Hey, This Is What Your Teacher Needs To Start With Online Lectures

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ABSTRACT

As a part of a huge and overturning educational reform in the Norwegian Armed Forces (NoAF), a digital strategy is being enforced. For the educational sector, this means moving more of the instruction and learning activities online. To be able to do so successfully, the teacher/instructor/lecturer plays a crucial part. An important question is what kind of support and incentives are most effective to get teacher to develop and use more online lectures.What do they need in the planning, development and implementation of these video lectures? One of the challenges in this process is that the teachers often underestimate the workload and there is not enough time set aside on their part to map out their content, prepare and develop the script and learning material.

Through in-depth interviews with teachers at NoDUC, the ADL section investigated what kind of knowledge, support and training the teachers need to increase their motivation to developing video lectures. This paper will highlight the findings from these interviews and present them in context of relevant research and experiences from NoDUC's use of video lectures the last couple of years. Finally, the overall aim of the paper is to recommend a number measures needed to be taken to ensure that teachers/instructors have the sufficient knowledge and motivation to produce and use online learning activities.

ABOUT THE AUTHORS

Commander (CDR) Geir Isaksen has more than fifteen years in the field of Advanced Distributed Learning (ADL) and is responsible for more than 30 defense projects in the field of digital learning methods and learning technology. He has published more than 11 papers covering different fields like mobile learning, student motivation, cognitive overload in e-learning and use of video lectures. He has a master's degree in Information Computer Technology (ICT) & Learning from the University of Aalborg (2014) and a bachelor's degree in Electrical Engineering from Vestfold University College (1998). CDR Isaksen holds the position as an ADL Staff Officer at the NoDUC/ADL Section, where he is responsible for leading and coordinating procurement, development and implementation of digital learning projects and use of defense LMS. His military background is from the Navy, serving on submarines for six years as an electro officer and he is also responsible for international ADL cooperation at the NoDUC.

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INTRODUCTION

All across the Higher Education sector (HE) in Norway, both in civilian institutions and in defense, there are pressing demands on cutting costs for education while at the same time ensuring high-quality education (Brun-Hanssen, 2017, p. 3, Ministry of Education, 2016-2017). Put succinctly, the aim is no less than achieving the same or even better learning outcomes while using fewer resources. This presents both a conundrum and a problem for many of us working in the sector. One of the remedies or rather the solution to these demands is online learning. More specifically, the use of video lectures or online lectures is now established as a low threshold alternative, more accessible and easier to develop than for instance expensive e-learning courses. Given that the content is suited for a multimedia format, online learning activities can free up time in the classroom and enable the students to participate more (Bergmann, 2018, p. 22-23).

Despite the fact that online learning can provide the same learning outcome and free up time for other learning activities in the classroom, instructional designers, advisors, developers and content managers working in the HE sector are reporting difficulties in getting their teachers/instructors onboard. There are perceived difficulties getting faculty members to try new digital solutions, to implement effective use, to develop content, and to commit to creating and supporting such online learning opportunities (Lloyd, 2012, p.8). Even in instances where the teacher/instructor is enthusiastic and committed to developing online content, the commitment does not last. Very often, the result is business as usual and the plan to digitalize is postponed, downscaled or even cancelled. What are the reasons for these challenges; Why do they arise and how may they be overcome?

When it comes to demands on cutting costs and moving education online, Norwegian Defense University College (NoDUC) is no exception. Also, both faculty members and administration experience digitalization challenges and difficulties in successfully planning, developing and implementing online learning. Yet, as part of a blended learning approach, NoDUC has looked at several types of online lectures and learning strategies to replace existing PowerPoint® based classroom lectures. As shown in last year's IITSEC paper, four types of lectures have been developed and tested out at NoDUC over the last couple of years. 1: Classroom streaming, 2: Classroom recordings, 3: Video lectures and 4: Multimedia lectures (Isaksen, 2017, p.4). Based on student feedback and an evaluation of the benefits using different types of video lectures, Isaksen (2017) recommended that NoDUC, in the future, focuses on video lectures and multimedia lectures as the primary online replacement for classroom lectures.

Although NoDUC has established a thorough focus on developing video and multimedia lectures, the ADL section is experiencing challenges in implementing an overall and streamlined approach to the development and use of online lectures, including the challenges mentioned above. There is some enthusiasm, willingness and commitment to digitalize, but the commitment does not last and often the result is 0. In this paper, we seek to map out these challenges, provide some possible reasons and explanations, and develop a set of recommendations on how the challenges can be overcome. The aim of this paper is a practical outcome that can be implemented in future work on digitalizing the education at NoDUC and other higher education institutions.

