not becoming apparent until some minimal level of competence has been acquired.

2.2.1 PBL Oriented Ways to Influence Student Motivation

Deci and Ryan (1980b) argues that a person's intrinsic motivation is positively impacted by events that promote their experience of autonomy and vice versa. Barrows and Tamblyn (1984, pp. 9–10) similarly write about self-determination as a motivating and defining characteristic of PBL, and Hmelo-Silver (2004, p. 241) lists higher intrinsic motivation as one of five key goals for PBL. Deci and Ryan (1980a, p. 39) adds that when teachers are more control oriented, students generally have both less intrinsic motivation and lower self-esteem. Also experiences that leaves one feeling more competent promotes intrinsic motivation.

Several studies have been conducted on the often cited intrinsic motivational benefits of PBL, with surprisingly varying results. Marshall (1993, p. 304) found that PBL students, in the medical field, use the library more often than LBL students. Also, “when they use it, they do so more frequently, for longer periods of time, and as a source for a greater proportion of their study materials.” Marshall (1993, p. 304). This they attribute to the nature of PBL curricula, though also acknowledging that other factors such as differences in library proximity, quality of staff etc. may also have played a part in their study.

Wijnia, Loyens, and Derous (2011) found that, contrary to their hypothesis, PBL does not always seem to lead to higher intrinsic motivation. They attribute this to the specific implementation of PBL they studied, which might not have provided the ideal PBL structure, and that most LBL curricula also include active learning activities in addition to lectures, which blurs the line.

Wijnia, Loyens, and Derous (2014, p. 931) later investigated how intrinsic motivation in PBL is affected by tutoring style (autonomy supportive versus controlling). They found that autonomy-controlling tutoring lead to increased extrinsic motivation and negatively affected performance. They also found autonomy-supportive tutoring to be unrelated to intrinsic motivation and subsequent performance. The role of student’s interest in a topic was also investigated and, contrary to tutoring style, they found that higher topic interest resulted in higher autonomous motivation and contributed indirectly to more self-study time and persistence. They conclude that it is crucial to take the interestingness of topics into account, as well as consider students expectation of interest in the topic addressed. They also conclude that a controlling tutoring style should be avoided and that autonomy-supporting tutoring does not seem to promote intrinsic motivation, possibly because PBL is in itself already autonomy-supporting.

McKeachie (2010, p. 141) supports that giving choice back to students and supporting their autonomy can enhance motivation. He elaborates that this can be obtained by giving students the choice of topics, test questions, due dates, or reading assignments.

2.2.2 Deadlines and Evaluation as a Motivational Tools

It is well known that cramming for an exam is common among students. It is also well known that spreading the burden of learning over a larger amount of time is better for ones... Kilde

Humphrey and Harbin (2010) investigated how deadlines + rewards as compared to deadlines alone impacted student’s academic procrastination in a web-based course. They found a statistically significant increase in assignment completion in one out of four assignments, a smaller increase in two out of four, and a very slight decrease in the last. The slight decrease in the latter they attribute to the assignment being last in the year, where students tend to be more motivated and grade-oriented (Bender, 2007), regardless of rewards. Also their sample size was small. Despite the shortcomings, the study shows that rewards in combination with deadlines were more effective than deadlines alone.

McKeachie (2010, p. 143) argues that used correctly, extrinsic rewards, containing informative feedback, can enable students to focus on improvement. For instance, grades should be accompanied by feedback that address direction for betterment or maybe even replaced with constructive criticism entirely. This is supported by Sansone et al. (2000, p. 17) who writes that extrinsic rewards can be used for controlling behaviour. Depending

on what the student finds most prominent, rewards can affect intrinsic motivation positively if the affirming and informational aspects are mostly salient. Informative extrinsic rewards can also help students focus on their strengths and weaknesses (Sansone et al., 2000, p. 295). This also brings up a new concept, the concept of internalised motivation, where a student internalise goals, goals that started external (Sansone et al., 2000, p. 296).

2.3 Students' Perspective on PBL Digital

On the 23th of April 2019 we partook in a workshop regarding the future of PBL in a digital context, organised by AAU as an initiative to involve students in the digitisation process. Four teams of approximately five students each brainstormed and talked about ways in which digital solutions could be beneficial to the future of PBL and AAU in general, from students' perspective. Each group submitted their best ideas as a mindmap at the end of the workshop, and the organisers later condensed these into a single mindmap summary containing five categories of ideas, depicted in Figure 2.1

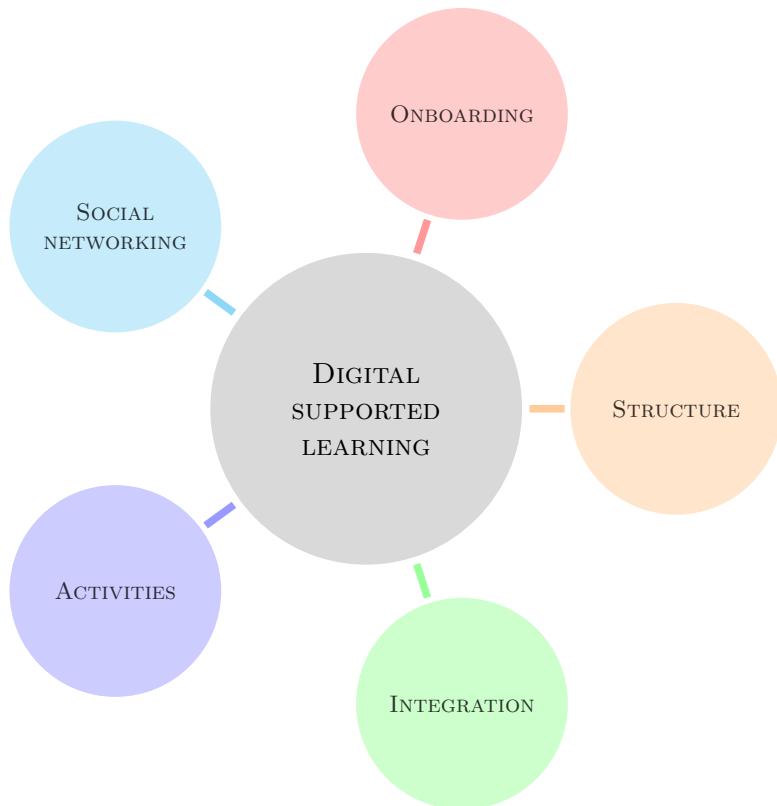


Figure 2.1. Categories of ideas generated from a workshop on digital supported learning

In the following we present each category of ideas. It is important to remember that we partook in the generation of some of these ideas ourselves. However we found it important and interesting to include it in the report as it provides yet another datapoint of comparison for our own results as well as some unique ideas.

2.3.1 Ideas: Onboarding

The ideas in **ONBOARDING** are concerned with educating students and teachers on the features and intended use of different digital initiatives and tools. The discussion that took place at the event (but is not reflected in the summary) justified the importance of these ideas with an inherent lack of awareness/ignorance of the features that Moodle provides. This sparked the fear that the same might happen for a video platform, and thus four ideas came to be:

- Introbook for new students
- Educate teachers about Moodle and video platform
- Digital literacy workshops
- Pop-ups/suggestions/getting started tips built into the platforms themselves

2.3.2 Ideas: Social networking

The ideas in **SOCIAL NETWORKING** revolve around different kinds of study relevant communication tools. The justification for many of these ideas were that students use many other tools like Facebook and Google to communicate, plan, and share content. This may not be the most effective workflow and there may be privacy implications when sharing research over these third party platforms. This gave rise to four ideas:

- Event planning / shared calendar
- Discussion and Q/A, categorised board across AAU
- Video platform with open access at AAU with indexed content and possibility to ask questions + interactivity
- Chat + blogging (Microsoft Teams / Slack / Micro.blog)

2.3.3 Ideas: Activities

The ideas in **ACTIVITIES** spans fairly wide, but the underlying theme is something to the effect of things one can do online, that may enhance learning. The discussion at the time, in relation to some of the ideas, was about how much people would actually end up using the features and how to avoid another Moodle situation where tons of features stand unused and unknown. This ties in with the ideas in subsection 2.3.1. The ideas were:

- Interactive classroom: quizzes / questions / dialogue
- Peer-to-peer problem solving workspace and feedback
- Showcase of good solutions and solved example problems
- Podcasts to learn when walking around or doing dishes
- Quizzes for self-testing
- Alternative report styles: video / audio / creative
- Feedback from teacher / supervisor

2.3.4 Ideas: Integration

The ideas in **INTEGRATION** are primarily technically ways to integrate with AAU's content and services. The discussion around these ideas is that time has shown that the software and interfaces that AAU provides is not always the greatest. Also it simply does not suit everybody's needs and preferences, and probably never could, given the

widely different use cases and people that uses it. Therefore it would be beneficial if AAU provided digital hooks for other applications to utilise. This is similar to how the email protocol is not tied to a single provider, but is openly available for anyone to build for. The ideas were:

- RSS for videos / podcasts
- Use open standards
- Easy export of notes / course material
- Notifications for hand-ins / deadlines

2.3.5 Ideas: Structure

The ideas in **STRUCTURE** are about how to structure and present curricula and course material to students. The discussion revolved around a need for a coherent overview over tasks and course material. It was in part motivated by experiences with Moodle often being used widely different from course to course. The ideas were:

- Progress tracking
- Templates for Moodle (for teachers)
- Strong search functionality
- Overview of learning objectives
- Gamification / visualisation of acquired skills
- Possibility to work across educations

2.4 An Overview of Existing Platforms

In this section we evaluate and discuss Mediasite, Panopto, and Kaltura, the three platforms that DeiC offer, and of which one will be chosen as the video platform at AAU. The focus is to map capabilities and features across the platforms and find out how well they meet the demands of AAU, from the teachers and students point of view.

First, some organisational definitions: As mentioned in subsection 1.1.4 (*Platform Practicities*) all three solutions are vetted by DeiC to reduce cost by consolidating and applying knowledge across Danish universities. DeiC's services also include presenting the solutions for potential clients and acting as the first line of support, followed by NORDUnet, and lastly the platform vendor, once a platform is implemented. All platforms are hosted by NORDUnet in Denmark, to maximise privacy, throughput, and stability. NORDUnet is part of the Global Network Architecture (GNA) initiative, that oversees the creation of national and international research networks.

The information we present in this section is obtained from DeiC (2019), two DeiC presentations at AAU, see Appendix H for notes, and carefully crawling platform vendor websites (Kaltura, 2019; Mediasite, 2019; Panopto, 2019).

	Mision Statement	DeiC Description
Kaltura	Kaltura provides live and on-demand video SaaS solutions to thousands of organisations around the world, engaging hundreds of millions of viewers at home, at work, and at school.	Kaltura is the portal solution for producing YouTube-like websites, with many opportunities to customise the website and players themselves, for example in collaboration with a designer.
Mediasite	We're here to make you think about video differently. We make sure educators and communicators reach the masses in real time with the most inspiring and imaginative uses of streaming video you'll ever see.	Mediasite has a special strength in relation to automation of auditorium recordings via dedicated hardware and calendar controlled recordings, as well as video conference system recordings. The recordings can subsequently be displayed across a number of portals and platforms.
Panopto	We're video nerds. We spend our time thinking about codecs, containers, media pipelines, and speech recognition. Why? So that you never have to.	Panopto is the lightweight solution suitable for user-generated content that does not require dedicated hardware solutions or steep learning curves.

Table 2.1. Overview of existing platforms, as described by themselves and DeiC

The three platforms have a similar feature set, but differs slightly in implementation: They all provide a desktop screen recorder app that can also record external sources, such as a webcam, simultaneously. They can publish directly to the platform, without leaving the app, or export the recording locally and upload later. This is useful if one wishes to edit locally with ones preferred third-party editing software. All major operating systems are supported for upload, either through an app or their website as fallback. On Figure 2.2, Figure 2.3 and Figure 2.4 is the desktop recorder for each platform, the interface in its entirety can be found in Appendix A.

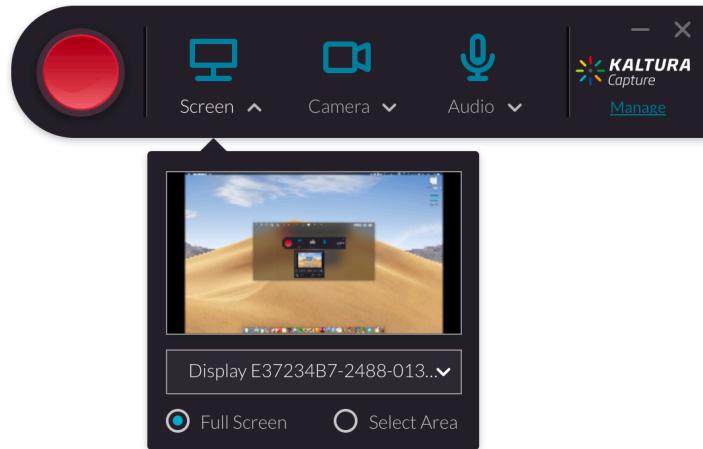


Figure 2.2. The desktop recorder that welcomes users who wish to start a recording with Kaltura

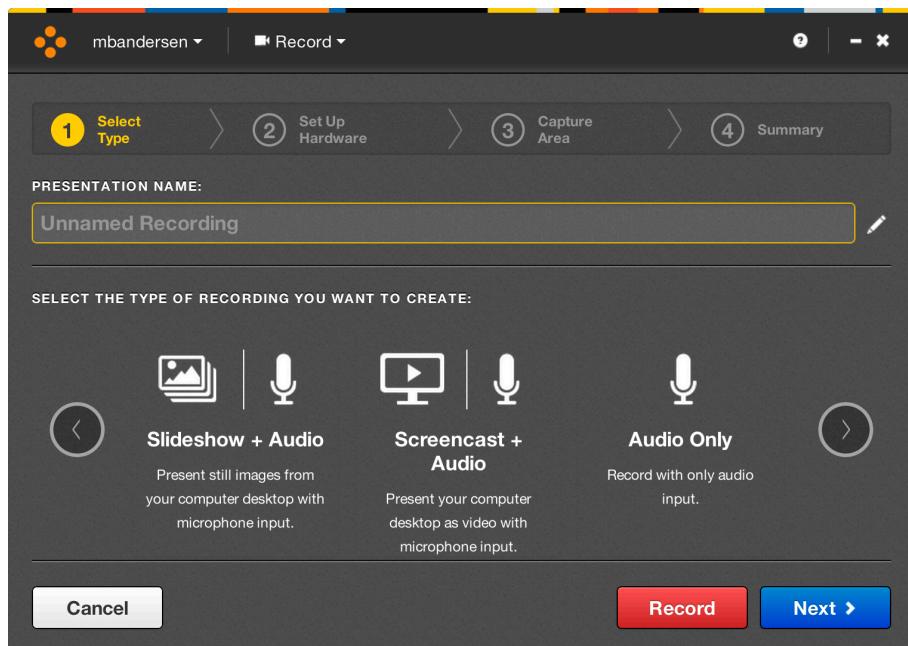


Figure 2.3. The desktop recorder that welcomes users who wish to start a recording with Mediasite

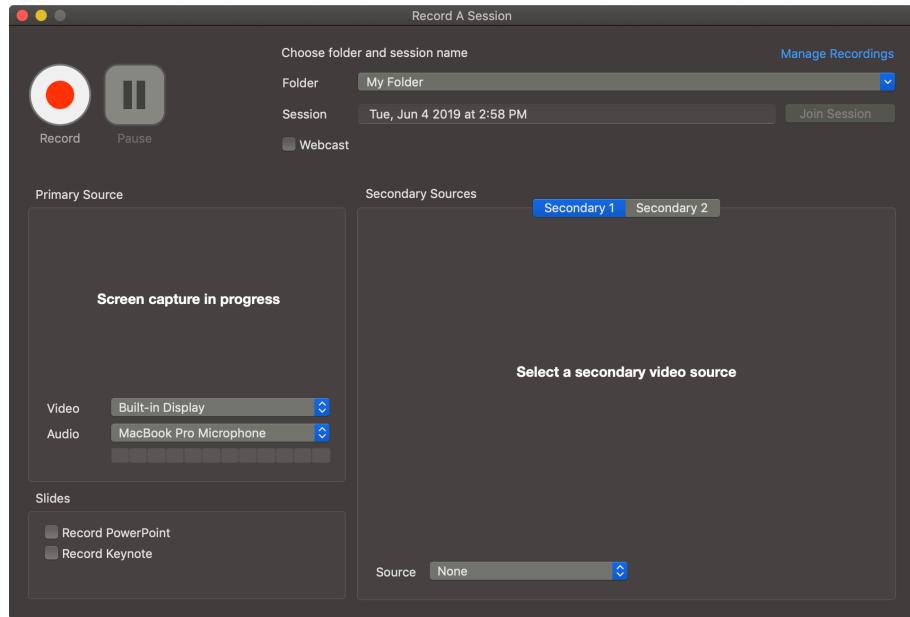


Figure 2.4. The desktop recorder that welcomes users who wish to start a recording with Panopto

After uploading, all platforms support limited (to varying degrees) editing directly in the browser. They also have direct integration with Moodle and support publishing directly into Moodle boards, for things like courses. Other noteworthy common features include, but is not limited to; quizzes, where teachers can gauge student understanding and analytics to track different aspects of student engagement with videos. For a comprehensive feature comparison at the time of writing, see Table 2.2.

Evidently all three platforms accomplish many of the same things, and are all able to fulfil AAU's three basic needs as described in section 1.1. It therefore becomes a matter of identifying which platform *best* meets the needs of the teachers, students, staff — AAU as a whole. In this regard it is worth briefly exploring from which background each platform comes from and what their differentiating strengths are:

Kaltura originates from the media and streaming market and is therefore very focused on playback of content and creates the best video archives similar to a local version of YouTube. A differentiating feature is their support for tagging of videos as well as flexibility and customisation.

Mediasite places a large emphasis on the technologies that power recording, transcoding and playback of content. They offer automated recording and publishing from auditoriums and video conferences via dedicated hardware.

Panopto was made specifically for, and primarily sells to, teaching institutions. They focus on easy production of user generated video content, with existing hardware. A differentiating feature is the ability for users to create bookmarked notes and strong support for comments. They also feature the strongest search functionality with both *Automatic Speech Recognition* (ASR) and *Optical Character Recognition* (OCR) that automatically makes in-video speech and text searchable by users.

The platforms seems to quickly converge over time as each adds features that the others already have. The feature comparison in Table 2.2 is a moving target, and incomplete because of the nature of the complex and flexible nature of the products. Also it is stitched together from fragmented pieces of information from their websites as best we

could. However, judging a platform by how many boxes it ticks, would be doing users a disservice. It is more sensible to further investigate which features support the underlying activities that are required at AAU as well as test how well each platform performs in the hands of a user.

Features	Mediasite	Panopto	Kaltura
Record (Tool)	✓	✓	✓
Record (Multi-stream)	✓	✓	✓
Record (Powerpoint)	✗	✓	✓
Record (Video annotations)	✓	✗	✓
Upload (PC)	✓	✓	✓
Upload (Mobile)	✓	✗	✓
Edit (PC)	✓	✓	✓
Edit (Mobile)	✓	✓	✗
Edit (Web)	✓	✓	✗
Stream (local)	✓	✓	✗
Steam (WWW)	✓	✓	✓
Podcasts	✗	✓	✓
Live-stream	✓	✓	✓
Playback speed	✓	✓	✓
Offline playback	✗	✗	✓
Viewing (Apps iOS/Android)	✗	✓	✗
Video comments (maybe timestamps)	✓	✓	✗
Video branching	✗	✗	✓
Play and organise multiple views	✓	✓	✓
Player customisability templates	✓	✗	✗
Closed captures	✓	✓	✓
Quizzes	✓	✓	✓
Analytics (watching)	✓	✓	✓
Analytics (Quizzes)	✓	✗	✗
Analytics (Individual)	✓	✗	✗
Analytics (Activity and viewership by device)	✓	✗	✓
Search (ASR)	✗	✓	✓
Search (OCR)	✓	✓	✗
Search (Tags)	✓	✓	✓
Search (Catalog)	✓	✓	✓
Search (Audio)	✓	✓	✓
Search (Notes)	✗	✓	✗
Search (Quiz questions)	✗	✗	✓
Search (defined scope)	✓	✓	✓
Search (Filters)	✗	✗	✓
Search (including synonyms of searched term)	✗	✗	✓
Access control	✓	✓	✗
Login with existing authentication system	✓	✓	✗
AAU visual branding	✓	✓	✗

Moodle specific integration	✓	✗	✓
Open API	✓	✓	✓
Publish to YouTube	✓	✗	✗
Publish to iTunes U	✓	✗	✗
Multiplatform	✓	✓	✗
Device feature parity (consume)	✓	✗	✗
Adaptive bitrate streaming	✓	✗	✓
Accessibility (Screen reader)	✓	✗	✗
Keyboard shortcuts	✓	✗	✗
Video chapters	✓	✓	✓
Update slides	✓	✗	✗
Manage user-based storage consumption	✓	✗	✗
Pre-scheduling of video availability	✓	✗	✗
Video quality cap	✓	✗	✗
Server storage (AAU)	✓	✗	✗
Server storage (Provider)	✓	✗	✗
Digital notes	✗	✓	✗
Customer service	✓	✓	✗
Public videos	✗	✓	✓

Table 2.2. Comprehensive platform feature comparison

Interviews 3

In this chapter we discuss the selection process of interviewees, interview strategy, and analysis method we used to conduct interviews for this report. Four interviews were conducted with students and teachers from intentionally diverse academic backgrounds. All interviews were semi structured and transcribed post-hoc. The interviews were analysed using thematic analysis, as described by Braun and Clarke (2006).

3.1 Selecting Interviewees

In this section we discuss our selection process for our interviewees. All interviewees have given explicit consent to be mentioned by name in the report. We strive to represent a wide range of perspectives in our data, all with some relevance to the user scenarios reported in section 1.1 (*State of the Art & Motivation for Digitisation at AAU*) and represent different faculties on AAU: Both the more technically inclined and the humanities and social sciences-oriented, across teachers and students. Figure 3.1 depicts an overview of the different faculties at AAU and their respective departments.

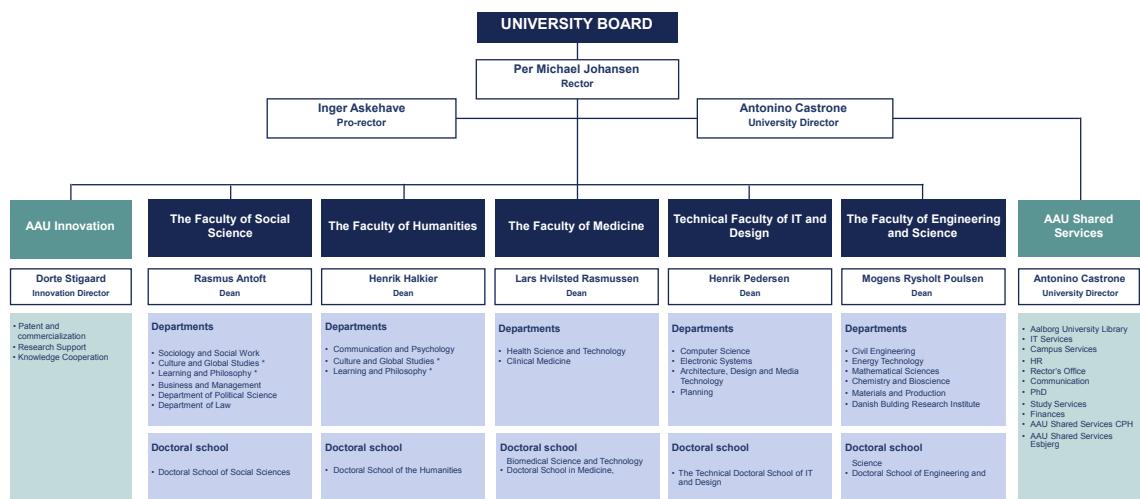


Figure 3.1. Organisation Chart for AAU (Aalborg University, 2019)

Equally many teachers and students are interviewed because we find their perspective equally important on a matter that impacts both. Due to time and resource constraints present study include interviewees only from the Faculty of Humanities and the Technical Faculty of IT and Design. When constrained to only two faculties, we find these to be the best representatives of a rough spectrum from humanities and social sciences-oriented to technical educations.

3.1.1 Interviewee: Kurt — Lector @ Computer Science

Kurt Nørmark is an associate professor at the Department of Computer Science at Aalborg University. He came to our attention and became of interest to present project because he is one of the pioneers of video lectures and the introduction of flipped classroom teaching at AAU. He has built his own video platform and gathered valuable, concrete experience in using it for the last couple of years — an experience he has written about on his homepage (Nørmark, 2018). As such he represents one of the most rigorous viewpoints at AAU in regards to the usage of video relevant tools and teaching methods. In the interview with him that we conducted the 27th of Marts 2019, we covered:

- History of digitisation at AAU
- Motivations for his platform
- Importance of classroom activities
- Lack of student engagement
- Importance of comments
- Benefits of using video
- Video best practices
- Recording and publishing
- Challenges of video post-processing
- Social aspects
- Challenges with scheduling
- How he benefits from his own videos
- Importance of capable hardware
- Importance of editing ones own videos
- His feedback from students
- The use of quizzes
- Analytics
- How the knowledge base can be of help

3.1.2 Interviewee: Stefan — Student @ Medialogy

Stefan Nordborg Eriksen studies Medialogy at Aalborg university at his 4th semester of the Bachelor. Before that he took an HTX exam in technology, design and innovation. Then a vocational education at 3D College, becoming a web integrator and working with 3D-graphics. After that he wrote a multi media design thesis on game development at Dania GAMES. In his spare time he teaches game development to kids via Coding Pirates Aalborg. He is also vice chairman at the Medialogy study board at AAU.

He represents the technical students at AAU. In the interview with him that we conducted the 30th of April 2019, we covered:

- Pedagogical method preferences
- Study tactics
- Prioritising mental resources
- The use of quizzes
- Wishes for video education
- Risks with digital solutions
- What motivates students
- Video hand-ins and knowledge sharing
- Importance of clear educational goals
- Segmenting hand-ins across a semester
- Importance of teacher feedback
- Importance of video fit-and-finish
- Problems with streaming lectures
- Analytics

3.1.3 Interviewee: Noomi — Lector @ Communication & Psychology

Noomi Christine Linde Matthiesen is an associate professor at the institute of Communication & Psychology at Aalborg University. She mostly teaches pedagogical psychology but has a vide educational profile. She has not used video in her own teaching and is appears to see technology as a means to an end.

She represents teachers from the humanities and social sciences-oriented fields at AAU, and argues for caution with regards to technology as the solution to all problems. In the interview with her that we conducted the 5th of may 2019, we covered:

- Importance of classroom discussions
- Lecture style and experiences
- Deep vs. surface level knowledge
- Audio only content
- Non-quantifiable evaluation
- How the knowledge base can be of help
- Engagement differences in class sizes
- Distractions on screens
- Reading the room
- Importance of quality of video
- Importance of easy-to-use software
- Analytics

3.1.4 Interviewee: Astrid — Student @ Psychology

Astrid (pseudonym) ia a 2th semester Psychology student at Aalborg University. She is also involved with different voluntary work, has traveled the world, and is politically active.

She represents students from the humanities and social sciences-oriented field at AAU, and is generally optimistic about technology, but has little patience for poorly executed user interfaces. In the interview with her that we conducted the 5th of may 2019, we covered:

- Importance of classroom discussions
- Social aspects
- Lecture style preferences
- Audio only content
- Procrastination and deadlines
- Tests for self evaluation
- Importance of UI/UX quality
- Frustrations with Moodle
- Importance of quality of video
- Reading the room
- Importance of easy-to-use software
- Analytics

3.2 Interview Method

The nature of the data that is sought is non-individual. Rather it should represent facts concerning thoughts and experiences with regards to teaching and learning at AAU, with a special focus on digitisation of education practices. Therefore the choice of interview methodology becomes a question of gaining access to knowledge possessed by the interviewees, whom in this context, and for the reasons outlined here, can be considered experts. In short: The expert interviewees are considered a source of information and are themselves not the object of investigation.

Expert interviews can take different forms, but the one best fitting the requirements at hand is the *systematizing expert interview*. Characteristics particularly includes an assumption that the experts has derived their knowledge from from action and experience and that the knowledge is reflexively available, (Bogner & Menz, 2009, pp. 46–47). This criteria appears to be met, considering teachers have practical experience teaching and students studying.

There is however a difference in the depth of expertise between students and teachers that impacts the dynamic of conducting the interview itself.

In the case of interviewing students we consider ourselves (the interviewers) and the students (the interviewees) co-experts. This has the implication that we can assume a shared store of knowledge on which to base the interview along with equal status, (Bogner & Menz, 2009, p. 58).

When interviewing teachers both status and depth of expertise is different. The optimal knowledge extraction strategy for the interviewer in this situation is to undertake the role of a *layperson*. While this may initially seem like a failure on the part of the interviewer, Bogner and Menz (2009, p. 63) argues that it can be utilised to a strategic advantage. This is because the expert then acts “like someone with a didactic task of transmitting knowledge”.

Whether the interviewer is considered *welcome* or *unwelcome* impacts the feasibility of this strategy. In present context the interviewees are given the opportunity to influence their own future, by letting their voice be heard. They also had every opportunity to turn down the interview proposal, and thus we consider ourself welcome and the threat of communication failure to be minimal. One possible shortcoming of the strategy is that the conversation may become a monologue on the expert’s part, but this did not appear to be a pronounced problem in the interviews, (Bogner & Menz, 2009, p. 71).

3.3 Conducting and Transcribing Interviews

The interviews were semi-structured with pre-made questions which provided an opportunity to have concrete questions answered, but also left plenty room to explore new topics of interest to the interviewees. We think of it as an inductive approach to interviewing, letting our interviews be directed mostly by the data/interviewee.

It is important to recognise that the data is the result of a complicated interaction between interviewer and interviewee. As such it would be naive and frankly not very credible for a researcher to claim that ones own position does not influence the interview and by extension the data. We make no such claims, but by being explicitly aware of this effect in the report we hope to minimise it.

Each interviewee had their own structure of questions, that can be found in Appendix C, based on their field of expertises. This was to ensure maximum output and the least waste of time possible. The questions also naturally evolved from experience with prior interviews. The interviewer allowed for detours and sometimes skipped questions entirely if they turned out to be less relevant in the interview setting than anticipated.

The transcription was fundamentally content oriented, meaning that repetitive or non-informative parts could be omitted. This necessitates some evaluation of potential selection bias and unintentional misinterpretation risk on our part. Ideally we could cross reference codes with multiple other people’s coding of the same data. This of course is resource intense, so the more pragmatic solution was to filter the data ourselves, but to do it together and discuss each decision.

Transcripts can be found in Appendix D, E, F, and G.

3.4 Analysis Method — Thematic Analysis

In order to analyse the interviews in a structured manner a method of analysis is needed. We are interested in extracting the existing knowledge, needs and past experiences of the teachers and students from which a set of recommendations can be constructed.

Thematic analysis, as described by Braun and Clarke (2006, p. 79) fits the bill, offering a flexible method for qualitative research that can be used to analyse the whole data corpus in a structured framework. We base our approach on the guidelines by Braun and Clarke (2006, p. 79) who, in short, describes thematic analysis as:

A method for identifying, analysing and reporting patterns (themes) within data.

— Braun and Clarke (2006, p. 79)

In generating themes we are using existing ideas, namely PBL and other pedagogical principles as a guiding structure. We are interested in what is needed to make a video platform successful for educational purposes at AAU, considering the existing needs for traditional education coupled with the requirements of implementing a video platform.

3.4.1 Alternative Methods Considered

The criteria for our choice of method were especially flexibility, accessibility and some robustness. In our search for a method grounded theory was also considered. This approach resembles thematic analysis in the sense that they both include coding and constantly moving between data gathering and analysis, (Corbin & Strauss, 1990, p. 12), and are grounded in the data, but there are a few key differences.

When constructing a grounded theory it is highly advised to not deduce the theory from preexisting assumption (Glaser & Strauss, 1965, pp. 1–4). Instead we actively base our approach on existing knowledge in order to generate the themes and codes in the analysis. Another essential aspect to grounded theory is generating a *theory* grounded in the data — we are more interested in themes. We also found the framework too rigid and we are not interested in a 'full-fat' theory, but more interested in extracting themes (Braun & Clarke, 2006, p. 81). Where thematic analysis is a more accessible form of analysis, where we need not the substantially more detailed theoretical and technological knowledge of approaches, as is accustomed in grounded theory (Braun & Clarke, 2006, p. 81).

Another alternative branch of qualitative analysis is discourse analysis, which focuses more on the underlying aspects of a conversation, the unuttered. If we were more interested in peoples attitude or feelings towards PBL we might take this kind of approach, but instead we consider our interviewees experts and assume that they are capable of dispensing their knowledge on a surface level (E. & I., 1993, p. 1). Given the nature of the data collected as described in section 3.2 we also found this to be an incorrect method to apply.

3.5 Our approach to Thematic Analysis

In this section we outline the specific approach to thematic analysis used in this report and how we conducted it, as advised by Braun and Clarke (2006, p. 79).

Given that we, the researchers, are the ones driving the analysis, we use a theoretical approach, according to Braun and Clarke (2006, p. 84). This results in a more detailed description of some of the data, but a less rich overall description, because we hone in on what we deem important. This suits the task at hand well because we believe that identifying and analysing few important themes in detail will be more beneficial for making specific recommendations than a surface level analysis of the indeed enormous topic of pedagogical and surrounding theory. This is also reflected in section 3.2, where we strive to trim out questions not important to our research. A theoretical approach also means that we are coding for an existing research question, as opposed to an inductive approach in which the research question is developed from the data (Braun & Clarke, 2006, p. 84), not unlike a grounded theory.

We are using a semantic approach to generating themes, where we use the explicit meaning of what participants say. A theme catches something significant about the information in connection to the research question, and represents some structured meaning from within the data. A more frequently occurring theme is not weighed more heavily than less represented themes, fair judgement is given to all themes — frequency of representation is not equal to importance.

The following steps describe our procedure we used, as outlined by Braun and Clarke, p. 87:

1. Familiarising yourself with your data (transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.)
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the report

This is not to say that we used a linear approach — several steps were repeated and intertwined, but each step was at least done once. First, we familiarised ourselves with the data by transcribing it manually. This is time consuming, but results in a very deep familiarity with the data. Some parts of the interviews with no relevance to the research question or which were incomprehensible, were cut from the interview transcripts indicated by three dots … as visible in the transcripts in Appendix D, E, F, G. Each interview was analysed partially before going to the next, this was done to reassess our existing questions in order to identify if trimming or expansion was needed.

The partial analysis involved generating our initial codes, for this we used the qualitative analysis software, ATLAS.ti (2019). With this application one is able to import and view transcript, code text snippets, group codes and much more. It can handle multiple transcripts in a single file, which enables the reuse of codes and tracking themes across interviews. Figure 3.2 depicts an example of coding in ATLAS.ti where two snippets of text has a corresponding code on the right.

K: jeg tror at de havde problemer på mobile platforme. Men det benyttede jeg faktisk en del dengang det var der. **For der kunne man sætte, på sådan et bestemt sted i videoen på sådan et overlay, ne tekst ind. Et eller andet, en besked om at her et eller andet ved en fejl, i skal lige være opmærksomme på.**

M: Ja.

K: **Men jeg har en drøm om at en videoplatform skulle kunne formidle stumper der ligger som altså, så hver en lille stump skulle så kunne erstattes med en stump der er gjort, altså der er rettet til.**



Figure 3.2. Example of coding using ATLAS.ti Diagram for AAU

Ideally we would conduct interviews until our data is completely saturated, but due to resource constraints we decided to end at 4 interviews — 2 teachers and 2 students. After ending the interviews we completed the analysis by re-reading and coding the 4 transcripts together over 3–4 rounds in an attempt to make sure nothing of importance was left out and ensure agreement.

Interview Analysis 4

In this chapter we present and discuss the findings from the thematic analysis of the four interviews. Five themes were isolated in the analysis — each exploring a distinct and interesting topic in regards to video teaching and learning at AAU. Each theme is thoroughly constructed from multiple cycles through the data, to the point that we feel confident about them. Select interview quotes have been translated from Danish → English for presentation in the report. Original quotes in danish are referenced in their respective transcripts that can be found in Appendix D, E, F, G as well. Such a reference will include the name of the interviewee, which appendix it can be found in and a number indicating which line in the transcript the quote can be found on, like so: “Kurt (Appendix D, l. 217)”. Clicking the reference will take you to the exact location in the transcript where the quote is from.

