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Lindgaard, O. M.

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Going Online;

a Shift from Teacher-Centred to Student-Centred Teaching and How to Facilitate

Oddlaug Marie Lindgaard
Nord University, Center for Learning and Technology (KOLT)
Norway
oddlaug.m.lindgaard@nord.no

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Abstract: To facilitate for change is challenging. In this project one went from teacher-centred face-to-face teaching to a student-centred online way of teaching using a specific teaching and learning strategy and software and tools free of use for students and teachers at Nord University. The teachers participating in the project were novice to tools and strategy, but experienced teachers. One of the challenges was a lack of common understanding of terms used in strategic documents given from government.

This brief paper highlights the effort needed to make it possible for non-technical oriented teachers to change their teaching and the need of support systems that can help them by facilitating a change from teacher-centered on-site teaching to student-centred online teaching.

Introduction

In this brief paper I will present my reflections upon the effort needed and the result of a project where two novice members of the academic staff at Nord University wanted to go online allowing their students to study online from home instead of being on campus for a couple of weeks in the fall of 2017. They were novice to the technology and the framework, not to teaching. A consequence of that wish was that the delivered teaching had to change from teacher-centred on campus to an online student-centred deliverance. As an adviser at the Centre for Learning and Technology at Nord University, my role was to facilitate the best I could so that the academic staff could accomplish their goal.

Online education and ITC-tools used

One definition of online education can be "electronically supported learning that relies on the Internet for teacher/student interaction and the distribution of class materials" (IndiaEducation, 2019) According to Keegan (1980), online education is characterized by teacher and student are in different places, that the teaching is influenced by an educational institution (hence makes it different from self-study) and use computer networks to communicate and distribute learning materials and two-way communication between students or between students and teachers. Online education can be delivered and done synchronous or asynchronous. In a synchronous class, both teacher and student must be online at the same time. In an asynchronous class, both the teacher and the student are free to do their activities free of time. In this project we used both approaches.

Software (tools) used in the project was software that Nord University has decided that academic staff and student must use and free online software. Following software were used:

Software:	About and use:
Fronter	Fronter is an LMS (Learning Management System), an online software. Students and teachers must log in to access the system. Fronter was used for: • Publication of preparation material. The preparation material is the subject matter that the students are expected to have studied before they meet for the synchronous teaching, for example. written text, video clips, links to subject matter and the like. • Publishing of the multiple-choice tests students took to reflect upon the acquired knowledge through using the preparation material. • Publish case assignments
Kahoot!	Kahoot is a free game-based platform for teachers and students. Kahoot is an online software. Kahoot was used to simultaneous report the specific choices the student groups took in case assignments.
Mediasite	Mediasite is a video platform. Mediasite is available online. Mediasite was used to upload and save the recorded videos used as preparation material.
Skype for Business	Skype for Business (SfB) is a communication platform that allows you to send instant messages, audio and video conferencing, web conferencing, recording, screen sharing. Available via mobile phone, PC / Mac and tablet. SfB is synchronized to Outlook, so links to meetings are available in calendar both in client and online version. SfB used for: • Recording of video lectures • Guidance • Teamwork
MediaPlayer	MediaPlayer is a simple video editing program available to all employees of Nord University. Used to edit video recordings made in Skype for Business.

Table 1 Overview of software used in this project

Didactic framework

Student-centred teaching

The role of the teacher and the focus must change from what the teacher do, to what the students do. According to Biggs & Tang (2011, p. 20) "the purpose of teaching is to support learning. No longer is it possible to say: 'I taught them, but they did not learn.' Expert teaching includes mastery over a variety of teaching techniques, but unless learning take place, they are irrelevant." The key is how to support the students learning. And how might one do that as a teacher? Michael (2006) says that there proof enough to conclude that active learning, student-centred teaching approaches works and that they work better than student-passive approaches.