In order to explore and answer the questions and arrive at a set of recommendations, we have conducted in-depth interviews with faculty members, asking questions about the development and use of online learning assets and activities. The questions asked are structured according to the following categories: expectations, level of knowledge and skills, time and planning, the difference between online lectures and regular lectures, teachers as people, flipped classrooms and other digital learning assets. These categories are in line with existing research and are also consistent with our own experiences and that of others working in similar areas. Furthermore, we employ a practical approach,

where we provide background and context, an example from an ongoing project, relevant findings in some of the contemporary research and relevant findings from the in-depth interviews.

BACKGROUND

On November 15th, 2017, the Chief of Defense (CoD) implementation plan for a new educational reform was put in effect. This reform established one joint university for all higher education in the Norwegian Armed Forces (NoAF) including the Army war college, Naval academy, Airforce academy, Cyber engineer school, Institute for Military Leadership and Operations (IMLO), Institute for Defense Studies (IFS) and one joint junior officer training school (Brun-Hanssen, 2017, p.12).

All these institutions are now under the command of Norwegian Defense University College (NoDUC) and have about 700 students annually. The new NoDUC offers a master's degree in military studies and bachelor's degrees in military studies with separate specializations in subject like telematics, leadership, engineering, logistics, air power, land power, and sea power (Norwegian Armed Forces, 2018). In addition, separate courses are offered without credits in subjects like Gender in the military, Senior Executive Course, the Information Course, the Military Attaché Course and the Course in Public Security and Crisis Management.

Cost benefits of the educational reform

The ultimate goals of the educational reform are to harmonize higher military education towards civilian universities, centralize support functions, increase educational professional competences, implement module-based education and clarify responsibilities and authorities for military education. By reducing the number of Junior Officer Training (JOT) schools from 6 to 1, cutting salary for officer cadets, increasing civilian cooperation and reduce number of faculty and staff, the goals are to gradually reduce the costs for higher military education by 69 million dollars by end of 2021.

Year	2017	2018	2019	2020	2021
Proposed benefits realization	$4.25M	$25.75M	$56.9M	$65M	$69M

Table 1: Planned benefits of the educational reform (Brun-Hanssen, 2017, page 16).

With decreased number of faculty and staff, modularized courses and less time in campus for the students, NoDUC are forced to look to increase the digitalization of existing and new courses. In some cases, this means that traditional classroom lectures and campus-based learning activities have to be replaced with online lectures and online activities (Isaksen, 2017, p.2).

PROJECT: NETPORTAL FOR CULTURAL AND GENDER TRAINING

In order to explore and uncover *what* the obstacles concerning the use of video lectures/other digital learning assets are, *why* they arise and *how* these challenges may be overcome, the initial plan was to interview teachers/instructors/subject matter experts (SMEs) within one of the ongoing NoDUC projects relying heavily on video lectures.

In 2017 NoDUC was awarded Concept, Development and Experimentation funds (CD&E) to develop a proof of concept for a portal for video lectures, covering culture and gender training. Both the portal and the content were supposed to be developed within the frames of the project. The target group includes both military and civilian personnel serving in UN and NATO missions around the world. Based on an individual user registration, with questions collecting information like type of mission and type of job, the portal will recommend an automatically tailored learning path, i.e. a collection of video lectures presented in a specific chronology. Every learning path will contain several 3-6 minutes video lectures divided by questions and tasks. In other words – the use of the portal is dependent on developing a lot of content, a process that would prove even more difficult than first anticipated.

The goal was to run a 3-month trial with students from September 2018 and then finalize the project with recommendations for further use and development by the end of the year. By April 2018, however, the number of produced video lectures was nowhere near the amount needed to run a trial (the initial goal was 50+, we narrowed in down to 20). Only four video lectures had been produced come June 2018.

Similar to earlier experiences on content development, and like many before us, we experienced how EdTech is easily developed and obtained or purchased, while the lack of content prevents effective and pedagogical use of the technology. The real challenge was to get the teachers/instructors to commit to participating in the production of the

video lectures. That is, to get them to map out their content, plan their video lectures and work with us to develop them. Even those teachers who enthusiastically supported the project and even expressed urgent needs and problems the video portal would meet and solve, could not find the time to partake in the planning and production of a video lecture covering their subject matter.

THE PROBLEM

Although the challenges we encountered in the Llearning project on culture and gender described above is an excellent case in point, the tendency of fading commitment is also the case in general at the NoDUC. Regardless of the well documented cost effective- and time saving benefits of using online lectures (Butt, 2014, p. 33, Uppal, 2017, p. 12) and the feedback from students saying they want more online learning resources (Isaksen, 2017, p. 6, 10), many teachers are reluctant to engage in the development of video lectures.