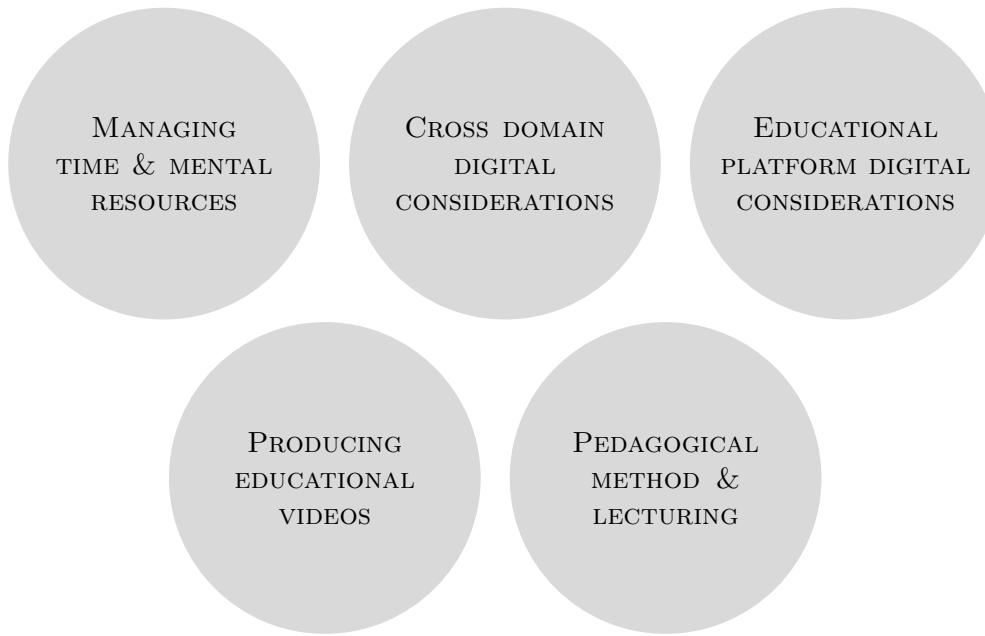


Figure 4.1. The five themes that were isolated with thematic analysis

4.1 Theme: Managing time & mental resources

The theme **MANAGING TIME & MENTAL RESOURCES** concerns the problems associated with prioritising and planning. It impacts students and teachers alike, but in different

ways. Figure 4.2 depicts the five codes that make up the theme. These will be discussed in the coming subsections below.

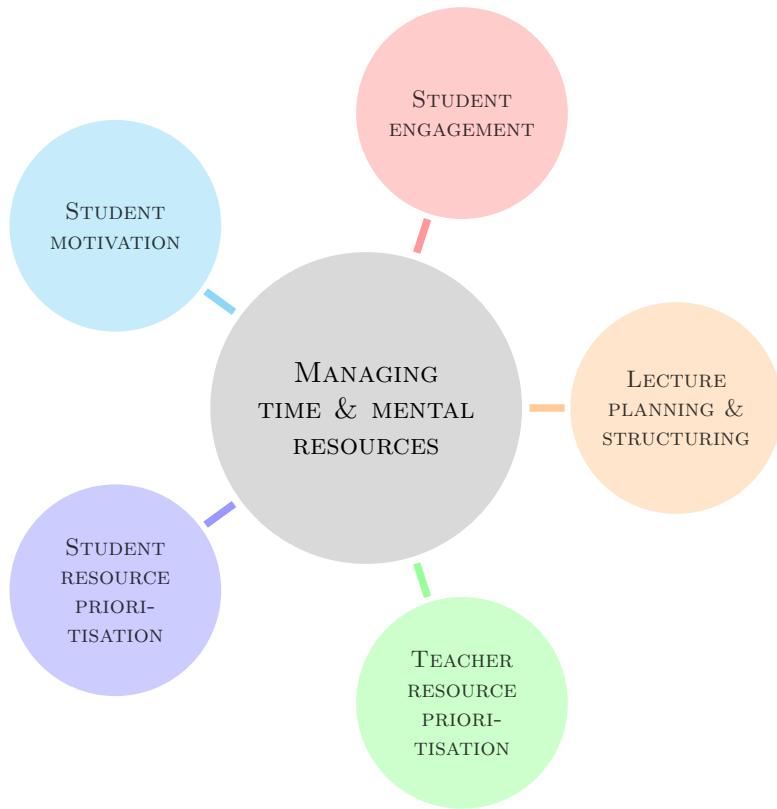


Figure 4.2. Theme: MANAGING TIME & MENTAL RESOURCES — with codes

4.1.1 Implications of Theme

In regards to restructuring lectures the current structure does not facilitate a flipped classroom structure well. As it is now changing the structure of a lecture introduces several problems and this could dissuade teachers from trying out new approaches. When transitioning from lectures to video teachers fear we risk losing even more student engagement if they are moved out of the lecture halls. Although it is already only a handful of students who participate in discussion during lectures, smaller classes seem to increase student engagement. This could be because students feel a stronger need to participate because they can hide in the crowd as easily. This may also have something to do with some larger classes being mandatory and smaller being elective. This indicates that smaller, elective and more intimate classes should be prioritised, where dispensing of knowledge happen outside the classroom.

The point of an assignment and progress should be very clear to the students. According to students combining test with videos could help retain motivation and help keep track of progress. Generally students think that they would benefit from having smaller mandatory deadlines spread out over the semester. But this should however not prevent them from delving deep into a subject from time to time. A combination of smaller assignments and tests could help increase motivation in students and also help keep track of progression both for students and teachers.

It should be clear for teachers how and what they will gain from using this digital resource and it should not be forced upon them. The knowledge base should put effort towards surfacing booms from using the platform and the implementation should happen willingly and not forced upon teachers.

4.1.2 Code: Lecture planning & structuring

The code LECTURE PLANNING & STRUCTURING is about how teachers like to structure their lectures and what problems emerge when that model does not fit into the usual structure at AAU. Ideally Kurt envision, use, and endorse a model where teachers meet with students for one hour in the beginning of a lecture, one hour in the end, and with group work in the middle, Kurt (Appendix D, l. 217).

The first hour is a conversation revolving around questions the students have submitted in advance, in response to watching videos. Noomi (Appendix F, l. 9) similarly prefers an introduction to the problems and topics at hand at the beginning of the lecture, before discussion or group work. They both do this to get the students thinking by briefly reminding them of the topics, even though they have either watched or read from home. This indicates that videos cannot stand completely on their own.

Kurt adds that one of the biggest problems he sees with introducing a flipped classroom model or similar, is that they do not fit into the standard room-booking procedure at AAU Kurt (Appendix D, l. 231).

4.1.3 Code: Student engagement

The code STUDENT ENGAGEMENT is dominated by input from the two teacher interviews. It is closely related to STUDENT MOTIVATION, which on the other hand is the students' perspective on some of the same problems.

Kurt describes his trouble with getting students to reflect on video course material as such:

I had actually thought that I would force the students to reflect on the things, the same way one would expect if we sit and talk about the subject matter. There, one would expect that the student reflects upon it, the subject matter. But altogether that has been very difficult.

— Kurt (Appendix D, l. 128)

This is a direct observation of how students reflect upon video material and thus carries a lot of weight. One might fear that many of the students have not even watched the videos, but this we can only speculate about. Either way it is highly problematic, since preparing from home is a tent pole of the flipped classroom methodology (340 Akçayır & Akçayır, 2018).

Noomi (Appendix F, l. 92) elaborates that the class discussion is worsened for everybody when some students have not read the curriculum. In the specific case she references she attributes the lack of reading to the students not being required to participate in the exam. On a similar note they both say that it is often the same few students that participate actively in a class discussion, Noomi (Appendix F, l. 17), Kurt (Appendix D, l. 134).

In classes with 200+ students Kurt has found that the amount of questions and responses is just enough to occupy the first hour, Kurt (Appendix D, l. 148). Although classes with 200+ students are not uncommon, most classes at AAU are much smaller. This might initially raise some concern, but Noomi (Appendix F, l. 95) has observed that in small classes, students are more likely to be engaged because, she believes, they feel more obligated to partake in the discussions. This may also be influenced by her smaller classes often being chosen by the students themselves whereas the large ones are obligatory, which she believes promotes student's motivation. This should be considered when designing video courses. It might be necessary to introduce extra carrots or sticks to make sure that student motivation doesn't deteriorate.

4.1.4 Code: Student motivation

The code STUDENT MOTIVATION is akin to the student's take on engagement, why they are sometimes not motivated to prepare for lectures, listen in class, and what they believe can be done about it.

Stefan (Appendix E, l. 85) thinks that it is a common problem when the point of a given assignment is not clear, this can in turn reduce student motivation to invest time and energy. He has sometimes found it useful to use teacher-provided checklists on Moodle to keep track of progress Stefan (Appendix E, l. 93)

When asked what would motivate her to watch and reflect on a video, Astrid (Appendix G, l. 56) swiftly answered *tests*. She also thinks that videos that, unlike lectures, can be watched without a deadline, are prone to being postponed, Astrid (Appendix G, l. 50).

4.1.5 Code: Student resource prioritisation

The code STUDENT RESOURCE PRIORITISATION is about how students prioritise and allocate their time and resources and how they can be better spent.

Astrid (Appendix G, l. 51) is afraid that if she had the opportunity, she would postpone watching all videos until right before the exam. Stefan (Appendix E, l. 100) has tried a model where the hand-in for a course was spread out over the semester as smaller parts of a large report, with deadlines. The same course was previously completed with one large hand-in at the end. Stefan thinks that, although it puts extra pressure on the students during the semester, it is ultimately for their own best. He also sometimes likes to achieve a state of flow, that emerges from having time to dig deep into a topic, Stefan (Appendix E, l. 9).

Again this indicates that there is a need for something more than just being told to watch a video. section 2.2 offers some strategies for promoting student motivation.

4.1.6 Code: Teacher resource prioritisation

The code TEACHER RESOURCE PRIORITISATION is about how teachers are pressured for time and how a video platform would fit into their schedule.

It is best described by this quote:

It is no secret that we are busy in general and we get more and more busy, the more funding is cut, and the more stuff is dictated from above. So for me to

prioritise to spend time to contact the knowledge base and get help to solve a problem or similar, then I would REALLY need to see that I had the time for it.

— Noomi (Appendix F, l. 39)

She adds that if the video platform makes it easy to produce videos of high quality, she would be motivated to use it. She is not interested in making videos of subpar quality, Noomi (Appendix F, l. 110). This indicates a need for a good first-time experience.

4.2 Theme: Cross domain digital considerations

The theme **CROSS DOMAIN DIGITAL CONSIDERATIONS** tells the story of generic user experience considerations that applies equally well to different domains. It is closely related to **EDUCATIONAL PLATFORM DIGITAL CONSIDERATIONS**, and there was some difficulty separating the two, given a fair amount of overlap.

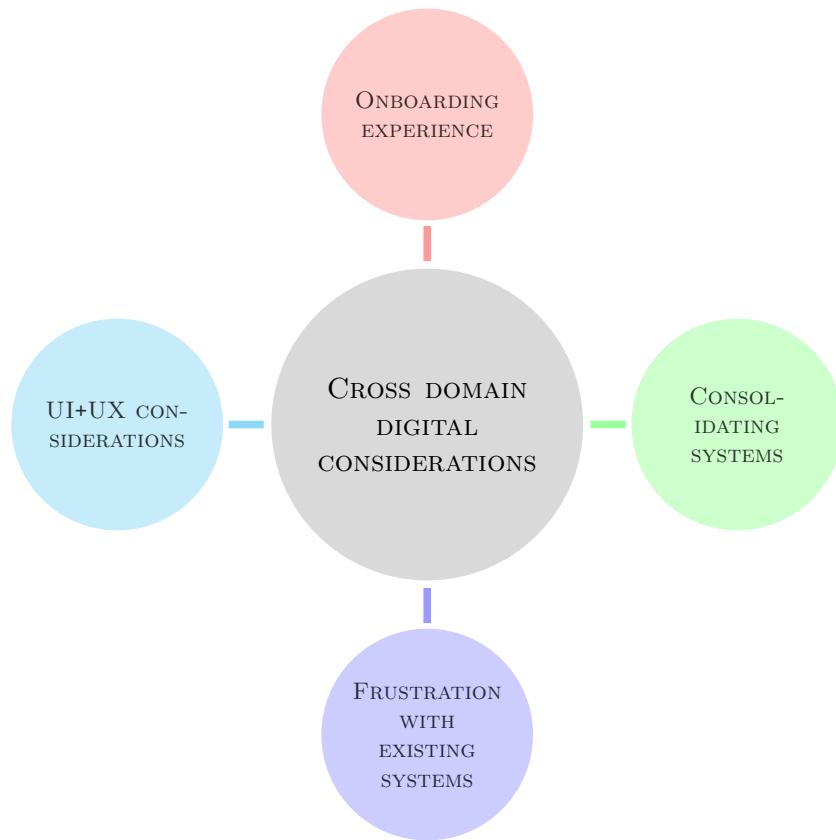


Figure 4.3. Theme: CROSS DOMAIN DIGITAL CONSIDERATIONS — with codes

4.2.1 Implications of Theme

Frustrations with the existing systems already permeate AAU, systems such as Moodle, caution needs to be exercised when implementing yet another system. AAU already have several IT systems, effort needs to be made towards ensuring that they are not implementing yet another undesirable system.

A video platform could benefit from introducing the different features progressively for the user while using the program. This should however not be lengthy tutorials or a hinderance for general use. Some people prefer to have their hand held throughout the process and other want to be allowed to explore the system on their own, without tutorials getting in their way, a compromise between these two should be found.

Technically inclined people seem to be more lenient when it comes to the UI, but they expect more in regards to functionality. Such as being able to edit videos directly in the platform. Whereas people from the humanities seem to expect a more forgiving interface, which also looks and functions without critical errors.

4.2.2 Codes: Frustration with existing systems + Consolidating systems

The code **FRUSTRATION WITH EXISTING SYSTEMS** and **CONSOLIDATING SYSTEMS** were surprisingly consistent across the interviewees. They mostly revolve around experiences with Moodle, but also some other systems. When talking about new digital systems, people are fast to compare them to their prior experiences, and these are seldom positive.

Moodle arose from similar conditions to the ones the forthcoming video platform finds itself in now, a need to consolidate anarchistic systems that started emerging from the bottom. Systems like Kurt's home-built video website, Kurt (Appendix D, l. 56). With regards to Moodle, Kurt sums up the sentiment:

There's multiple challenges with Moodle. I know that my colleagues also hate Moodle. I have yet to meet the first who says that Moodle is a fantastic system.
— Kurt (Appendix D, l. 94)

Astrid (Appendix G, l. 75) agrees and adds that she used a system at her gymnasium, called Fronter, that she used think was bad, but after trying Moodle, she reevaluates that. Astrid and her fellow students use Facebook as an index for linking to thinks on Moodle, because that works better than using Moodle alone.

This general tale of caution should be heard and incorporated when introducing new digital systems, like a video platform. People are already expecting the worst, and will be ready to criticise and compare to previous systems. It would be beneficial to study what is the cause of the frustration with Moodle and make sure to learn from it and make sure to not make the same mistakes again, before introducing the video platform.

4.2.3 Code: Onboarding experience

The code **ONBOARDING EXPERIENCE** is a collection of ideas of how to introduce and educate users of a system in its functionality and intended use.

Stefan (Appendix E, l. 136) notes that it can be an art form just to use search engines effectively, tricks like using quotes for a specific word etc. He believes that many people could benefit from the system informing about itself the first time it's used, with the option to rewatch the hints again later, Stefan (Appendix E, l. 132).

Astrid (Appendix G, l. 100) interestingly adds that often when she encounters a tutorial for an app that she is not familiar with, she skips 9/10 of them because she believes that she doesn't need it. Then after half a year she might discover that she did.

This indicates that it the users should not be introduced to everything at once, but instead when they need it, using progressive disclosure. This can be applied to the software itself, but also the tutorials. Also tutorials that require a lot of reading or watching a long video might be more likely to be skipped. An alternative could be pointing to different functions on the screen with a popover that explains its functionality and why one might want to use it. Astrid (Appendix G, l. 87) thinks it would be a good idea to surface the information right when the user needs it.

4.2.4 Code: UI+UX considerations

The code **UI+UX CONSIDERATIONS** is a collection of considerations in regards to user interfaces and experiences with roots in, but not all exclusive to, educational platforms.

Kurt (Appendix D, l. 205) believes that studnets see the video platform as a valve and is thus fairly indifferent about whether the videos appear in the context of a Youtube playlist or his website. Stefan (Appendix E, l. 128) agrees and says that it does not *need* to be the most aesthetic, as long as it works. Noomi (Appendix F, l. 56) and Astrid (Appendix G, l. 83), on the other hand, expects it to be a very nicely designed system for them to want to use it.

As soon as i had to spend time messing around with it and think it doesn't quite work, i would give up

— Noomi (Appendix F, l. 58)

This again hints that the technical studies are willing to tolerate worse UI than the humanities and social sciences-oriented. It also highlights the importance of getting the UI/UX aspects right, considering they might already be difficult to get on board, given their lesser interest in technology in general.

4.3 Theme: Educational platform digital considerations

The theme **EDUCATIONAL PLATFORM DIGITAL CONSIDERATIONS** encapsulates a collection of considerations with regards to using technology in education. It is specific to education, as opposed to **CROSS DOMAIN DIGITAL CONSIDERATIONS**.

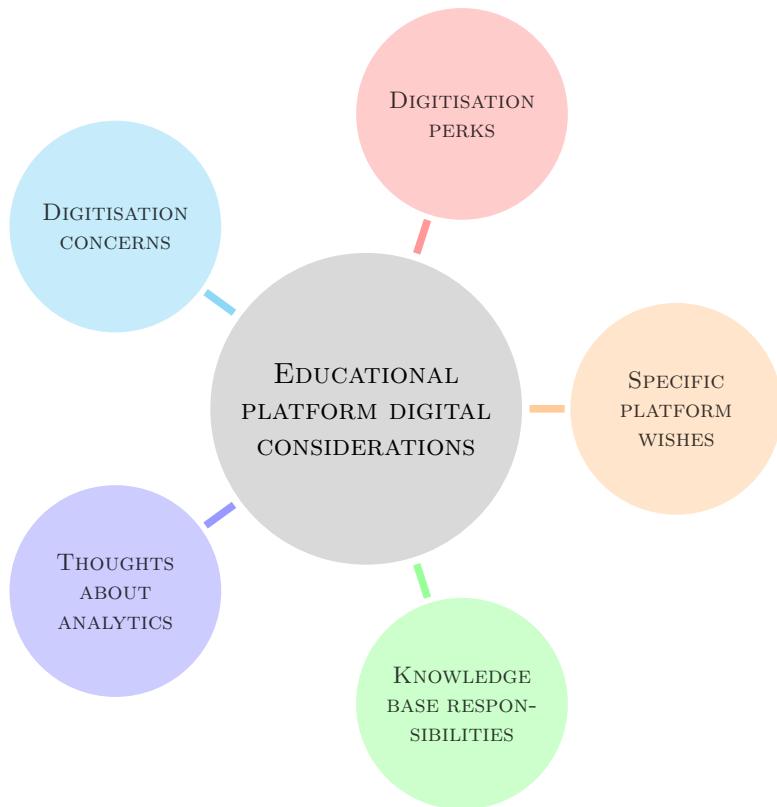


Figure 4.4. Theme: EDUCATIONAL PLATFORM DIGITAL CONSIDERATIONS — with codes

4.3.1 Implications of Theme

Having information traditionally found in lectures available all the time have its perks. Videos can be watched just-in-time, repeatedly, far in advance and from home. They can also reduce the time needed to convey a given subject, because a video can be much more concise. When watching a video Noomi fear that it will be more tempting to turn it off, she do acknowledge that students already phase out during lectures, but the lecture keeps going on and you have a chance to tune in again. Astrid fear that it will be harder to get answers to questions, this could prevent the student from progressing until they receive help.

The general sentiment about analytics is restrained and that it should be used with caution and thoughtfulness. It is especially important for Noomi to allow students to fail trying and not punish errors.

The knowledge base should help interested teachers with getting started with videos, software issues and restructuring of their course around videos. The knowledge base should also make it clear what the teacher stand to gain from using videos, this is an issue for teachers like Noomi who are not already using videos in her teaching.

Some interviewees sought some specific functionality. Stefan would like a robust way of searching the video library and transcripts, to make it easier to find what he is looking for. Kurt would like editing to be built into the platform in order to make small edits faster and easier, this could potentially drastically reduce the work needed to make smaller edits to existing videos.

4.3.2 Code: Digitisation perks

The code **DIGITISATION PERKS** is the optimistic take on the potentials of digitised education, video in particular. These codes broadly explain why one would be interested in digital solutions in the first place.

Stefan (Appendix E, l. 59) mentions the most obvious perk — that the videos can be watched whenever. Kurt (Appendix D, l. 246) backs this up by letting us know that he has heard from students that the fact that they can watch them far in advance or just-in-time, is what they enjoy the most about videos. They can watch them one or more times, and potentially right before doing an exercise. Kurt (Appendix D, l. 294) even watches his own videos as preparation for a lecture.

The students can take the video class whenever they need it and they can watch it one or two times.

— Kurt (Appendix D, l. 247)

Astrid (Appendix G, l. 39) mentioned that students with disabilities can watch from home, which might enable students that would otherwise have difficulties attending lectures. Same goes for students that are ill for longer stretches of time, Astrid (Appendix G, l. 53).

Another large perk is that lectures that would normally take two hours in an auditorium can easily be shortened to one hour of video, according to Kurt (Appendix D, l. 262). Also videos can be played back faster than real time.

4.3.3 Code: Digitisation concerns

The code **DIGITISATION CONCERNS** is the pessimistic or cautious take on digitised education. It represents the viewpoint that one should not let oneself be swayed by exiting new software. This theme also offers compelling reasons why it might even be a bad idea to turn certain aspects of education digital, regardless of implementation.

One such viewpoint is that videos might introduce a disconnect between teacher and students due to the inability to gauge the students current understanding and state of mind, this results in worse communication, Noomi (Appendix F, l. 111). Astrid (Appendix G, l. 42) agrees.

In a lecture room I can feel on my audience — if they need a break, if what I say does not make sense to them, or they have completely lost attention and look blank on their faces. I don't just say what I have prepared, I feel the room and adjust. That is probably some of what is difficult to replace with video.

— Noomi (Appendix F, l. 111)

Noomi (Appendix F, l. 104) also thinks that the temptation to watch Netflix or otherwise not pay attention is enlarged when not in a classroom setting. She acknowledges that students already scroll Facebook at lectures, but makes the argument that the lecture is still going on in the background, and that inattentive students can jump back in whenever, whereas if they are at home, they can just turn off the video entirely. Astrid (Appendix G, l. 50) adds that there might be a problem of procrastination, if there is no hard deadline on when to watch the videos. She also fears that some might become more lonely, Astrid

(Appendix G, l. 39) and that it will be harder to get ones questions answered, Astrid (Appendix G, l. 33).

Interestingly the code **DIGITISATION PERKS** is dominated by Stefan and Kurt, and **DIGITISATION CONCERNS** by Noomi and Astrid. This is further indication that technical studies hold a more positive attitude towards technology in education than the humanities and social sciences-oriented.

4.3.4 Code: Thoughts about analytics

The code **THOUGHTS ABOUT ANALYTICS** describes the four interviewees feelings towards analytics in the context of an educational video platform.

Noomi (Appendix F, l. 80) is not a fan of measuring people this way in general and does not like the idea of introducing more control in this regard. Astrid (Appendix G, l. 109) thinks that analytics is OK if only used on groups, not individuals.

Kurt (Appendix D, l. 426) recognises that analytics can be used or abused, but also believes it to be an attractive resource. Stefan (Appendix E, l. 139) personally do not take much issue with it, but believes that it is not a good metric of how students perform.

The general sentiment is that neither are explicitly happy about analytics, but rather vary on acceptance and perceived utility of it. One implication might be that analytics should be minimised and not targeted towards individuals, if possible. It might also help to be open about what is collected and how it is used.

4.3.5 Code: Knowledge base responsibilities

The code **KNOWLEDGE BASE RESPONSIBILITIES** is a collection of ideas about what kinds of help teachers might need, specifically what responsibilities the knowledge base initiative should take on.

Kurt sees three areas where the knowledge base can be of help: 1: Pedagogical support with regards to course modeling and video types, Kurt (Appendix D, l. 434). 2: Providing software tools, Kurt (Appendix D, l. 436). 3: Help getting started with video editing.

Noomi (Appendix F, l. 121) needs help understanding why she should even make videos in the first place, and wants the knowledge base to provide clear reasons for herself and others and simply market it well to teachers.

4.3.6 Code: Specific platform wishes

The code **SPECIFIC PLATFORM WISHES** contains wishes for the upcoming video platform. Only Kurt and Stefan are represented in this code.

With regards to student-facing features, Stefan (Appendix E, l. 69) wants good search so that he won't have to spend a long time finding videos. He would also like transcripts for every video but recognise that it probably takes too long to make those, Stefan (Appendix E, l. 68). Kurt (Appendix D, l. 160) thinks that besides playing the video itself, the platform needs basic commentary functionality at the least.

In terms of teacher-facing features Kurt (Appendix D, l. 161) believes it would be a huge advantage to have a larger degree of editing capabilities built-in. He also envisions a platform where it would be easy to swap parts of the video after the initial upload. Kurt (Appendix D, l. 173). Stefan is less specific in this regard given that he is not a teacher,

but generally wants the tools to make it easy for the teachers to produce video of high quality, Stefan (Appendix E, l. 115), and Stefan (Appendix E, l. 123).

4.4 Theme: Producing educational videos

The theme **PRODUCING EDUCATIONAL VIDEOS** is heavily influenced by Kurt, given his experience with just that. It is about practicalities like planning, recording, and other technicalities, but also what makes a video good in general. Below the main implications for this theme is discussed and following that a more in depth description of each code.

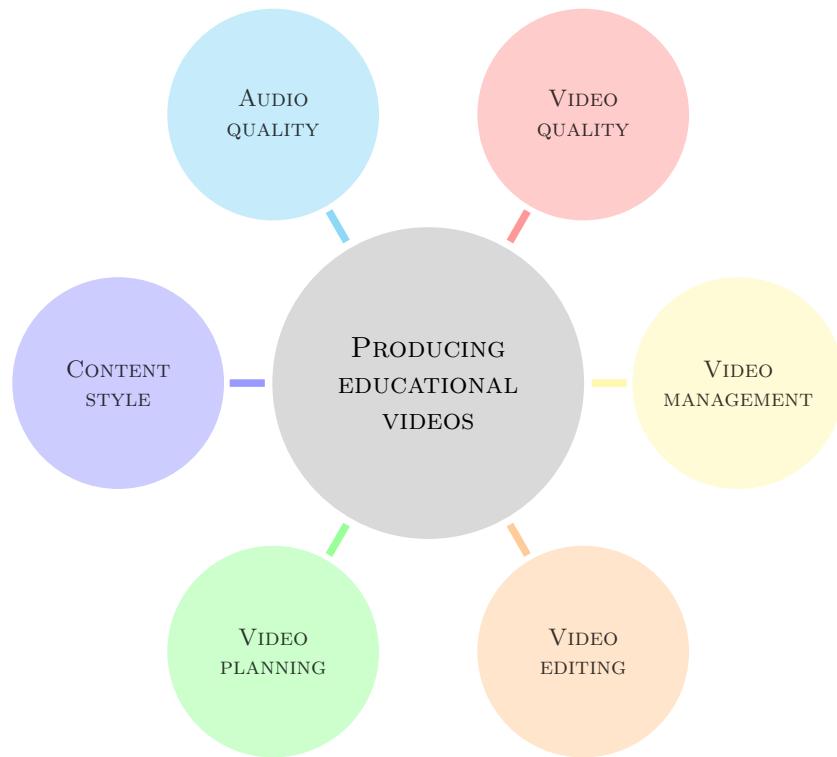


Figure 4.5. Theme: PRODUCING EDUCATIONAL VIDEOS — with codes

4.4.1 Implications of Theme

Overall it seems our interviewees expects an acceptable level of fit-and-finish, both in terms of audio and video, but with a strong emphasis on audio. Some suggest podcasts as the default, and no-one found it particularly useful to record the teacher.

With regards to video and audio quality, the obvious implication is that teachers should have easy access to quality cameras and microphones. Maybe even dedicated studios that they can rent on campus. Teachers should also have access to capable editing functionality, preferably built into the platform to minimise the amount of manual work with exporting and uploading. This at a minimum requires some form of highlighting capabilities, both when recording and in the editing phase.

But one question remains: How can we expect the videos to be good when the teachers are not educated in, and have probably never even tried, editing video before? Noomi even mentions that the fit-and-finish of the videos she sees is usually pretty bad.

This leads us to believe that courses in practical video editing as well as clear guidelines for what makes a good video, should be offered to the teachers by the knowledge base at AAU.

4.4.2 Codes: Video quality + Audio quality

The codes **VIDEO QUALITY** and **AUDIO QUALITY** goes hand in hand. They both represent expressions of what the interviewees expect in terms of audio/video fit-and-finish (not the quality of educational content). With regards to video Stefan (Appendix E, l. 122) does not expect anything resembling Hollywood quality, but also finds bad video “that looks like something that a 7 year old has made” to be distracting. Astrid (Appendix G, l. 106) emphasises the importance of text, if present, needs to be legible. This of course becomes increasingly more important with smaller screens, like phones.

Noomi (Appendix F, l. 62) thinks that it is very important that it does not “look like it is recorded with a handheld webcam”. She wants the image to be sharp, that it is easy to hear what’s said. Kurt did not explicitly talk much about video quality, but had tried filming himself and decided it was not worth it for him. He found it to take a lot of time and effort with light, clean environment and clothing etc, Kurt (Appendix D, l. 343). This implicitly means that he also cares for the fit-and-finish and would rather leave out parts that does not live up to his standard, than do a bad job of it. He also uses transitions, highlights parts of the screen with arrows and boxes while recording, and generally cares for details and student feedback.

Stefan (Appendix E, l. 151), Noomi (Appendix F, l. 61), and Astrid (Appendix G, l. 105) specifically mention that especially audio quality is important.

4.4.3 Code: Content style

The code **CONTENT STYLE** is closely related, but differs in that it concerns what is good and bad about different kinds of content styles, and what to do differently in a video than a lecture. Kurt (Appendix D, l. 258) says that the first ten minutes of a lecture often passes with just getting set up and saying good morning etc. Also teachers often dwell on unimportant stuff and repeats themselves. On video this can and should be avoided, which in turn will make the videos much more concise. He has had success with what he calls a lecture video: 20 minutes in which he goes over the core topics of a lecture. He then supports that with smaller satellite videos that dig into a specific topic, tool, or problem, Kurt (Appendix D, l. 268). Noomi (Appendix F, l. 41) supports the concept of lecture videos and sees the utility of videos that pique the interest of the viewer enough for them to delve deeper into the topic on their own. Noomi (Appendix F, l. 62) likes when there are animations but has not seen many good examples of animations herself. She likes the ones in which the instructor draws and explains simultaneously Noomi (Appendix F, l. 67).

Neither Astrid (Appendix G, l. 106) nor Noomi (Appendix F, l. 63) particularly cares for watching teachers hand waving on camera and would, if video is not necessary, rather only listen to audio. This frees eyes and body to do other things, like doing the dishes or going for a walk, a well known perk of podcasts.

I don't know if the visual part means so much, actually. There are many who do the dishes etc. at the same time. It is not so necessary to stand there and

watch a teacher wave around their hands.

— Astrid (Appendix G, l. 106)

Noomi (Appendix F, l. 64) even suggests audio-only content could be used more. This would also make distribution and editing much simpler than with video. There is an open RSS infrastructure for podcasts that does not require complicated and expensive platforms as distributors. Interestingly only Noomi and Astrid, both from the humanities and social sciences-oriented end of the spectrum, suggested using podcasts, this could be as a result of their field of study. Although sample size is extremely small, this may indicate that humanities and social sciences-oriented educational material is better suited for audio-only content than something like computer science. This makes sense when considering that these are generally literature heavy, which is somewhat easily spoken instead, whereas it can be difficult to make sense of something like programming in audio form. Kurt (Appendix D, l. 281) for example sometimes records his screen while programming and talking about it.

4.4.4 Codes: Video planning + Video editing + Video management

The codes **VIDEO PLANNING**, **VIDEO EDITING**, and **VIDEO MANAGEMENT** are all heavily influenced by Kurt. This is the obvious consequence of him being the only one of the four interviewees who has produced educational video material. These codes shed light on the video production process and some of the difficulties and practical challenges it entails.

VIDEO PLANNING is the phase in which a teacher structures the material and produce the graphics that is to be in the video, typically some animations with progression or just static images. This phase takes a relatively short amount of time, Kurt (Appendix D, l. 274). The recording itself also does not take too long, if everything is ready in advance, Kurt (Appendix D, l. 282). The editing phase is the one that takes the longest. Kurt (Appendix D, l. 283) estimates that he can produce a few 10-minute videos in a day.

The code **VIDEO EDITING** is interesting because this is likely what differs the most from the normal lecturing. It is also a large part of the interview with Kurt, as he finds it an integral part of the process, that he has come to appreciate. He removes individual words like “umm” Kurt (Appendix D, l. 369) and annotates with arrows and boxes to bring attention to certain parts of the recording Kurt (Appendix D, l. 381). The editing takes place soon after recording, otherwise he finds it difficult to remember what to do, Kurt (Appendix D, l. 398).

He underlines the importance of using a capable computer for editing and processing of the video files. — if one’s computer is too slow it is an uphill battle Kurt (Appendix D, l. 315).

The largest challenge with editing, however, is to edit *after* the initial export. Kurt describes that as completely unrealistic, because it requires a large portion of manual work and time to re-export and upload just to edit a small error. It is most often not worth the overhead.

Just like there are errors in books, there is also errors in videos. It can not be avoided and it is completely unrealistic to edit one. Let's just say we have a video on 10–15 minutes, and then you discover an error. It is simply not

realistic to edit thet error.

— Kurt (Appendix D, l. 161)

This is of cause in the context of his current editing flow. Kurt thinks it would be a colossal advantage if there were a large degree of editing capabilities built into the platform. The closest he has gotten is a system that Youtube recently deprecated, for annotating videos post export, Kurt (Appendix D, l. 161).

A fast platform with capable editing features built-in would solve many of Kurt's current problems.

The code **VIDEO MANAGEMENT** is about the management and handling of video files. Even with professional video editing software, Kurt (Appendix D, l. 304) finds it difficult to keep track of the different resources. It is especially difficult to get back to a project after a few years, Kurt (Appendix D, l. 307).

4.5 Theme: Pedagogical method & lecturing

The theme **PEDAGOGICAL METHOD & LECTURING** describes the interviewees experiences with current pedagogical practices at AAU along with ideas for what can be improved, and how so.

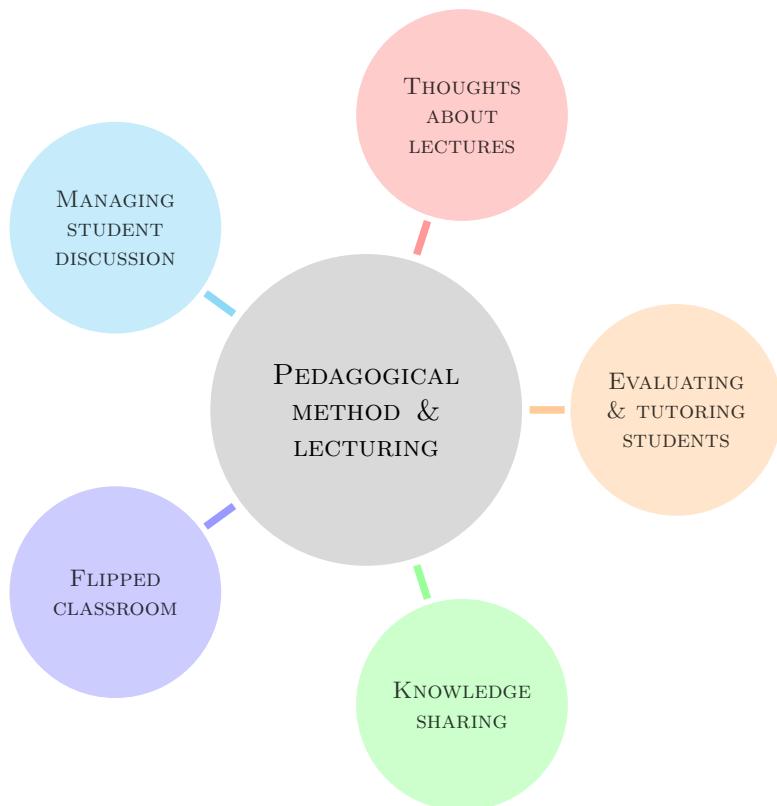


Figure 4.6. Theme: PEDAGOGICAL METHOD & LECTURING — with codes

4.5.1 Implications of Theme

A lecture should not only be dispensing knowledge already present in the curriculum, this can heavily demotivates students. Lectures also consume a lot of time with preparation and they scale badly due to levels of participation in larger classes.

