Blended learning: How Teachers Best can Combine Different Ways to Interact Online

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Abstract: Students learn best when they are active and engaged. Even when we combine asynchronous and synchronous communication, it is challenging to get the optimal levels of engagement and communication. A number of different ways of creating engagement and interactivity have been tested out including mandatory on-campus seminars, small size groups of students, different types of media and teaching in real time. This paper presents a holistic approach to increase communication and engagement in online teaching by using the blended learning concept. The paper presents different ways of combining on-campus and online teaching. The methodological approach is mainly qualitative. The empirical data is mainly observations, interviews, group interviews and surveys. The respondents are students and lectures. The theory this research rests on is theory on theory on communication and engagement and blended learning. Findings and results are a part of Lervik's PhD work. The preliminary results show that the combination of on-campus and online teaching is preferred and recommended. For some students a blend that also include online learning is what makes taking the course or study possible. Some students have a work and/or family situation that does not allow them to move away to go to a university. A critical factor is to conduct on-campus seminars at the start of the education as this enables the teacher and students to get to know each other and develop the trust required to have the required involvement, engagement and communication. A high level of involvement and engagement will increase the learning outcome from the subsequent online teaching. The threshold for contacting peer students seems lower for students that have had a personal meeting entering the course or study. The forming of these "communities" is important for their study as learning with and from peers is an important contributor towards an enhanced learning outcome. The blend of learning opportunities provides the students with different approaches that can support different learning styles.

Keywords: blended learning, communication, engagement, interactivity, asynchronous and synchronous communication

1. Introduction

Activating students is recognized as important for students learning, and different takes as e.g. Flipped Classroom, is being used to engage students in order to enhance the learning outcome, but also to keep students motivated so that they finish their studies. Online studies still struggle with high dropout rates, hence the need for finding ways to keep the students in a study and thereby reduce the dropout rate(Xing et al., 2016). These efforts will also benefit blended learning courses.

At The Norway Inland University of Applied Sciences, there are three major types of courses; only online, online and seminar based, and on campus courses. We need to meet the requirements from the students, their future (and/or present) employers and the public, and we need to reduce the dropout rate to a minimum due to a financial system that release the financial cost of the student when the student has completed. At the same time, we need to keep the quality of the education at a high standard to fill our obligations as a university. Hence, the constant search of an optimal adaption regarding lecturing and teaching ways.

Research done by Monica Lervik indicate that factors like face-to-face meetings, group size, teaching in real time are important to the quality of online teaching. Furthermore, the research suggest an opening seminar that is a face-to-face meeting with students and faculty staff in the beginning of a study period. The different ways of combining online seminars that all can participate in with online seminars that are either for smaller groups or on individual basis are also tested. Our research focus on these two features and our research question is thus:

How can lecturers best combine different ways to interact online?

In this paper, we present some theory that has guided us in our search for increasingly better learning outcome for our students. We also present our research and our results so far.

2. Theoretical backdrop for the study

Blended learning refers to a way of teaching that embraces different types of communicating the learning material (Deschacht and Goeman, 2015). It may be using streaming video, online discussion, email conversations, etc.

Salomon's five stage model (Salmon, 2011) describes a five stage process for how to support and activate students in a digital learning environment. The process promotes cooperation between students and teachers and aims to establish a safe and productive climate that promotes learning. Salmon describe the steps necessary to ensure that the students and the teachers can form an environment that lay the grounds for an optimal learning environment.

Moore's transactional distance theory emphasizes that dialogue and communication are important to succeed with online teaching. The theory includes "the universe of teacher-learner relationship that exist when learners and instructor are separately space and/or time" (Moore, 1997). Moore (1997) called these universes that exist between teacher and learner relationship when is separated by space and/or by time for the transactional distance. The transaction that we call, online teaching, occurs between teachers and learners in a context having the special characteristic of separation of teachers from learners. It is this psychological and communication space that is the transactional distance. According to Moore (1997) videoconference media will permit a more intensive, more personal and more dynamic dialogue than can be achieved in using a recorded medium. Programs that use audioconference systems are therefore likely to bridge the transactional distance more effectively than programs using recorded media.