To be able to meet the demands of cost reductions from the educational reform (reform (Brun-Hanssen, 2017, p. 16), NoDUC has to increase their use of digital learning. And to increase the use of digital learning, we need both committed and skilled personnel. How do we get the faculty onboard? This brings us back to the initial questions. What are the real reasons why many teachers are skeptical towards converting more of their lectures to online learning resources? How can the NoDUC ADL office tailor our support to faculty to change this? Also, how should the ADL office facilitate the development process to ensure that NoDUC as a modern university meets the expectation of the new generation of students and moves more of their learning activities and lectures online?

The problem at hand leads to the following questions to be answered: *What* are the common obstacles concerning the development and use of video lectures? *Why* do they arise? *How* may these challenges be overcome?

EXISTING RESEARCH

As mentioned in the introduction, certain topics or categories informed the questions we asked the faculty members. The categories and questions were identified based on experience with developing video lectures and by consulting some of the existing research on online learning. In the proceeding brief review, the topics expectations, level of knowledge and skills, time and planning, the difference between online lectures and regular lectures, teachers as people, flipped classroom and other digital learning assets are contextualized according to contemporary research.

Expectations, time and level of knowledge

Results from a survey done by the Norwegian Defence Research Establishment (FFI) show that faculty administration, teachers/instructors and students have different expectations to the use of digital tools in education and training. They all believed that digital tools can contribute to a slightly higher learning quality and learning outcome, but it was a significant difference between the three groups. The administration had the lowest belief in digital tools, followed by teacher and instructor, while the students significantly had a higher belief that digital tools would improve the quality and learning outcome (Elstad, 2017, p 11.). The difference in how the faculty members and the students view the outcome of using digital tools might affect their approach to online learning. Furthermore, although all groups believe that digital tools would improve the learning outcome, the strength of this belief may affect the willingness to invest in using such digital tools.

Establishing a connection between experience and expectations, other research has found that over 80 percent of faculty with no online teaching or development experience believe that the learning outcomes for online are “inferior” or “somewhat inferior” to those for face-to-face instruction (Seaman, 2009, page 6). According to this finding, some of the reluctance or skepticism towards online learning might come from inexperience. It is common sense not to invest efforts in initiatives one does not believe in. From this perspective, inexperience and level of knowledge become obstacles for getting engaged with developing and effectively using online learning assets. As a result, the faculty members this is true for, will only commit to moving their teaching online little by little, for instance when circumstances force them.

Inexperience and level of knowledge as obstacles for engagement with and exploration of digital tools and online learning assets are also found in other studies. According to Sadik (2008), teachers are not able to adopt technology for teaching and learning tasks in the same pace as the students, and many teachers believe that technology integration is a difficult, time-consuming and resource-intensive endeavor and is more trouble than it is worth (p. 488). Findings in the FFI report can expand on this view. It was found that teachers believed that it is more time consuming for them to use digital tools compared to the time the students have to use (Elstad, 2017, p 12.). Perceived difference between

efforts needed for the teachers and for students, level of knowledge and insecurity seems to be factors that affect the attitude and response to online learning.

According to Lloyd et al. (2012), who have pointed out 10 barriers against online learning, the top five obstacles are: increased workload, time commitment, lack of personal relationship with students, frequent technology failures, inadequate compensation for instruction (p. 6). Increased workload and time commitment as the two biggest barriers is supported by findings in other studies. For instance, in one conducted by Babson College in 2009 they found that the biggest faculty concerns about using online learning is the belief that teaching or developing an online course requires more time and effort than for a comparable face-to-face class session (Seaman, 2009, page 3). Again, there is a perceived discrepancy between what time and efforts the teachers need to invest and what the returns are. If the expectations are that it will not be worth the effort, chances are they will not do it.

Maybe this perceived difference between cost and benefits is real. Research done by Tomei (2006) found that conversion to online courses required more time for all three elements of teaching: instructional content, counsel and advisement, and student assessment. The findings indicate that online teaching demanded 20 percent more time than traditional instruction, most of which was spent presenting instructional content (Tomei, 2006, page 44). This finding suggests that both good reasons and proper incentives have to exist in order to make the effort. An extension of Tomei's research would be to see when the extra time is worth spending and whether it "pays off" over time.

Level of knowledge and expectations also play a part in some recent research on what might affect the attitude towards moving online learning activities online. In connection with a flipped classroom project at an Australian university, Kehoe et al. (2018) have identified four reasons connected to the unwillingness to use online learning from faculty:

1. Unfamiliar higher-education language and concepts.
2. Discomfort with using unfamiliar technology to educate students.
3. Lack of familiarity with research in higher-education pedagogies and
4. Resistance to change due to the high value placed on academic independence (p.1).