In order for flipped class room to function well, the teacher needs to facilitate discussion, group work and ensure students stay on track.

When studying you sometimes need human guidance, someone who knows how to explain something so you understand it. Evaluating students should be personal and tailored to the students current level. Digital tools can make some forms of evaluation easier, such as student to student evaluation, where students review each others assignments. Here Noomi saw possibilities in allowing students to share and give feedback via the platform.

In order to get the most out of discussions, they need an objective and need to be preceded by some form of guidance or information acquisition. Quizzes could help facilitate or inspire the subject of a discussion, this could be done by including where the students answered wrong and fuelling the discussion with that.

Sharing past experiences and holding onto gained knowledge is generally sought after both by Kurt and Noomi, they have both tried documenting their experiences. They did this in a blog form and feel like this is a good medium for sharing knowledge more informally.

4.5.2 Code: Thoughts about lectures

The code **THOUGHTS ABOUT LECTURES** lays the groundwork for discussion as it highlights some of the problems with traditional lectures.

Astrid (Appendix G, l. 6) does not like being seated and just absorb information that is dispensed to her or through a book. Stefan (Appendix E, l. 39) has noticed that when a lecture simply repeats what is in the book, there is a larger risk of people not showing up for it.

Kurt (Appendix D, l. 258) point out that there is a lot of waste time in a traditional lecture, like setting up, repeating oneself and more. Noomi (Appendix F, l. 89) believes that traditional lectures scale badly due to lower student engagement with larger classes.

These and similar problems are what spawns speculation about whether there is a better way to teach, which it what the majority of the remainder of this theme revolves around. Kurt mentions many times that he has had almost universally good feedback on his course model.

4.5.3 Code: Flipped classroom

The code **FLIPPED CLASSROOM** is the interviewees thoughts about a popular alternative to traditional lecturing — the method is briefly described in subsection 1.1.1.

Kurt has structured his courses after the flipped classroom method since he had the idea to place a stronger emphasis on technical dialog Kurt (Appendix D, l. 120). His flavour of it is to meet with the students in plenum to discuss the videos they have watched in advance, their questions and difficulties. He also gives feedback on hand-ins and live code in front of them Kurt (Appendix D, l. 235). After approximately an hour

of this, he prepares the students for group activities where they solve problems together. He emphasises that this preparation is essential to make sure the students know what to do in the groups Kurt (Appendix D, l. 240).

For five years I have systematically researched this, made questionnaires for the students after they have [had a course]. It is very clear. There is no doubt that it is the students' wish that we leave the old fashioned model in an auditorium, and make good video material.

— Kurt (Appendix D, l. 409)

Stefan (Appendix E, l. 19) has had a flipped classroom class where they quizzed in plenum to get a discussion going, which he liked. However he fears that some students might more easily fall behind if they do not manage to prepare from home when there's a stronger emphasis on that Stefan (Appendix E, l. 34).

When asked if he believes video lectures will affect social aspects for the worse, Kurt (Appendix D, l. 209) pointed out that the flipped classroom model gives the students more *active* time together instead as opposed to simply being in the same room, as is the case with lectures.

4.5.4 Code: Evaluating & tutoring students

The code EVALUATING & TUTORING STUDENTS is about the benefit of evaluating and tutoring students and how and when to do either. Both are critical tools to affect student motivation, as described in section 2.2.

Stefan (Appendix E, l. 2) recognise the need for a tutor that he can ask when studying, especially when ones understanding of a subject is limited. He points out that doing an internet search can answer many things, but sometimes he needs someone that can tailor an answer just for you Stefan (Appendix E, l. 3). This is especially interesting in the context of digitising because it raises the question of whether the kind of thorough tutoring that Stefan needs can exist in a digital environment.

Evaluation is on some level just another kind of tutoring — in its most basic form that might be a stretch, but as soon as an evaluation is accompanied by comments or other kinds of food for thought, the lines gets blurred, which is why this code encapsulates both. Stefan believes that it is important for many students, including himself, to receive feedback from teachers:

As far as I know there are many people who absolutely love to get feedback on what they've made. … A number of 02 explains nothing, but to see why you made the mistake, what the mistake was, and what it would have taken to do it better.

— Stefan (Appendix E, l. 106)

Noomi (Appendix F, l. 82) is generally not a fan of quizzes and other quantitative measurements as a means of evaluation, and much prefers human evaluation where students' thinking is expanded, instead of just being told that they are wrong. She attributes this to the nature of the kinds of material she teaches, where the understanding and discussion of theories is unsuited for quantitative analysis. However she recognises that it can be applicable and valuable to studies where quantitative answers play a larger

role Noomi (Appendix F, l. 70). She has also experimented with letting students evaluate each other's answers in groups to strengthen the student's thinking and argumentation capabilities Noomi (Appendix F, l. 74). Student-to-student evaluation might even become easier with digital tools.

Astrid (Appendix G, l. 54) speculates that more evaluation might become necessary if educations are digitised and students end up staying more at home as a result. She prefers evaluations that are not part of the examination because they are meant to be for students' own motivation's sake Astrid (Appendix G, l. 72). Noomi (Appendix F, l. 86) has entertained the thought of having students submit a portfolio containing summaries of the discussion points raised in each lecture as part of the exam.

4.5.5 Code: Managing student discussion

The code **MANAGING STUDENT DISCUSSION** is about some of the difficulties with managing different kinds of discussion and some ideas for how to do it well.

Noomi (Appendix F, l. 19) found that when there's too much time for plenum discussion, especially if not preceded by a lecture, they tend to lack a thread of consistency for the students.

Astrid (Appendix G, l. 22) has experienced class discussions that became boring because they lacked a diversity of points, where the teacher did not manage to take the role of the devils advocate. To make discussions more interesting Noomi sometimes asks students that give common sense arguments in discussions what their claim is based on Noomi (Appendix F, l. 18). This is one way she attempts to force the students to try and remember theories and heighten the quality of class discussion in general.

Kurt (Appendix D, l. 415) suggests integrating a discussion activity based on quizzes. Stefan (Appendix E, l. 23) has tried, this in practice where the quizzes were part of the class with graphs on the big screen afterwards. This was then the center of discussion afterwards, and Stefan liked it.

Noomi (Appendix F, l. 117) also believes it would not be a possibility to have a successful discussion with 120 students, if they had only watched a video from home. She thus hopes that video education would enable her to have discussions with a smaller amount of students, for them to be successful.

4.5.6 Code: Knowledge sharing

The code **KNOWLEDGE SHARING** spans different kinds of knowledge sharing and why and how it can be useful to document ones experience for others as well as ones own sake, and what role digital tools can play in this.

When asked whether the whole library of AAU-made videos should be available to every student, Stefan (Appendix E, l. 80) said that he found that to be a good idea, although not the primary use case. He also envisions that a video platform could be used by students to make instructional videos for other students Stefan (Appendix E, l. 66).

Noomi (Appendix F, l. 32) has not used many digital tools, but once had a successful experience writing a blog in relation to a research project, along with the other researchers. They used it as a communication tool with questions and answers and inadvertently documented the progress at the same time. Kurt (Appendix D, l. 34) has similarly written about his experiences with video education on his own blog, documenting his tools and

best practices. He finds it very useful to sometimes stop and hold on to information on what one has made and hopes that others can learn from his mistakes Kurt (Appendix D, l. 360).

The idea of blogging or otherwise openly document and/or communicate is an interesting use case of digital tools. Q&A sites are very common on the web, sites like Stack Overflow (2019) for programmers, for example. Blogging as well. Although out of the scope of this thesis, these kinds of digital tools might be worth looking into in the wider adoption of digital tools at AAU.

Usability Test 5

In this chapter the design and conduction of a usability test is discussed to evaluate and compare the usability of the three different platforms. It is designed to imitate the workflow of recording a video (screen + webcam), giving it a title, editing it slightly, and making it available for viewing. Although the three platforms differ in functionality and implementation, they all support this workflow, providing a common ground on which to be evaluated.

The test utilises a between-subject design with 9 participants: 3 associate professors and 6 students of whom 5 were males and 4 were females. They were all recruited from Electronic Systems at AAU. The test was conducted in Danish and all participants were native Danish speakers.

5.1 Test Design

The usability test consists of two parts:

1. Rating individual platforms on scales (VAS) regarding difficulty of four tasks
2. Ranking the platforms against each other on seven parameters regarding usability

5.1.1 Rating Individual Platforms on VAS — Test Design 1

Before seeing and/or interacting with any of the platforms, participants were asked to rate expected difficulty of the tasks they would later perform. The tasks are designed to cover the expected workflow of a teacher producing a video, as outlined in Table 1.1:

How difficult do you expect the following tasks to be in the three platforms?

1. Record video
2. Change the title of the video
3. Edit video
4. Obtain a link to share the video

This provides a metric on which to evaluate how well their expectations match reality. The scales on which they ranked their expectations, along with the original danish formulation, can be found in Figure B.5.

Instructions on how to carry out the subsequent usability test were slightly more verbose than just the four tasks, and were provided in written form, for consistency's sake. If necessary they were elaborated verbally. The original Danish version can be found in section B.1, and the english translation below:

1. Review the manuscript as needed

2. Start a recording of yourself and the screen (read aloud, point to the mouse, explain you decide)
3. Stop the recording after 30 seconds
4. Change the title of the recording to the subject of the manuscript
5. Cut approx. 5 seconds somewhere from the video
6. Save the changes
7. Obtain a link to share the video

Participants were provided a different topic and accompanying script to use as content for each video: Blooms Taxonomy, flipped classroom and problem based learning. The specific topics are not important to the test, but as it may be difficult to come up with something to talk about on the spot, we choose some in advance to make it easier for the participants. Scripts can be found in section B.6. After the completion of each platform test, participants were asked to rate the experience on the same 4 questions as they rated their expected difficulty on.

A latin square design was utilised to minimise the (probably large) potential for carry over between the three platforms. The order is visualised in section B.3 (*Stimuli Presentation Order*).

5.1.2 Ranking Platforms Against Each Other — Test Design 2

After completing all tasks with all three platforms, participants were asked to rank them against each other on seven parameters regarding usability. The parameters were heavily inspired by the ones used in the System Usability Scale (SUS). However, instead of *rating* each platform on separate VAS from one to five, all three platforms were *ranked* against each other, producing ordinal data, with the following instructions:

1. Rank, so the one you would prefer to use regularly is at the top
2. Rank, so the one you find least complex is at the top
3. Rank, so that the easiest to use is at the top
4. Rank, so the one you find least likely to need technical support to use is at the top
5. Rank, so the one in which you think the different features are best integrated is at the top
6. Rank, so the one you perceive to be most consistent is at the top
7. Rank, so the one you think others would prefer to use is at the top

Data for both the evaluation and ranking were gathered using SurveyXact (Ramboll, 2019). Four Visual Analogue Scales (VAS) were used for rating, and an interface allowing for visually stacking the platforms in a hierarchy from best to worst, for the ranking. The SurveyXact implementation can be found in section B.5.

5.1.3 Equipment

The test was conducted on a MacBook Pro (15-inch, 2018), running macOS 10.14. The operating system might be unfamiliar to some, but assistance was readily available if any problems should arise. Everything but the recording was done in a web based editor which does not differ much, if at all, between operating systems.

The only platoform software to have any difference in appearance between operating systems is Panopto. On Windows it shows a webcam preview immediately when opening

the app, whereas it is initially hidden behind a tabbed interface in the Mac version. We estimate the effect of unfamiliarity with the operating system and other slight differences, to be low. All software and websites were set to English.

5.1.4 Pilot Tests

Three subsequent pilot tests were conducted to verify the structure and procedure of the test. On their basis some fairly large changes were implemented, which are already reflected in the structure described in subsection 5.1.1 and 5.1.2. For good measure, however, they are listed in subsection 5.1.5, 5.1.6, and 5.1.7.

5.1.5 Pilot Test 1

The task where participants were tasked with recording themselves + screen was modified to include a *suggestion* for what they could do in the video, to combat insecurity: Read aloud the script, point in the text with the mouse, and explain.

It turned out to be difficult to edit out exactly five seconds from a video, so the wording of that task was changed from “edit out five seconds” to “edit out approximately five seconds”.

A *save changes* step was added to the list of tasks, because it wasn’t clear from either of the platforms that this was a necessary step, and it caused unnecessary confusion.

We experienced technical issues with Mediasite, which consistently paused after seven seconds of recording, showing a dialog stating that “Frames are being dropped”. The dialog could easily be dismissed and the recording resumed. After dismissing once the problem would go away. The computer running the software was plenty capable, which meant that it was a problem with the Mediasite software. This in turn meant that there was seemingly nothing we could do about it, so we decided to do just that. We later learnt that warnings could be turned off in settings.

Kaltura similarly presented a “low memory” warning, even though the computer had plenty to spare and it did not impact the recording. Again we decided to use it as was. This also also seems fair, given that these behaviours were the standard of the two applications and would potentially be part of the workflow in a real setting as well.

Before this pilot test, participants only ranked the platforms against each other on seven parameters, as described in subsection 5.1.2, but afterwards we decided to add the difficulty rating of individual platforms, as described in subsection 5.1.1 as well. This was inspired by (Tullis & Albert, 2008, p. 132). This change was motivated by a desire to learn more about what the participants found difficult and get a more nuanced picture than ranking alone.

5.1.6 Pilot Test 2

As evident from subsection 5.1.5, substantial changes were made to the original test design and therefore we decided to conduct another to verify the changes. We found that some changes to the structure were needed.

The rating of perceived difficulty of the tasks in the individual platforms was previously conducted after they had all been completed. However the participants had difficulty telling the platforms apart at that point, so we moved the ratings to directly after the

completion of the tasks in each platform. The necessary tradeoff is that participants then has no ground of comparison with the first platform. The latin square design somewhat remedies this. The paper with written instructions saw slight changes to layout and fonts to make it more legible. None of the formulations were changed.

Before this pilot, screenshots of the application windows of each platform were presented in the end, to help participants remember the looks of each platform and tell them apart. This was changed to screenshots of the entire context, including browser window, to make it more clear which was which. An example of this is depicted in section B.2 (*Platforms*), which was printed for all three platforms on A3 paper available to the participants when needed.

5.1.7 Pilot Test 3

Only slight changes were made after the 3rd pilot, so it concludes the refinement process of the test design.

Some users prefers to use a mouse as input device, as opposed to a laptop trackpad, so this was acquired prior to the final tests. A field for writing occupation was added to the consent form. We found no need for any major changes and feel confident in the test design.

5.2 Data Analysis

In this section the VAS and ranking data gathered with SurveyXact for the usability test is analysed. The screen and voice recordings of the participants are not analysed in this report due to time constraints. All numerical analysis was conducted with the statistical computing tool R (R Foundation, 2019).

5.2.1 Rating Individual Platforms on VAS — Analysis 1

To get an overview of the data from the VAS, a box plot of the ratings of task difficulty on individual platforms is created. The plot is segmented in four colored groups, each representing a task. From left to right: ● Record ● Change title, ● Edit video, and ● Obtain link.

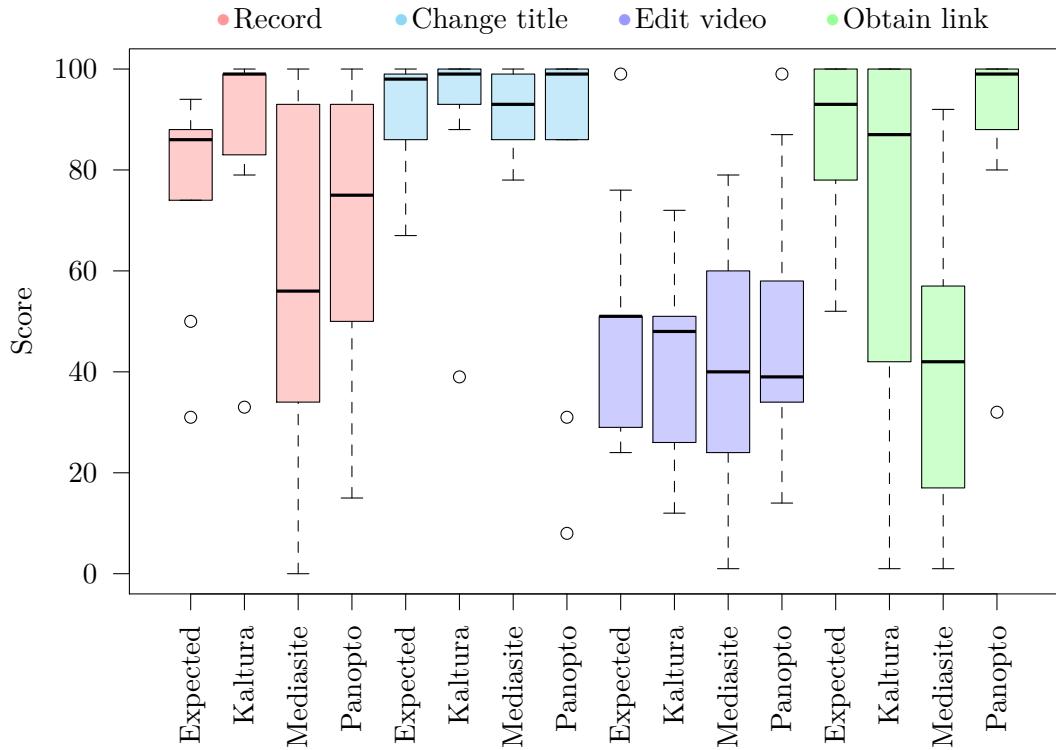


Figure 5.1. The y-axis denotes the score, 100 being the best and 0 the worst. On the x-axis the plot is segmented into four colored groups, each representing a task. It is further segmented into individual box plots for Expected, Kaltura, Mediasite, and Panopto, and labeled as such.

The platforms evidently perform similarly and matches expectations, as indicated by the general low in-group variance of the median line's vertical position. The only obvious exception is that Mediasite seems to be struggling when participants needed to • record and • obtain a link.

A paired t-test between each platform and the expected difficulty is conducted to investigate this further. The results hereof are depicted in Table 5.1, 5.2, 5.3, and 5.4. The highlighted p-values reveal Mediasite to be significantly different from (more difficult than) both Expected and Kaltura in regards to • recording. Mediasite is also significantly different from (more difficult than) both Expected and Panopto in regards to • obtaining a link.

	Expected	Kaltura	Mediasite
Kaltura	**0.0099		
Mediasite	0.1209	*0.0312	
Panopto	0.2882	0.0760	0.4257

Table 5.1. P-values: • Record

	Expected	Kaltura	Mediasite
Kaltura	0.99		
Mediasite	0.887	0.8688	
Panopto	0.3152	0.171	0.171

Table 5.2. P-values: • Change title

	Expected	Kaltura	Mediasite	Expected	Kaltura	Mediasite
Kaltura	0.484			0.1392		
Mediasite	0.2375	0.7727		**0.0036	0.1377	
Panopto	0.9321	0.5656	0.376	0.9315	0.0761	**0.0019

Table 5.3. P-values: • Edit video**Table 5.4.** P-values • Obtain link

To investigate if the difficulty of each task differs a t-test was conducted on the accumulated score for each task, this is only for the three platforms and not the expected difficulty. These values can be seen in Table 5.5. From Figure 5.1 it is obvious that • Edit video stands out as being rated lower than all other tasks, the t-test also reveals that editing video is significantly different from all other tasks. Furthermore • Change title is also appears as

	• Record	• Change title	• Edit video
• Change title	*0.0155		
• Edit video	***0.000123	***2.65e ⁻⁸	
• Obtain link	0.528	**0.00417	**0.00685

Table 5.5. P-Values for accumulated values on tasks

5.2.2 Ranking Platforms Against Each Other — Analysis 2

The data from the usability test produced by ranking platforms against each other, is ordinal. 1 being ranked highest and 3 lowest. Thus the data says nothing about the distances participants may attribute to the rankings, only the order. Each participant ranked the platforms on seven different usability parameters and with nine participants, that equals 63 datapoints in total.

For an overview of how well each platform performed, all the best, middle and worst rankings a platform received across all seven parameters were surmised and counted. The maximum score possible is then 63 for each rank, so that if one platform consistently got all the highest rankings, the others would get none, etc. The surmised rankings pr. platform is plotted in Figure 5.2.

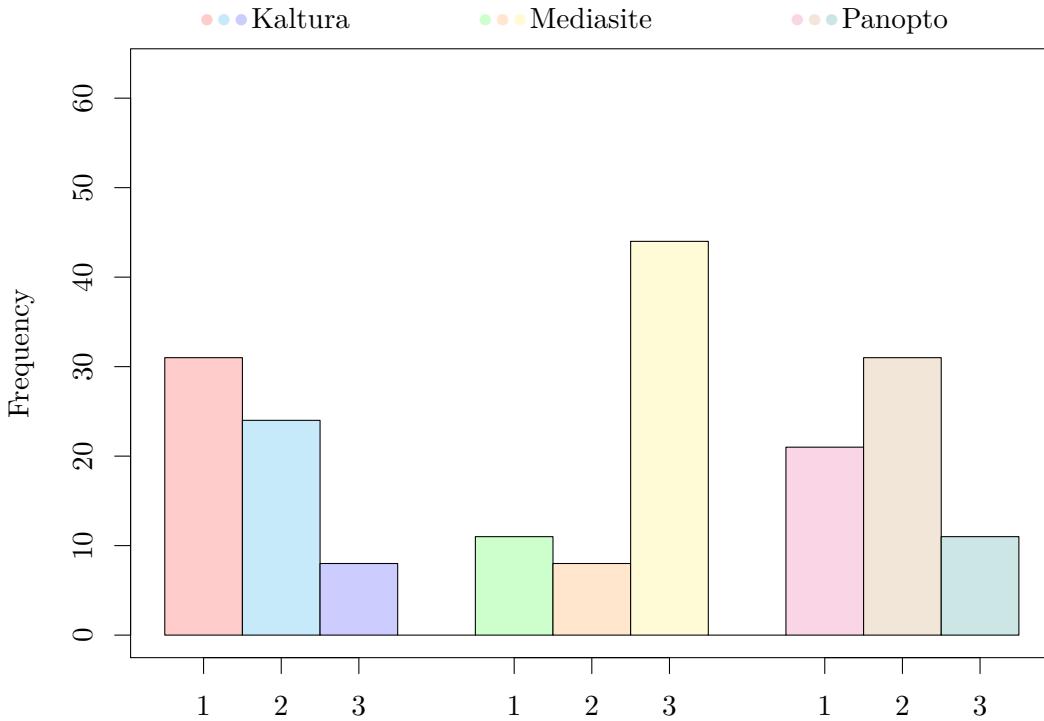


Figure 5.2. Histograms of ranks for each platform, gathered in one chart

A Kruskal Wallis variance analysis was computed, which tests whether mean ranks are the same in all platforms. It also has the advantage of not assuming a normal distribution. The test returns a p -value of $1.461e^{-9} \approx 0.00018$, which, since $p < 0.05$, means that there are statistically significant differences in the data. This should come as no surprise after glancing at Figure 5.2.

To investigate these differences further we conducted a Wilcoxon signed-rank test with continuity correction, where each platform was compared. Kaltura and Panopto were found to be insignificantly different from each other with a p -value of 0.19. Kaltura and Panopto were both found to be significantly different from Mediasite, however, with p -values of $2.716e^{-6} \approx 0.0067$ and $9.794e^{-4} \approx 0.024$ respectively.

A Cliff's Delta was then calculated to investigate the effect size and better gauge the magnitude of the difference. In line with prior tests, both Kaltura and Panopto were found to have large estimated deltas, of 0.57Δ and 0.48Δ respectively, when tested against Mediasite. Between Panopto and Kaltura a small delta of 0.16Δ was found. All evaluated against a 95% confidence interval.

The median and confidence interval for each platform were then calculated using these formulas:

$$\text{Lower range} = \frac{N}{2} - \frac{1.96 * \sqrt{N}}{2} \quad \text{Upper range} = 1 + \frac{N}{2} - \frac{1.96 * \sqrt{N}}{2}$$

Where $N = 7 * 9 = 63$, the total number of data points, and the ranges are the upper

and lower medians for each dataset. For instance to calculate the ranges for Kaltura we insert our number of samples:

$$24 = \frac{63}{2} - \frac{1.96 * \sqrt{63}}{2} \quad \mid \quad 40 = 1 + \frac{63}{2} - \frac{1.96 * \sqrt{63}}{2}$$

From these we use the number on index 24 and 40 in the ordered vector of values for Kaltura, getting 1 and 2. This we repeat for each platform resulting in Table 5.6, which provides an easily digestible high level overview of platform performance.

	Median	Lower range	Upper range
Kaltura	2	1	2
Mediasite	3	3	3
Panopto	2	2	2

Table 5.6. Confidence intervals and median rank of each platform

Discussion 6

In this chapter we cohesively discuss the findings and interesting aspects of this project, namely the interviews, the thematic analysis and the usability test. Five overarching recommendations are presented on the basis of the analysis. We also evaluate the approach with which the data was gathered and what could benefit from more/different testing.

6.1 Findings and Recommendations with regards to educational IT

This thesis initially set out to explore what design and user interaction needs an educational video platform should be aligned with to support the pedagogical approach at AAU. This section answers that to the best of our abilities, and provides concrete actionable guidance on how to make it work, given the constraints.

In our work with building this large body of knowledge, other tangential and equally important knowledge presented itself. This is discussed on equal footing with the video-specific findings, as it is believed to be of interest in the larger context of digitising AAU, and is often deeply intertwined with the video efforts.

The discussion is organised around interview codes as a foundation and builds from there with findings from research and the usability test.

6.1.1 Recommendation 1: Provide Easy and Capable Video Tools

The interview codes **VIDEO PLANNING**, **VIDEO EDITING**, **VIDEO MANAGEMENT** from subsection 4.4.4 and **SPECIFIC PLATFORM WISHES** from subsection 4.3.6 describe how producing a video is a resource intensive task in terms of computation power and time, but also in terms of personal commitment to learning the necessary technical capabilities. It is no trivial task and it requires planning, time, and know-how.

This is supported by the usability test, as documented in subsection 5.2.1 which found editing to be the most problematic task as evident from Table 5.5. The data is inconclusive as to whether it means that video editing is inherently difficult or if the platforms simply implements editing poorly. There is no significant difference to be found between the expected difficulty and the experienced, so editing is about as difficult as our participants expected. But should this be ascribed to the complexity of the editing or the specific implementation? We believe a strong argument could be made that the latter is the case. The editing task that participants were asked to perform was extremely simple and limited in scope: editing out five seconds somewhere in a video. It stands to reason that if that this was found to be difficult, the implementation is not adequately easy to use. From observing the participants, much of their struggles had to do with finding functionality on the screen and other UI-related quirks which further back this up.

One solution would be to use an external editing tool instead, but this would completely defy the purpose of an integrated solution which benefits from removing a whole slew of problems in regards to managing video files, uploading, etc., as Kurt repeatedly stresses the importance of in subsection 4.4.4.

A logical next test should provide the participants longer time with, and a more relaxed setting in which to test the products. The platforms' editing functionality should also be evaluated against other well established video editors. This would provide perspective and strengthen the results as it would take into account how they perform after some familiarisation with the platforms has occurred, which is how the platforms will be used most of the time. It is however still important to test the first-hand experience, which is what we have done in this thesis, as that might be an important decider of acceptance among teachers.

With regards to recording, Kaltura performed the best, significantly better than Mediasite, and Panopto was close, as evident from Figure 5.1.

If videos are supposed to partly or fully replace knowledge dissension and lectures, which section 2.1 supports, a huge effort is needed towards enabling teachers to produce videos of acceptable quality. It is of our opinion that neither of the platforms tested here offers a satisfactory experience in this regard, without external video editing tools. The editing capabilities are neither capable, performant, or easy to use.

Things to consider that can ease the burden of video production, in no particular order:

- Give ample time for creation of quality videos
- The editing phase is the most demanding, and requires special support and attention
- Offer getting started with video editing courses
- Have inspiring video examples for teachers to aspire to and learn from
- Provide alternative editing tools
- Have someone on the decision board regularly use the tools themselves

6.1.2 Recommendation 2: Use Good Audio and Video

The interview codes: **VIDEO QUALITY** and **AUDIO QUALITY** from subsection 4.4.2 and **CONTENT STYLE** from subsection 4.4.3 imply that if videos education is to succeed, they need to reach a certain overall quality. This may seem almost banal, but as covered in subsection 1.1.3, AAU intends videos to be low cost and visually simple by design. It is difficult to gauge what this means and whether the two viewpoints are reconcilable.

Luckily some ways of obtaining a higher production quality can be solved with access to good cameras, good microphones and guidelines on how and what makes a good video. It is essential that text is legible and voices can be heard clearly and that there is no unnecessary noise. A teacher blocking half the frame of a blackboard where none of the text is legible is among the least desirable formats.

Interestingly the University is also entering the competition in an arena where lots of alternatives already exist — they need to find value in what they are doing, because otherwise why not just buy other peoples content?

Things to consider for producing quality videos, in no particular order:

- Quality microphones. Should filter background noise and even the sound pressure

6.1. Findings and Recommendations with regards to educational IT Aalborg University

- Cameras able to capture enough detail for text to be legible (not laptop webcams)
- Guidelines on what video styles should be utilised and for what
- Short videos are useful for piquing interest in a subject
- Use audio only if there is no meaningful visuals to show
- An audit of audio/video quality in each of the three platforms is advised

6.1.3 Recommendation 3: Elevate Student Motivation

The interview codes: **STUDENT ENGAGEMENT** and **STUDENT MOTIVATION** along with **STUDENT RESOURCE PRIORITISATION** from subsection 4.1.3, subsection 4.1.4, subsection 4.1.5 respectively, are somewhat direct accounts of what some of the problems with a lack of student motivation and the importance of it's presence for prosperous learning. **DIGITISATION CONCERNS** and **EVALUATING & TUTORING STUDENTS** from subsection 4.3.3 and subsection 4.5.4 provide further cause for concern in regards to digitising education and teacher tools for affecting student motivation.

There is a lot to be considered when implementing a new teaching paradigm. It is evident from our interviews and research that motivation is one of, if not *the* main, concern for both teachers and students, digital or not. If students are to assume further responsibility for their own learning, as discussed in section 2.1, it is advantageous to have copious amounts of material readily available for viewing, reading or listening — friction free. The teacher should assume a larger role in mentoring the students, and provide valuable feedback, not only in the form of grades. It is rewarding to feel competent, capable and autonomous, as described in section 2.2, and letting students influence their choices of subjects and courses can also increase the sense of autonomy and in turn motivation, as described in subsection 2.2.1.

Another way to help students retain motivation and keep students on track is with small checkups. This could be quizzes, smaller deadlines with assignments or have students help each other by giving feedback on assignments or answering questions in a forum or blog-like manner. This could also build into a system that helps students keep track of their progress, with clear learning goals.

Needless to say it is a huge ask and task for teachers to incorporate these techniques, but they might become more and more important as more parts of education are digitised.

Things to consider to elevate student motivation, in no particular order:

- Let students have influence on what they learn and how, is beneficial to motivation
- If students spend more time acquiring knowledge on their own or in groups, they will benefit from mentoring to keep them on track
- Small checkups, in the form of quizzes, tests or assignments should help keep students on track
- Feedback between students and teachers should be made easy and clear

6.1.4 Recommendation 4: Be Prepared to Restructure Lectures

The interview code: **LECTURE PLANNING & STRUCTURING** described in subsection 4.1.2 along with codes **THOUGHTS ABOUT LECTURES**, **MANAGING STUDENT DISCUSSION**, and **FLIPPED CLASSROOM** from subsection 4.5.2, subsection 4.5.5 and subsection 4.5.3 respectively revolve around some of the problems with traditional lectures and offers

some ideas on how to make them better in different ways. **DIGITISATION PERKS** from subsection 4.3.2 specifically considers how digital content can aid by courtesy of its ability to be consumed anywhere anytime. There is a consensus among interviewees that larger

6.1. Findings and Recommendations with regards to educational IT Aalborg University

classes lower student engagement and that when the teacher only dispenses knowledge it leads to even lower student engagement, as also described in section 2.1.

Class discussions are negatively affected by students who aren't prepared for class, which generally leads to arguments based on common sense, rather than facts, hence the need to elevate student motivation as described in subsection 6.1.3.

Adopting a flipped classroom approach seems like the logical approach to match and take advantage of the benefits of digital video content. However that requires a lot of work, experience and infrastructure that is not currently in place. For example Kurt has had difficulties with booking lecture halls or classrooms in his courses where instead of having one long continuous lecture, he has one hour in the beginning and one at the end with class activities in the middle. Also the physical facilities may need to be revamped to better support class activities.

Things to consider when restructuring lectures, in no particular order:

- Dispensation of knowledge should be avoided in the classroom and replaced with activities
- The room booking system must facilitate different and more dynamic schedules
- Facilities should make class activities easy
- Teachers must understand and be prepared to adopt new teaching styles and should be provided the wiggle room to successfully do so

6.1.5 Recommendation 5: Digitise in Compelling Ways

The codes: **FRUSTRATION WITH EXISTING SYSTEMS** and **CONSOLIDATING SYSTEMS** from subsection 4.2.2 are about prior, less good experiences with digital solutions. Codes **TEACHER RESOURCE PRIORITISATION** and **THOUGHTS ABOUT ANALYTICS** from subsection 4.1.6 and subsection 4.3.4 respectively reflect on some of the concern with digitising. Codes **ONBOARDING EXPERIENCE** from subsection 4.2.3, **UI+UX CONSIDERATIONS** from subsection 4.2.4, **SPECIFIC PLATFORM WISHES** from subsection 4.3.6, along with **KNOWLEDGE BASE RESPONSIBILITIES** from subsection 4.3.5 offers practical advice on what digitising necessitates.

For many teachers an introduction of video will be a replacement of their existing workflows and tools. This kind of disruption is bound to result in some resistance. In order to mitigate the transition it would be beneficial to learn from prior experiences, especially the adoption of Moodle. All interviewees voiced a dissatisfaction with either the product or how it is used. The video platform could benefit immensely from a thorough investigation of the reasons that make Moodle unpopular.

It is also clear that functionality is not the problem — Moodle is very capable, but neither students nor teachers know how to take advantage of it. This raises the question of whether this should be ascribed to bad implementation, incompetence or a simple lack of attention on the users part? This is some of the questions that an investigation could answer. If we had to guess the answer would be a mix of all three. Maybe a better implementation could incentivise users to learn about the features and thus become better at using it. Regardless, a video platform can be assumed to be more complicated and play a more central role to users, thus at the risk of having some of these problems exaggerated.

General cross domain design usability considerations should play a large role when designing or choosing a platform. Users interact with highly polished products every day and have little patience for bad UI+UX as a result.

Videos should also provide enough benefits to not only match, but also *succeed* the workflows and tools that people already have in place. For some the excitement of technology may be enough while others simply see it as extra work or even a degradation. The people in the latter category, like Noomi, will need very compelling reasons, possibly in the form of example videos and evidence that the pedagogical upside is worth it, which is still debatable.

The knowledge base should spend time marketing and informing about these kinds of things, and be honest and pragmatic about when to use video and when not to. Also a good onboarding experience, preferably built in to the platform would be beneficial. More so it is readily available even if dismissed the first time, and maybe even smart about offering help if users seem to be struggling. Bite-sized tutorials are preferable.

Generally people from the technically oriented educations can be expected to be more lenient when considering the general look and feel of a platform, but have more specific functionality demands like a good way to find relevant information, as also brought up in subsection 2.3.5. People from the humanities and social sciences can be expected to care more about the intuitiveness and easy to use, and if they get stuck, there is a larger chance they will stop using the system altogether. Also people are generally not happy about analytics, but openness and collecting the bare minimum could prove helpful.