In addition to dialogue, Moore also emphasizes structure and autonomy as important components to successful teaching and education. *Structure* is a measure of the educational program`s responsiveness to the learner`s individual needs and *Autonomy* describes the extent to which in the learning-teaching relationship, it is the learner rather than the teacher who determines the goals, the learning procedures and resources, and the evaluation decisions of the learning program.

The students in higher education are adult learners. It is thus important to adapt even the online part of the education to support how adult learns. One of the major contributors towards how adults learn are activity (Rogers, 2007). Keeping the students active and also utilize their input towards the education will keep them motivated and engaged, which will enhance the learning outcome (Rogers, 2007, Monk, 2013). Dewey (2008) also suggest to utilize the learners own experiences. To bring the experiences of the students into the education, will offer the students a possibility of reflecting on their own learning from experiencing. This is described by Kolb (1984) in his *experiential learning cycle* which gives an overview of how one can learn from an experience by reflecting upon it, evaluating the learning, expanding on the experience by forming a new experience based on the learning from the previous experience.

The reflection processes this refers to can be expanded by what is described by Schön (1987, Schön, 1991) regarding reflecting before an action/experience, during an action/experience and after an action/experience. These reflection processes may be integrated in the blended learning, not only in the face-to-face seminars, but also adapted in the online part of the education, e.g. through assignments.

Group work will allow the students to learn together with others and learn from each other. This can be compared to what Lave and Wenger (1991) call "Communities of Practice" (CoP). The students have a common interest in the curriculum and can learn by contributing with their own experiences, and also learn from others and their experiences. There are many ways of forming groups, but the original idea of CoP's was a description of workers with a common interest voluntarily formed groups that learned from each other, often with a peer that had more knowledge than the others. Nowadays, and in an educational setting, the students can form groups themselves, or the lecturer can organize groups. Some students prefer to work on their own, for different reasons. However, all students should be a part of a group as the social part of the learning has proved very important for the total learning outcome (Haave et al., 2016).

Another part of the online learning environment is advising. Advising requires trust, something that requires experience and cooperation. The advising can be done synchronous (via e.g. Skype) or asynchronous (e.g. e-

mail). Synchronous via e.g. Skype, offers a partial picture of the «reality», hence a slightly lesser offer rather than face-to-face. However, for remote students the time spent on studying rather than travelling, is welcomed.

The online situation regarding advising require that trust; trust regarding the competence and capabilities (Holen et al., 2016). A personal meeting in the start of the semester may establish this trust, rather than spending several online meetings to obtain the same level of trust, as it is then possible to meet up, become acquainted, test the gear used for the advising, etc. This will enhance the personal mastery (Senge, 1992) within the advising session.

Another aspect is that there may be a difference between what is seen and what is intended, and the interpretations is coloured by ones own perspective. Previous experience will also have implication. If, for instance, the student has previously negative experience, this may influence the way the students approach the online advising, mostly in a negative way. Literature on teambuilding support the idea of the physical meeting in the beginning of a study in order to establish the necessary trust and confidence building (Hjertø, 2013).

A framework for describing and analysing the connection between online learning and online advising has been developed by Kristian Aasbrenn (2010). In this framework, the motivation for joining the discussion and thus contribute, discuss actively or just completing will have an effect on the outcome. The distance both mentally regarding the distance between the student and lecturer, and physically through distance, may also affect the learning outcome. Other factors that may be regarded either as supporting or be an obstacle for learning, are financial issues (price of course, e.g.), language, culture and previous competencies, and requirements for study material.

Another point is that one as an online advisor is a representative for the education and the University, and the student's perception of quality can be based on the relationship between the student and teacher. Hence the importance of the students and lecturers relational understanding, relational skills and ethical reflection.

It is also important to keep in mind that when student and lecturer meet online, these are two humans trying to communicate and understand each other using different communication methods. These methods follow different norms and adaptations, all within the institutions laws, rules, power balance, and motivation (Johnsen, 2005).