Even though factor 2 and 3 identified by Kehoe et al. (2018) were not listed in the top 10 barriers from Lloyd et al. (2012), both fear against unfamiliar technology and inadequate pedagogical skills for online teaching could be found on their list of barriers (p. 6).

Teachers as people – online lectures vs. regular lectures

Filming a classroom lecture is often the easiest way of getting a lecture online, and often is the solution the teachers/instructors prefer. According to Crook and Schofield's (2017) work on the video lecture, expression of personal identity is important in lecturing. When converting a classroom lecture to a video lecture, important features such as intersubjectivity and nonverbal cues can be lost (Crook & Schofield, 2017, page 58). This view can be connected with traditional theory on the relations between an audience and a speaker in successful lectures or presentations where the communication is perceived as a dialogue. In reality, such instances always involve more of a performance than the common connotations of the word "dialogue" suggest. Also, the experience of this "performance" will not be the same when seen on video as compared to the one experienced in the classroom. It has to be "translated" for the medium. An obstacle for the lecturers may be that they do not know how to "translate" their performance and include their charisma and enthusiasm for the subject matter in a new and different way.

In Goffman's (1981) essay on the lecture, he emphasizes how the audience learns something about the speaker's relation to the subject matter through the act of lecturing (p. 163). From this perspective, the lecturer or teacher's relation to his or her subject is communicated through the lecture as form and through the way in which he or she talks about and involves the audience in the subject matter. This makes it tempting to conflate the lecturer with the subject matter, suggesting that the identity of the lecturer is somehow interdependent on the subject matter. Goffman's statement that the "subject matter is meant to have its own enduring claims upon the listeners apart from the felicities or infelicities of the presentation" (Goffman, 1981, p. 163.), shows that this is not the case. Accordingly, the same content and subject matter may be communicated through a different medium.

Taken together, these views highlight the fact that the way in which the subject matter is presented does affect the learning experience. They can also partially explain why the lecture *and* the lecturer hold such important positions within education. Furthermore, and in direct connection with converting classroom lectures to online teaching, these

perspectives might explain a common phenomenon when working with teachers/instructors. They often have a different idea of what underpins concepts like the "flipped classroom" or "blended learning", for instance by suggesting that recording a classroom lecture will be the same as a lecture that is optimized for online usage. According to Kehoe et al. (2018) this "is not an issue purely of interdisciplinary miscommunication that requires the minimization of higher-education disciplinary jargon, but rather a fundamental disconnection in understanding between a developer and an academic" (p. 3). This suggests that more measured should be made to ensure the teachers and the advisors are "on the same page".

Flipped classroom and digital learning assets

A common mistake is conflating online teaching/learning with classroom teaching/learning, thinking that the exact same communication, teaching methods and learning activities from the classroom can be used online. This misunderstanding is particularly evident when it comes to flipped classroom and blended learning. Ideally, blended learning is a perfect integration of classroom face-to-face learning experiences with online learning experiences. Often blended learning is well spoken of as a concept that integrates the strengths of synchronous (face-to-face) and asynchronous learning activities. At the same time, there is considerable complexity in its implementation with the challenge of virtually limitless design possibilities, types of learning activities/assets and applicability to so many contexts. Garrison & Kanuka (2004) already pointed this out more than ten years ago; "blended learning is both simple and complex" (p. 96). One of the reasons for the challenges getting the teachers/instructors onboard with blended learning or flipped classroom, then, might actually be the complexity of it. There are too many options and it is difficult to know both where to start and how to proceed.

As defined by Butt (2014), a flipped classroom moves the traditional passive learning activities like reading and viewing/listening to lectures, outside the physical classroom and reserves the valuable face-to-face time for active engagement in the form of problem solving, case studies, discussions and collaboration (p. 34). If the teachers/instructors do not know that these are the kind of learning activities that should be focused on when using flipped classroom, it is likely that the kind of activities they rather use are the exact same as in traditional teaching. From this perspective, the challenge is that the teachers might not know how the online lectures should be used, and thus not what kind of information is suited for this kind of lecture, or what other options there are.

Another aspect is that blended learning changes the teacher role. According to Seereekissoon (2018), it "changes the role of the lecturer who will then, facilitate learning activities instead of delivering face-to-face lectures" (Seereekissoon, 2018, page 497). If the teachers/instructors are not ready for this change, or even not aware that a change in their role is called for, there is a potential challenge concerning both the way the teachers flip the classrooms and the learning activities they are likely to include.