If all this is met and everybody accepts the platform and workflows, time will also be a factor. Acquiring the skills and changing workflow takes time, so providing teachers with this is essential to the success.

Things to consider to make digitisation compelling, in no particular order:

- Offer exemplary videos
- Make it clear what teachers stand to gain from producing videos
- The platforms should be easy to use and aesthetically pleasing
- Be honest and pragmatic about when to use videos and when not to
- Offer some kind of persistent onboarding experience / tutorials
- Features alone will not make people use it
- Do it right the first time or risk teachers trying it once and deciding it isn't for them
- Learn from Moodle
- Be prepared to offer the necessary time for teachers to learn new skills

6.2 The Interviews

As the interviews were conducted just on 4 people, it is unlikely that every view is represented in this thesis. Ideally more people would be included until some criteria of data saturation is met. A wider range of represented educations would be an obvious way to strengthen the data. Despite this the semi-structured expert interviews proved a very large and valuable resource of information.

6.3 The Thematic Analysis

The thematic analysis approach proved very useful, as it enabled total emergence in the data in a structured manner. It created a good understanding and structure of our otherwise expansive dataset.

Ideally the thematic analysis would be done by more people, preferably with different backgrounds. More people would enable us to check for inter-rater agreement which would strengthen the rigidity of the analysis.

6.4 The Usability Test

The results from our usability test should be taken with a grain of salt, as only 9 people participated and the tasks were fairly limited in scope. Also it is worth noting that first-hand experience does not necessarily reflect the true value of the platform. However it probably greatly influence peoples willingness to accept it into their teaching.

The production of an actual educational video is much more complicated than the basic workflow we tested. This is concerning, given the difficulty the participants had with editing, even in a very simple scenario.

A more thorough long-term user test in a more natural setting would be able to provide a much deeper understanding of teachers ability to produce video, and inform if these systems are even what AAU needs. We tested on a very limited set of tasks, because we wanted to compare all three platforms and keep the test within subject, for the sake of comparison. One way to go more in-depth is to test only one platform pr. teacher, but make up for the lost comparability in volume.

The screens and voice of the participants in our test was recorded but ultimately unused due to time constraints. This would also be an obvious candidate for further exploration.

Conclusion 7

As should be well known by now, this masters thesis has investigated user needs in relation to video education at AAU. The main bulk of the work was conducting and analysing expert interviews, using thematic analysis that generated 25 codes, each describing distinct aspects of the interviewees' view on the matter. These were condensed into 5 themes described in chapter 4. A supplementary usability test was conducted to gauge how well three video platform candidates performed in the hands of actual users, as described in chapter 5. From the combined research and analysis we argue a set of 5 recommendations, summarised in section 6.1 that we believe AAU would benefit from implementing.

Let's now revisit the research question from section 1.2:

What specific design and user interaction needs should a video platform be aligned with to support the pedagogical approach of problem-based learning (PBL) at Aalborg University?

The success of the video platform depends a series of factors, not all having to do with PBL. In fact we found little evidence of unique factors in this regard. We did however isolate the aforementioned five recommendations, here surmised in their shortest form:

A lot of it depends on the quality that the teachers produce, therefore the focus should be on giving them the best tools and workflow possible. Capable computers and simple, yet powerful editing tools.
Microphones and cameras of ample quality should be at the teachers disposal as well as guidelines about what constitutes a good video.
Focus on retaining or elevating student motivation is essential. This includes letting students have influence over their own learning, provide valuable feedback, and ensuring that they are staying on track. This could be done with quizzes, test and assignments.
The traditional structure of lectures needs to change if videos are supposed to assume the role of knowledge disseminator. Administrative aspects also needs to adapt, booking rooms and scheduling needs to facilitate a broader set of approaches to teaching.
Digitisation needs to be implemented in a compelling way and not forced upon teachers. It should be made clear what they stand to gain from using videos in teaching and what didactic approaches supplement videos. The platform should also introduce as little friction as possible, in existing workflows including videos as well as traditional teaching methods not currently utilising videos. Lastly it is essential to learn from experience with existing systems in order to avoid committing the same mistakes.

Unsurprisingly this study supports the notion that one should not digitise for digitisations sake. Instead technology must supplement and support existing didactic methods, and that a transition requires large amounts of support and resources, both human and material. Most noticeably we do not feel secure recommending that AAU proceed with any of the three platforms that is at their disposal at the time of writing.

Bibliography

- Aalborg University. (2019). AAU organisation chart. Retrieved from www.en.aau.dk/about-aau/organisation-management
- Ahlers, T. (2018). Call for action — teknologisk upgrade på de videregående uddannelser. Retrieved from www.ufm.dk/uddannelse/indsatsomrader/teknologisk-upgrade
- Akçayr, G., & Akçayr, M. (2018). The flipped classroom: A review of its advantages and challenges. *Computers & Education*, 126, 334–345.
- ATLAS.ti. (2019). Atlas.ti. Retrieved from www.atlasti.com
- Barrows, H. S. (1996). Problem-based learning in medicine and beyond: A brief overview. In *New directions in teaching and learning* (68).
- Barrows, H. S., & Tamblyn, R. M. (1984). *Problem-based learning: An approach to medical education*.
- Bender, T. A. (2007). Time of participation effect and grade-orientation. *Personality and Individual Differences*, 43, 1175–1183.
- Bogner, A., & Menz, W. (2009). The theory-generating expert interview: Epistemological interest, forms of knowledge, interaction. In A. Bogner, B. Littig, & W. Menz (Eds.), *Interviewing experts*.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. doi:10.1191/1478088706qp063oa
- Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology*, 13(1), 3–21. doi:10.1007/BF00988593
- Dansk Industri. (2018). Strategi for digital læring. Retrieved, from <https://digital.di.dk/viden/publikationer/Pages/UdspilStrategifordigitallaering.aspx>
- Deci, E. L., & Ryan, R. M. (1980a). Self-determination theory: When mind mediates behavior. *The Journal of Mind and Behavior*, 1(1), 33–43.
- Deci, E. L., & Ryan, R. M. (1980b). The empirical exploration of intrinsic motivational processes. *Advances in Experimental Social Psychology*, 13(1), 39–80.
- DeiC. (2019). About deic. Retrieved, from www.deic.dk/en/about-deic
- E., B., & I., P. (1993). *Discourse analytic research*. Routledge.
- Glaser, B. G., & Strauss, A. L. (1965). *The discovery of grounded theory*.
- Hmelo-Silver, C. E. (2004). Problem-based learning: What and how do students learn? *Educational Psychology Review*, 16(3).
- Humphrey, P., & Harbin, J. (2010). Effect of rewards and deadlines. *Academy of Educational Leadership*, 14(4).
- Kaltura. (2019). About kaltura. Retrieved, from www.corp.kaltura.com
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*.
- Kofoed, L. (2019). Pbl future. Retrieved, from www.pblfuture.aau.dk
- Lykkegaard, P. (2018). Knowledge for the world: Digital strategy. Retrieved, from www.strategi.aau.dk/Digitaliseringstrategi/

- Marshall, J. G. (1993). A study of library use in problem-based and traditional medical curricula. *Bulletin of the Medical Library Association*, 83, 299–305.
- McKeachie, W. (2010). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers* (13th edition). Belmont: Wadsworth.
- Mediasite. (2019). About mediasite. Retrieved, from www.mediasite.com/about/
- Mikkelsen, B. (2018). Strategi for danmarks digitale vækst. Retrieved, from <https://www.regeringen.dk/nyheder/strategi-for-danmarks-digitale-vækst/>
- Moodle. (2019). Moodle. Retrieved from www.moodle.org
- Nørmark, K. (2018). Digitalisering af undervisningen. Retrieved, from www.people.cs.aau.dk/~normark/digital-undervisning/digital-undervisning.html
- Panopto. (2019). About panopto. Retrieved, from www.panopto.com/about/
- R Foundation. (2019). The r project for statistical computing. Retrieved from www.r-project.org
- Ramboll. (2019). Surveyxact. Retrieved from www.survey-xact.dk
- Riisager, M. (2017). Undervisningsministeren nedsætter rådgivningsgruppe for digital læring. Retrieved, from <https://www.uvm.dk/aktuelt/nyheder/uvm/udd/folke/2017/mar/170330-undervisningsministeren-nedsaetter-raadgivningsgruppe-for-digital-laering>
- Ryan, Richard, M., Deci, & Edward, L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *25*, 54–67. doi:10.1006/ceps.1999.1020
- Sansone, C., Harackiewicz, & Judith, M. (2000). Intrinsic and extrinsic motivation : The search for optimal motivation and performance.
- Stack Overflow. (2019). Stack overflow homepage. Retrieved from www.stackoverflow.com
- Tullis, T., & Albert, W. (2008). *Measuring the user experience: Collecting, analyzing, and presenting usability metrics*. San Francisco, CA, USA: Morgan Kaufmann Publishers Inc.
- Uddannelses- og Forskningsministeriet. (2018). Fleksible universitetsuddannelser til fremtiden. Retrieved, from www.ufm.dk/publikationer/2018/fleksible-universitetsuddannelser-til-fremtiden
- Wijnia, L., Loyens, S. M. M., & Derous, E. (2014). Do students' topic interest and tutors' instructional style matter in problem-based learning? *Journal of Educational Psychology*, 106(4), 919–933.
- Wijnia, L., Loyens, S. M., & Derous, E. (2011). Investigating effects of problem-based versus lecture-based learning environments on student motivation. *Contemporary Educational Psychology*, 36, 101–113.

Appendices

Screenshots of All A Three Platforms

This appendix contains screenshots from the main parts of all three platforms in the order the user would experience them.

1. The screen that meets the user when starting the program
2. The screen for starting a recording
3. The screen for managing local videos
4. The screen for managing videos on the web
5. The screen for editing videos on the web, this is the only place editing is possible

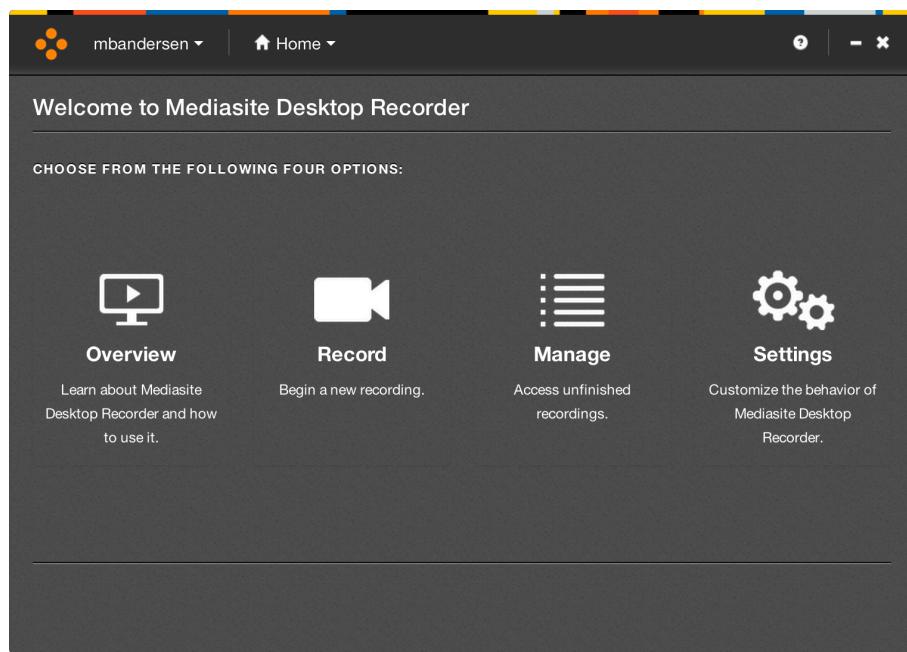


Figure A.1. The screen that welcomes the user when starting up Mediasite

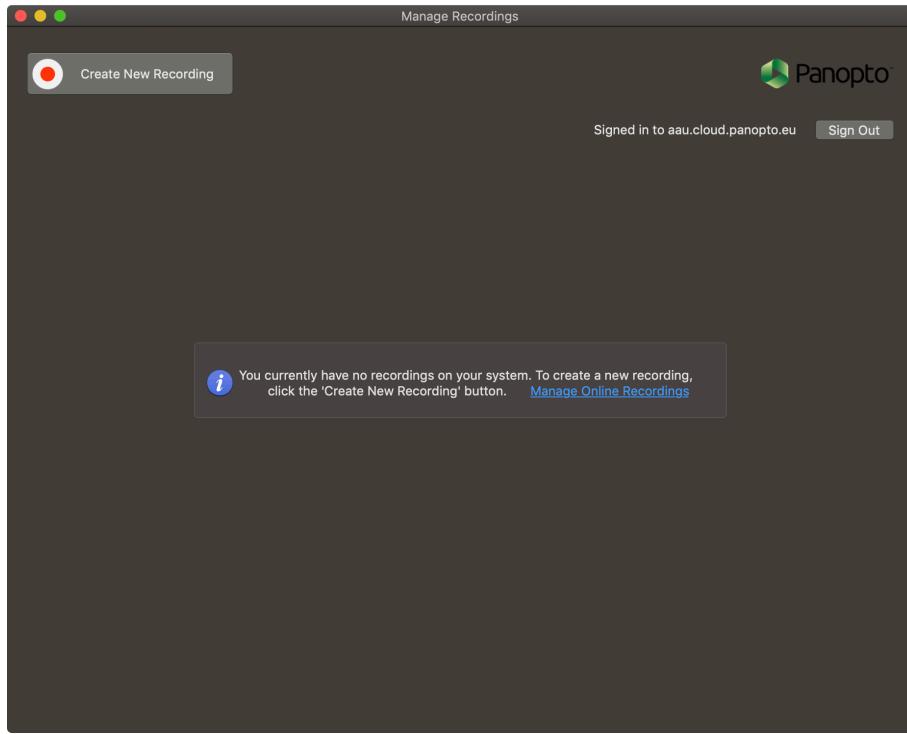


Figure A.2. The screen that welcomes the user when starting up Panopto

When Kaltura starts up, the recording screen is the thing that welcomes the user unlike the two other platforms.

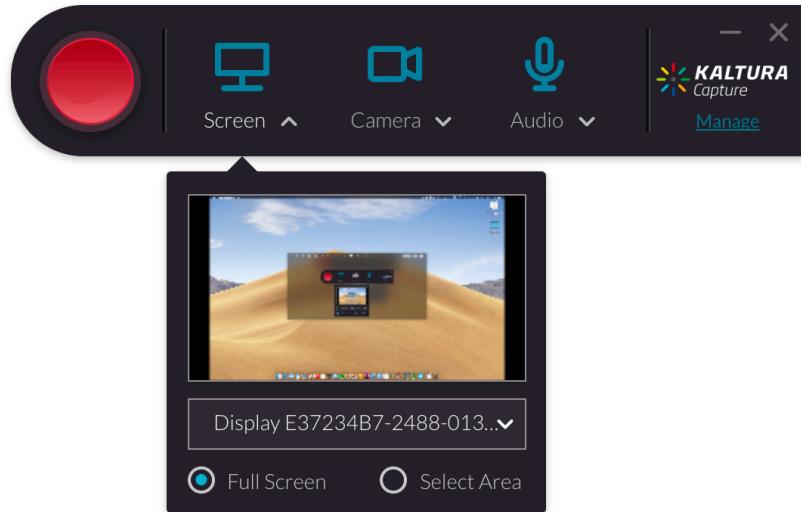


Figure A.3. The screen that welcomes the user when starting up Kaltura

Below is the recording screen for Mediasite and Panopto.

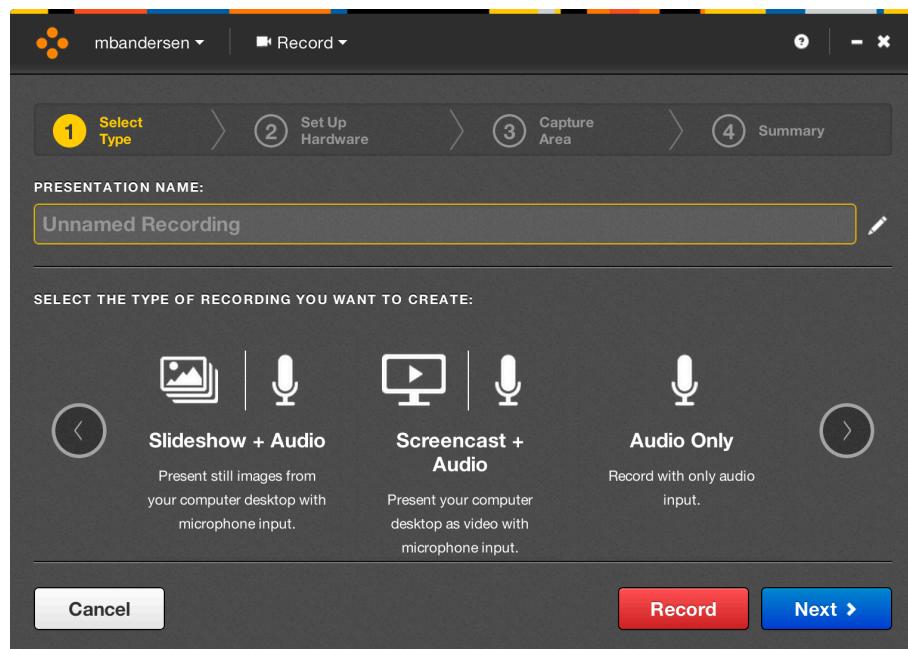


Figure A.4. The record screen for Mediasite

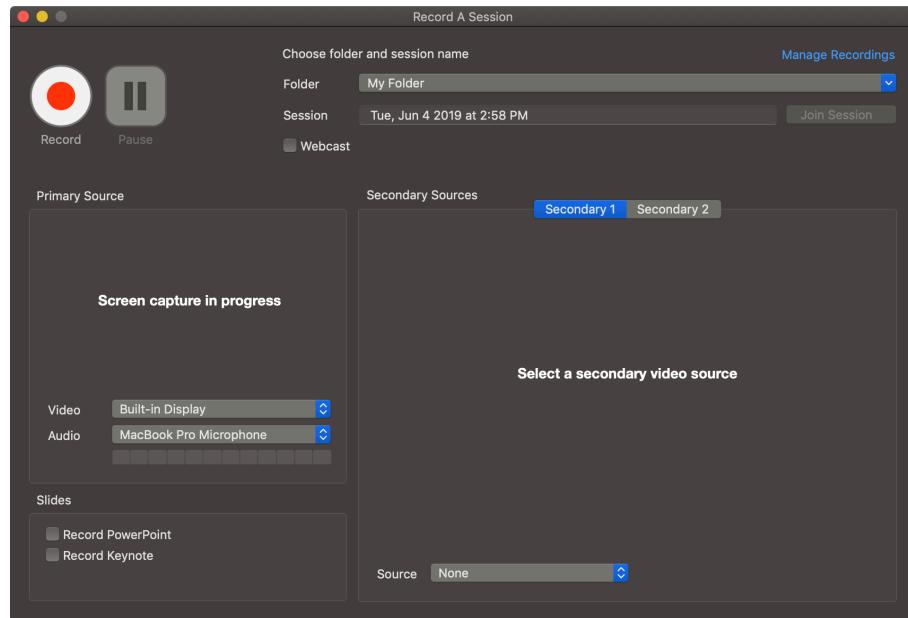


Figure A.5. The record screen for Mediasite

Below is the screen for managing local videos for each platform.

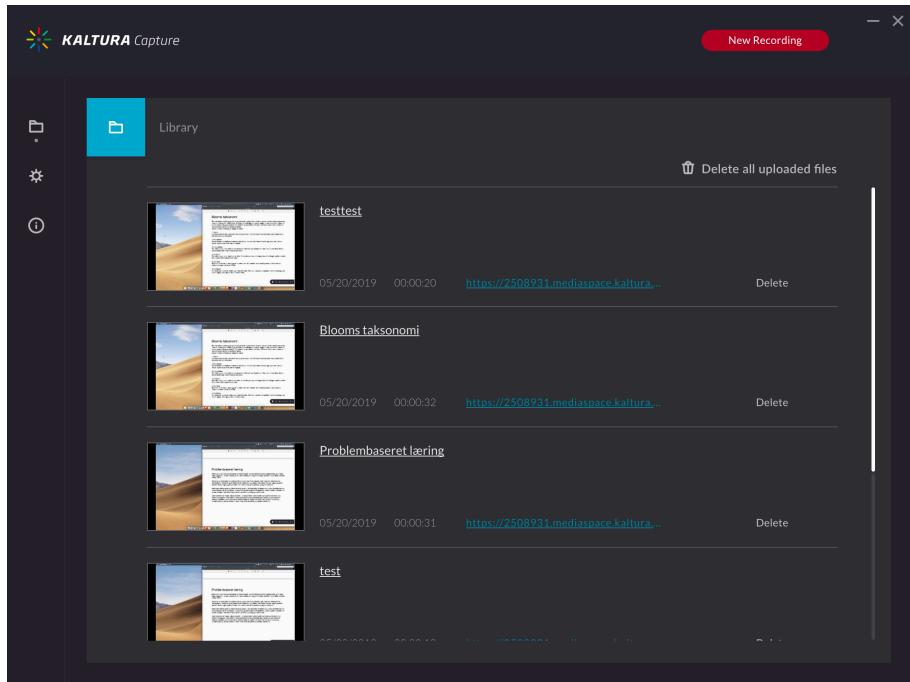


Figure A.6. The manage screen for Kaltura

A screenshot of the Mediasite Recording Management interface. The top bar shows the user 'mbandersen' and a 'Manage' dropdown. The main area displays a message: 'Recording Management: You have no unfinished recordings'. Below this, a table lists three recordings: 'blooms taks... rop' (05/16/2019 12:44 PM, Uploaded), 'test' (05/20/2019 9:54 AM, Uploaded), and 'testesttest' (05/20/2019 2:28 PM, Uploaded). The table has columns for 'Recording Name', 'Recording Date', and 'Status'. At the bottom are buttons for 'Manage Selected Recordings' and '+ Make New Recording'.

Figure A.7. The manage screen for Mediasite

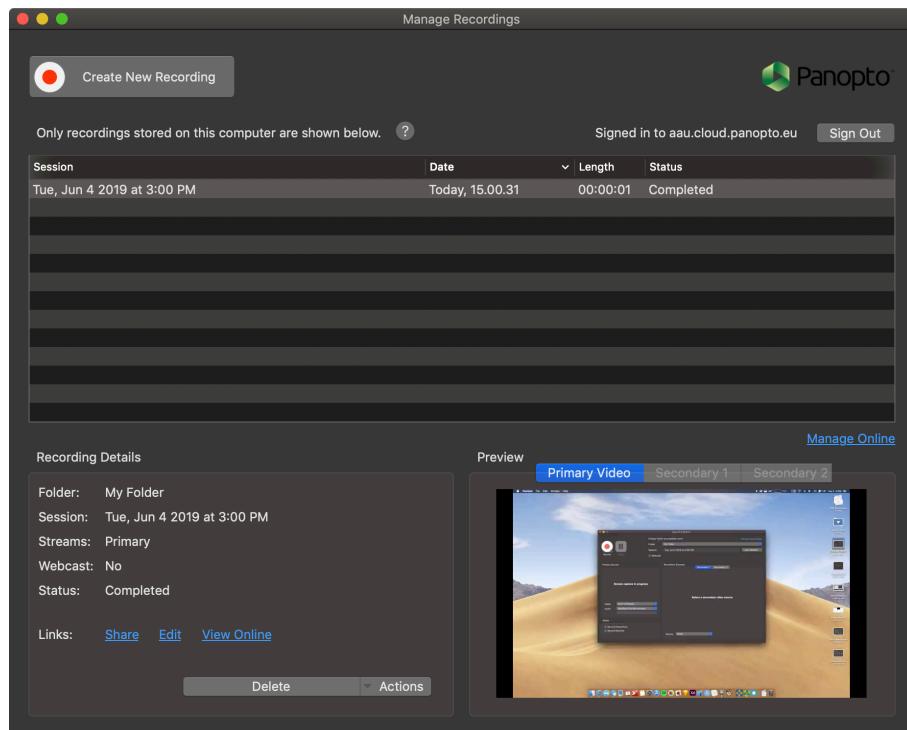


Figure A.8. The manage screen for Panopto

Below is the screen for managing videos on the web for each platform.

The screenshot shows a web-based video management interface. At the top, there's a navigation bar with links for 'Home', 'Courses', 'Study Activity Model', 'What is MediaSpace?', 'All Channels', 'About us', and 'Kaltura Learning'. On the left, a video player displays a presentation slide titled 'Blooms taksonomi' with text about Bloom's Taxonomy levels. On the right, there's a 'Related Media' section with the message 'No Entries'.

Figure A.9. The manage screen on the web for Kaltura

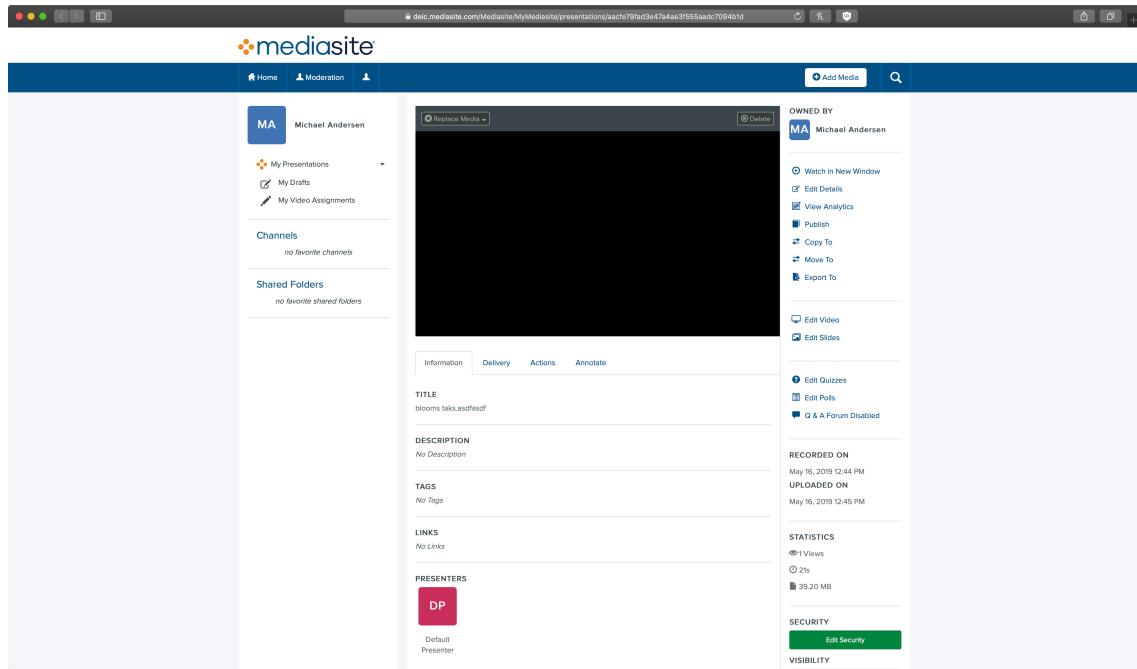


Figure A.10. The manage screen on the web for Mediasite

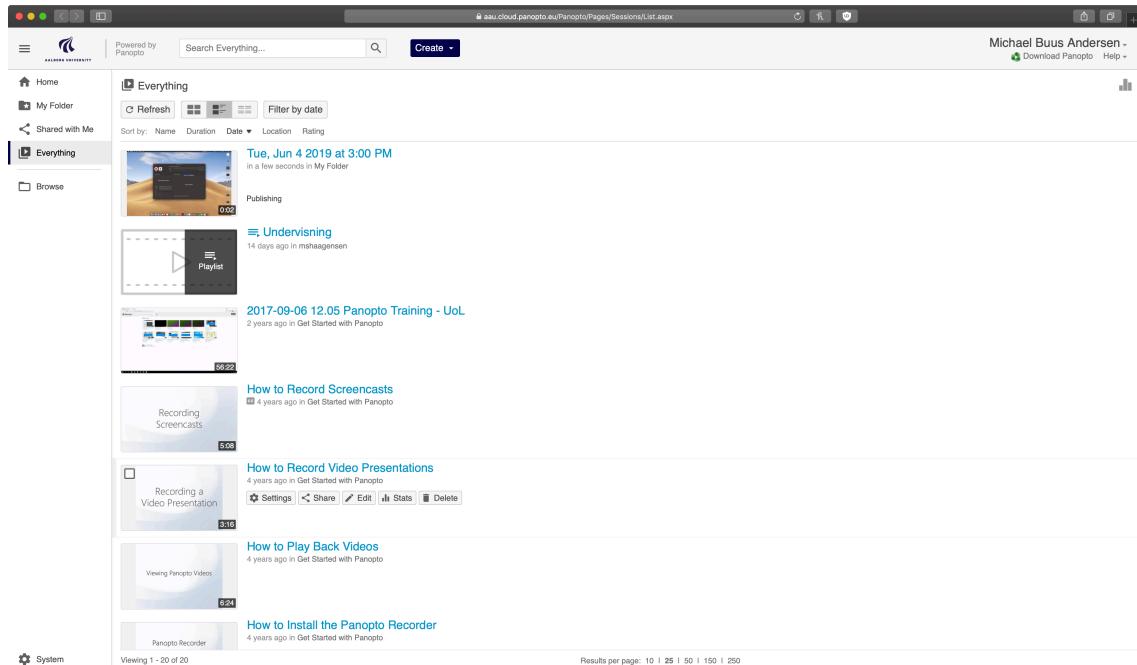


Figure A.11. The manage screen on the web for Panopto

Below is the web based editing screen for each platform.

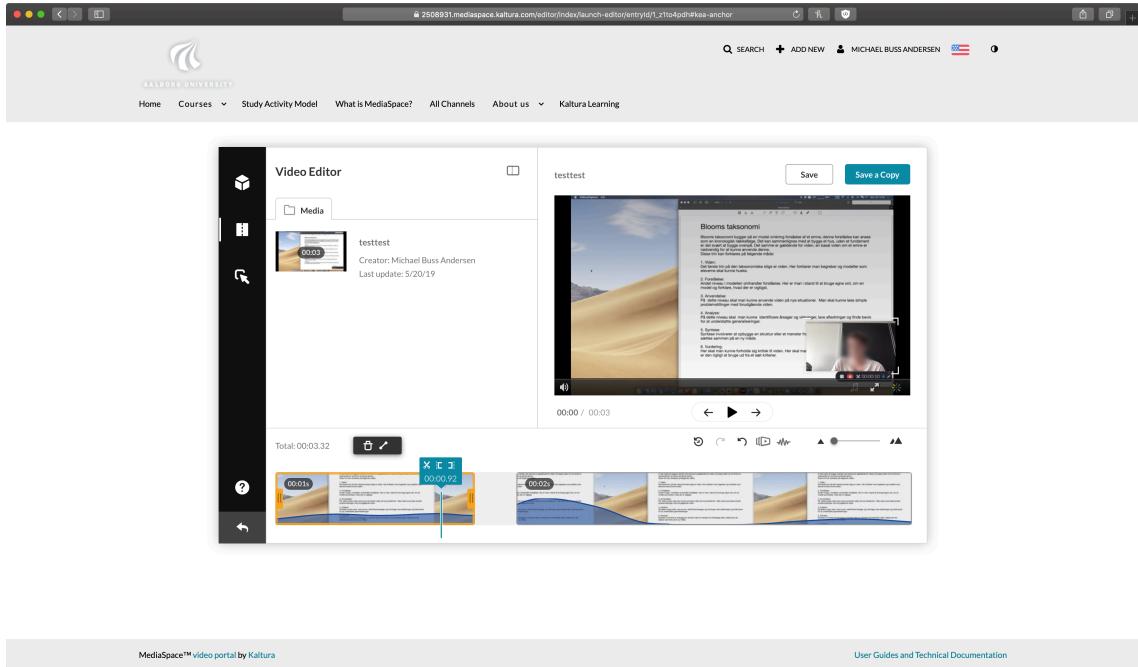


Figure A.12. The video editing screen on the web for Kaltura

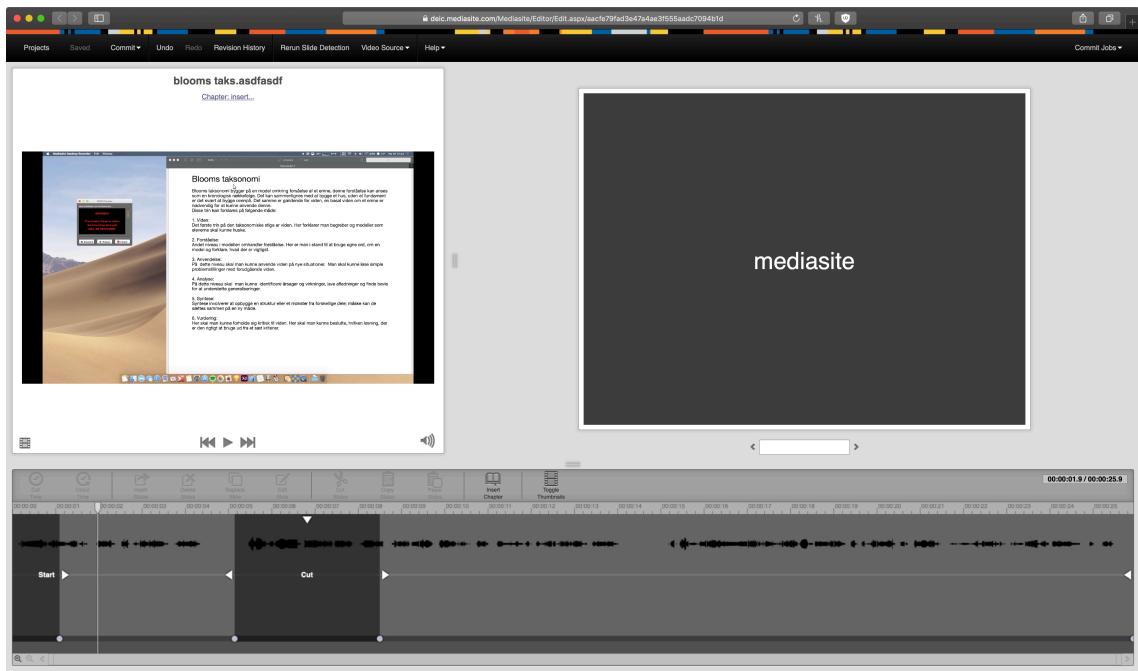


Figure A.13. The video editing screen on the web for Mediasite

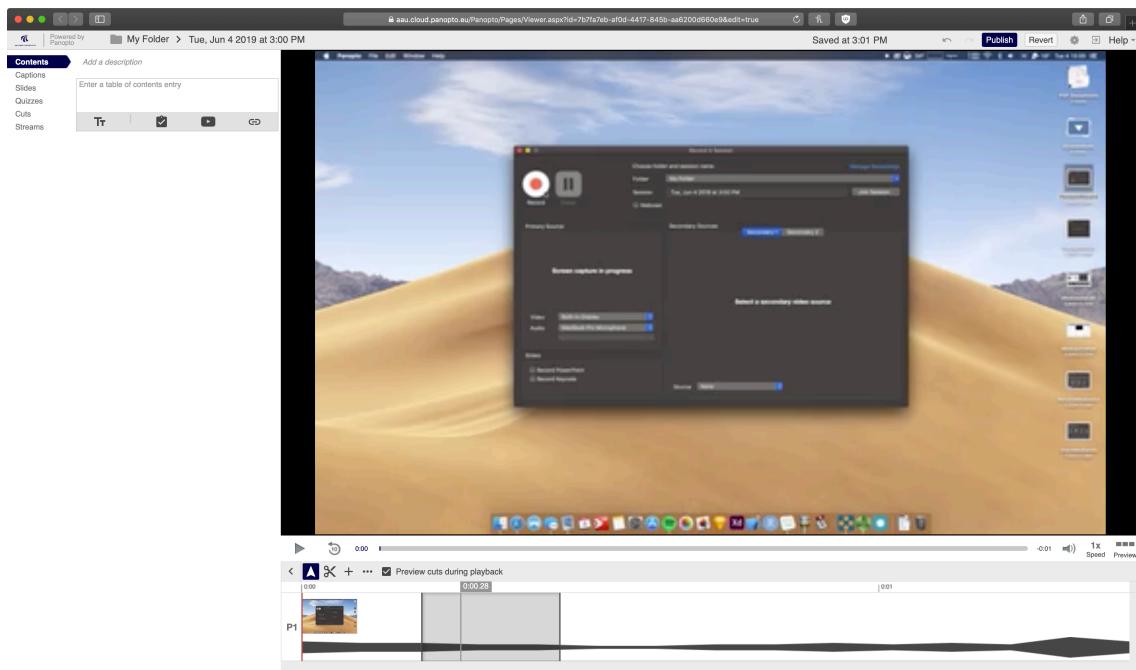


Figure A.14. The video editing screen on the web for Panopto

Usability Test Resources B

This appendix contains the resources used in the usability test in chapter 5.