One way of delivering student-centred teaching, is an approach called flipped learning/classroom. Flipped learning is defined as "a pedagogical approach in which the conventional notion of classroom-based learning is inverted, so that students are introduced to the learning material before class, with classroom time then being used to deepen understanding through discussion with peers and problem-solving activities facilitated by teachers"(AdvanceHE, 2017). In a flipped learning approach, the students are often introduced to the learning material through a video, a written text or a multimodal text published online in an LMS and the time in class is used to explore the subject matter in more depth by e.g. discussion, problem-solving or case-studies.

Balan, Clark & Restall (2015) talks about pre-learning challenges for the students when going from traditional lecture to a flipped approach where students did not "like it", hence did not do the expected preparation

because it was to difficult, to much work, they were lost or they did not want to learn by themselves since they did not want to do the teachers job. Balan, Clark and Restall (Balan et al., 2015, p. 653) *says* "Problems that have been identified in the literature occur largely because of resistance by students to change from traditional lecture methods; thus educators are faced with the challenge of effectively preparing students for this very different classroom and learning experience." Therefor we wanted to try to avoid some of the known problems with flipped learning and use Team-Based Learning as a framework, since Team-Based Learning goes beyond Flipped Learning e.g. regarding how to make sure the students do the pre-class preparations, and gives structured approaches for in-class activities, collaborative learning and feedback to other students.

Team-Based Learning

As a main framework, we decided to use the well-tested teaching and learning strategy called Team-Based Learning (TBL). The definition of TBL is "an evidence based collaborative learning teaching strategy designed around units of instruction, known as "modules," that are taught in a three-step cycle: preparation, in-class readiness assurance testing, and application-focused exercise.*"*(The Team-Based Learning Collaborative, 2019) TBL is a type of student-centred flipped classroom that is very structured in its form. TBL is normally used in a campus-based education, but we wanted to test if it could be used online as well. TBL is divided in a three-step cycle.

In the first part of the cycle, the students are told to prepare themselves through some material that the teacher has provided. Typically, that would be a pre-recorded video or written text. In the second part of the cycle, the students are tested if they are ready to proceed to the next part of the cycle. The teachers want to make sure that the students have prepared well enough to be a contributing participant. That is checked through the Readiness Acceptance Procedure. This procedure consists of 4 elements;

1. An individual Readiness Acceptance Test (iRAT)
2. A team Readiness Acceptance Test (tRAT)
3. An appeal if a team is not satisfied with the result of the tRAT
4. Mini-lecture given by the teacher if needed to clarify misunderstandings or explaining elements the students have had a hard time understanding

In the third part of the cycle, the students will apply their newly gained knowledge along with old knowledge and skills, to solve tasks that must be significant to the topic as a team. The learning outcome will be a result of working with the material in different phases; alone, in group discussions and in discussions in class (*Team-Based Learning: A Transformative Use of Small Groups in College Teaching*, 2004)

There are 4 key underlying elements of TBL that are essential to be able to succeed with creating learning teams and they are, as Michaelsen & Sweet (2008) states:

- Groups must be properly formed and managed and stay together for the whole course.
- Students are made accountable for both their individual and team work
- Students must be given frequent and adequate feedback.
- The assignments given must promote both learning and team development

Team-Based Learning Going Online

TBL is originally designed to be executed on premises with the students and the teacher in the same room. When going online we faced some challenges. Both teachers and students needed to be taught how to use and be familiarized with the software we had chosen to use. In the preparation part, the teachers published the material they wanted the student to read/see via our LMS, Fronter. In an online folder, the students could find videos prepared by the teachers, written articles and links to webpages.

The tests in the Readiness Acceptance Process was created and run via the LMS. All students took it individually and then again as a team. When they took the test as a team, the students connected to one another through Skype for Business (Skype). Skype is a software that makes it possible to livestream video, audio and shared screen. One student answered the test on behalf of the team after they had discussed what they thought was the correct answer. When this is done on premises, it is normally done using an analog test where you as a teacher

has full control over the surroundings. When describing how to use TBL, Michaelsen, Sweet & Parmelee (2008) says that the tests in RAP cycle preferably should count against the students grade as a form of coerced motivation to assure the students motivation to prepare themselves since that would be the only option if they wanted to get a high score on the iRAT and the tRAT.