At the NoDUC blended learning and flipped classrooms are used more and more, with positive feedback from the students (NoDUC ADL section, 2017). Similarly, in a survey done at the Australian National University in 2014 over 75% of the students viewed the flipped classroom as being beneficial to their learning experience compared to a didactic lecture structure (Butt, 2014, page 41). This suggests that there might be a difference between how the teachers/instructors view this approach and how the students experience it.

How students experience the flipped classroom approach, however, should not be taken as proof that it actually works and provides a better learning outcome. One of the key elements in using a flipped classroom approach is getting students to go through learning materials before coming to class. Pre-class reading assignments or pre-video lectures replace lectures in flipped courses. For the face-to-face time to have the intended effect, it is essential that students complete their assignments before class (Miller et al., 2018, page 2). Active engagement in the classroom is dependent on well-prepared students. Yet students skipping requested pre- assignments is an important problem in higher education. If the teachers/instructors doubt the students' commitment to preparing for class, this will probably affect their willingness to develop digital content.

NDUC FACULTY INTERVIEWS AND FEEDBACK

To reiterate, the aim of this paper is to uncover the major obstacles to the development and use of online lectures, understand where these obstacles come from and suggest how they may be overcome. As the preceding discussion and review shows, the categories expectations, level of knowledge and skills, time and planning, the difference between online lectures and regular lectures, teachers as people, flipped classroom and other digital learning assets are relevant for these questions. In order to expand on the possible answers and solutions to our questions, we

conducted in-depth interviews with faculty members, where the questions came from the same categories. Furthermore, the goal is to use insights from our conversations with the faculty in order to make some recommendations for both our own and others' use.

As mentioned in the introductory part of the paper, the initial plan for arriving at a set of recommendations was to use the 20 or more subject matter experts involved in making video lectures for the culture and gender project. By the time we had to start conducting our interviews, however, only two of the video lectures had been made, and the other teachers/instructors/SMEs had shown little to no interest in making progress within the project. Accordingly, uncovering *what* the obstacles concerning the use of video lectures/other digital learning assets are and *how* these challenges may be overcome are two questions that cannot be answered within the limitations of the culture and gender project.

The interviews and questions

The challenges are the same in the ADL section's general work with NoDUC's digital learning assets. Often the teachers underestimate the workload and there is not enough time set aside on their part – or they are not given the extra time to manage the extra workload – to map out their content, prepare and develop the script and learning material. Thus, instead of selecting the interviewees based on the criterion that they had to be part of the culture and gender project, the interviewees were selected based on the follow criteria: employed at NoDUC, teaching experience, some experience with digital tools and online learning. Nine semi-structured interviews were conducted with both civilian and military NoDUC employees in April and May; enough interviews to collect data for a small project (Braun, Clarke, 2013, p. 48). Additionally, we also consulted answers from informal surveys about the staff's expectations to digital learning tools and other feedback regarding online learning.

The interviewees were invited to come and talk with us about online lectures and other digital tools, and the interviews were conducted as conversations at our office. While we conducted the interviews with a set of questions and a semi-structured approach, the different experiences and backgrounds of the faculty members affected what they chose to focus on and how they proceeded from topic to topic. Thus, various unplanned questions were asked and follow-up questions in the different interviews tapped into diverse topics. Yet the new questions or topics were still tangent to and relevant to the initial categories informing the questions.

RESULTS FROM THE INTERVIEWS

Faculty and student expectations

The topic of expectations is appropriate for many of the issues discussed in this paper. Many of our actions as human beings are based on what we believe will happen, and we adjust our behavior accordingly. As seen in the discussion above, online teaching and learning is no exception. Teachers are reluctant to spend their limited resources on planning, developing and implementing digital and online learning activities because they do not know whether their efforts are worth it. For the sake of brevity, we look at general expectations and the view on student expectations related to moving teaching and learning activities online under this heading, while expectations more specifically related to time and level of knowledge are treated under these headings.

When asked about the expected rewards of moving their teaching online, the faculty members were quite divided in their answers. Some of them elaborated enthusiastically on opportunities for freeing up time, tailoring learning content for the learners' needs and trying out new technology – a combination that in sum might lead to greater learning outcome. In contrast, many of the teachers we spoke to did not believe there would be immediate rewards for investing time and other resources in this work. Rather, low cost, easy and quick-fix solutions (e.g. being filmed in the classroom) were preferred as good enough, short-term solutions. While the answers from our respondents were divided with regards to expectations of rewards, they were quite similar when we asked about long-term expectations. Most of the respondents agreed that budget cuts and fewer people will require more and extensive use of online learning activities. In other words, most faculty members expect that a growing part of the education on NoDUC will have to happen online. At the same time, however, because there is no clear-cut strategy or leadership expectation of how and when this should be done, digitalization is seen as something that will happen in the near future, but not right now.