B.1 Task List

The list of tasks the participants received on paper, in danish.

Opgave

1. Gennemgå manuskriptet efter behov
2. Start en optagelse af dig selv og skærmen (læs højt, peg med musen, forklar, du bestemmer)
3. Stop optagelsen efter 30 sekunder
4. Skift titlen af optagelsen til emnet på manuskriptet
5. Klip ca. 5 sekunder et sted fra videoen
6. Gem ændringer
7. Anskaf et link til deling af videoen

B.2 Platforms

The reference material the participants received printed on A3 paper.

Kaltura

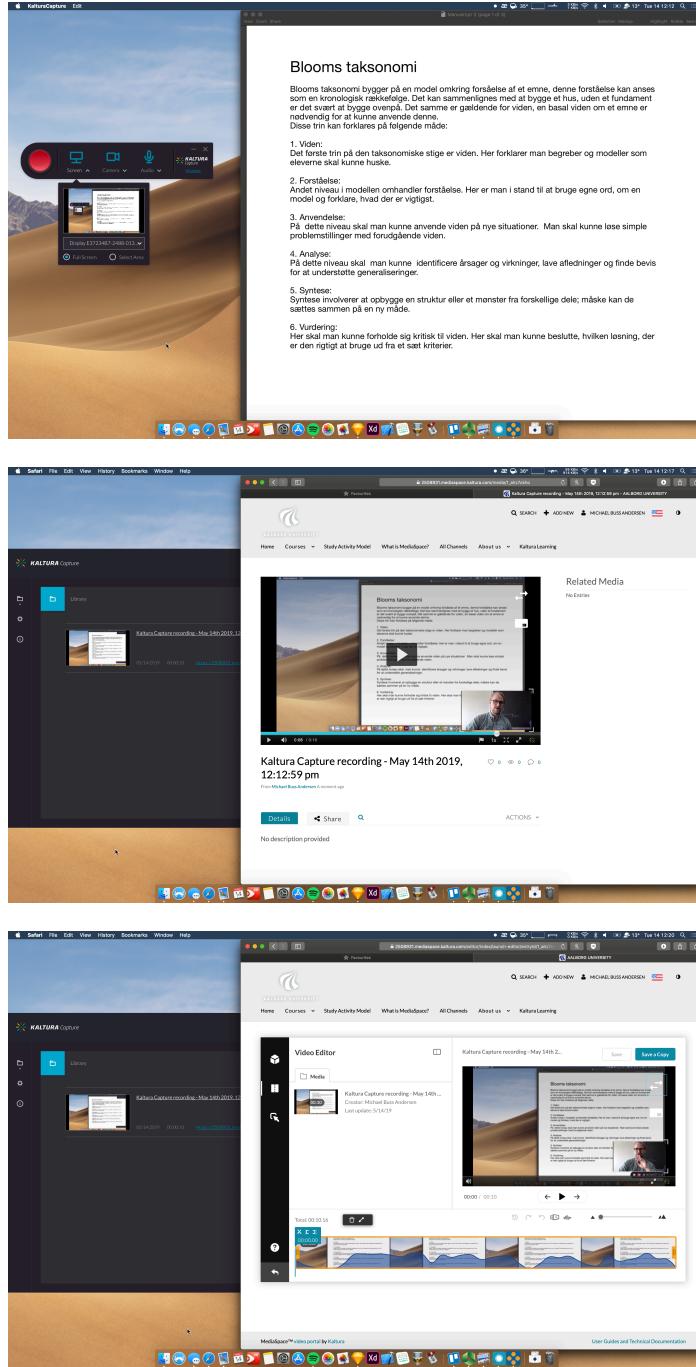


Figure B.1. The screen setup of the usability test using Kaltura

Mediasite

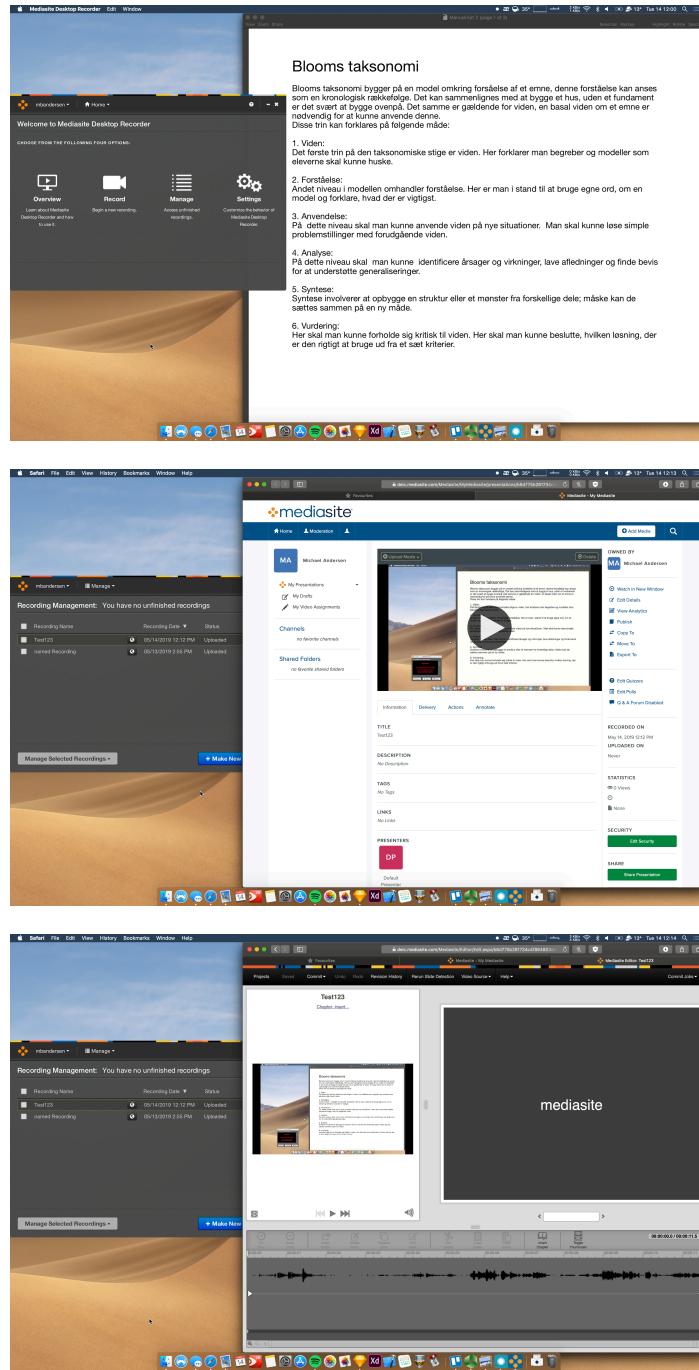


Figure B.2. The screen setup of the usability test using Mediasite

Panopto

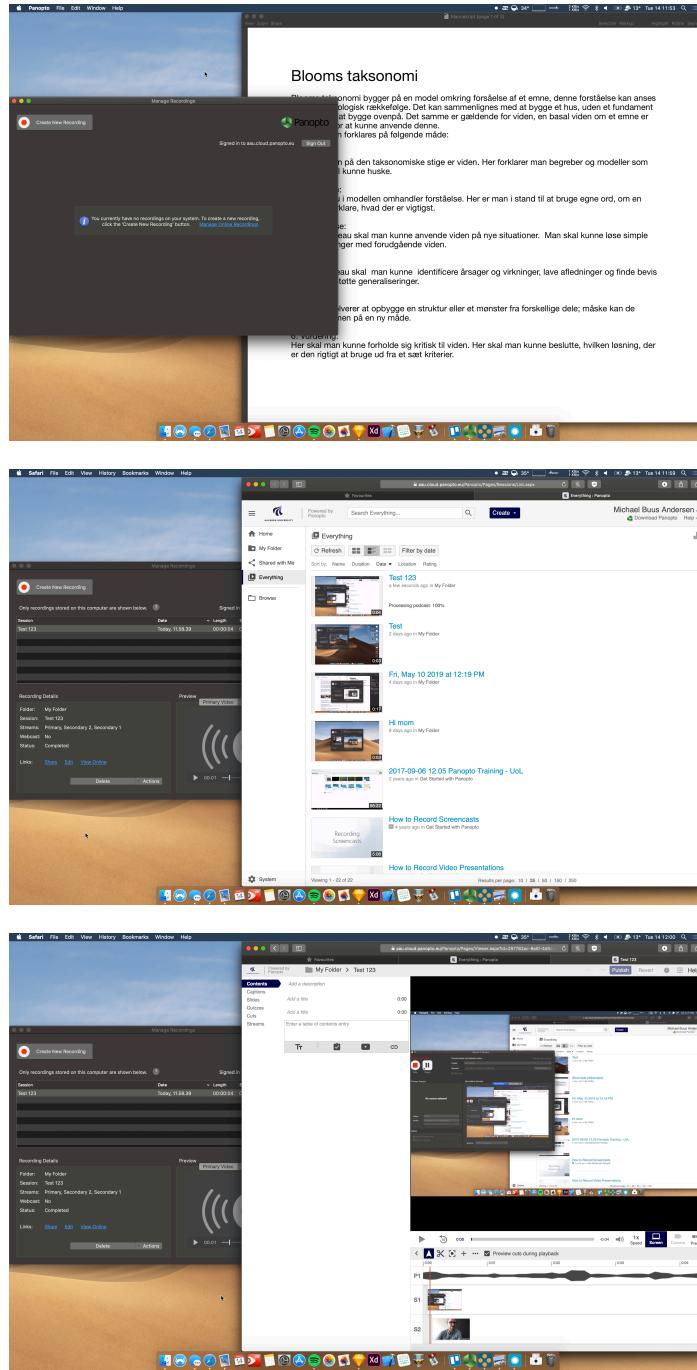


Figure B.3. The screen setup of the usability test using Panopto

B.3 Stimuli Presentation Order

The order in which the participants received the platforms and accompanying scripts.

Test Person	Run 1		Run 2		Run 3	
	First system	Script	Second system	Script	Third system	Script
TP1	Panopto	Bloom	Kaltura	Flipped	Mediasite	PBL
TP2	Kaltura	Flipped	Mediasite	PBL	Panopto	Bloom
TP3	Mediasite	PBL	Panopto	Bloom	Kaltura	Flipped
TP4	Panopto	Flipped	Kaltura	PBL	Mediasite	Bloom
TP5	Kaltura	PBL	Mediasite	Bloom	Panopto	Flipped
TP6	Mediasite	Bloom	Panopto	Flipped	Kaltura	PBL
TP7	Panopto	PBL	Kaltura	Bloom	Mediasite	Flipped
TP8	Kaltura	Bloom	Mediasite	Flipped	Panopto	PBL
TP9	Mediasite	Flipped	Panopto	PBL	Kaltura	Bloom

Table B.1. Stimuli presentation order for the Usability test

B.4 Danish Consent Agreement

The consent agreement in danish, they agree to let us record: audio, video and the screen on the computer they were using during the test.

Samtykkeerklæring

Samtykkeerklæring for deltagelse i usability test, ved Aalborg Universitet, Produkt – og Designpsykologi, 10. Semester, gruppe 19gr1081.

Jeg giver hermed mit samtykke til deltagelse i testen, samt er indforstået med at lyd-, video- og skærmoptagelse, som optages under testen, må gemmes til projektets afslutning, Juli 2019.

Alder: _____

Beskæftigelse: _____

Dato: _____

Underskrift: _____

Figure B.4. Consent agreement in danish

B.5 SurveyXact Evaluation

The VAS and ranking form the participants answered on before and after using each platform.

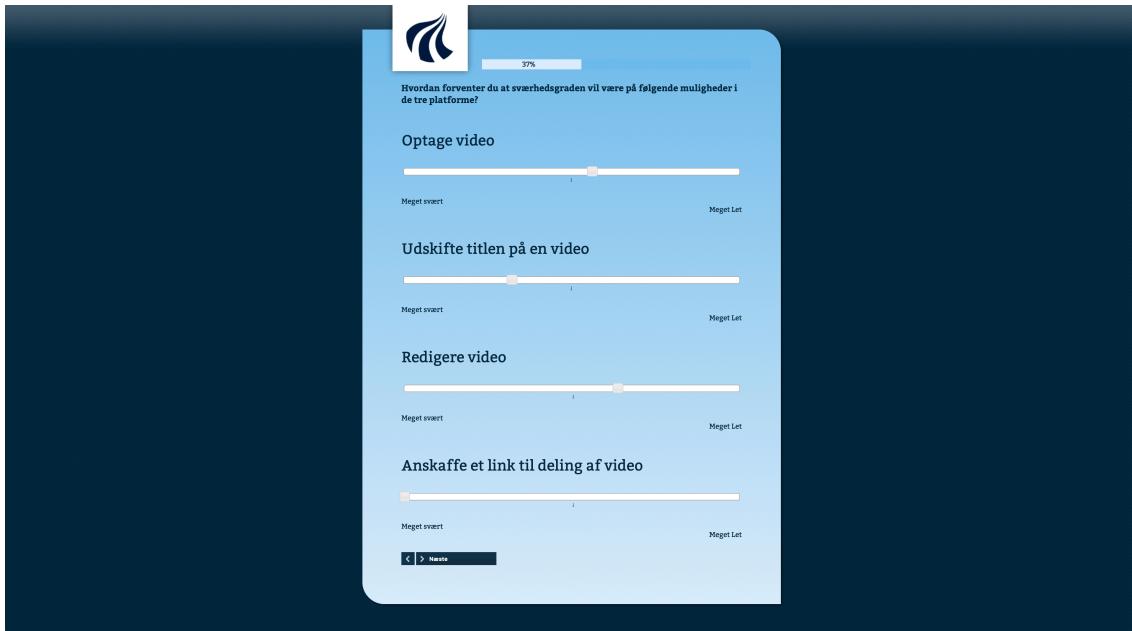


Figure B.5. The scales they ranked their expected difficulty and the different platforms on, each containing 4 VAS scales.



Figure B.6. Three of the seven rankings for the final ranking of all three platforms.

B.6 Scripts

The three different scripts given to the participants during the completion of the tasks on each platform.

Script: Blooms Taxonomy

Blooms taksonomi bygger på en model omkring forståelse af et emne, denne forståelse kan anses som en kronologisk rækkefølge. Det kan sammenlignes med at bygge et hus, uden et fundament er det svært at bygge ovenpå. Det samme er gældende for viden, en basal viden om et emne er nødvendig for at kunne anvende denne. Disse trin kan forklares på følgende måde:

1. Viden:

Det første trin på den taksonomiske stige er viden. Her forklarer man begreber og modeller som eleverne skal kunne huske.

2. Forståelse:

Andet niveau i modellen omhandler forståelse. Her er man i stand til at bruge egne ord, om en model og forklare, hvad der er vigtigst.

3. Anvendelse:

På dette niveau skal man kunne anvende viden på nye situationer. Man skal kunne løse simple problemstillinger med forudgående viden.

4. Analyse:

På dette niveau skal man kunne identificere årsager og virkninger, lave afledninger og finde bevis for at understøtte generaliseringer.

5. Syntese:

Syntese involverer at opbygge en struktur eller et mønster fra forskellige dele; måske kan de sættes sammen på en ny måde.

6. Vurdering:

Her skal man kunne forholde sig kritisk til viden. Her skal man kunne beslutte, hvilken løsning, der er den rigtigt at bruge ud fra et sæt kriterier.

Script: Flipped Classroom

Et Flipped classroom er en instruktionsstrategi, der vender det traditionelle læringsmiljø på hovedet ved at levere undervisningsmateriale, uden for klasseværelset. Det flytter aktiviteter der traditionelt har været betragtet som lektier, ind i undervisningen. I et Flipped classroom ser eleverne online forelæsninger, samarbejder i online diskussioner eller udfører forskning derhjemme, mens de arbejder i dybden med emnet i klasseværelset med vejledning fra underviseren.

Istedet for at underviseren dispenserer viden og eleverne lytter passivt, kan eleverne se en video hvor materialet bliver vist og forklaret. Med det udgangspunkt møder eleverne forberedt op til en undervisning mere fokuseret på deres aktive læring. Flipped classroom ændrer også på opgaverne i klasselokalet. Disse kan omfatte laboratorieforsøg, dokumentanalyse, debat eller projektbaseret læring.

En lærers interaktion med elever i et Flipped classroom kan være mere personlig og mindre didaktisk, og eleverne er mere aktivt involveret i deres tilegnelse af viden, da de deltager i og evaluerer deres læring.

Script: Problembaseret Læring

Aalborg universitets uddannelser er kendtegnet ved problembaseret projektarbejde, som tager udgangspunkt i et sæt principper for uddannelse, der udgør Aalborgmodellen for problembaseret læring (PBL).

Modellen er internationalt anerkendt og er gennem tiden blevet mødt med stor interesse fra universiteter, forskere og studerende fra både ind- og udland. Studieformen har udgangspunkt i projektarbejde og bygger på autentiske problemer, deltagerstyring og samarbejde.

Aalborgmodellen giver studerende redskaber til selvstændigt at tilegne sig viden, færdigheder og kompetencer på et højt fagligt niveau. Mange studerende får ligeledes under studiet mulighed for at samarbejde med eksterne partnere om løsning af faglige problemer.

Læringsmodellen tager udgangspunkt i, at studerende lærer bedst ved at anvende teori- og forskningsbaseret viden aktivt i deres arbejde med problemstillinger. Samtidigt understøtter læringsmodellen udviklingen af de studerendes kompetencer inden for kommunikation og samarbejde, og de studerende lærer at arbejde analytisk og resultatorienteret.

Interview Questions C

This appendix contains the interview questions that laid the groundwork of the semi-structured interviews that was conducted for this report. Each interviewee their or her own structure of questions, based on their field of expertise. This was to ensure maximum output and least waste of time. The questions also naturally evolved over the course of the research, due to a growing understanding of the topic on the part of the researchers.

The interviewer allowed for detours and sometimes skipped questions entirely if they turned out to be less important in the interview setting than anticipated. The actual questions that were asked can be extracted from the respective interview transcripts in Appendix D, Appendix E, Appendix F and Appendix G.

C.1 Questions for Kurt Nørmark

- Why did you decide to build your own video platform?
- What is your success criteria for the video platform?
- What would be your stretch goals and MVP?
- What went well and what went not so well with your own platform?
- How do we keep the good social aspects of normal lectures in the platform?
- Is there a way to keep the good her-og-nu aspect of normal lectures in the platform?
- Would you recommend that all videos be available all the time, or should they be released on a schedule?
- Would you recommend students watch the video alone or together at school?
- You say that videos can be shorter than normal lectures. Why is that important?
- What constitutes active learning?
- How compatible is videos with PBL?
- How did your students react to video lectures?
- How did the students react to your platform?
- How much time do you spend preparing a video?
- What did you find hard in the beginning?
- What do you find hard now?
- What will other teachers find hard?
- How do you think other teachers will react to having to produce video?
- How do you make sure the students actually watch the videos?
- How did it affect student learning (grades)?
- What do you see as the main road blocks?
- Whats the role of quizzes?
- Should quizzes be mandatory?
- What are your thoughts on analytics? (teacher and student)

- What would you (and others) want the most from the new knowledge base?
- Do you want video editing capabilities in the platform or separate?

C.2 Questions for Jakob Stoustrup

- What is PBL Digital ultimately meant to accomplish?
- What concrete new possibilities will PBL Digital give?
- How big a part of PBL Digital is the video platform?
- What are you trying to accomplish with the video platform?
- What is the reason for implementing the AAU Digital Strategy? Business community/government pressure?
- How will future teaching be at AAU?
- How do you plan to transition to a different form of teaching?
- Which challenges do you see in introducing more digital solutions?
- How do you plan to handle changing needs for room booking?
- Are students meant to be able to access every video or only the ones in their curricula?
- How do we make the students actually watch the videos?
- How do we avoid another Moodle? (that few uses correctly and/or likes)
- How do we make people want to use it?

C.3 Questions for Stefan Nordborg Eriksen

- What is the ideal educational method for you?
- Do you have any experience with video/flipped classroom education?
- What challenges do you see from your own / the students point of view in turning a larger part of education digital?
- What are a few important things that the video platform must do well for you to want to use it?
- Would you want access to every video at AAU, or only the ones for your own curricula, and why/why not?
- Would you want to watch the videos alone or with fellow student?
- What are your thoughts on motivating students to watch and reflect on videos?
- What would make you watch/skip a video?
- Do you think that gaining exam points for watching videos/answering quizzes/other throughout the course would motivate students?
- What do you think we can do to make that students (and teachers?) wants to use the new platform, not just endure it? (Unlike Moodle)
- What functionality would you want the most for the platform? Name a few. Why these?
- How important is the design/speed/ease-of-use for you?
- How do we best teach about the platforms features and encourage their use?
- How important is the fit-and-finish of the videos? (the use of animations/transitions/camera equipment/sound quality etc.)
- What are your thoughts on analytics? (Teacher/administration being able to easily and precisely monitoring your activity)

Interview Transcript: D Kurt Nørmark

- 1 **K** Jamen, måske skal du starte med at sige hvem du er hvem I er, altså hvad baggrunden er for at I laver det her, hvem jeres vejleder er, er det en jeg kender?
- 2 **I** Måske, han hedder Nikita, han sidder ovre på psykologi.
- 3 **K** Men du var fra elektroniske systemer eller hva'?
- 4 **I** Ja, men jeg læser noget som hedder Produkt- og Designpsykologi, det har du måske hørt om.
- 5 **K** Jaaa,
- 6 **I** Engineering Psychology hedder det på engelsk. Ehm. Jamen det handler egentlig.. Tænk på det lidt som interaktionsdesign, men så bygger vi meget af det på psykologisk teori og eksperimentalpsykologi, så det er noget med at teste og brugerteste.
- 7 **K** Så det er altså en bacheloruddannelse?
- 8 **I** Det er det også
- 9 **K** Så det er altså en uddannelse hele vejen igennem.
- 10 **I** Yes. Yes. Det er så vores afgangspunkt, det her.
- 11 **K** Men det kører vel på elektroniske systemer?
- 12 **I** Af historiske årsager.
- 13 **I** Det ér en ingeniøruddannelse.
- 14 **K** Ja.
- 15 **I** Så vi har også lidt elektronik, vi har programmering
- 16 **K** Ja.
- 17 **I** Det har vi i hvert fald i særdeleshed på bacheloren. Slut på bacheloren.
- 18 **K** Hvor store hold er I på bacheloruddannelsen?
- 19 **I** Der er næsten ingen forskel, men jeg tror at da vi startede var vi 22–23 stykker og vi er 12–14 stykker nu.
- 20 **K** Ja. Ja.
- 21 **I** Så relative lille. Jamen så -
- 22 **K** Yes.

- 23 | **I** Grunden til at vi laver det her, det er så at vi synes at det er utroligt spændende og det er sådan noget vi går og tænker over. Vi har sloges med Moodle måske, og tænkt mange gange. Og så kom vi også til at studse.. En af mine kammerater han, ehm, han sidder i et af de mange udvalg og har så fortalt os lidt om det på siden, og der er mange ting som vi studerede lidt over og hvad betyder det i det hele taget at vi skal digitalisere Aalborg Universitet, fordi vi har allerede nogle digitaliserings-ting af det. Betyder det så at vi skal e-maile mere eller hvad handler det egentlig om.
- 24 | **K** Eej.
- 25 | **I** Og det havde vi egentligt lidt svært ved at finde ud af i starten, hvad folk de mener. Og så en af de ting som folk universelt er enige om, det er noget med den her video, videoplatform. Så vidt vi kan forstå er det i hvert fald.
- 26 | **K** Jaa, men det tror jeg, at det er da, det er en brik i spillet man kan få øje på.
- 27 | **I** Ja.
- 28 | **K** Men der er også andre brikker.
- 29 | **I** Absolut. Men den er meget konkret, så det er noget vi kan arbejde med.
- 30 | **K** Ja.
- 31 | **I** Ehm. Så typisk så arbejder vi med interfacesign og så dan noget, men den her gang så går vi lidt mere teoretisk til værks og prøver at finde ud af hvordan problembaseret læring passer ind i alt det her. Er det overhovedet kompatibelt med at arbejde online? Hvad skal der så til?
- 32 | **K** Det er jo centralt i forhold til det fakultetet vil ud i.
- 33 | **I** Ja, Yes. Det er det vi laver. Så har jeg snydt lidt hjemmefra og læst på hvad du laver, men du skal også være velkommen til at præsentere det hvis du har lyst.
- 34 | **K** Naa, ja, men altså hvis du var inde og kigge lidt på.. Øh. Jeg har jo på de sidste, ja det er jo nogle måneder siden jeg, at jeg lagde de der par notater ud. Noget af det har jeg lavet i forbindelse med det udvalgsarbejde som du også var inde på og noget af det er egentligt bare et forsøg på at dokumentere nogle af de ting som jeg har fundet ud af igennem nogle år. Såå, der er jo den her digitalisering af undervisningen, så har jeg på det seneste også, øh, så har jeg lavet nogle, øh, lidt dokumentationer af de systemer jeg har lavet, e websystemer jeg har lavet. Jeg ved ikke om du har set dem?
- 35 | **I** Jo.
- 36 | **K** Jaer.
- 37 | **I** Du må gerne hvis du vil demonstrere noget specifikt? Men jeg har kigget på dem.
- 38 | **K** Jeg skal se om jeg kan finde dem. Ahm, det var nok på hjemmesiden, så det var nok det her som du har læst. Ja! Her er det. Så det er, det er ligesom det, jamen det er en god ide lige en gang imellem at stoppe op også øh, fastholde information om det man har lavet. Men der er også det her i det at øh de har en usikker fremtid, det her system.
- 39 | **I** Ja, det er klart.
- 40 | **K** Jaa, både af tekniske årsager, men også af, i forhold til databeskyttelse
- 41 | **I** Yes, Ja. Ja.
- 42 | **K** som der er nogle udfordringer i.

- 43 **I** Ja.
- 44 **K** Det er et åbent spørgsmål hvordan fremtiden bliver på den her front, men jeg finder forhåbentlig ud af det i det her semester hvordan det vil gå.
- 45 **I** Men om ikke andet kan det være at du har været med til at inspirere noget.
- 46 **K** Jojo, jamen det er fair nok altså. På et tidspunkt såå, de der anarkistiske systemer der skyder op hist og her, så falder de ligesom, de falder lidt til ro igen og de bliver erstattede af nogle mere centrale tiltag. Det er sådan set fair nok, synes jeg. Det er naturligt nok — det var også det vi så får en del år siden omkring hele web, altså, øøøøhm. I de rigtig gamle dage der var alt jo på papir.
- 47 **I** Ja.
- 48 **K** Og der når der var et kursus var det ugesedler.
- 49 **I** Ugesedler?
- 50 **K** Det var maget centralt dengang. Fordi ehm, hvordan skulle de studerende vide hvad der sker i et kursus?
- 51 **I** Ahh.
- 52 **K** Så der hver eneste uge så kom der, det var helt fast i programmet, en ugeseddel.
- 53 **I** Ja.
- 54 **K** Der kom en seddel rundt i boksene til de studerende, øhh, hvad er, øhh, menuen den næste uge? Hvad skal ve læse og hvilke opgaver er der. Og de kom så selvfølgelig på world wide web dengang at det spirrede op. Og alle kurserne havde deres egne ideer om hvordan det skulle struktureres.
- 55 **I** Ja.
- 56 **K** Sådan kørte det i mange år end til man sagde at det, amen vi bliver nødt til at finde et fælles slag på det. Og det var så der Moodle blev opfundet.
- 57 **I** Ja. Kan du så huske hvordan folk reagerede på at skulle tage stilling til det?
- 58 **K** Jamen altså når der sker sådan noget så er folk altid trætte af det. Man synes jo egentlig at det man selv har det er helt klart det bedste. Så hvorfor skal jeg lave det om? Sådan er det altid.
- 59 **I** Hvad med eleverne? Dengang de skulle gå over til det?
- 60 **K** Jamen jeg tror at de studerende synes.. De studerende var lidt frustrerede over på et tidspunkt at der var så mange måder at gøre det på.
- 61 **I** Mmm.
- 62 **K** Så om ikke andet så bare at få det ens.
- 63 **I** Ja.
- 64 **K** Er.. Det var godt.
- 65 **I** Jaja.
- 66 **K** At det så i Moodle blev sådan en lav fællesnævner at Moodle på en eller anden måde er lidt træls.
- 67 **I** Ja, og du vil også blive overrasket over hvor mange forskellige måde som folk kan bruge Moodle på.
- 68 **K** Ja.
- 69 **I** Haha.
- 70 **K** Men der er ikke ret mange der er gode til at bruge Moodle ud over sådan den der minimalitiske måde.

- 71 **I** hvorfor tror du at det er?
- 72 **K** Igen, ehm, hvis man skal blive god til at bruge Moodle så bliver man faktisk nødt til at sætte sig noget ind i det. Og det er der nok mange der glider lidt af på.
- 73 **I** Mmm
- 74 **K** Ligesom at leve sig ind i, i de muligheder der er.
- 75 **I** hvad tror du at man kan gøre for at gøre den proces lidt bedre, for jeg forestiller mig ikke at underviserne har ændret sig så meget?
- 76 **K** Nej, jeg tror, altså der er jo selvfølgelig ressourcerne. Man kan jo bare gå ud og opsøge de ressourcer der skal til. Jeg tror måske mere at det skal hældes ned i halsen. Jeg tror at man skal. At de folk der styrer Moodle skal rundt og fortælle om mulighederen på Moodle. Altså ikke i banelange kurser, man sådan korte sessioner hvor man..
- 77 **I** Mhem
- 78 **K** ..bliver, hvor man bliver indført i, hvis nu man vil det og det i Moodle, så gør ma sådan og sådan.
- 79 **I** Man kan sige, den mest kyniske måde at få folk til at gøre det på det er at cutte dem i løn hvis de ikke gør det.
- 80 **K** Ah ha
- 81 **I** Det var selvfølgelig en joke.
- 82 **K** Ej det tror jeg er ehh
- 83 **I** Det er nok ikke den bedste måde at gøre det på.
- 84 **K** Det tror jeg ikke på.
- 85 **I** Hvad med sådan noget som at have Moodle til at lære folk lidt om det?
- 86 **K** Jo hvis man kunne organisere det, så ville det være fint. Altså for mange er Moodle bare et PDF repository
- 87 **I** Ja, ik'å?
- 88 **K** Ja, ja. Og øöh, jeg er heller ikke selv ret god til Moodle.
- 89 **I** Det er der heller ikke nogen af eleverne, der er.
- 90 **K** Nej.
- 91 **I** Ha.
- 92 **K** Det man kan sige, det er at de fleste hader Moodle. Jeg har fået det at vide — jeg holder styregruppemøder med mange studerende, og det er altså, det er et tema i alle, på alle styringsgruppemøder og et tema i alle semesterevalueringer.
- 93 **I** Ja.
- 94 **K** At d, at der er forskellige udfordringer med Moodle. Jeg ved også at mine kollegaer de hader også Moodle.
- 95 **I** Hæ.
- 96 **K** Jeg har ikke mødt den første endnu der siger at Moodle er et fantastisk system.
- 97 **I** Nejnej, men det er det vi har.
- 98 **K** Såå, Ja det er det vi har.
- 99 **I** Det lyder til at videoplatformen bliver bygget, også at den kan passe ind i Moodle.
- 100 **K** Ja, givet vist. Det ville jo også være mærkeligt andet.

- 101 **I** Det kan man sige, ja.
- 102 **K** Ja, ja.
- 103 **I** Man kan så håbe at de bygger det sådan at det er let at skifte ud i fremtiden.
At man ikke bygger det så det gror så meget sammen at..
- 104 **K** Altså jeg kan jo se at der er et møde her sidst på ugen omkring video, de overvejelser omkring videoplatformen.
- 105 **I** Ja.
- 106 **K** Ja. Jeg ved ingenting om det.
- 107 **I** Nej vi ved en lille smule fordi vi har holdt andre interviews. Ehm. Jeg ved at et af kravene er at det skal integrere med Moodle.
- 108 **K** Ja, men hvad gør ikke det? Det kan ikke være svært..
- 109 **I** Ja.
- 110 **K** At integrere i.
- 111 **I** Nej, og jeg tror at..
- 112 **K** På et eller andet niveau.
- 113 **I** Det er jo dét. På et eller andet niveau. Det synes jeg tit er et problem når vi snakker med nogen der sidder i administration, så siger de sådan noget som at det skal integrere med Moodle, men har svært ved at sætte ord på havd det egentlig betyder. Betyder det at vi skal, altså at man skal kunne embedde video, eller skal det være links til video?
- 114 **K** Det kan man. Jo altså, embedde en video, altså man kan embedde video i hvad som helst.
- 115 **I** Jojo, men er det dét de mener eller noget andet? Ja, nå.
- 116 **K** Ja, deeeeet øh. Det er et godt spørgsmål.
- 117 **I** Hæhæ. Okay, jeg har forberedt nogle spørgsmål.
- 118 **K** Ja.
- 119 **I** Så kan vi bare tage udgangspunkt i dem. Ja, så hvorfor besluttede du dig for at bygge din egen videoplatform? Vi tager den til at starte med.
- 120 **K** Jamen altså, kort fortalt — det var jo en ide jeg fik omkring, øh, omkring en nødvendig dialog. Altså ikke bare at formidle videoerne og sige "her er videoerne", men også det at tillade en form for faglig dialog omkring det stof der nu er i videoerene. Og så fik jeg den ide og så lavede jeg det, ligesom jeg har lavet mange ting.
- 121 **I** M-hm
- 122 **K** Jeg har ligesom en eh, jeg har, jeg har en platform der gör at jeg ret let kan lave nogle små, nogle mindre systemer jeg producere på nogle ganske få dage. Det gjorde jeg også med det her. Og så når jeg har produceret det på få dage, så ved jeg godt at det jeg så glemmer tit, det er at det tager tid og kræfter at holde hånden under det, altså det tager også tid og kræfter at ændre det til den tid og virkelighed der ændrer sig omkring det. Det er ikke bare at få dage, det er selvfølgelig mere. Men første bud på hvordan sådan noget kan laves, kan jeg faktisk producere ret hurtigt. Så når jeg får en ide, så er det typisk at jeg vil lave det til et eller andet system. Det har jeg gjort på mange måder. Det var ret, det var ret enkelt.
- 123 **I** Okay, det var delvist nemt, men det var vel også fordi du så en eller anden pointe med at lave videoer?