In the last part, the application phase, our students were told to solve specific problems presented in different cases that had to do with the subject matter. The students cooperated using Skype to discuss and try to find a common solution and when asked to deliver a written solution, they co-wrote using Office365. One case was presented with 4 different possible solutions and the students were told to find the solution they thought was the correct one. They presented their result simultaneously using an online tool called Kahoot!. Michaelsen & Sweet (2008) makes a point out of skipping the face where every group present their result one by one, since most students are not that interested in what the other groups have done and if answers are given in a sequence, students tend to change their answer towards what they think is the correct one. Michaelsen argues that it gives a higher learning outcome if they must engage themselves in a discussion in class where they must defend their own point of view. We gathered all our students in a shared Skype-meeting and asked them to give their answer to the problem in Kahoot! and then they had the discussion where they augmented for their point of view before we presented them with the correct answer. We also used peer-reviews as a feedback method. "…it requires more insight or more understanding for the reading matter if you are going to review others…" as one of our students said.

The role of the Facilitator

In this project, the two educators were not familiar with the technology, nor with the teaching strategy. My focus has been to facilitate the educators, so they would be as successful as possible in their goal of delivering quality teaching to the students. Hence, I have provided reading material regarding the teaching strategy and online teaching and learning, participated in discussions regarding the strategy and the challenges the strategy gave the educators when it came to produce the necessary material such as:

- Videos
- Presenting material online
- Creating tests online
- "In-class" activities online

The two educators and I had lot of discussions regarding pedagogy, technology, teacher-centred vs student-centred teaching and how do student learn when planning the semester, during the semester and afterwards when evaluating the project. The educators are the experts on the subject matter, I was helping them delivering teaching.

I have delivered training to them in the tools we have been using, so they could be able to produce material and collaborate with the students online. I also delivered training to the students in the tools, like the LMS and Skype. During the two weeks the students were at home, I was present in all the synchronous activities in case they needed assistance. I have also facilitated the teachers with ITC-matters regarding their research on this project.

Feedback from students

There were 7 students doing this course the fall of 2017, none of them had any prior experience with online learning and they did not know that they were going to participate in this project when accepting the course. There were 6 men and 1 woman, and the age span was from 29 to 50. The interviews of the students done after the two weeks with online learning gave two mayor findings (findings not published yet, in press). The students found collaborative work through online tools more challenging than in class. They preferred to work together in-class where they could see each other and communicate without depending on online tools.

The second finding were that when working with solving problems related to subject matter in cases, they said that working together was what really gave them higher level of knowledge and the previous reported problem with collaboration was diminished.

Feedback from academic-staff

After the completion of the project I asked the academic-staff about their experiences of the facilitator's role in this project. I asked the following question: "KOLT has offered support in various areas (ICT, pedagogical and methodical guidance, interlocutor). Can you describe the significance of the support in our own words?

The answers confirm the impression I have had during the project. One of the educators says: "KOLT has had an absolutely invaluable function in our project. This, of course, regards the purely practical use of digital tools, but also and not least, theory and pedagogical implications and input in the use of digital tools and how these assists in the students' learning work. KOLT represents a slightly different tradition in the understanding of learning through the use of digital tools, and it is interesting to get academic perspectives that deviate somewhat from their own educational standpoint. Not that this understanding is necessarily more sustainable than own, but it is precisely in this span between different perspectives on learning that the pedagogy is brought on."

Reflections

Looking back, we see that we had two mayor challenges going online with TBL. One is regarding the motivation within the students for doing the different phases and exercises that were prepared and the other was how to create exercises (test, cases etc) that gave the student the right amount of challenge, not to easy or hard and that also promotes reflection and discussion.