The answers were also divided on the topic of student expectations. Some of the faculty members connected the need for digital and innovative solutions with the fact that the students recruited for the new programs are younger than has hitherto been the case. Their view was that the teaching and learning activities need to meet student expectations for

what a modern education is, and that the activities should be similar to how the students interact with information and technology in their daily lives. By contrast, other faculty members indicated that an important part of the education is to learn how to gain knowledge the old-fashioned way (by lectures, reading and writing papers). One faculty member expressed a third view – student expectations change quickly, and they are quickly assimilated into the tacit knowledge of how things are done at a school.

Not surprisingly, what the interviewees say about expectations of digitalization in general and student expectations shows that there are multiple views and approaches to the matter. This diversity might point to a need for a more wholesome take on digitalization, where faculty members know what is expected from them, what the students expect and what outcomes are expected from digitalization activities. Furthermore, the fact that there is reluctance to invest too much time and resources in digital and online learning materials/activities because teachers do not know whether it is worth the investment indicates that the teachers might require more proof and examples if they are to commit fully to digital and online learning solutions.

Time and planning

As seen in the above, time is an important aspect when it comes to expectations. Time is also a recurrent topic both in the research literature, other discourses on the matter, and in the discussions we had with our respondents. According to the literature (e.g. Lloyd 2012, Seaman 2009), time, or the lack thereof, is one of the largest barriers to online learning. Time is also one of the rewards that are often highlighted in relation to online learning; the time spent developing content is returned later when less planning is needed for a lesson and when the time set aside for face-to-face activities can be used for more engaging learning tasks. Also, time is also an inescapable feature of developing quality content – it does take time and require commitment.

Even though most faculty members are positive about online learning, most of them say that they do not have the time to do it properly. While there are different views on how much time they should or would spend on digitalizing parts of their learning content, most of them emphasized that they cannot allot the time needed on top of their regular work tasks. Some of respondents with some experience in developing online learning content also expressed that it takes so much time that one has to be absolutely sure that the content is reusable. If the teachers are to use time on developing content, this takes time from other tasks. Most of the teachers we talked to emphasized that the alternative cost is too high – focusing on online learning would mean taking time from the available hours to spend with students, answering questions they might have and so forth.

With regards to time, availability is also seen as a big issue. In a general survey on faculty members' use of learning platforms and digital learning assets, many of the respondents highlighted the fact that they did not want to increase the use of digital learning and teaching due to demands on availability. In one particular answer, for instance, increasing the use of a learning platform was conflated with demands on being available 24/7. Such answers suggest that there is a belief or worry that it is not only the development of video lectures or other digital learning assets that take time. Rather the view seems to be that a digital approach in general means spending more time online being available to answer questions from students.

Similar to the findings in the expectations category, these different facets of the notion of time in relation to online learning show that something is missing in order to get the commitment needed to develop, plan and implement digital learning assets and hold parts of a course online. The teachers need to be more certain that the time they invest will be worth it both with regards to learning outcome and reusability, and they need to be given extra time to manage the extra workload.

Level of knowledge and skills

Another barrier to getting teachers onboard with online learning might be the level of knowledge, experience and skills. If they are inexperienced or unfamiliar with the technology, tools, processes and the benefits of video lectures or other learning assets, this may affect their attitude towards these solutions. As discussed earlier, if the belief that online learning assets will make a difference is weak, this will probably affect the willingness to invest time and effort needed when converting learning material to online formats. Accordingly, if teachers perceive that they have a low level of knowledge or skills in developing and using video lectures, they might be less likely to engage in such projects.

Regardless of whether they had some experience or more experience with online learning, most of our respondents were positive about both video lectures and other digital solutions. The ones with more experience and specific

experience with making video lectures, however, were able to pinpoint what they will do differently the next time and what they wished we had focused on when they started developing their first lecture. Most of these respondents started by emphasizing that they really had received all they needed from us, but as they elaborated on their experience it became clear that they missed a through guide on pedagogical principles for online learning, an example of the development process from A to Z, a high-quality example of a video lecture following this process, input on what kind of information is suitable for video lectures, and examples of alternatives to video lectures.

While our findings did not uncover a clear connection between inexperience and willingness, they show that a more successful approach to getting the teachers onboard probably requires us using more time with those who are inexperienced. The contrast between the respondents feeling that they did receive all they needed from us and later elaborating how they did not, indicates that there is a need to be more specific in the communication and ensuring that we are "on the same page". More involvement might be needed from our side, and the first timers should be followed up more closely with questions, suggestions and ideas. Furthermore, the fact that the more experienced teachers were both positive and more able to be more specific about what they would have done differently today, illustrates the importance of going through the process once or twice and learning by doing.