- 124 **K** Jo, men min teori, min hypotese på det tidspunkt var at videoerne kan ikke stå alene. Jeg vil gerne have noget aktivitet omkring dem. Om ikke andet så ville jeg gerne have en ventil der gjorde at eleverne som kører surt i et eller andet fagligt stof i videoerne kan ligesom sige at her er noget — det kan jeg ikke finde ud af, eller her er noget jeg undrer mig over. Her er noget jeg gerne vil stille et spørgsmål til. Så lige nøjagtig den her detalje.
- 125 **I** Så det er noget med kommentarer eller sådan noget?
- 126 **K** Kommentarer og reflektioner.
- 127 **I** Ja.
- 128 **K** Jeg havde egentlig også forestillet mig at jeg ville tvinge de studerende til at reflektere over tingene, på samme måde som man ville forvente hvis vi sidder og taler om det faglige stof, så forventer man jo at elevenen forholder sig til det, til det faglige stof. Men det har jo så, altså summa summarum så har det været meget svært.
- 129 **I** At få dem til det?
- 130 **K** Ja, altså det er i en eller anden forstand en fiasko.
- 131 **I** Okay. Og det er simpelthen svære end når du sidder i klasselokalet?
- 132 **K** Nej, der siger de studerende heller ikke noget. Jamen i et auditorium hvor vi er på de hold så er der jo mellem 100 og 300 studerende. Der er ikke mange der siger noget. Og de folk der siger noget, det er dem der føler en eller anden trang til at sige noget hver gang.
- 133 **I** Ja
- 134 **K** Det er de samme folk der siger noget.
- 135 **I** Det er lidt ærgerligt. Det er det som PBL gerne skulle..
- 136 **K** Joe, men det kræver en eller anden form for mod at sige noget i en forsamling.
- 137 **I** Ja især i en større..
- 138 **K** I en større forsamling. Så det., de fleste er bare sådan i lytte-mode eller jeg sætter mig ned her og så forventer jeg ikke at der er nogen der forstyrrer mig, jeg er her bare. Så det er egentligt fair nok, men altså det, det er svært at få de studerende til at reagere på de videoer de ser, det må jeg indrømme.
- 139 **I** M-hm.
- 140 **K** På den måde har det ikke været en succes.
- 141 **I** Man kunne jo egentlig have tænkt lidt at det ville afhjælpe den der spørgeskæرك.
- 142 **K** Ja, men jeg skal virkelig råbe ind i ørene på hele holdet at jeg forventer at jeg får en eller anden form for feedback — fordi tanken var jo, min pædagogiske tanke var at de studerende skal forberede sig ved at se videoen, omkring en times tid, forud for hver lektion. Så skal de, ehh, reflektere, undre sig, stille spørgsmål og så videre. Og så de refleksioner der kommer til en video, de skal være udgangspunktet når jeg taler med de studerende.
- 143 **I** M-hm, m-hm.
- 144 **K** Jeg ved hvad udfordringen har været, lad os tale om det når vi mødes. Men hvis der kommer for lidt ind så er det jo svært.
- 145 **I** ja, absolut.
- 146 **K** Men altså på et hold, lad os bare sige et hold på 200 studerende, så kommer der jo trods alt et eller andet ind. Det kommer ét eller andet.

- 147 **I** Ja det er klart, når der er mange, så må der..
- 148 **K** Ja så kommer der et eller andet. Så måske lige nøjagtigt not til at jeg kan parriere hvor det er at skoen den trykker.
- 149 **I** Okay, okay.
- 150 **K** Men det var tanken.
- 151 **I** jaja. Det lyder da meget som flipped classroom tankegang. Det der med at man skal stille nogle spørgsmål og reflektere over det hjemmefra og så komme og diskutere det.
- 152 **K** Ja. Det, jamen det er det også, altså.. ja.
- 153 **I** Okay. Hvad ville være, kan man sige, det mindst omfangsfulde produkt en videoplatform, hvad skal den som minimum kunne for at den dur. Så kan vi så bagefter snakke om hvad du godt kunne tænke dig hvis du havde uendelige ressourcer og tid og talent til at bygge den.
- 154 **K** Det kommer jo nok meget an på hvad det er for noget viden man vil formidle. Altså der er jo mange forskellige idéer om videolektion. Altså det kan jo være alt lige fra optagelse af ting der foregår i en fysisk forelæsning. Det der skete sidste år, det har vi så på dåse, det kan vi så bruge næste år, eller der skete i fredags, det ligger på video, og det er så sådan en ressource for dem der ikke kunne møde op eller dem der vil høre eller se det endnu en gang, dem der vil se det forud ofr eksamen.
- 155 **I** M-hm.
- 156 **K** Eller en video det kan være noget som er.. Det kan være en særlig fagligt forberedt gennemgang af udvalgte ting som er produceret løsrevet fra vores møder med de studerende. Så altså der er jo adskillige forskellige former for videolektioner.
- 157 **I** Det er rigtigt, men jeg tænkte sådan på teknologien, platformen, hjemmesiden, hvadende det er for noget at vi har fat i. Så kam kan blive ved med at putte features på, men hvad er det, skal man kunne redigere i den, eller er det noget man bare kan gøre et andet sted? Skal man, selvfølgelig skal den vide videoerne, det er nok absolut det vigtigste.
- 158 **K** Det er nok ligesom helt basalt ikke også. Uden det så har man ikke noget.
- 159 **I** Så kan du jo gå i dybden med mange af dem; skal teksten være søgbar eller talen være søgbar. Der kan være kommentarer rundt om og alt sådan noget.
- 160 **K** Altså det at man kan vide det og det at man på en eller anden måde kan knytte en kommentar eller spørgsmål, det er nok det minimale.
- 161 **K** Øh, i forhold til dem der producerer videoeren ville det være en kolossal fordel hvis man, hvis der var højere grad af redigering indbygget. Fordi en video er sådan en stor monolith der bliver produceret og som man ikke kan, som det er meget svært at, det er meget svært at ændre den, det er meget svært at annotere. Fordi, øhh, der er fejl i det her. Altså ligesom at der er fejl i lærebøger, så er der også fejl i videoer.
- 162 **I** M-hm.
- 163 **K** Det kan ikke undgåes, og det er fuldstændigt urealisitsk at rette en, lad os bare sige at vi har en video på 10–15 minutter. Og så opdager man en fejl. Det er simpelthen ikke realistisk at rette den fejl.
- 164 **I** nej.

- 165 | **K** Som det ligger i dag. Og ehm, det er jo fordi at videoen den bliver jo eksporteret, det vil sige den bliver kørt ud fra det værktøj der laver den, en mp4-fil eller noget i den stil, som jo så er blevet kopieret til en server. Forberedt på serveren. De der trin med at køre den ud, få den uploadet og få den på plads på serveren. Den skal du jo gentage hvis man skal rette en lillebitte fejl. Det er urealistisk.
- 166 | **I** M-hm.
- 167 | **K** Det tætteste jeg har været på noget der virkede, det var dengang YouTube, som er den platform jeg bruger, dengang at de tillod annoteringer.
- 168 | **I** Ja, det har de lige fjernet, ikke?
- 169 | **K** Det har de fjernet. Fordi, tror jeg, at de kunne åbenbart ikke have det kørende på alle platforme. Og så synes de at det var bedre at fjerne det helt.
- 170 | **I** Mhmmmm.
- 171 | **K** jeg tror at de havde problemer på mobile platforme. Men det benyttede jeg faktisk en del dengang det var der. For der kunne man sætte, på sådan et bestemt sted i videoen på sådan et overlay, ne tekst ind. Et eller andet, en besked om at her et eller andet ved en fejl, i skal lige være opmærksomme på.
- 172 | **I** Ja.
- 173 | **K** Men jeg har en drøm om at en videoplatform skulle kunne formidle stumper der ligger som altså, så hver en lille stump skulle så kunne erstattes med en stump der er gjort, altså der er rettet til.
- 174 | **I** Ja.
- 175 | **K** Så I stedet for den der monolith man producerer og er svær at have med at gøre, så skulle platformen jo egentlig kunne afvikle ting som var a meget mindre granualitet. Så bare ligsom altså få dem ud. For så vidt det som et videoredigeringsværktøj gør. Der sidder nogle stumper og man kan jo godt se helheden men kunne man streame det ud fra stumperne, frem for en eller anden video, det ville være..
- 176 | **I** Eller altså bare processen bare var automatiseret inde bagved, så når du så lavede en ændring i projektfilen, så..
- 177 | **K** Ja, netop. Det ville være et STORT skridt fremad i forhold til at gøre det nemmere at ændre småting i.
- 178 | **I** Det er rigtig godt at høre. Det er en nyhed for mig. Det giver rigtig god mening når du siger det. Det er ikke noget vi har tænkt på før.
- 179 | **K** Men jeg getter jo på, i forhold til, hvis man kigger på professionelle tv-mæssigt brug af det her, altså jeg tror ikke t Danmarks Radio er afhængige af at alt skal køres ud på en mp4-fil, jeg tror altså de må afvikle det fra en eller anden form der gør at de kan håndtere stumper hver for sig, altså, ik' også.
- 180 | **I** M-hm.
- 181 | **K** Altså det ville være en fantastiks ting.
- 182 | **I** Det er godt at høre, spændende.
- 183 | **K** Men om det er den vej det kommer til at gå med den videoplatform, det, det aner jeg ikke.

- 184 **I** Du skal huske at vi to, vi er på universitetet, så i hvertfald jeg kan være fuldstændigt ligeglæd med virkeligheden, hæhæ, vi kommer med nogle anbefalinger når vi er færdige med det her, selvfolgtlig. Fra vores synspunkt så er vi bare interesserede i at finde ud af hvad det idéelle er, og så må vi pakke det ind go så vælge noget realistisk efter det, det er nogle andre der står for det. Så helt klart ikke hold dig tilbage hvis du har nogle idéer som er urealistiske nu.
- 185 **K** Ja, men teknologien ændrer sig jo hele tiden altså øh altså ny teknologi, og hvad der er praktisk men altså det jo, og det har ændret sig meget de sidste 15–10 år og vil jo sikkert stadig gøre det.
- 186 **I** En af de ting jeg lige hurtigt kom til at tænke på, med sådan noget som at have sådan nogle projektfiler, så bliver der nødt til at være et eller andet særligt format jo..
- 187 **K** Mm-hmm
- 188 **I** ..hvad sker der så hvis den videotjeneste lukker og, og du ved hvis man bare har en fil så det...
- 189 **K** Yeah yeah der er der jo så, af nødvendighed, opstået enighed om om nogen få videoformater, det ku' der jo også, det ku der nu også opstå på den her front...
- 190 **I** Ja, det er rigtigt ja
- 191 **K** Gu' ved om der ikke allerede er noget, det vil jeg nu alligevel tro der er, jamen det ville da være sundt hvis det ku'. Det kunne også være sundt i forhold til alle de redigeringsplatforme der er, hvis man kunne udveksle samme format. Et fællesnævnerformat.
- 192 **I** Yeah.
- 193 **K** Ja, det ville jo i hvert fald være i videofoknenes interesse.
- 194 **I** Ja da.
- 195 **K** Men nok ikke producentens.
- 196 **I** Nej, plus, det er nok, når det er noget med tekst er det ret nemt at blive enige om ting, fordi det er ret få ting som de skal blive enige om, selv noget som øhm..
- 197 **K** Man jan jo se inden for tekstverden — de fleste tekst tekstoprocessorer kan jo åbne en Word-fil, men sådan er det ikke med video.
- 198 **I** Nej, de er nok bare mere komplicerede.
- 199 **K** Det er de nok på en eller anden mode, men det burde kunne laves.
- 200 **I** Jeg er enig. Der burde i hvert fald være et alternativ. Det kan også være at der er det, det må vi jo se på. Nå, men den platform du lavede — hvad har den fået af kritik og ros? Du må have fået noget feedback fra de studerende, tænker jeg.
- 201 **K** Sådan i det hele taget? Omkring flipped courses og videolekctioner, er det det du tænker på?
- 202 **I** Jeg tænker på din platform.
- 203 **K** Jamen jeg tror at de studerende er ret invariante, jeg tror at de er ret, det betyder ikke så meget for dem.
- 204 **I** Okay.

- 205 | **K** Altså med den platform der. Det tror jeg faktisk ikke. Yeah. Altså det er en ventil for dem, hvis eleverne har et spørgsmål, så kan de fyre den af. Så kan de jo formodentlig også få et svar på den. Så det er 10% af de studerende som benytter sig af det, det er ikke.. Om midlerne bliver formidlede i en YouTube-playliste eller de bliver formidlet i mit værktøj, jeg tror sgu ikke det gør den store forskel.
- 206 | **I** Det err også et svar.
- 207 | **K** Det tror jeg.
- 208 | **I** Det kan godt være. Jeg ved at det er for mange, men nu går jeg også på et studie som går op i sådan nogle ting, jeg ved ikke hvordan det er for andre. Øhm, så en af de ting som folk er bange for når vi snakker om video-ting, det er at man mister det sociale aspekt. Har du nogen ide om hvordan man kan, altså jeg vedas man kan mødes i virkeligheden også, men hvordan kan man bringe noget af det over på den digitale side også, hvis overhovedet?
- 209 | **K** Jo men hele tanken med flippede kurser er jo at man booster aktiviteten, så i stedet for at man tilbringer tiden to timer i et laboratorie, som jo ikke er ret meget, jo vi er der allesammen, man kan se hinanden, der er jo ikke meget, der er jo ikke meget liv.
- 210 | **I** Nej, nej dater der ikke.
- 211 | **K** Så er tanken jo at vi skulle på en eller anden måde organisere det sådan at der skulle blive mere plans til aktiviteten. Nu bruger vi ikke tiden på gammeldags forelæsniger, nu, formidlingen er sket på en anden måde, så nu har vi tid til aktivitet i grupper. Så det synes jeg enlig, det synes jeg egentlig virker ret formuftigt. Jeg er ikke så bange for den del af det. Øhm, det der er den store udfordring omkring kurser der bliver omlagt på den måde, det er at finde en model for at afvikle kurserne. Vi er jo hundredemetermestre i den gamle model. Det ved vi lige nøjagtigt hvordan vi skal gøre. Det er 10–12 lektioner og hver lektion har 2 timers forelæsninger og så to timers opgaveregning.
- 212 | **I** M-hm.
- 213 | **K** Så vi reserverer en halv dag om gangen, vi ved lige nøjagtig hvordan det skal foregå. Men hvis man begynder at tænke i de her retninger, så spørgsmålet det er så hvor mange lektioner deal der være, og skal en lektion, eh, skal vi overhovedet, hvor mange gange mødes vi i den store flok? Skal man skemalægge tiden til at se videoerne? Øh, og sådan noget der.
- 214 | **I** Hvad synes du om det?
- 215 | **K** Det tror jeg ikke nødvendigvis er en god ide. Fordi, er man studerende på et universitet, har man jo sin frihed til at tilrettelægge tiden som man synes er bedst, altså det er en del af forberedelsen, så vi skal ikke pådutte de studerende en bestemt måde at forberede sig på.
- 216 | **I** Okay.

- 217 **K** Men, eh, jeg kan forestille mig en model hvori man mødes ved kursets start, man mødes ved kursers afslutning. Så mødes man to gange ind imellem. En time hver gang. Det, det er det man mødes i et stort rum, og så holder vi så aktivitet i lidt mindre grupper, det kan være projektgrupperne, det kan være en gruppe der er lidt større. Og det er så der hvor der er liv, hvor der måske er gruppearbejde, det er der hvor en underviser har dialog med studerende om den faglige udvikling. Men det er jo en her anden form for skemalægning.
- 218 **I** Absolut, absolut.
- 219 **K** Og det, ehh, vi er ikke kommet dertil hvor vi ligesom siger; et kursus kan afvikles på den her nye måde baseret på videolekctioner, øhm, og-øh, det bliver afsat fire sessioner hvor man er sammen først og sidst og to gange ind imellem for at gøre status, og så er der reserveret nogle andre former for rum. Vi er milevidt fra at tænke i de baner.
- 220 **I** M-hm.
- 221 **K** For kursusholderen er det skide svært at være, at lave den forandring. For hvis jeg skal holde sådan et kursus, så systemet, det lægger bare tingene tilrette; og ja, du skal have et au., hvor mange, hvilke auditorer vil du ha, nej det altså, du får det auditorium 12 gange af to timer, det. Så er det skide besværligt, for ikke at sige nærmest umuligt at så sige; jamen det har jeg ikke brug for, jeg skal have noget helt andet, jeg vil i øvrigt gerne have skemaet brudt op på en helt anden måde.
- 222 **I** M-hm.
- 223 **K** Dét er svært. Jeg kalder det kursusmodel.
- 224 **I** Yeah. Så systemet arbejder en lille smule imod det lige nu?
- 225 **K** Systemet er i hvert fald ikke, øh, er ikke indrettet på at der skal andre kursusmodeller til hvis vi ønsker at undervisningen skal foregå på video. Vi er simpelthen ikke kommet dertil endnu. Og det er svært for den enkelte underviser at gøre noget der, for spå er man på en eller anden måde, hvis det ikke bliver helt ideelt første gang, så er det kursusholderen der har et problem.
- 226 **I** Ja.
- 227 **K** Hvorimod man kan sige at det er vel universitet der i bund og grund er ansvarlige for undervisningens form, og altså, rammer. Det er undervisningsrammer vi taler om.
- 228 **I** Ja.
- 229 **K** Så der er, som underviser er man på herrens mark.
- 230 **I** Ja, okay.
- 231 **K** Hvis man ønsker at ændre på rammerne på en radikal måde. Det er nok nærmest det største problem jeg ser fra undervisers side.
- 232 **I** Yeah. Interesant — noget jeg ikke..
- 233 **K** For jeg har jo, jeg har jo faktisk i flere år har jeg har begyndt at indføre det her på, på et stort kursus. Det har jeg bibrædt alle forelæsningstimerne. Altså det er ikke forelæsninger, de studerende kommer og de har set det faglige stof, det skal de ha', om de har det eller ej, det ved jeg jeg ikke, men det er deres problem.

- 234 **I** Mhm, ja.
- 235 **K** Og så mødes vi og så har vi noget plenum-aktivitet hvor jeg taler med dem om nogle ting, for eksempel hvad har jeg samlet ops hvilke udfordringer kan jeg se at der er? Det taler vi lidt om. Så giver jeg noget feedback på nogle afleveringer de studerende har..
- 236 **I** M-hm.
- 237 **K** Såååå laver jeg et program mens de studerende kigger på, så udvikler jeg et program.
- 238 **K** Men jeg doserer ikke det faglige stof,
- 239 **K** Jeg holder ikke den der forelæsning, som det gamle ritual
- 240 **K** Jeg bruger tid på at lægge op til opgaveregning, så når vi kommer ud i grupperummet ved alle hvilke opgaver der skal regnes ellers kommer folk ud i grupperummene og de aner ikke havd der skal laves og der går lang tid inden de finder ud af hvad der skal laves
- 241 **K** Hvis man lige bruger et kvarter inden man kommer der ud, I skal lave de her opgaver og det her er det vigtigste
- 242 **K** På langt sigt kan man ikke bibeholde at man både har den faglige formidling på videoer og man også mødes ligeså meget som man ellers har gjort i auditoriet, der skal skæres ned på auditorietid og det er så der hvor de nye kursus forløb kommer på banen
- 243 **I** Du snakker om at man mister det der her og nu aspekt, som holder folk til ilden
- 244 **I** Er der nogle gode ideer til hvordan man kan bibeholde det eller bare gøre det lidt bedre, ville det for eksempel være en god ide kun at lade videoerne være tilgængelige i en periode eller lave nogle tricks der er mere eller mindre drastiske
- 245 **K** Nej
- 246 **K** Den store fordel ved at have video og det de studerende også fortæller er at videoer er til stede formodentligt i god til før de skal bruge dem
- 247 **K** De studerende kan tage videoen lige når de har brug for den og de kan se den en eller to gange, nogle ser den slet ikke og man kan se den igen, har man ikke set den hjemmefra kan man se den lige nøjagtig inden den opgave hvor den er nødvendig, det gør de studerende, det er også en måde at gøre det på
- 248 **I** Absolut
- 249 **K** Og nogle vil jo så også se den igen før eksamen, det kan jeg jo se
- 250 **I** Det kommer de fleste jo nok til
- 251 **K** Der er nogle resourcer der som er til rådighed, forelæsningen er flygtig og foregår nu og her og om to timer er alting væk, det er jo lidt trist
- 252 **K** En af de store fordele ved video er at det er en mere blivende resource, vi skal endelig ikke begynde at begrænse vores brugere
- 253 **I** og heller ikke før, så den først bliver tilgængelig den dato hvor de skal

- 254** **K** Det synes jeg egentlig ikke fordi i forhold til PBL og just in time, nogle grupper har jo brug for det faglige stof, lad os sige at det kommer for sent i kurserne, så kan man jo sige at okay nu er kurserne jo ikke på den traditionelle form I kan go ind og tage lektionerne en måned før, det synes jeg er fint
- 255** **I** Så kan folk også bingé watche hvis de har lyst til det
- 256** **I** ØØØØHHHHH
- 257** **I** Du siger at videoer gerne skal være kortere end almindelige foreløsninger, hvorfor det?
- 258** **K** Hvis man ser på hvad der sker til en forelæsning så er der jo de første 10 går med et eller andet rituelt stof, når man står der som den der formidler stoffet nede i bunden af auditoriet, har man en eller anden tendens til at dvæle ved noget og siger ting to gange, træder sig selv over tærne og fjumre rundt på en eller anden måde det tager for lang tid
- 259** **K** Hvorimod hvis man gør det på video så skal man tænke på at sige det en gang, men sig det ordentligt og sig det kort og kontant, lad være med at falde for fristelsen at lige skulle sige det igen og lykkedes det ikke kan man bare gøre det om
- 260** **I** Det er rigtigt
- 261** **K** Oven I hatten så kan man justere på afspilningshastigheden, jeg kan sagtens spilles med 1.2 eller 1.5 i hastighed hastighed, det går riktig fint, det er lidt afhængig af at man forelæser eller producenten taler og det betyder jo meget i forhold til den tid der bliver brugt på det
- 262** **K** Så jeg mener hvis igattager de her ting, så de ting jeg bruger to timer på i auditoriet kan jeg sagtens gøre på 1 times reel afspilningstid
- 263** **I** Og så kan folk afspille det ved dobbelt hastighed
- 264** **K** Så kan man sagtens komme ned på den halve tid med mere klarhed
- 265** **I** Deler du så også forelæsningssemnerne op i mindre bidder
- 266** **K** det gør jeg typisk, det er lidt afhængig af på mit største kursus, imperativ programmering, der har jeg indført det jeg kalder en lektionsvideo
- 267** **I** Okay
- 268** **K** Tanken er på omkring 20 minutter og gå hen over hele stoffet, altså kernestoffet i lektionen og så vil der typisk være satellitemner, måske centrale emner jeg ønsker at uddybe, give flere eksempler på
- 269** **K** Men det første man gør det er at man ser lektionsvideoen og så får man det samlede overblik og så vil der være typisk et antal satellitvideoer for særligt vigtige emner eller hvad nu det er
- 270** **K** Jeg deler dem op i kategiroer som noget der er centralt og noget der er supplerende
- 271** **K** Plus der oveni kan der være, værktøjsvideoer, videoer omkring løsninger af bestemte opgaver
- 272** **I** Hvor meget tid bruger du på at lave en video, hvor meget tid går der per videotid
- 273** **K** Det kommer noget an på hvad det er for en video, om det er en lektionsvideo eller om det er en video omkring et mere afgrænset emne, men altså det tager tid

- 274 K Der er forskellige faser i det, det er en tilrettelæggelsesfase, en fase hvor mand i bund og grund strukturerer stoffet og så må mand jo producere nogle ting der kan vises, det er jo typisk nogle animationer, eller nogle statiske billeder, måske noget der er noget progression I
- 275 K Jeg bruger næsten aldrig mine slides, jeg ønsker ikke at lave videoer som bare er talking slides, det synes jeg ikke fungerer
- 276 K Så det betyder at tilrettelæggelsesfasen den går sådan rimeligt effektivt
- 277 K Jeg skriver den ned, jeg laver sådan en eller anden form for script/plan og så må jeg jo tilvejebringe den billedside der skal til
- 278 K Det kan godt være at jeg bruger powerpoint til det, det er typisk nogle powerpoint slides der er noget udvikling i og der står meget få ting på slidsene
- 279 K Det er ikke sådan at det er lange tekstrækker der bare bliver læst op osv, det tager tid at lave hvis ikke man allerede har det
- 280 K Og så er det jo ofte nogle programmer, jeg taler om programmering, så hvis jeg ikke har programmerne, så må jeg lave et program
- 281 K Enten som noget jeg viser eller noget jeg udvikler undervejs
- 282 K Og så er der jo indspilningsfasen, så hvis ellers tingene er tilrettelagt og man har en god base, så går det rimeligt hurtigt
- 283 K Og så er der redigeringsfasen som tager noget tid
- 284 K Så hvor lang tid det tager, sådan et par videoer på hver 10 minutter, det kan man gøre på en hel dag
- 285 I Okay, det er bare fint
- 286 K Men altså håbet er jo så at hvis det er lavet ordentligt, så er det noget stof der kan bruges i 5 år
- 287 I Så det er en investering
- 288 K Det er rigtigt dejligt
- 289 I Så kan de fyre alle underviserne
- 290 K Det kan man
- 291 K Jeg ser altid mine egne videoer
- 292 I du ser dem?
- 293 K Ja, jeg ser dem,
- 294 K Nu skal vi ligesom i gang med en lektion, det er sådan en meget behagelig og god måde for sig selv, lige og komme efter det igen, altså hvad var det nu det er
- 295 K Så jeg kører dem med så høj hastighed jeg kan og så føler at nå ja, nu ved jeg lige nøjagtig hvad det er
- 296 K Og så finder jeg også nogle fejl, som jeg tænker kunne jeg bare ændre den
- 297 I Jeg skulle lige til at sige det er også en måde
- 298 K Og det kan jeg ikke
- 299 I det kan du ik?, det er alt for besværligt
- 300 K Ja, så det gør man ikke, så skal der meget til
- 301 I Gemmer du egentlig selv projektfilerne?
- 302 K Ja det gør jeg, men
- 303 I De må fylde ad Pommeren til?
- 304 K Nej, det er ikke så meget at det fylder, men det er et helvede at , man skal virkelig være systematisk hvis man skal holde styr på det

- 305 **K** Det er jo et sammensurium af resourcer, lige fra alle stumperne til lyd tingene, til alle billed tingene, til alle lapperne som man har bugt i redigeringsfasen
- 306 **K** Jo jeg gemmer dem, jeg har faktisk også forsøgt på at være systematisk med koblingen
- 307 **K** Det er faktisk en udfordring, det er skide svært at komme tilbage til en video man lavede for en 3-4 år siden og så finde det hele frem og få det hele på banen
- 308 **K** Ofte er der også flere videoer i den samme projektfil
- 309 **I** Så det er noget rod?
- 310 **K** Det kan meget let blive noget rod, medmindre man er super struktureret
- 311 **I** Ja
- 312 **K** Det bør man være
- 313 **I** Det er jo også en udfordring der er værd at takle hvis det er noget alle skal
- 314 **I** Du er vandt til at bruge computer, der er nogle undervisere der helst vil undgå det, så hvis det er svært for dig så må det være svært for alle, kan jeg forestille mig
- 315 **K** Det er klart, det kræver jo også at man har nogle computere der kan magte opgaven
- 316 **I** Ja
- 317 **K** Jeg ville aldrig lave det på den måde
- 318 **I** Nej video det kræver lidt noget, du kan gøre det, men det er lidt op ad bakke, du skal vente lidt og bliver sur på den
- 319 **K** Det er meget vigtigt at have en potent computer
- 320 **I** Ja
- 321 **K** Jeg laver det på en computer jeg har der har 8 TB, så det vil sige nærmest uendelig
- 322 **I** Heh
- 323 **K** Man behøves ikke at tænke på det
- 324 **I** Nej
- 325 **K** Og så 32GB RAM og godt grafikkort
- 326 **I** Det skal være ordentligt
- 327 **K** Ja for ellers er det simpelthen for surt
- 328 **I** Bliver det for surt?
- 329 **K** Det er for surt, ja
- 330 **K** Det er utroligt vigtigt, at man har en maskine der kan magte opgaven
- 331 **I** Hvad tror du der bliver den største udfordring for nye lærer der skal til at tage det op
- 332 **K** Nye lærer de er i to grupper, der er jo unge mennesker som er omstillingsparate eller som egentlig slet ikke skal omstilles, men skal i gang med det herog det tror jeg ligger ret
- 333 **I** Også det at filme dem selv?
- 334 **K** Man skal jo, det er en del af det, der er jo forskellige stilarter hvis vi lige skal tage den
- 335 **K** Det at filme sig selv er skide besværligt
- 336 **I** Ja, har prøvet

- 337 **K** Så der skal man spørge sig selv om, hvor meget bidrager der er ved at filme sig selv
- 338 **K** Hvis der ikke er meget bidrag ved det, så lad være
- 339 **I** Ja
- 340 **K** Fordi du skal have en ren skjorte på
- 341 **I** Jaaahhh!
- 342 **K** Hvis man filmer sig selv så og så kig sådan på dem, det bliver med træt af
- 343 **K** Der er sådan lige nogle ekstra komplikationer, som lys
- 344 **I** Ja
- 345 **K** Skide besværligt, man har noget professionelt grej der med noget lys du kan styre og en braggrund, der er masser af ting man kan tænke på
- 346 **K** Jeg har prøvet det
- 347 **I** Ja
- 348 **K** Og jeg har egentlig sagt til mig selv at der er ikke værdi i det, ås lad være
- 349 **I** Ja, det siger du også i en af dine videoer
- 350 **K** Men altså udfordringerne omkring underviserne, det er et konservativt område for tiden, det er det bare
- 351 **I** Ja
- 352 **K** For dem er det en meget stor omstilling
- 353 **I** Ja
- 354 **K** Det er der ingen tvivl om, nogen vil sige at hvorfor skal vi lave om på noget der virker, og så simpelthen stå af allerede der
- 355 **K** men der bliver talt så meget om det nu her så der er jo nok flere og flere der på en eller anden måde forsøger på at komme i gang med det
- 356 **I** Ja
- 357 **K** Det tror jeg
- 358 **I** Det er i hvert fald meningen
- 359 **K** Ja men det tror jeg også vil ske, det kan jeg også se begynder at ske
- 360 **K** Håbet kunne være at de ikke behøves at lave alle de fejl som vi andre havde lavet, så man ligesom kan lære lidt af de her fejl
- 361 **I** Det ville være ideelt
- 362 **K** Ja det må være ideelt
- 363 **I** Jeg tror også at det er ideen med den der centralehavd kalder de det, kompetencecenter
- 364 **K** Ja, men om vi kommer der til hvor underviserne bare skal spytte stumperne ind og så er der nogen der sætter det sammen, det tror jeg måske ikke så meget på
- 365 **K** I hvert fald i min process der sker der rigtig meget i redigeringsfase og jeg ville ikke kunne få andre til at redigere det
- 366 **I** Okay, det er faktisk en af de ting vi har siden og tæt over
- 367 **K** Det er jo redigeringsfasen det egentligt falder på plads, jeg kan lægge mange lapper ind på ting som jeg synes der skal lappes på, jeg kan også redigere rigtig meget ud
- 368 **I** Ja
- 369 **K** Jeg er faktisk nede på at redigere enkelte ord ud

- 370 **K** Så hvis der er nogle principperne man bliver træt af, så tænker man, vi tager lige en 10-15 stykker ud
- 371 **I** Det kan jeg godt forstå
- 372 **K** Det er ret let gjort, det er forbavsende let at kommer afsted med lyden uden at der er nogen der opdager det
- 373 **I** Ja, med lyd kan man snyde rimelig meget
- 374 **I** Nu virker det fuldstændig unrealistisk, men hvis der kom en ud og bare er din videoredigerer for en dag og kunne hjælpe dig med det, ville det være attraktivt?
- 375 **K** Nej
- 376 **I** Slet ikke?
- 377 **K** Det ville det ikke, det er fordi at det er i redigeringsfasen at
- 378 **I** Ja ja
- 379 **K** De ting man lægger på, de yderlige virkemidler man kan lægge på der gør at det bliver godt at det bliver en god faglig formidling, det er jo dem du kommer på i redigeringsfasen
- 380 **I** Ja
- 381 **K** Fordi man magter ikke at gøre det hele, du ved, nu og her, men man kan sige okay der bliver nogle yderlige ting som man kan lægge på nogle pile og nogle tekster og nogle overgange osv. Bland andet en ekstra boks der lige fiser ind fra højre og forklarer et eller anden
- 382 **K** Det er i redigeringsfasen det sker, på en eller anden måde synes jeg også at det er en sjov fase, jeg kan egentlig godt lide det
- 383 **I** Det var da godt, jeg håber at andre har det på samme måde
- 384 **K** Man ser at den der faglige formidling den ligesom falder på plads, så jeg synes egentlig at det er sjovere at redigere det end det er at producere det og lave de enkelte stumper
- 385 **K** Det kan godt være lidt frustrerende, fordi det lykkedes ikke altid som ønsker det
- 386 **I** Nej
- 387 **K** Så må man gøre det om, i starten startede jeg forfra hver gang, det var et sandt helvede, jeg troede jeg kunne
- 388 **K** Sådan en 5 minutters video troede jeg godt at jeg kunne skuldre, så gik det galt efter 3 minutter, okay forfra
- 389 **I** Forfra, aaahhh
- 390 **K** Når du har gjort det nogle gange og det ikke lykkedes, så bliver man virkelig frustreret
- 391 **I** Ja for filan
- 392 **K** Som det sker nu så klapper jeg dem lyd:KLAP!
- 393 **I** Så du kan synkronisere dem?
- 394 **K** Ja, så kan jeg se dem på lydsporet
- 395 **I** Ja, lige præcis
- 396 **K** Og så gør jeg det at jeg starter redigeringen måske inden jeg er helt færdig med at spille lyd, så kan jeg huske hvad der skete og så kan jeg meget hurtigt lige få, i bund og grund få det hele på plads
- 397 **I** Ja

- 398 **K** Hvis der derimod går en dag eller to inden jeg begynder at redigere, så kan jeg ikke huske noget som helst, så bliver det for svært
- 399 **I** Det kan jeg godt forstå
- 400 **I** Har det påvirket dine studerendes karakterer eller ydeevne?
- 401 **K** Det er meget svært at måle på
- 402 **K** Det ved jeg ikke, det er der måske nogle universiteter der kan finde ud af
- 403 **I** Ja det er svært
- 404 **K** Det er nemlig skide svært, men altså der er ingen tvivl om blandt de studerende i forhold til de studerendes oplevelse og modtagelse af det her, det er ekstremt positivt, det oplever jeg
- 405 **K** De studerende kan virkelig godt lide den måde at køre på, det er helt entydigt
- 406 **K** Jeg ser meget udtalt at det er i de studerendes interesse at vi gør det her
- 407 **K** Altså dels kan jeg jo set det i semesterevalueringerne
- 408 **I** Ja
- 409 **K** I 5 år har jeg systematisk undersøgt det her, lavet spørgeskemaer til de studerende efter de har, det er meget tydeligt
- 410 **K** Der er ingen tvivl om at det er de studerendes ønske at vi går bort fra den gammeldags måde i et auditorium og lavet et godt video materiale
- 411 **I** Hvad synes du om quizzer, hvor vigtige er de?
- 412 **K** Quizzer er populære, quizzer kan for eksempel lægges i statusboblen på en video
- 413 **I** Mhhmm
- 414 **K** Det har jeg også selv gjort
- 415 **K** Quizzer kan også integreres som en aktivitet, vi kan have en aktivitet hvor man har quizzer kan man jo så diskuterer udfordringerne ved quizzerne med de studerende
- 416 **K** Og quizzer ligger jo også sådan i forhold til alignments de ligger jo egentlig ret naturligt multiple choice og skriftlige eksaminer, men det er et stort arbejde at lave dem hvis der skal laves mange quizzer
- 417 **I** Det kan jeg godt forstå
- 418 **K** På samme måde som det er et stort arbejde at forberede at skriftlig multiple choice eksamen
- 419 **I** Ja, det er klart
- 420 **I** Nu hvor vi taler om eksaminer og sådan noget, hvad men sådan noget som analytics, hvad er din holdning til det?
- 421 **I** Det er let at se nogle fordele og det er let at se nogle ulemper
- 422 **K** Det tror jeg da at der er, altså hvis vi tager det fra dag et, så er det jo meget attraktivt at bruge det
- 423 **K** Altså det kan bruges men det kan sikkert også misbruges
- 424 **K** Et eksempel er de analytics der sidder på YouTube, dem kigger jeg selvfolgelig på
- 425 **I** Ja, man kan sige der findes jo både analytics til de studerende, man kan også se en fremtid hvor man begynder at vurdere lærernes performance
- 426 **K** Ja, klart, det kan også bruges og misbruges
- 427 **K** Jeg tror at det er attraktivt, især hvis vi får rigtigt mange data, så er det svært at kigge den anden vej