Since we did not have the possibility to make the tests in the RAP count towards their final grade, the coerced motivation in that that sense would not work. We had to rely on a more autonomous form of motivation among the students. Ed Deci (TEDxTalks, 2012) points out that autonomous motivation comes from volition and choice, endorsement, things one finds interesting and deeply valued. In the Self-Determination Theory (Deci & Ryan, 1985) they talk about different types of motivation based upon different reasons that moves us to do something, from extrinsic to intrinsic motivation. In TBL, one tries to support different types of motivation, from extrinsic coerced tests to intrinsic and autonomous motivation where the students see the value of being a participating member of the team that contributes to the team' success whilst gaining new and deep understanding of the subject matter. Our findings tell us based upon the amount of time spent and the feedback from the students, that we probably have not succeeded completely in communicating well enough the reason for doing the preparation and the readiness acceptance procedure. Deci (TEDxTalks, 2012) talks about the meaningful rationale as a vital point with trying to give autonomy support. When we ask our students to do something, it is vital that we provide them with a meaningful rationale. Why should they prepare? The answer to this is to be able to be a participant that contributes to the discussions and therefore will help the team gain a deeper understanding of the curriculum. If a student chose not to prepare, he/she will not be able to participate as much as a student that has prepared. He/she will personally gain a lower learning outcome and will not be able to contribute in the discussions and the problem solving within the team. Hence it will be important to highlight the "why" so we can get the students to understand the importance and then they may internalize it and make it a part of their own value system. We should have talked the students more thoroughly through the learning- and teaching strategy prior to going online.

The second major obstacle for us, where the creation of tests and exercises. In hindsight we should have anticipated the students' behaviour when facing an online test. According to Deci (TEDxTalks, 2012), when using controlled motivation, the object you try to move, tend to take the shortest path to the desired outcome. The shortest path to desired outcome for the students, where to use some form of aid. When faced with questions they could find the answer to online, they would use that aid. We had no way of preventing them from doing so. The students found our questions to concentrated around facts, and they found them to simple. We should have provided them with questions where they had to take a stand or trying to figure out what the most correct answer is. Instead of using the lower steps of Bloom's taxonomy (Bloom, 1956), we should have used the higher steps of the taxonomy making the students analyse, evaluate and create as we did in the cases in the Application Focused Exercise- cycle.

The chosen ITC tools and software in this project, did what it was intended. We had few technical issues during the two weeks working online. The success of the project does not raise or fall with the tools, but rather how you use the tools as an educator. Salomon (Salmon, 2013) call attention to "High-quality interaction, full participation and reflection do not happen simply by providing the technology; hence the need to design e-tivities

carefully, to reduce barriers and to enhance the technology's potential." Solomon points out that high-quality interaction and collaboration does not happen automatically, even if the technology is present. As a teacher, you must arrange for this to happen by reducing barriers. Because we are a product of our upbringing, hence we tend to think we need to follow the patterns of classroom interaction (Ehrmann, 2012). Instead the white stones on the path for success in an online environment is made out of student activity, problem solving, reflections, commitments, structure and the use of knowledge and experience from a complex set of areas from working life, family life and others. (Holmen & Fleksibel utdanning, 2017)

As a facilitator I have discovered that, even we all come from a teaching background, we did sometimes lack a common language. Or we have had a rather different interpretation of terms used when teaching. During the preparation of the project, the planning and the implementation, we have had a lot of discussions because we have not had the same interpretation of the terms used in e.g. whitepapers from our government. E.g. what do one imply when one talk about student active methodology?

Summary

Being a facilitator for novice academic-staff, novice to technology and student-centred learning, has been a challenging exercise. In retrospect, the lack of common understanding of terms has been a rather big obstacle that has had an impact on the outcome of the training given and the conversations we have had over and about the chosen teaching and learning strategy. Communication is never easy, and the number of misunderstandings will not be less when the common understanding is missing. Hence clarifying terms and terminology that one come across, might spare a lot of time.

One can use Team-Based Learning as a framework when going online, it will help the educator structure the material for learning and the activities. But I also think that one could have done the readiness acceptance process using a different approach, especially since we did not count the test to any final grade. The main thing when going online is creating tasks for the students that allow them to be active, reflective and to communicate with their fellow students both synchronic and asynchronic.

Going online with the tools and software provided by the university and other free of use online tools is doable. In most Learning-Management-Systems there will be tools that one can use to facilitate student activity and student learning.

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