3. Method of inquiry

The data material presented in this paper, is collected by studying the on-line education in two different university colleges in Norway. The research project is developed as a case-study design. The approach is mainly qualitative, by using a combination of methods such as observation and interviews, both structured and semi-structured (Dalen, 2011, Denzin and Lincoln, 2005, Strauss and Corbin, 1990). The structured interviews have been conducted by following an interview-guide with predefined categories. By combining the structured and semi-structured interview approach, the researcher has made it possible to catch up unforeseen matters that emerge during the conversations. In addition, data derived from document analysis is taken in as part of the material.

As is common in case-studies, the categories are theory-based, making this an deductive approach. The data are analysed by a software system for analysing qualitative data (Atlas). The use of triangulation of methods secure multiple sources of data, and give a better accuracy of understanding when collecting and analyzing data (Lincoln and Guba 1985).

4. Results and analysis

On-campus seminars:

Both colleges that have been studied organize two or more compulsory physical on-campus seminars, one before and one during the semester. On-campus seminars include activities such as introduction to technology, writing courses, getting to know the library, administrative information, group establishment, group work, individual conversations, and behavioral knowledge in real time use, lecturing, social dinners and other social activities. The purpose of these seminars is to become better acquainted and to promote good relations between the students. This is considered a key factor to success as this will make it easier for the students to be active and engaged during lectures and seminars.

This use of on-campus seminars is a good example of blended learning as it combines physical seminars with online teaching. It is furthermore in accordance with Salmon's five stage model as it provides support to the students and promotes active participation.

Group size:

The number of students in the individual online lecture is also a considered a critical factor. Bates (1998) assumes that the size of classes involved in online education and the number of overall students involved are key factors in order to succeed with communication, dialog, activity and group discussions. According to Moore (1997) the number of students is one of the environmental factors that will influence dialogue, activity and the transactional distance between teacher and learner. Large student groups being lectured online may inhibit the lectures interactivity with the students, which might cause more one-way lectures without possibility of discussions, confrontations and critical questions. Foley (2003) presume that group size or number of students online is a critical factor regarding the importance of communication, interaction and discussions. Palloff and Pratt (2003a), claims that an experience teacher might handle between 20-25 students online whilst an unexperienced might handle only 15. Research shows that both quantity and quality interaction with the lecturer is a critical factor for success in online lecture (Woods, 2002). In accordance to Palloff and Pratt (2003b), they recommend having no more than 10 students whilst lecturing online because of the plausible confusions and inhibit communication with so many students simultaneously.

Both colleges have chosen relative small groups of students for their online lectures and the individual groups vary between 10 and 50. The teachers that have up to fifty students online argue that it is too many to handle. They argue that the presence of the conversation and activity disappear and that the lecturing become mechanical and monologues when they have this many students.

Teaching in real time

The research shows that teaching in real time is the dominant way of teaching at both colleges. Each online teaching session might last up to eight hours and includes activities like tutoring, group work, and lectures. In addition to this, individual online tutoring sessions are also available for the students and cooperation between the students is highly recommended.

In this regard, both colleges from our study has responded to individual students needs which is according to what Moore (1997) promotes in the structure part of his transactional distance theory. By choosing teaching in real time, the colleges are also acting according to the recommendations from Hratstinski (2009). He argues that taped lectures is far less effective as this does not take into consideration the students' experiences, competencies, and requirements.

5. Conclusion

Our conclusion is that not only do the students need to work together and that the size of the group will have an impact on the learning outcome, but most important is the personal meeting in the start of the total learning activity. The personal meeting will contribute towards the total learning outcome of the educational activity as the meeting with fellow students, and the faculty staff, will reduce the distance and gap between the parties. It will support the advising process as the introductory phase may be done face to face and thus lay the ground for an improved mutual understanding in the advising process. Also, the meeting with peers may lower the threshold for reaching out to fellow students either for cooperation or help.

5.1 Future research

This is a part of an ongoing research and more results will be available from different projects, some of them as a result of blended learning, and some with only online learning activities. Also, to see how a face to face meeting in the middle of a semester/course, and how this will affect the learning outcome, will be interesting to test out.

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