- 428 **I** Det er rigtigt
429 **K** Men det er klart igen, det er data, det er personlig data og så er vi jo inde i GDPR og sådan noget der
430 **K** Det skal kalkuleres hvordan det må bruges
431 **I** Det behøver vi heller ikke at komme så dybt ind i, men jeg kunne ikke lige lade være med at tænke på det
432 **K** Nej
433 **I** Hvad tror du at der er mest brug for at det der kompetencecenter det giver?
434 **K** Pædagogisk support omkring kursusmodulering og support til hvilken form for video man skal lave, hvilken genre skal man slå ind på
435 **K** Og kom i gang support, så folk skubbet ordentligt i gang med at gøre dejlige kommer over hurdlen
436 **K** altså sige du skal bruge det og det software og du skal bruge den og den pakke, så man kan sætte sig ned og gå i gang med noget
437 **K** Og så lidt hjælp i starten til at få det skubbet helt igennem med at få det redigeret, indtil folk bliver selvkørende
438 **I** Altså lære dem at bruge programmerne og sådan noget?
439 **K** Ja
440 **I** Ja
441 **K** Fordi de programmer man vil bruge i dag de er givet vis muligt at integrere i systemet, hvor det hele er sat sammen i en stor pakke, hvor man nærmest også fra redigeringsplatformen nærmest også kan skubbe det ud på serveren
442 **K** Du kan være et sted og så gøre det hele
443 **K** Det er ikke det jeg bruger, men det er så fordi jeg er startet for 5 år siden og der var verden lidt anderledes
444 **I** Det var faktisk alle de spørgsmål jeg har, du skal være velkommen til at tilføje noget
445 **I** Det var spændende
446 **K** Jeg er lidt nysgerrig for hvad i finder frem til
447 **K** Kan du ikke sende mig produktet

Interview Transcript: E Stefan Nordborg Eriksen

- 1 **I** Hvad er den ideelle undervisningsmetoder for dig, hvis du havde frit spil?
- 2 **S** Det kommer lidt an på hvad det lige er man bliver undervist i, hvis det er noget hvor man ikke føler sig særlig stærk eller hvor det er fuldstændig nyt, så foretrækker jeg at man har en eller anden der fungerer lidt som en mentor
- 3 **S** Du kan google dig til mange ting, men nogle gange har du også bare brug for den der person der står og er der til at kunne formulere det
- 4 **S** Nogle gange er der 3 forskellige måder det bliver sagt på, på internettet, og de er alle sammen lige forvirrende
- 5 **S** Eller hvis du er super uhedlig, så kan du ikke finde noget på internettet omkring lige præcis den der ultra specifikke ting der bare driller dig af helvede til
- 6 **I** En ekspert ved hånden?
- 7 **S** En ekspert ved hånden
- 8 **S** Det er den ene ydre ekstrem
- 9 **S** Den anden, hvis det er noget hvor man føler at du har et godt flow med at studere på egen hånd, der et det mest af alt fordybningstid som jeg har brug for
- 10 **S** Og selvfølgelig drivet og motivationen og at der er et eller andet mål som jeg kan se at det her er hvad jeg skal opnå en eller anden ting jeg skal producere
- 11 **S** At jeg har tiden til at fordybe mig og det er nogen gange noget der kommer i karambolage med at du har mange ting i løbet af dit studie du skal lave på en gang, du har måske 3 afleveringer ude i fremtiden og så har du lige det her miniprojekt
- 12 **S** Hvis du har nogle fritidsaktiviteter, de ryger også lige ind over og selvfølgelig også gruppe projekt og jeg skal komme efter dig
- 13 **S** Hvilket jo gør at du er nødt til at prioriterer og selvfølgelig, det er en del af livet at skulle prioritere, men nogle gange føler jeg også at du får mest ud af at bare kunne sige at jeg fokuserer alle mine kræfter på den her ene ting, jeg skal ikke til at frakoble min tankeprocess fra en ting til noget andet og spilde energi på at gøre det
- 14 **S** Men jeg kan bruge alle mine fakulteter på den her ene lille ting og bare studere den helt ned i dybden

- 15 I har du selv nogen erfaring med video undervisning eller flipped classroom?
- 16 S Minimalt, altså faktisk lige nu i Physical Interface Design er det at vi har en underviser der hedder Henrich, der kører noget lidt i den retning
- 17 S Grunden til at jeg ved det er fordi han ordret lagde et dokument op på vores moodle side som beskrev hvad flipped learning er
- 18 S Dog er det ikke ham der primært har stået for det course, der har det været en anden underviser som stået for undervisning om elektronik osv.
- 19 S Men hans del har været omkring det der med affordances og signifiers og hvordan du laver et godt interface visuelt og der har han kørt flipped learning med video tutorials og videoundervisning, hvor han så lægger op til at tiden i klasselokalet den bruger vi på at quizzo og tjekke om vi har forstået tingene og får en dialog kørende
- 20 I Så I fællesquizzer?
- 21 S Han bruger Moodles system til at lave nogle quizzzer hvor du ikke kan tilgå dem før du er ved klasselokalet til lektionen, når han så aktiverer den kan du kun gå videre til det næste spørgsmål når han siger ok fra hans computer
- 22 S Så vi tager et spørgsmål ad gangen du får noget tid til at tænke over spørgsmålet, svar på det, så får vi nogle grafer som viser, hvad har folk svaret
- 23 S Man kan få de der hvem vil være millionær agtige grafer omkring hvad folk har ment hvilket kan give et indtryk i sig selv, men hvis man går ind og diskuterer omkring de forskellige svar, hvorfor er de rigtige og hvorfor er de forkerte og hvis nogen er i tvivl er der også plads til at stille spørgsmål omkring det
- 24 S Det kan jeg faktisk rimelig godt lide, men apropos dem, der var faktisk en oplevelse for et stykke tid siden, som en del af de her lektioner, der snakkede han om konceptet feedforward, han har ved et uheld beskrevet det på en måde der kunne misforstås
- 25 S Det stod klart da næsten alle grupper præsenterede deres feedforward forkert, fordi de havde forstået det på en forkert måde baseret på måde han havde forklaret det
- 26 I I videoen?
- 27 S Delvist i videoen, delvist i klasselokalet
- 28 S Vi havde forstået det som noget der var meget ordret som at det her er konsekvensen af din handling, hvor det egentlig ikke var så firkantet i virkeligheden
- 29 S Hvilket havde resulteret i at en masse havde sagt at vi har ikke feedforward i vores system, fordi der stor ikke slide to unlock, det var det eksempel han brugte i hans videoer
- 30 S Men bare det er der er nogle ikoner der indikerer at det her vil ske uden specifikt at sige med ord at det her vil ske, så vil det egentlig være feedforward
- 31 S Det var noget som de fleste af os havde misforstået og der fangede jeg ham i at sige ups, det var ikke lige meningen
- 32 S Det er det eneste jeg kan sætte fingeren på at jeg har prøvet med flipped classroom, med hans begrænsede lektioner i PID

- 33 **S** Det der er udfordringen er ligesom med de andre projekter osv. At der er noget læse eller videomateriale og det skal man have læst eller set og hvis du ikke får gjort det, så falder du bag ud
- 34 **S** Der kunne være en følelse af at der er lagt endnu mere vægt på det i flipped classroom, hvilket gør at jeg føler at der er en større risiko for at hvis du ikke lige har tid til at følge med i den her ting, fordi ting sker, så falder du endnu mere bag ud
- 35 **S** End hvis det bare var at læse op på noget og du havde en traditionel lektion hvor alting blev gennemgået
- 36 **I** Hvad er det ved en normal lektion der hjælper på det?
- 37 **S** Ved en normal lektion så bruger vi jo tiden på at introducere emnet, hvor i flipped learning ligger introduktionen i materialet du får, du skal selvstudere
- 38 **I** Hvad får så folk til at møde op til en lektion?
- 39 **S** Der har jeg også lagt mærke til at hvis en underviser gennemgår nøjagtig det der stor i bogen, så er der en større risiko for at folk bare dropper at dukke op, fordi de kan jo bare læse det
- 40 **S** Problemet er jo så bare hvis at de tror at der bliver gennemgået nøjagtig hvad der står i bogen, men det ikke præcis er det der bliver gennemgået i bogen, men underviseren faktisk viderebringer informationen på en mere forståelig måde
- 41 **S** Så kommer de lige pludselig til at stå med håret i postkassen fordi bogen er lidt for kryptisk, det sker
- 42 ...
- 43 **S** En normal lektion bliver jo brugt som måden at introducere det nye koncept på, hvad end det nu er, forhåbentlig vil der også være nogle opgaver bag efter, hvis der er tid og energi til det
- 44 **S** Vi havde et problem med et booking system der gik galt her på create, vi skulle have haft tid til at lave opgaver, men det tid der var til at lave opgaver var blevet booket til at have en lektion til noget andet og der røg vores chance for at øve os i det vi lige var blevet undervist i og der røg vores chance for at vi kunne udnytte at vi har TA (teacher assistants)
- 45 **I** Hvilke udfordringer ser du i at digitalisere flere af universitetets gange, hvis nogen?
- 46 **S** Den første ærketyptiske ting jeg tænker på er hvis du har et system, så har du også noget der kan bryde sammen, jo bedre det er lavet, jo lavere er risikoen selvfølgelig for det
- 47 **I** Hvad mener du med at det bryder sammen?
- 48 **S** Lad os sige at det kører over en hjemmeside, det kan være Moodle, hvis serveren der booster moodle bryder sammen er der ingen der kan tilgå deres materiale.
- 49 **S** Et andet eksempel er hvis noget opfører sig atypisk i forhold til hvad du regner med, vi havde PV, der var noget der gik galt med den måde vores underviser havde sat deres Moodle side op
- 50 **S** Hvilket gjorde at der var et hjemmeside element som var usynligt som lagde og dække over mange af knapperne, som gjorde det næsten umuligt at navigere på hjemmesiden

- 51 | **S** Medmindre du var meget præcis med at ramme lige ved siden af denne usynlige kasse eller kunne manipulere HTML i en browser, så havde du et seriøst problem, det var ret træls
- 52 | ...
- 53 | **S** Så ender du med at bruge tiden på at kæmpe med et system der bare burde virke, istedet for på at lære noget
- 54 | ...
- 55 | **I** Kunne det være at den ikke er i stykker, men bare er svær at bruge?
- 56 | **S** Ja, bare klart ja!
- 57 | ...
- 58 | **I** Hvis du skulle vælge et par vigtige ting som en videoplatform skulle kunne, fra en studerendes synspunkt?
- 59 | **S** Selvfølgelig skal du kunne se en video og se den når som helst
- 60 | **S** videoen skal kunne køre stabilt
- 61 | **S** Altså selvfølgelig play pause og alt det du forventer vi som minimum skal kunne
- 62 | **S** Når det er til undervisningsformål noget i retning af videoquizzes, at de ikke bare eksisterer i et vakuum, men at der er en quiz midt i video, som lige terper noget af det der er blevet gennemgået
- 63 | **S** Videomaterialet/undervisningsmaterialet i sig selv bør også stå klart, det er der hvor vi kommer over i almindelig undervisningspedagogik med læringsstile osv.
- 64 | **S** Det har jo ikke så meget med videoen at gøre, men mere produktionssiden
- 65 | **S** Det kommer også an på hvordan den skal bruges, en ting er at underviserne ligger videoer op selv, som han eller hun selv har lavet
- 66 | **S** Jeg kunne også forestille mig en situation hvor de studerende selv bruger videoplatformen til at viderbringe information og spørgsmål eller lave deres egne gennemgange af noget materiale
- 67 | **S** Der kunne være en opgave hvor du skal præsentere, bare en webcam video på computeren, hvordan du har fortsået et eller andet, som en aflevering
- 68 | **S** Transskription vil nok også være rigtig rart for unge mennesker og unge mennesker, det kan f.eks. være at underviseren ikke har verdens bedste mikrofon eller ikke så god akustik i sin optagelse eller i værste fald nogle som bare ikke håndtere de her videoer særlig godt, som bare vil have det på tekst
- 69 | **S** Bare vil have evnen til at kunne søge hurtigt, jeg leder efter det her koncept, gå hurtigt til det, jeg orker ikke at bruge 5 minutter på noget jeg kan finde på 3 sekunder
- 70 | **S** Transskription ved jeg tager rigtig lang tid
- 71 | ...
- 72 | **S** Der kunne det være bedre hvis der var nogle automatiserede funktioner til det (transskription), men det er jo et helt studie i sig selv
- 73 | **S** Det er noget jeg kunne forestille mig underviserne kunne sætte rigtig meget pris på, hvis nu at transskription af deres videoer er noget de skulle bruge
- 74 | ...

- 75 **I** Vil du ønske at have adgang til alle videoer på AAU eller kun dem der menes at være relevante for dig
- 76 **S** Jeg vil sige en blanding, på den måde ment at der er primært fokus på det der er relevant for mig og mine studier, der er ingen grund til at jeg som mediolog der roder med kode har 10 videoer i hovedet omkring undersøgelse af jordprøver
- 77 **S** Men på samme tid kan man, afhængig af studie kan du sagtens komme ud i nogle projekter som omhandler noget som er et godt stykke fra hvad der er normalt på dit studie, det ved jeg kunne være meget relevant for os mediologer fordi vi er så bredspektret
- 78 **S** Lige pludselig kommer vi til at arbejde noget med noget er meget niche, som kræver at vi faktisk skal tage noget som normalt ikke har noget med dit fag at gøre og bruger det som en del af dit projekt
- 79 **S** Det kan være at vi skal lave en ting som gennem noget kode skal arbejde med nogle jordprøver, og så bliver de videoer jo meget relevante, til lige specifikt os
- 80 **S** Under typiske forhold vil det primært være det som er direkte brugbart for vores studier, men at de andre er tilgængelige og søgbare, vil jeg mener er en god ide
- 81 **I** Hvordan kan man gøre motivationen bedre for at se videoer hjemmefra bedre, så der er større sandsynlighed for at de får dem set?
- 82 **S** Jeg er lidt usikker
- 83 **S** Noget af det handler om modenhed og prioritering, der er jo nogle de hader jo nærmest at bruge så meget tid derhjemme på at studere, selvom det jo er det vi er her for, at lære
- 84 ...
- 85 **S** Jeg tror noget af det der typisk er et problem at du får noget undervisning i noget hvor du kan se hvad formålet er
- 86 **S** Ligesom vi kender tilbage fra folkeskolen af hvor vi skal finde den ubekendte af x osv. vi sidder bare der og stirrer hvad skal jeg bruge det til
- 87 **S** Og der er ikke noget klart svar fra underviseren og så er der ingen motivation for at gøre det, for du kan ikke se pointen i det, pointen skal være der, hvis underviseren hurtigt kan pointere det her er nøjagtig hvad vi bruger det til, så forstår folk det og så forstår folk pointen i det og det giver en motivation til at arbejde i det
- 88 **S** Jeg kommer faktisk til at tænke på 2. Semester hvor vi havde en masse matematik og nogle af alle der her matematiske ligninger føltes, som om det var noget vi skulle brug på et tidspunkt, men vi havde ingen anelse om hvad eller hvorfor
- 89 **S** Så blev det en tand for abstrakt, så følte man egentlig bare at man lavede matematikken for matematikkens skyld og ikke fordi der var en pointe med matematikken i sidste ende
- 90 **S** Det er så her man i bagklogskabens lys på et senere semester rent faktisk bruger noget af den teori, og måske skulle man have brugt mere tid dengang, men det er jo ikke det der er vigtigt det handler jo egentlig om at når du er i øjeblikket at du kan se hvorfor du skal ligge kræfterne i det

- 91 ...
- 92 I Hvad med sådan noget som at svare på nogle quizzes undervejs, altså løbende evaluering, så du ikke endte med det hele til sidst? Så kunne du have undgået at se videoer hele forløbet.
- 93 S Der er nogle ting, der er faktisk tre ting jeg kan trække på der. Lige netop Hendrich, hver eneste gang vi har haft Hendrich, også på de tidlige semestre. Moodle har nogle funktioner med at du rent faktisk får nogle checklister og checkbokse som visuelt indikerer at du rent faktisk har interageret med den her ting, godt gået. Og nogen synes måske bare at det er plat, mens for andre er completionists og skal have checket altting.
- 94 I Så det er for ens egen skyld, så man kan holde styr på hvad man har lavet?
- 95 S Ja, mere eller mindre.
- 96 ...
- 97 S Men den anden ting det er, du nævnte det der med løbende opgaver osv. Og afhængigt af hvad du arbejder med, så tænker jeg at et løbende format er super super godt.
- 98 S Sidste semester skulle vi skrive nogle opgaver om menneskelige sanser og jeg faldt lidt i snak med nogle tidligere Medialoger som sagde at formatet som det blev kørt på har ændret sig frem og tilbage.
- 99 ...
- 100 S Årgangen før os skulle aflevere en stor rapport på en gang og det var helvede, fordi selvfølgelig har man så fokus på alt muligt andet når det ikke er presserende lige nu. Hvorimod for os, der havde vi nogle delmål som sagde at den her del af den samlede rapport skal laves til den her dato osv. Og den samlede rapport er så en sammenlægning som skal afleveres en given dato.
- 101 ...
- 102 S Vi har noget lignende nu i et andet fag, hvilket på den ene side lægger noget pres på, men det tvinger dig til at lægge noget energi i det løbende i stedet for lige pludseligt så står du med en kæmpe lort foran dig og tænker; jeg kommer aldrig igennem, jeg dumper.
- 103 ...
- 104 S Pointen er at ved at have de løbende opgaver er der ikke nogen vej udenom at du kommer til at træne løbende i den her ting, hvilket egentlig også er for dit eget bedste. Fordi sådan som fagene er lagt op her (på AAU) de skal jo støtte dit hovedprojekt. Og hvis du ikke får trænet i den der ting, så kan du ikke støtte dit hovedprojekt.
- 105 ...

- 106 **S** Hele evaluatingsprincippet; så vidt jeg ved er der mange mennesker som, så vidt jeg ved, så elsker de absolut at få noget feedback på det de har lavet. Altså hvis de har lavet noget som bare virker super fantastisk og de bare får at vide at det er godt, det er der måske ikke så meget gods i, men hvis nogen har lavet noget som er tæt på at virke eller for den sags skyld noget der var helt elendigt, og så rent faktisk kan få noget feedback som diger hvorfor fik du ikke en ret god karakter. Hvor bør du forbedre dig. I stedet for at man bare får en karakter. Et 2-tal forklarer ikke noget, men at se hvorfor, altså hvor du lavede fejlen, hvad fejlen var, og hvad der skulle til for at gøre det bedre. Bare den feedback i sig selv har jo en undervisningsmessig værdi, vil jeg mene.
- 107 ...
- 108 **S** Jeg havde en fejl til en eksamen i programmering hvor syntaksen var syntaks korrekt, men ikke påen, jeg har ikke glemt det siden. Og jeg kunne jo gå ind på den Moodle-prøve og se at jeg havde lavet den fejl og hvad det var, og der var rent faktisk også en beskrivelse lige ved den prøve hvorfor var det en fejl.
- 109 ...
- 110 **S** Og det er netop det der princip med at få feedback på hvor gjorde du det forkert, og så husker du det. I stedet for at det bare er Jeg fuskede prøven op drikker en beder, videre.
- 111 **I** Det kan jeg godt nikke genkendende til.
- 112 ...
- 113 **I** Hvad tror du at vi kan gøre for at primært studerende, men også lærer, fik lyst til at bruge sådan en videoplatform?
- 114 ...
- 115 **S** Afhængigt af hvem man er, så har man forskellige færdigheder. Dem der måske arbejder inden for science-relaterede far, dem kunne jeg godt forestille mig at de som konsekvens af det har en mere naturlig forståelse af sådan noget som videoredigering. Og har en forståelse af bruge nogle helt almindelige værktøjer, og bare kan lave en video og uploadet den. Mens andre som er pissem dygtige ingen for deres felt, men måske er grænsende til teknologiforskrækkede i forhold til [indsæt tilfældig platform] og i det øjeblik at man siger at de skal bruge den her teknologiske dime, så siger de bare Åh nej, får så ved de at de skal til at sætte sig ind i et eller andet helt nyt system for 50ne gang som bare er træls. Og det kommer selvfølgelig til at påvirke kvaliteten af det video de lægger op. Så jeg tror at det vil være en rigtig god tjeneste for folk, i hvertfald fra underviserens side, og derved også eleverne senere hen at det er et værktøj som, hvid due er dygtig til at lave en video, kan du bare lægge en mp4 op, no problem. Hvis du derimod har nogle udfordringer med at sætte videoer sammen, at platformen så selvhad nogle værktøjer til at hjælpe dig med at lave de her videoer.
- 116 ...

- 117 **S** At det er tilgængeligt fra starten af og systemet understøtter det der skal bruges. Det vil i sidste ende også, forhåbentligt, resultere i at kvaliteten af videoerne bliver bedre og at de studerende kan få mere ud af dem i stedet for at det er en cringe-fest.
- 118 **I** For eleverne, er det så nok at videoerne er gode, eller er der noget andet omkring som også skal ...
- 119 **S** Altså, selvfølgelig, uanset om det er flipped learning eller ej, så, hvis underviseren er dårlig til at formidle, så tror jeg ikke at der er en video i verden der kan redde dem.
- 120 **S** Og hvis de studerende får et indtryk af at underviseren laver sådan noget minimal effort noget og de ikke er ret interesserede i det, de er egentlig mere interesserede i deres forskningsprojekt, det er jo også et dårligt indtryk. Men det har nu ikke noget med platformen at gøre i sig selv, jo.
- 121 ...
- 122 **S** Ej, men en video som er vel lavet og produceret og det behøver selvfølgelig ikke at være hollywood-kvalitet, men at det ikke bare er noget hvor du tænker at det her det er den ringeste gang lort jeg har fundet 7-årige der har livet bedre videoer på YouTube. Og du så sidder og bliver distraheret over hvordårligt en ting egentlig er lavet.
- 123 **S** Jeg tror at det er mere eller mindre min pointe. At man laver nogle værktøjer som gør at man kan få nogle bedre videoer ud.
- 124 ...
- 125 **I** Hvor vigtigt er design og hastighed, hvor nemt det er at bruge, du ved, UX.ting. Hvis vi antager at videoerne er lige som de skal være.
- 126 **S** Selvfølgelig skal de jo sættes op på en måde at du ikke bruger lang tid på at kæmpe med systemet, og det er også med at sørge for at systemet giver dig et overblik over at, uanset om du er på en specifik video, at hvis der en transskription, at du kan se at transskriptionen er der ..., men også alt videomateriale på en gang. Altså det er jo det samme som med for eksempel Moodle, med at bevare overblikket, fordi hvis der bare er tusinde ting som svømmer rundt et eller andet tilfældigt sted, så her og lykke med at finde den ene ting du så har brug for, så det er vigtigt på et eller andet punkt, men det er lidt svært at kommentere på et system der jo ikke eksisterer lige nu,
- 127 ...
- 128 **S** Det handler jo ikke om at du skal lave verdens mest æstetiske, veldesignede system, det skal bare fungere.
- 129 ...
- 130 **S** Det skal bare være tidligt at mulighederne er der, og knapperne skal ligge et logisk sted, og så ikke noget hokus-pokus.
- 131 **I** Hvordan lærer vi bedst om de muligheder som platformen tilbyder? Har du nogle gode idéer til hvordan men kan fortælle folk hvad en kan og hvordan man gør det osv.?

- 132 **S** Med ethvert nyt system, med mindre det er livet ekseptionelt godt mht. at forklare sig selv … måske selv i det tilfælde … så vil det nok være en god idé at der er en form for tutorial. Altså selv Moodle, når du går ind på den første gang, så kommer der en popup som siger at her er de forskellige knapper og ting du kan gøre. Og du kan også genaktivere den igen hvis du bliver i tvivl senere. Og det tror jeg også er værd at gøre på videoplatformen.
- 133 ...
- 134 **S** Og ikke nødvendigvis kun på forsiden.
- 135 ...
- 136 **S** Det kan være en kunst i sig selv bare det at bruge Google konstruktivt og vide at der er nogle tricks med at hvis jeg smider gåseøjne her og plusser her og minus her, så får jeg lavet en meget specifik søgning. Første gang du går ind på den side at den så siger Du har de her tricks som du kan bruge , som måske ikke er åbenlyse.
- 137 ...
- 138 **I** Hvordan har du det med at undervisere og administration kan se hvilke videoer og quizzes du har set/taget?
- 139 **S** Det er sådan lidt et blandet dilemma. Personligt har jeg ikke ikke så stort et problem med det umiddelbart fordi en undervisers roller er jo at formidle til os, læringen kommer fra os selv, men de kan jo bruge de værktøjer til at se hvem følger rent faktisk med, selvfølgelig er det så ikke en klar indikation af hvem der klarer sig godt i praksis.
- 140 ...
- 141 **S** Eller hvis nogen bliver ved med at gense den samme video, kan det så være en indikator for om videoen er god nok, eller er det bare fordi emnet er komplekst. Eller er der et område for en ny video der går i dybden med det — det kan jo bruges til at forbedre undervisningen.
- 142 ...
- 143 **S** Men samtidigt er der jo også det evige spørgsmål om hvordan dataen bliver opbevaret, behandlet og bliver det misbrugt osv. Jeg vil umiddelbart mene at jeg har rimelig god tiltro til at de undervisere vi har her, de nok skal lade være med at bruge den information på en forket måde, men tanken er der, frygten er der.
- 144 ...
- 145 **S** Jeg kan også forestille mig at andre kunne komme med nogle meget andre kommentarer. At det er nederen at andre kan side og afløre præcist hvad de gør.
- 146 ...
- 147 **I** Det var egentlig det hele. Har du nogle afsluttende bemærkninger?
- 148 ...
- 149 **S** Live undervisning er jo en ting der kunne have rimelig stor relevans. Og som man også kan gå tilbage og se bagefter.
- 150 ...
- 151 **S** Jeg har hørt flere som er lidt utilfredse med at hvis de er til en fjernlektion [giver eksempler]
- 152 ...

- 153 | **S** Hvis der er nogen som helst akustiske problemer med lokalet, eller lokalerne, det er super nederen.
- 154 | **S** Derudover er der også den udfordring at du prøver at række armen op, men underviser kigger ikke på sin skærm, han kan ikke se at du gerne vil spørge om noget. Hvor der måske er brug for at der er en frivillig studerende der bruger tid på at fungere som torvholder herfra. Det ved jeg at de har haft udfordringer med og at der har været snak omsat der burde være en réel hjælpelærer til det. Der tror jeg at der er et potentielle for at bygge et system op der bedre understøtter den form for undervisning.
- 155 | ...
- 156 | **S** Så en bedre måde at indikere at dem fra Aalborg, de har et spørgsmål.
- 157 | ...
- 158 | **I** Tusinde tak skal du have

Interview Transcript: F

Noomi Christine Linde Matthiesen

- 1 N Jeg underviser i pædagogisk psykologi og jeg har rigtig mange forskellige undervisningsopgaver. Jeg har en forholdsvis bred undervisningsprofil.
- 2 N Altså i efteråret der laver jeg primært forelæsninger til store hold ca. 150 i pædagogisk psykologi, og så er jeg ansat til at varetage noget undervisning på kandidaten, noget der hedder professionsprogram, hvor de er mellem 20–40 studerende. Det er primært seminarundervisning og projektvejledning og workshops.
- 3 N Her I foråret der har jeg også undervisning i det her ppsa på kandidaten som igen primært er korte forelæsninger til der her 20–40 studerende og så workshop-arbejde. Og så specialestudende, selvfølgelig. Og så er jeg også projektvejleder. Og så har jeg også noget metode.
- 4 I En bred vifte.
- 5 N Ja, en bred vifte.
- 6 I Når du siger kort forelæsning, hvad er det så?
- 7 N Øhm, i dag så er det omkring 40–45 minutters oplæg som man kan stå på til selve gruppearbejdet bagefter.
- 8 I Bruger du den til at sætte op til nogle opgaver eller hvad gør du med den?
- 9 N Ja, det er primært at sige, jamen jer har vi et felt, hvordan er de her tekster egentlig tænkt sammen? Hvad er det for nogle problemstillinger? Som er på spil i forhold til det her? Altså bare lige for at kridte banen lidt op, hvor de så han nogle grupper hvor de drøfter opgaver, og så samler vi på plenum bagefter.
- 10 I Er det så, ud af en 4-timers lektion, 40 minutter først, så mødes de i grupper, og så mødes igen i slutningen?
- 11 N Ja, lige præcis.
- 12 ...
- 13 I Er der så en antagelse om at de har læst hjemmefra?

- 14 N Ja, altså de har forberedt sig, i dag var det kandidatundervisning og de er i praktik lige nu. Så de har forberedt sig på den måde at de har sendt en case fra deres praktik til mig og min kollega og så har vi nogle temaer til de her workshops, og så har vi taget cases og delt dem på temaer. Så i dag har vi valgt at temaer og cases og så målet med undervisningen er at de skal koble pensum og teori til de cases som de møder i praktikken. Og det kan være svært for dem at lave den praksis-teori-kobling. Så derfor er oplægget først for at kridte banen op i forhold til teori og så er de opdragter i deres opgaver og kan sige at her har vi cases, hvordan kan vi forstå dem på baggrund at de har teorier eller tekster. Så jeg har nogle forventninger om at de har læst i hvert fald en stor del af pensumteksterne.
- 15 I Eer der nogen undervisningsform som du synes fungerer bedst for dig?
- 16 ...
- 17 N Hvis vi er 120, så synes jeg helt klart at det fungerer bedst med en forelæsning og så bruger jeg sådan nogle summer-øvelser undervejs for at få noget dialog ind i forelæsningen, men jeg vil sige at det er ikke fordi at det nødvendigvis fungerer godt i den forstand at det kan være svært at., altså det er de samme syv på en årgang som er dem der driver den plenum-diskussion. Så på den måde — hvorvidt det funder godt eller ikke godt, i hvert fald, når man har så mange er det helt klart den måde der fungerer bedst at undervise på . Vi har prøvet lidt forskellige ting ad i forhold til she her seminarer på kandidaten, og jeg synes faktisk at den her model vi er kommet frem til nu hvor vi giver dem en lille forelæsning sti hjælper dem få koblet de her fragmenterede tekster fra pensum, få dem til at se hvordan de egentlig hænger sammen eller hvordan de kan være modsvar til hinanden og de kan bruges til forskellige vinkler i de diskussioner der kan være på spil. Og så det her med at de selv har rigtig mange erfaringer fra praksis hjælper dem til at bruge pensum og forstå det og overordnet drøftelse. Den model synes jeg fungerer godt.
- 18 N Vi har tidligere ikke givet oplægget, og så har vi tidligere også brugt mere tid på plenumdiskussioner. Den ene ting at se er at når vi har plenumdiskussioner uden oplæg og at vi tydeligt har sagt til dem at det er vigtigt at i har læst, så bruger det ofte lidt common sense af teoretiske diskussioner. Så vi vil gerne have at det bliver teoretiseret, deres overvejelser. Så Jeg kan godt nogen gange, hvis de har et perspektiv og der ikke er en eksplisit reference, så kan jeg bede dem om at sige hvor de har det belæg fra. For at tvinge dem til at huske teorier.
- 19 N Og hvid der har været for meget tid til at plenumdiskussioner, så har de en oplevelse af at det liver ufokuseret. Så kan vi (undervisere) godt se alle de røde tråde, men eleverne svært ved at lave den der samling. Så det at der er tid til at sidde lidt fokuseret i grupperne gør at vi også systematisk kan gennemgå dem alle sammen og trække op og så hvad er det fælles der går igen.
- 20 I Har du nogen er faringer med at lave flipped classroom?
- 21 N Jeg kender det, kan du lige minde mig om hvad det er helt præcist?
- 22 ...

- 23 I Så det synes jeg egentlig at du har, i følge det du har fortalt.
- 24 I Har du lavet nogen som helst form for digital undervisning ud over at sende PDFer rundt? Nogle pencasts eller videoer eller andet?
- 25 N Nej. Det vildste jeg har rodet mig ud i er sådan nogle padlets. Alså opgaven med at få det der foregår i de forskellige gruppeditiskussioner, hvordan kan man meningsfuldt få samlet op på det på plenum.
- 26 N Og der har jeg nogen gange brugt en padlet hvor de skriver deres hovedpunkter, for så har man noget der ligesom kan fastholde hvad deres punkter er. Jeg ved ikke om jeg synes at det fungerer særligt revolutionært?
- 27 I Nej, tit kan det godt være simpelt og så fungere.
- 28 N Men nej jeg har aldrig brugt videoer og den slags.
- 29 I Er der andre digitale ting du grader nytte af?
- 30 N Nej, jeg må indrømme at jeg ikke er særlig kreativ. Jeg bruger selvfølgelig Moodle.
- 31 ...
- 32 N I forbindelse med et forskningsprojekt lavede vi en blog hvor efter det første år begyndte vi at skrive på den omkring vores fund frem og særdeles med nogle små opgaver og så med spørgsmål vi gerne måtte skrive på bloggen omkring som vi at brugte til yderligere data. Og det handler jo ikke om undervisning på universitetet, men det handler om at give dem noget information og noget information og viden som de kunne gøre noget ved, og de kunne give os noget information og viden som vi så kunne gøre noget ved og udvide vores forståelse. Det var meget sådan sammenspilsagtigt som vi brugte noget digitalt til.
- 33 ...
- 34 I Universitet har plan om at lave kompetencecentrene … og til det, hvis de var der til at tage dig igennem processen med at lave videoer, er det så noget du tænker at du godt kunne bruge? Hvad er det der holder dig tilbage fra videoer?
- 35 N Jeg tror at det er skridtet før det. Hvad er det for et problem som det skal løse? Jeg tror ikke engang helt at jeg kan få øje på problemet som det skal bidrage til. Så jeg tror at det er det som jeg har brug for hjælp til at se. Alså det her det vil jeg kunne gøre klager hvis jeg brugte det digitale, fordi at jeg ikke formår at løse det uden det digitale.
- 36 I Så du mangler simpelthen at se muligheden i hvorfor man overhovedet skulle gøre det?
- 37 N Ja.
- 38 ...
- 39 N Sådan nogle centre, så tænker jeg; Det er ikke nogen hemmelighed at vi har travlt generelt og vi får mere og mere travlt jo mere der bliver skåret og jo flere ting der kommer ned ovenfra. Så for at jeg vil prioritere at bruge tid på at gå over til kompetencecenteret og få hjælp til at gøre et eller andet så skulle jeg VIRKELIG kunne se at det løste et problem for mig. Og så skulle jeg også kunne se at jeg havde tid til det.

- 40 **I** Det kan jeg virkelig godt forstå og en af deres planer med det er … at dele undervisningen mere ud sådan at det ikke bare løber hver onsdag, men at det mere er just in time adgang som de studerende har til undervisningen. Så de har en eller anden basisviden som måske er 50% af ects-points som er basisundervisning så alle har et fælles fundament, men så at de kan gå ud og dykke ned i et andet emne. Det er der de forestiller sig at lave et helt videokardotek/kilder/bøger. Har du nogle tanker om hvorvidt eleveren kunne have gavn af at kunne tilgå hele den samlede hjerne på AAU?
- 41 **N** Jeg tænker helt klart at vi er struktureret på samme måde som jer, altså 50/50 ects. Umiddelbart tænker jeg at det passer meget godt i forhold til deres PBL-projekter, og jeg ved ikke helt hvordan det skulle foregå, men altså de der korte videoer, at kunne få en fornemmelse af hvad der er på spil således at de kan blive skarpere på hvilket aspekt af et eller andet de gerne vil dykke ned i.
- 42 **N** Jeg ville have en bekymring for at det kunne være med til at understøtte sådan en Wikipedia/Youtube overfladelæring hvor at det som PBL gør, netop er at de kommer grundigt ned i materialet omkring en problemstilling. Og der er jeg usikker på, og det kan bare være min forestillingsevne der lidt mangler, om ikke det vil betyde at vi har overfladen og så er der kun få ting som vi dykker ned i. I stedet for at an får sådan en grundig basisviden som er ideen i vores efterårssemester med forlæsningsrækken og sådan noget.
- 43 ...
- 44 **N** [Beskriver semesterstruktur]
- 45 **I** Man kan jo godt lave videoer der går i dybden, men er du også bange for at de ikke får arbejdet på den mere problemm-agtige måde med stoffet, men at de bare ser en video og siger nu har jeg lært det?
- 46 **N** Jeg tænker at der er mange ing. Hvis jeg for eksempel skal hurtigt sætte mig ind i en teori, så går jeg på YouTube og ser en halv times video og læser et par hurtige artikler på Wikipedia. Men hvis skulle skrive en artikel omkring det eller bruge det til noget forskning så ville jeg skulle sidde med bøger for for alvor at fordybe mig i det.
- 47 **N** Og på den måde, også bare fordi det hele går hurtigere, altså en studerende kunne formegentlig godt slippe afsted med at skrive sit projekt og vise sin undeviser af man egentlig har grundigt sat sig ind i det, men det er egentlig bare en overfladisk forståelse om man har hentet.
- 48 **N** Og så ville det først være til eksamen at man, ej, jeg ved ikke om man kan snyde på den måde., Men det er bare at., jeg kan være bekymret for om man opfordrer til den måde at studere på som bliver lidt overfladisk.
- 49 **N** Og det kan godt være at det er en lidt ubegrundet bekymring, det ved jeg ikke. Men der er i hvert fald en generel samfundstendens til at vi er dårligere og dårligere tilsat fordybe os. Og det kan der være alle mulige grunde til, men sådan et kritisk perspektiv på det her med videoer er jo at det kunne understøtte det, snarre end sidde grundigt at læse i en bog.
- 50 **I** Det er også derfor at de prøver påsat sige at det skal ikke erstatte den reflekterende del, udleveringen af viden.
- 51 ...