The difference between online lectures and regular lectures

When asked about the difference between an online lecture and a regular lecture many of the faculty members answered that moving the lectures online is problematic and presents a set of challenges. The reasons for them perceiving this as a problem, however, varied and the mentioned challenges differed from worries that video lectures will become too static to worries about losing control.

A couple of the respondents told us that one of their major difficulties in teaching and choosing active teaching methods is that the students do not prepare. When the students do not prepare, these teachers cannot choose learning activities that require a higher level of knowledge. Rather, they feel they have to use the face-to-face time on lectures where they go through the basics with the students and ensure that everyone at least has a minimum level of knowledge. The classroom lecture then becomes a control mechanism, whereby the teacher can make sure he or she has been through the expected material. The main reasons for this felt need of ensuring a minimum level of knowledge through classroom lectures are that the students do not read in advance and look for "quick fixes".

From this perspective, one of the respondents emphasized that an argument against video lectures is that students will watch the material instead of reading and believe it is an adequate substitute to the reading material. This view suggests that we lack good examples on how to implement video lectures as a part of a blended learning approach, and that the students do not get proper guidelines as to how the video material may be used in guiding their reading and as part of their learning strategy.

While a couple of the interviewees mentioned the lack of preparation and the need to use the lecture as a control mechanism, most of the teachers we talked to did not think unprepared students are the main problem. Instead, many of the faculty members mentioned the same challenges in both classroom lectures and video lectures: the communication is too static the students become passive. Furthermore, while they see these challenges in both kinds of lectures, many of the faculty members expressed that it is easier to remedy this challenge in the classroom compared to online video lectures. In the classroom, they can break up the monologue with pair discussions, individual tasks and other activities, but this is not as easy in a video lecture. Replies such as these, suggest that video lectures as static entities may not be a sufficient alternative when proposing digitalizing parts of the teaching.

The *kind* of information suitable for video lectures or other digital learning assets was also an important topic in some of the interviews. While the faculty members seem to have a clear idea of what parts of the subject matter should be covered in a classroom lecture, there was more uncertainty as to what parts could be covered online and in a digital medium. Some of the respondents replied that there was not any particular difference, while others were clear-cut on the fact that the information conveyed in a video lecture should be general, constant and durable such as definitions or other general knowledge within the field that are needed to understand contemporary and transient issues. Here, there was a different between those who had made video lectures before and those who had not. Again, there is an indication that more specific guidance might be needed when the teacher is developing online learning assets for the first time. Moreover, the general findings in this category suggests that a more thorough framework on *how* the classroom lecture differs from the video lecture and *how* it may be transformed will be useful.

Teachers as people

The questions in this category were closely related and a continuation of the ones concerning the difference between a classroom lecture and a video lecture. Accordingly, these findings are elaborations on this topic. Amongst some of the faculty members, questions concerning moving lectures online revealed a felt need to be physically present with the students while lecturing them. The reasons for feeling the need to be physically present with the students differed and as did the views on whether a filmed classroom lecture would be as beneficial as a video lecture. Furthermore, the felt need of being present in the classroom with the students also may also be affected by the teachers' own relation to his or her subject matter.

Connected with and as mentioned in the previous section, for some of the faculty members, the need for physical presence was a means for control and a way to ensure that the students had been through the curriculum and learned what was expected from them. From this perspective, physical presence is the best way for the teachers to be certain that they have fulfilled what is expected of them. Furthermore, some of the faculty members also expressed concern that they will not be able to motivate or engage the students in questions and tasks if they are not physically present in the classroom. For some, this was connected with a view that their own motivation for and relation to a subject matter were important for the students' learning in the particular area. When the teachers holding this view were asked whether the same "personal effect" could be captured using a video lecture, most of them replied that they needed to actually see the students in order to teach well.

How the faculty members relate to their fields is also connected with the notion of academic freedom. This notion does not only affect freedom with regards to their inquiries and research, but also influences flexibility and freedom when choosing teaching methods. Academic independence is a very important principle at NoDUC (NoDUC, 2018), as it is at most research and higher education institutions. And similar to other institutions, there seems to be a tug of war between demands of standardization on the one hand and academic freedom on the other. The questions in the interviews only scraped the surface on this matter. Yet, similar to other research (Kehoe et al., 2018), some of the interviews revealed that a valid question is how this contrast affects the attitudes toward online learning.