- 52 N Jeg kan godt se at det kunne bruges på den måde at man ikke står og holder de der lange forelæsninger fordi det kunne man have forberedt på forhånd.
- 53 I Ja, for der er mange ting som underbygger at der er noget passivt over det, ala det er de syv samme elever som deltager i plenum.
...
- 54
- 55 I Hvis en digital platform skulle hjælpe dig, hvilke features ville du så synes var fede?
- 56 N Det skulle være meget lækket og brugervenligt før jeg ville bruge det
- 57 I Hvad er det vigtigste, designet og at det er let tilgængeligt?
- 58 N Så snart jeg skal bruge tid på at rode rundt i det og synes at det ikke helt spiller, så ville jeg opgive
- 59 N Arbejdslivet er enormt presset, tingene skal være lette
- 60 I Har du selv nogle preferencer til video, når du selv ser dem, f.eks. i forhold til produktionsværdien, nogle animationer?
- 61 N Lyden er rigtig vigtig
- 62 N Så betyder det meget for mig at man ikke kan se at folk sidder med et håndholdt webcam ed deres skrivebord og billedkvaliteten er dårlig
- 63 N Når jeg sidder og ser det betyder det meget for mig at billedet står skarpt, at jeg kan høre dem tydeligt og gerne at der er nogle animationer, så jeg ikke bare ser på en person der står og snakker, så kunne jeg lige så godt have hørt et podcast
- 64 N Man kunne overveje, det er noget jeg ikke har tænkt på før, om podcasts var et medie som man skulle bruge mere
- 65 I Hvordan tænker du at, udover lyden, at animationer kan hjælpe med at forklare stoffet?
- 66 N rigtig meget af det jeg har set er virkelig dårligt, så jeg har ikke så mange gode erfaringer med noget der er lækker produceret, det kan være noget med der hvor jeg finder dem eller de emner som jeg ser omkring
- 67 N Jeg kan rigtig godt lide dem hvor man tegner samtidig med man fortæller
- 68 N Men igen det er jo ofte nogle meget overfladiske videoer der kan laves på den måde, men jeg synes hvis man bare lige skal have en meget kort fornemmelse af et eller andet, fungere det godt for mig, da jeg er ret visuel
- 69 I Hvad er din holdning til quizzler?
- 70 N Jeg tror at det kan være rigtig, rigtig godt hvis man underviser i noget hvor der er faktuel viden, men meget af det jeg underviser i er mere komplekse teorier, hvor det er optaget af at de forstår teorierne og det kan man ikke spørge om i en quiz og det er en kvalitativ metode så det er ikke statistik
- 71 N Rigtig mange af de spørgsmål jeg vil stille lægger op til dialog, det ligger ikke så forfærdeligt op til quizformat
- 72 I Tænker du det kunne fungere hvis man f.eks. sender besvarelser rundt til 3 andre studerende der så kan evaluere besvarelsen istedet for en computer
- 73 N Ja, det har jeg aldrig tænkt over før
- 74 N Jeg har gjort noget lignende, på papir, hvor man sidder i en gruppe sammen og kommer med et svar og så bytter man papir og så skal man sum gruppe evaluere de andres svar, det er top bare den analog version af hvad du siger
- 75 N Det ville selvfølgelig bare være nemmere at gøre digitalt

- 76 I har du ellers nogle gode erfaringer med det?
- 77 N Det var ret fint i forhold til de første semestre, hvor man skal lære at bygge en argumentation op, dels lærer man det ved at man skriver det og får feedback fra en underviser, men hvis man skal begynder at bedømme andres måde at gøre det på er det en anden type af lære, så man kan hæve det lidt op til noget mere meta
- 78 ...
- 79 I Hvad er dine tanker i forhold til analytics?
- 80 N Det ville jeg være ked af at gøre, jeg synes i forvejen at vi har en bestræbelse på fejlfrihed i uddannelserne, jeg tror på læring er rigtig meget forbundet med at man får lov til at eksperimenter og fumler sig lidt frem, hvis man hele tiden bliver målt med noget så tydeligt som et tal vil det hele tiden hæmme den der nu prøver jeg og ser hvad der sker
- 81 ...
- 82 N Jeg vil argumentere for så lidt kvantificerbart evaluering som overhovedet mulig, meget mere menneskelig evaluering, så det heletiden udvider ens tænkning istedet for at sige det var forkert
- 83 I Hvad er din holdning til at opgaver er adgangsgivende for eksaminer, måske ikke nødvendigvis med karakter, men for at mod-kæmpe at ingen udfylder det?
- 84 ...
- 85 N Det er jeg fortaler for at forpligte folk til at gøre noget, der kan f.eks. være nogle studerende der kan have svært ved at få læst på forhånd og lave nogle opgaver, som man ikke direkte retter ind mod en eksamen så hvorfor skal jeg gøre det
- 86 N Jeg har leget med ideen om at lave noget på 5. semester, der har de en bunden uge-eksamen, hertil kunne de lave en portefølje som skal være en del af en af den eksamen, hvor de efter hver forelæsning skal skrive et kort essay om en problemstilling der rejste sig i forelæsningen
- 87 ...
- 88 I Hvordan er motivationen nu for at få læst pensum?
- 89 N Der er stor forskel om det er de store forelæsningshold eller mindre seminarhold, jo større holdene er jo mindre er motivationen, fordi forpligtelsen for deltagelse er mindre
- 90 ...
- 91 N Vi har kørt tidligere med nogle seminarforløb, nogle forelæsningsforløb med efterfølgende workshop, hvor nogle studerende kunne deltage i det, som ikke fulgte forløbet
- 92 N Det betød at de ikke var forpligtet til at gå til eksamen i det pensum der var tilknyttet forløbet, her var det tydeligt at de deltog i undervisningen og deltaget i diskussionen uden at have læst pensum, det forringede kvaliteten af diskussionen
- 93 ...
- 94 I Hvad giver motivation til at få læst?

- 95** **N** Noget af det er den forpligtigelse der ligger i det, hvis man er et lille hold, så skal alle på en eller anden måde bidrage til undervisningen, man skal ikke direkte, men det er mere oplagt at bidrage hvis man har læst
- 96** **N** Hvorimod man bare kan forsvinde i de her store forelæsningslokaler uden man har læst
- 97** **N** De store forelæsninger er ikke noget de selv har valgt, mens seminarholdene ofte er forbundet med et projekt de er ved at skrive, så de har en interesse for det eller også er det på de her professionsprogrammer de har valgt sig ind på et spor, de er bare mere personligt interesseret i det
- 98** **I** Hvordan tror du at det kan påvirke motivationen hvis man udskifter forelæsningen med en video?
- 99** **N** På den ene side tænker jeg at det kan være sådan potato potáto
- 100** **N** Det kommer nok også an på hvem man er, men jeg tænker på en kollega, Jesper Aagaard, han har skrevet om distraktion i gymnasieklasser, hvor hvis man sidder og laver noget arbejde på computeren, så har vi bare de her kropslige vanegjorte ting
- 101** **N** F.eks. hvis de går på computeren så uden de har tænkt over det, så er de på facebook, ofte er det ikke et bevidst valg, men bare en vane at gå der ind, hans pointe er at der er noget ved det en computer kan som gør at man bliver draget alle mulige andre steder hen og at det kræver mere at have fokus
- 102** **N** Det sker så også i en forelæsingssal
- 103** **N** Nogle gange opfordrer jeg mine studerende til at lukke computeren og skriver noter i hånden, fordi det er en anden form for koncentration
- 104** **N** Min pointer er at hvis man sidder og ser noget som man synes er kedeligt, hvis man er i en forelæsingssal kan man måske gå på facebook, men den kører der stadig
- 105** **N** Hvis man sidder derhjemme er fristelsen for at gå på Netflix endnu større, hvis vi snakker motivationsmæssigt
- 106** **N** Langt hen af vejen tænker jeg at det måske er det samme
- 107** **I** Ordet er frit
- 108** **N** Jeg synes i skal gå videre med det podcast
- 109** ...
- 110** **N** På den ene side vil jeg enormt gerne vide mere om det og eksperimentere med det, og hvis der er nogle lækkre platforme der gør det ret let og jeg gider ikke lave videoer hvis det er af dårlig kvalitet, så det betyder meget for mig hvis jeg relativt nemt uden for stor indsats selv kan lave noget, så vil jeg være mere motiveret for det
- 111** **N** I en forelæsingssal kan jeg fornemme på mit publikum om de trænger til en pause, eller det jeg siger giver ikke mening for dem, eller de har fuldstændig mistet opmærksomheden og de ser helt blanke ud i ansigterne
- 112** **N** Jeg siger ikke bare det jeg har forberedt, jeg fornemmer og justerer, det er nok noget af det der er vanskeligt at erstatte med en video, men til gengæld kan man sørge for at det er skarpere i en video end en forelæsning
- 113** ...

- 114 N Så længe at det ikke kommer til at overtage, selvfølgelig skal der være fordybelse hvor man kommer ned i materiet på nogle ting, hvis det kan være et supplement til de andre ting, synes jeg også at det vil give rigtig god mening
- 115 ...
- 116 N Det er relativt krævende at lave en forelæsning, selvom man kan genbruge dem er det stadig tidskrævende at læse op på den, jeg kunne forestille mig at man på færre ressourcer kunne lave de her videoer, så kunne der være overskud til at lave mindre hold for at have den der dialog bag efter
- 117 N Men hvis de har set videoen derhjemme og så skal man køre en dialog med 120, det duer bare ikke
- 118 ...
- 119 N Brugervenligheden og kvaliteten(af videoer) synes jeg virkelig er vigtigt
- 120 ...
- 121 N Og så en eller anden form for markedsføring der overbeviser om hvad jeg som underviser får ud af at gøre det her, hvad er det for et problem jeg løser
- 122 I Ligesom prøve at sælge den?
- 123 N Ja lige præcis

Interview Transcript: G Astrid (pseudonym)

- 1 **A** Identificerbar information udeladt
2 ...
3 **I** har du nogle preferencer i forhold til undervisningsmetode?
4 **A** Jeg kommer fra Sjælland af og tog til Aalborg pga. PBL, det kan jeg godt lide og det der høre med den er at du har forelæsninger og så har du rigtig meget gruppeddannelse
5 **A** Jeg kan godt lide tanken om at du ikke sidder alene med opgaverne, vi har haft enkelte projekter hvor vi gjorde, men selv der har jeg formået at finde grupper jeg sad sammen med, fordi jeg synes at det sociale også er rigtig vigtigt og du fanger rigtig mange fejl når du er i en gruppe frem for alene
6 **A** Jeg er ikke til folkeskoleundervisning i form af at sidde ved et bord og læse, det gør de meget på jura, det synes jeg er en misforståelse af hvordan du lærer bedst
7 **I** Har du hørt ordnet flipped classroom før?
8 **A** Nej, ikke ordet i hvert fald
9 **I** Jeg kan lige hurtigt forklare hvad det er
10 ...
11 **A** Det har jeg prøvet, jeg har gået i skole på malta, det var det de kørte der
12 **I** Hvordan fungerede det?
13 **A** Det var lidt af hvert, vi havde jo forskellige timer, der var maltetisk historie, der skulle men læse meet selv og ville man møde op og debatere forskellige filosofiske retninger om hvordan gangen var gået Malta, fordi de har mange forskellige ideer til hvad der er sket
14 **A** Hvad angik sproget, vi havde maltetisk og engelsk, så skulle du ud og snakke og prøve noget af kulturen, jeg fik timeopgaver hvor jeg skulle smage kanin og målet var at finde en restaurant hvor du kun måtte være Malteser og de tillod os selvom vi ikke var så gode til maltesisk og så tog vi et billede af det
15 **I** Hvordan var det sammenlignet med dit referencepunkt
16 **A** Dengang kom jeg jo fra folkeskolen direkte over til Malta, det var sjovt og det var fedt og det var meget forvirrende, man følte sig meget alene især da vi skulle ind og besøge ne kirke, hvor jeg ikke havde det rigtige tøj på, så jeg måtte ikke komme ind, problemet er at bussen ikke gik tilbage, de andre var gået ind og jeg kunne ikke informere de andre, fordi vi ikke havde mobiler med, så lige pludselig havde jeg 7 timer alene, hvilket er meget som 15 årig

- 17 A Jeg lærte også meget af det og jeg var også den der kom ud med det bedste snit, så jeg tror at det kommer an på hvor meget du tør
- 18 A Der var en anden pige, hvor der skete det samme for hende og hun tog hjem fordi de gjorde hende for nervøs
...
I Jeg tænkte især det er du gør noget hjemmefra og så kommer du op og diskuterer det på gruppen, hvordan synes du det fungerer i forhold til din læring?
- 21 A Jeg tror at du lærer rigtig meget uden du opdager det, hvilken først rigtig går op for en ved eksaminerne, har jeg erfaret eller efter
- 22 A Jeg lagde også mærke til at undervisningen virkede kedelig fordi der ikke var nok forskellige pointer i debatterne, det var ikke altid at lærerne formåede at leje djævelens advokat til at det fungerede og så når det endelig fungerede i at eleverne tog forskellige udgangspunkter, så var der en tendens til at men blev meget sure
- 23 A F.eks. var der en debat i Maltas historie, hvor du som pige ikke må gå i bikini, men du må godt som dreng gå i badeshorts, hvor drengene tog det standpunkt at det var helt fair fordi de skulle ikke fristes, og pigerne var sådan hvorfor skal iv så fristes?
- 24 A Og det blev spinned op til at vi faktisk var nødt til at dele undervisningen op i to køn de næste to dage, fordi vi var så sure på hinanden og pigerne strejkede ved at gå i skole i bikini
...
A Sammenlignet med de timer hvor jeg har siddet og tænkt hvornår går vi videre, så tror jeg egentlig at den var at foretrække
...
I Så du har ikke prøvet noget videoundervisning?
- 29 A Jo det gjorde vi på gymnasiet, hvor vi havde videoundervisning fordi vores lærer boede i Canada
- 30 I Var det så live?
- 31 A Ja, vi prøvede lidt af hvert, vi prøvede live og vi prøvede at hun sendte videoer hun havde lavet før, når hun var syg på hospitalet, og så var det dem vi skulle gå ud fra
- 32 A Live var normalt nogenlunde, bortset fra at hun ikke kunne tælle hvor mange der var, så hun ville give opgaver som om vi var 20 i klassen og reelt var vi 5, hvilket var frustrerende fordi så får vi bare skældud for ikke at nå nok og dem der slacker de har så ingen konsekvenser
- 33 A Videoer var der mange problemer med at man ikke kunne stille spørgsmål, så der var stor forvirring og de var ikke altid lige tydelige fordi hun havde filmet dem relativt hurtigt, så hun havde brugt meget Canadisk slank af og til
...
A Jeg ville ikke have haft en anden lærer, så jeg var rigtig glad for at hun gjorde det på den måde, på den måde var det fedt at bibe holde at lærer man er glad for

- 36 **I** Hvilke udfordringer ser du ved at gøre en større del af en uddannelse digital, hvis nogen?
- 37 **A** Det kommer an på hvordan du gør den digital
...
- 38 **A** F.eks. den med videoer er jo fin i forhold til at det betød at du kunne side hjemme, hvilket gør at de elever der har sensory disabilities kan sidde i ro og klar sig bedre og dem der er asociale kan blive meget indelukket og der var nogle der fik depressioner fordi de ikke så andre mennesker i flere uger
- 40 **A** Så må man jo argumentere for at de må tage fat i deres egen hverdag og se nogle venner istedet
- 41 **A** Jeg tror at den største ulempe er hvis det ikke er gjort ordentligt, så kan du ikke stille spørgsmål, det er meget let at når du slukker skærmen så er det ovre og så glemme alt
- 42 **A** Kommunikationen vil også være anderledes, i form af at du ikke kan se andres miner og micro ekspresions
...
- 43 **I** Hvis nu AAU laver den har platform, har du så nogle få vigtige ting den så skal have før du har lyst til at bruge den?
- 45 **A** I et større klasselokale eller i en mindre gruppe?
- 46 **I** Det er tænkte til at det skal erstatte nogen undervisning med video
- 47 **A** Vi har en underiser i København, så vi bruger ofte skype, hvilket fungere fint for os, måske kunne vi bruge en måde hvorpå at den ikke skal trække så meget net for at fungere, som Skype altid skal, det sker tit at nogle af os bliver logget af
- 48 **A** Der er dilemmaet med mikrofoner, hvis du er 3 mennesker der sidder sammen, med 3 forskellige computere, så er det også et stort problem at man enten ikke kan høre alle eller man hører for meget
...
- 49 **A** Hvis det bare er en video der er optaget virker det bare som en serie man bare skal se, og det tror jeg er en fare i form af at den ikke har en deadline, som så mange forelæsninger har
- 51 **A** Jeg tror hvis jeg havde muligheden for det, så ville jeg desværre være doven nok til at vente til ugen før og så se alle forelæsninger
...
- 52 **A** Det kan også være en fordel, hvis du er syg i længere tid, kunne det være fantastisk at sidde derhjemme
- 54 **A** Men så tror jeg at vi skal have nogle flere checkups for at flere studerende klarer sig bedre, i form af miniprøver
- 55 **I** Hvad ville motivere sig til at se og reflektere over videoen?
- 56 **A** Prøver
...
- 58 **A** Oxford prøvesystem baseret på det der, som jeg var nede og besøge
...
- 59 **A** Oxford bruger det hvor du har prøver hver anden til tredje dag og det gør bare at du lærer mere og du bliver mere motiveret fordi du gerne vil klare dig godt hver gang

- 61 I Tæller prøverne som en del af eksamen?
- 62 A Nej
- 63 ...
- 64 A Den prøve der ikke tæller med i noget, betyder stadig noget for dig selv og det er en god måde at tjekke op på om du har forstået alt du har behov for
- 65 A Vi har ingen prøver pt. Så vi kan ikke se om vi har forstået alt hvad vi har behov for
- 66 A Jeg tror at det kan være en styrke, men også en svaghed, i form af at når du er i grupper, gruppen kan finde en fejl, men den kan også guide en person i den forkerte retning, og det sker især når vi har så minimal undervisning som vi har
- 67 I I har ikke ret meget?
- 68 A Nej, vi har et projekt over 2 måneder, og vi har ca. 10 timers undervisning i alt
- 69 I Det var ikke meget
- 70 A Og det er vejledning til projektet
- 71 ...
- 72 I Vil du foretrække at de små milepæle gav eller ikke gav point?
- 73 A Ikke, jeg tror motivationen vil være nok i at se du klarer dig godt, jeg tor at hvis den giver point så vil det mere blive et krav og et stresspunkt og der er nok stress på universitetet som det er.
- 74 I Hvor vigtigt er design, altså hvor nemt det er at bruge. Og sådan noget? Fordi en ting er hvad det kan, men hvor vigtigt er det for dig at det er nemt og hurtigt at bruge?
- 75 A Hurtig er helt klart en stor faktor. Jeg synes at Moodle er forfærdeligt på computeren sådan som det er nu.
- 76 ...
- 77 A Jeg kommer fra et program som jeg tænkte var forfærdeligt, og så fik jeg Moodle. Og nu synes jeg egentlig at Fronter var OK. Hæhæ.
- 78 ...
- 79 A Men på Moodle bruger jeg mobilen fordi der er skemaet tilgængeligt, og så bruger jeg kun skemaet, og så resten af tiden der går jeg ind på computeren og sætter en halv time af når jeg skal finde ud af noget, og det er også tungt. Det er kun få ting hvor jeg så har lavet genveje til tingene i browseren.
- 80 I Vil du sige at det forhindrer dig i at bruge det, så?
- 81 A Ja, meget. Jeg vil sige at det kunne de godt have lavet smartere. Og på min computer især er det meget langsomt.
- 82 ...
- 83 A Men også designet. Den er ikke pæn, den er ikke let sat op, så at sige. Den er ikke lækker. Den er designet til noget som vi ikke skal bruge. Jeg ved ikke hvorfor, jeg ved ikke hvem der har designet den? Det kan være at du kan besvare det?
- 84 I Måske ens studiesekretær?

- 85 **A** Det kunne godt passe, for det er meget sat op i hvordan jeg kunne foerstille mig at de lettest kunne komme til. Men også, selvom der står at mapperne er lavet til specielle ting, men der er flere gange hvor skemaet ligger inde under “ekstra informationer”, og det er jo ikke sådan ekstra informationer. Det må gå ind under basale informationer. Men det ligger ikke der. Der ligger eksamensdatoer, som egentlig ikke skal bruges før senere.
- 86 **I** Så måske kunne det egentlig også hjælpe hvis den viste dig de informationer som er vigtige lige nu?
- 87 **A** Ja, helt klart. Det vi gør nu, det er at jeg er en del af junta'en, og så skriver folk ind hvis de har nogle problemer, og så sætter vi en i juntaen til at finde problemet, og så tager vi linket til det og sætter ind på vores Facebook så alle andre kan finde det. Fordi Moodle er så dårlig at man ikke gider at forklare vejen, så er det lettere bare at lægge det inde på Facebook. Så forfærdeligt er det.
- 88 **I** Kan du forklare hvad juntaen er?
- 89 **A** Man kan sammenligne det med vores elevråd for Psykologi
...
- 90
- 91 **I** Hvordan informerer vi bedst studerende som dig om hvad sådan en videoplatform den kan? Noget der gør den let forståelig og noget du har lyst til at bruge.
- 92 **A** Skal det være en video?
- 93 **I** Nej, overhovedet ikke, altså det er dog en videoplatform.
- 94 **A** Hvis I kunne lave step-by-step sådan så der er en for hvordan du finder skemaet, hvordan man sender beskeder, hvilket jeg ikke engang ved om man kan på Moodle?
- 95 **I** Det tror jeg at man kan?
...
- 96
- 97 **A** Jeg har bare ikke fundet det.
- 98 **A** Hvis du har step-by-step så du bare har den vej som du har brug for, det tror jeg kunne være brugbart.
- 99 **I** Så det er nogle af de gængse workflows?
- 100 **A** Ja, men også for, der er mange tutorials når jeg laver feltarbejde, så der er man forskellige programmer vi bliver introduceret til, og jeg springer 9/10 over fordi jeg tænker at det kan jeg sagtens. Og så tit så erfarer jeg det lidt senere at jeg got kan fordi det plejer at give intuitiv mening men meget af det er så kedeligt at gå igennem i første del at man ikke gider, så det er de indviklede funktioner som jeg først erfarer et halvt år senere.
- 101 **I** Man gider ikke til at tage ni tutorials lige til at starte med.
- 102 **A** Nej, og vi bruger Slack, og en af drengene skrev en guide til hvordan man bruger det, hvor selvom det var meget uprofessionelt lavet, så var det meget fedt at han gjorde det og han lavede en masse videoer; sådan her gør du det, sådan laver du en plan osv. Og så lage han det ind sådan at dem der sad med økonomien havde adgang til den del og andre med til deres del. Og sådan var der flere som havde flere forskellige, men det lå stadig i forskellige mapper, det var meget fedt.

- 103 I Hvor vigtig er produktionkvaliteten af videoerne? Det er sådan noget som animationer, brugen af kamera og lyd osv.
- 104 ...
- 105 A Vigtige. Den skal sidder lidt i skabet, faktisk. Især med lyd. Vi har haft videoer med piv-lyde som jeg får hovedpine af, som har betydet at jeg har måttet holde pause halvvejs inde. Og det er halvdelen af studiet som har det sådan. Det er ret dårligt.
- 106 A Jeg ved ikke om den visuelle del betyder så meget igen, faktisk. Der er mange der tager opvasken osv. samtidigt. Det er ikke så nødvendigt at stå og se på en lære blafre med hænderne. Men hvis det er at de viser tabeller og lignende, eller har deres noter, så vil jeg rigtig gerne kunne læse det. Og det ville være en dyb frustration ikke at kunne det, faktisk.
- 107 ...
- 108 I Hvordan har du det med sådan noget som analytics? Altså at universitet og dine lærere er i stand til at se hvilke videoer du har set og hvornår du har set dem, hvordan det er gået med de quizzes du har taget osv?
- 109 A Hvis vi tager det udgangspunkt at quizzes ikke skal betyde noget for karakteren, så kan jeg ikke se nogen grund til at de skal kunne se hvor meget man har set, ud over om de har brandet det godt nok, men så synes jeg ikke at det er vigtigt at se om jeg som individ har set den, men hvor stort et antal der har set den. Det giver mere mening, også for ikke at føle sig overvåget. vi lever meget i et overvågningssamfund — det behøver vi ikke.
- 110 ...
- 111 A Så der vil jeg helt klart sige at jeg ikke ser nogen grund til at man skal have det sådan.
- 112 A Men jeg synes ofte at så kan nogen af lærerne i hvert fald få feedback i form af at kun 1/7 af eleverne har set deres videoer. Det giver mening, det skal jeg da ikke sige noget imod.
- 113 I Det var det hele, så hvis du har noget mere, så skal du være velkommen til at freestyle.
- 114 A Hmm. Brug berigtede farver!
- 115 I Det betyder noget?
- 116 A JA det gør.
- 117 I Hvad er de rigtige farver?
- 118 A Det er let adskillelige. Det værste jeg har at den brugte sort som baggrund og hvid med lyserøde streger. Jeg tror at det var lavet for at være sådan lidt spacy, men det var bare irriterende at se på. Men der var så nogle ordblinde for hvem det fungerede virkelig godt … ellers så afslappede farver, ikke for mange. Helst gerne den mørkeblå tone.
- 119 I Neutralt, det fungerer.
- 120 A Ja, og AAU har den mørkeblå tone. Også så man er sikker på hvor man hører til.
- 121 I Tak skal du have.

Ny Videoplatform til AAU - Præsentation af Mulige Kandidater

This appendix contains notes, in danish, from two meetings held on the 4/4 and 5/4 by a representative from DeiC, Torkild Jensen.

Notes: Alle tre er hostet i Danmark De regner med at AAU har lokal support, hvis det er mere kompletst kan DeiC agere support og endeligt en af de tre services Et arkiv gør at man kan anvende hindandes materiale og søge i det hele og en tættere integration med egne systemer (Moodle) Tre brugsscenerier af mediehosting

1. Underviser
 - a) optager, uploader til moodle, publicerer
 - b) statistik
2. Studerende via desktop/mobil
 - a) optager, uploader, publicerer
3. Ansatte
 - a) Optagelser af møder, audio/video
 - b) uden brug af ekstern hardware, de vil investere få penge i hardware

H.1 Panopto

eksemplet er på integration i Moodle Er god til undervisning, har mange værktøjer til brugerne Stammer fra undervisningens verden Kommentering og Noter, særligt ved Panopto (opdater listen)

Bogmærker, mellem player og startskærmen I afspilleren er der:

- Video
- videokontrol
- noter (personlige reflektioner, kan deles i en gruppe)
- bogmærker
- kommentarer (til alle der har adgang til videoen)

Talegenkendelse er ikke tilgængeligt på dansk, men er på vej Via appen kan man optage og upload Søgning er I top, og integreret Non destructive editing Recorder app til macOS ser neat-o-ish ud Kan ikke redigere i appen (det kan de andre heller ikke)

Det er muligt at indsætte en quiz på et bestemt tidspunkt i videoen Man kan eksportere til en flad videofil

Mediasite kan også dette

Ikke alle videofiler er et bestemt Panopto format, kan ikke downloades? Man kan redigere et enkelt slide efterfølgende hvis man opdager en fejl Har de bedste muligheder for redigering (ikke nemmeste, men stadig godt)

H.2 Mediasite

Kan downloade en ikke-flad fil Fra 90erne Har en mobil app Er solid til at ørette skaller i Har bedre søgemuligheder og indexering med metadata, såsom tags Der er ikke en central liste med features, det udvikler sig fra måned til måned

Hvis vi har et bestemt behov kan DeiC hjælpe med at afklare hvordan de forskellige platforme dækker dette

Har de nemmeste (ikke bedste) redigeringsmuligheder Kan uploadet til My Drafts så man ikke behøver at poste med det samme Kan redigere slides efterfølgende Hvis man bruger slide-funktionen får man dem som billeder/pdf. Ikke pptx Den bedste måde at bruge mediasite fra mobillos er via hjemmesiden. Den adapterer og kan det samme, foruden redigering. Kan uploadet eller optage fra mobilen, via hjemmesiden Virker godt mht. at optage videokonference (via zoom) Har annoteringer Playlister er fordi det ikke er i playeren Desktop app ser ud

H.3 Kaltura

Stammer fra medieverdenen Er rigtig god til metadata, laver et godt index over sine videoer Administratorer kan kræve at uploader udfylder bestemte metadata Kan mindst mht. redigering Kan customise afspillerne meget mere end de andre Er godt som katalog ala privat youtube Mobil app ser OK ud Desktop app ser ud og er meget simpel Direkte integration med zoom (kommer snart)

H.4 Øvrigt

Vi bør stille vores behov skarpt og derfra se hvorvidt de forskellige platforme dækker disse Hvor langt går de forskellige features, såsom redigering Panopto kan få mest indhold ind, både recorder og redigering Vil gerne have det klar til studiestart, men IT vil hellere vente (ikke sikker på at de overhovedet kan nå det)

Afspillingshastighed, det er hørbart ved højere hastighed Man kan umiddelbart ikke ændre på antal af steps i afspilningshastighedsindstilningerne

Undersøg hvordan brugere vægter forskellige features, dernæst test hvor godt de forskellige platforme klarer sig i en test (vægtning*test score=overordnet score)

H.5 Alt det Udenom

Mange forskellige aliaser giver problemer, især på tværs af systemer Moodle til Panopto/Kaltura/Mediasite AAU benytter WAYF, hvor det bliver mail@aau.dk Stammer

fra manglende kommunikation og koordination på tværs af organisationer såsom AAU og DTU Under en LMS bliver roller automatisk udstede, det meste er givet på forhånd, f.eks. hvad en underviser skal være Generelt set er desktop dårligt understøttet, Mediasite kører alt via Web teknologier Alle understøtter brug af Windows, mac, iOS, Android

Nogle bruger ikke native applications, her er det især igen Mediasite

Som tingene er nu er de to første scenarier godt dækket ind med alle tre platforme Det tredje (optagelse af videokonferencer) er der en del mere opsætning på AAUs side Panopto er stærkest i forhold til søgning Det er generelt let at inkludere følgende i sin video vha. Panopto:

- Kamera
- Et eksternt kamera
- Skærm
- Ekstra Skærm
- Et dokumentkamera
- Slides
- Lyd
- Er også best til at sætte en stream op i, bare en knap

Mediasite og Kaltura kan få video og slides ind (her skal man vælge imellem slides eller skærm) Kaltura har en meget lang process for at sætte live-streaming op Det er en organisations licens, målt på antal fuldtidsstuderende

Prisen vil ændre sig i forhold til volumen af brugere igennem Nodunet (i skandinavien)

Lagringsplads er ikke det der koster noget signifikant AAU har ikke en et stort bibliotek af eksisterende video, ellers kunne alle platforme godt importere større biblioteker Eksport er der umiddelbart en gnidningsfri process Underviseren ejer indholdet, også når de forlader stedet Elever har også mulighed for at downloade deres uploadet indhold Det er muligt at definere hvornår en video skal være tilgængelig og hvor længe Right to be forgotten, her kan man nemt gøre det på Mediasite På Panopto kan man gøre det ved at tildele brugeren et nyt ID, så det effektivt bliver semi anonymt Statistik kan man også se som admin/underviser

På videoniveau, hvor meget bliver det set, hvor hopper folk fra, hvilke platforme kommer de fra Man kan også se disse ting på mappe niveau, lektion/kursus/semester/uddannelse etc. Hvor mange kendte brugere har man, hvor mange anonyme

Ifølge Thorkild er Panopto bedst til UI, men ser ikke den store forskel generelt for slutbrugeren Den store forskel er på admin siden Kaltura er tungt i opsætning, men kan også customises mest Mediasite ligger i midten, arbejder meget med skaller, players og templates Panopto er ikke særligt komplekst at sætte op, men der er as is

Notes: State of the Art Interview

Notes in danish from meeting about state of the art at AAU.

Per: AV, video konferencer, designer klasselokaler, lærredstørrelse etc, overholder handels aftaler, spørgsmål om video, har været på AAU i 15 år, har været med til at designe video konferencer, deres opgave nu: hvilken platform er det de skal have og hvilke behov er det brugerne har.

Jakob: har været med ind over hele strategien, har arbejdet på planer og metoder, har været med til at sætte kompetence centre i gang, har meget fokus på at igangsætte de aktiviteter der skal til

Planen for videoplatformen er ikke en del af en stor forkromet plan, men mere et mindre initiativ, det er på pilot niveau, lidt ustruktureret.

Lige nu er det enkelte undervisere der selv finder ud af hvordan de skal gøre tingene.

De vil gerne kunne: lagre video, de studerende kan tilgå materialet naturligt, gerne igennem Moodle, undgå bekymring omkring hosting/servere etc.

Det skal teknisk set tænkes ind i det allerede tekniske landskab, det skal kunne spille sammen med Moodle, det skal fungere med eksisterende logons.

DeiC er her for at hjælpe med indkøbsaftalerne omkring videoplatformen, de har prøvet udbudsprocessen. De skal vælge blandt de 3 platforme DeiC her foreslået DeiC er under ministeriet, sidder i lyngby, på DTU, skulle levere fibernet, nu har de en computer du kan leje dig ind på

Helt overordnet er de interesserede i PBL-modellen, den er udgangspunktet for deres arbejde, det er den pædagogiske praksis der skal udvikles. Der er også PBL future, hvordan ser PBL ud i fremtiden

Lærings situationen i at se video, er meget omkring flipped classroom
Hav en bred vifte at kurser de studerende kan vælge imellem, ondemand, efter behov, begrundet i deres projektarbejde.

Der er brug for kompetence forandring, det behov ændrer sig hurtigt, normalt tager det

5–7 år

Kompetencecentret gør at det strømmer ind med henvendelser omkring folk der vil have hjælp til at komme i gang med digital undervisning.

kompetencecenteret er lige nu manpower, de arbejder på en hjemmeside der måske kommer op i morgen(13/3), der skal opbygges en base for best practices.

Der skal både være noget teknisk, noget pædagogisk og noget administrativt(det er lægge en plan for undervisningen eller hvor lang tid det tager)

Noget af høj teknisk kvalitet, så bliver optræden forstyrrende hvis den ikke er på samme niveau (fra Jens Myrup). Man skal kunne fornemme underviserens nærvær. Høj kvalitet kan skabe afstand mellem undervisere og studerende.

Skal lærerene selv producere video selv? der bliver ikke arbejdet på et hold til at hjælpe med udvikling af video.

Det behov der kunne dækkes af video, er det instruerende

På sigt er det ikke sikkert at de skal være Moodle

Det kan også være at de studerende skal producere video materiale som en del af aflevering
Underviseren brugere mindre tid på forelæse og mere tid på at lave aktive learning

De vælger mellem tre pakkeløsninger, de sigter efter ikke at lave egenudvikling. Det er dyrt og skrøbeligt at lave udviklingen selv.

Who defines scope/features?

AAU, dem vi var til møde med

Who designs?

Det visuelle den studerende møder, vil f.eks. være igennem Moodle, der kommer ikke nogen til at side og udvikle decideret. Der er mulighed for at redigere lidt småting. Der kan ikke ændres i det visuelle.

Who dictates technologies?

Det er ofte på baggrund af snak med undervisere og andre undervisningsinstitutioner(verden rundt).

Der er et brugerperspektiv; hvad ønskes der? Hvad er teknisk muligt?

DeiC kommer og laver to præsentationer; en brugerpræsentation og en teknisk(vi kunne evt deltage)

Who does quality control/user testing?

Overordnet set er det ITS, DeiC foreslår to typer test; en test implementeret i DeiCs landskab og en i AAUs landskab.

What role does DeiC have in this project?

Giver tre bud på mulige leverandører af IT løsninger

Har taget feedback med tilbage og ud fra dem er det blevet lige netop disse tre løsningsforslag