The importance of teachers as people, the notion of a "personal effect" when teaching, and the connection between the teachers' relation to the subject matter and his or her choice of teaching methods were recurrent and underlying themes in many of the answers. But neither our questions nor the interviewees responses elaborated specifically on this topic. Yet our findings do indicate that there is a connection between how the teachers relate to their subject and their attitude towards online learning. A tendency seems to be that there is some skepticism towards video lectures and other digital learning assets amongst lecturers that view themselves and their specific way of lecturing as an important part of the learning process. This suggest that guidelines and examples of how this role is transformed when going online, and how this affect the learning material.

Other digital learning assets

The wish to engage the students in active learning experiences is also expressed in the faculty members' desires to know more about different kinds of digital learning assets, not only video lectures. As was clear from the overall concern about moving lectures online, teachers and lecturers are worried that the interactive component enabled by being gathered in a classroom will be lost. Most of the faculty members we talked to thought that other digital learning assets could be used to partially remedy this loss.

Some of the respondents replied that devices to ensure some kind of interaction online did not have to be very complicated – as a minimum, however, such devices would have to make the students stop the information flow, think through the information that is communicated and use it through reflection or repetition. Others wanted to know more about the use of online discussion, online peer review and other possibilities. One respondent emphasized that the focus on video lectures is too narrow and wanted a more comprehensive approach.

These answers and views show that there is a belief that interaction and engagement can be carried out online. To some extent there is also willingness amongst many of the faculty members. The lack of knowledge of, experience and familiarity with the tools and alternatives for static transference of information online. Again, there is an indication that the teachers need more specific help when moving learning activities online and more specific examples and alternatives on how they might proceed.

SUMMARY AND RECOMMENDATIONS

For the most part, the findings from the interviews we conducted adhere to and elaborate on challenges and obstacles already pinpointed in contemporary research literature.

Similar to earlier findings (e.g. Seaman 2009), our conversations with some of the teachers at NoDUC revealed a strong link between the expected returns from investing in developing online learning assets and the willingness to do so. If there are low expectations about the benefits of online learning and the possibility for reusing the developed assets, less time consuming and short-term solutions are preferred. Low expectations seem to stem from lack of evidence that the time and effort will be worth it and from uncertainty about whether the subject will be taught next year.

There is also a connection between expectations, experience and the perceived level of knowledge and skills. We found that the inexperience does not necessarily affect the attitude towards online learning negatively. Also, having developed one or two video lectures seems like an entry point to online learning, and has the potential of acting as a catalyst. The teachers with some experience were more interested and specific, more conscious of quality *and* more critical towards the necessary steps in development and use of video lectures and other online learning activities. The experience enables them to better understand the language, concepts and "how tos" of developing online content.

Another challenge is the difficulties in seeing the difference between the different formats and mediums where a lecture might be given and how this affects the lecturer's role. This partly stems from what the teachers are used to doing, how they were taught themselves, the perceived need for physical presence both as a control mechanism and as a motivator. Furthermore, we found that the teachers miss more specific examples of the options and alternatives for flipped classroom and online learning – they found it difficult to discuss a new approach when they did not really know what they could choose from.

Based on findings from this paper, a set of recommendations is presented for getting teachers fully onboard with online lectures and other digital learning assets and using them to overcome the challenges we have discussed.
As promised – this is what your (and our) teacher needs to start implementing online lectures:

- Communication that ensures that the teachers and the advisors or developers are "on the same page" as advisors and developers (i.e. understand and infer the same information when discussing online learning)
- Clear recommendations and reasons for the recommendations (i.e. research and evidence that online learning works, how it works, why it works and why it yields results)
- Instruction on how and why the teacher's role changes online (i.e. examples of online equivalents to physical presence in the classroom, control mechanisms and motivation)
- Training in the technology that is available (e.g. LMS, software, report functions and xAPI)
- Concrete and step-by-step examples of both the processes and the end results (i.e. the process and product when developing a high-quality video lecture)
- Managed expectations (i.e. realistic considerations of time, effort and rewards)
- Alternatives to video lectures and examples of how to use these
- Clear incentives for developing and reusing material
- Leadership expectations for digitalization of teaching and learning activities (i.e. a comprehensive approach founded in the organizations leadership)

CONCLUSION AND WAY AHEAD

This in-depth analysis of some of the challenges at NoDUC reveals that institutions have to fine-tune measures and make sure they actually do what they think they are doing. Albeit found in the specific contexts of NoDUC's education, the findings are similar to and elaborate on existing research. The suggested recommendations are a synthesis of these specific results and existing research, and should be valuable and transferrable outside Norway's borders. The findings in this paper have led to many new and unanswered questions. For NoDUC's ADL section, the next question is whether a commitment to these recommendations will solve some of the challenges discussed in this paper, and advance the process of developing online learning content, improve the quality of the content and increase the learning outcome.

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