

Imran Riaz Chohan

GROUP DYNAMICS IN FLIPPED LEARNING SITUATIONS IN HIGHER EDUCATION

Master's thesis

Faculty of Education, Media Education

University of Lapland

Autumn 2016

University of Lapland, Faculty of Education

The title of pro gradu thesis: Group Dynamics in Flipped Learning Situations in Higher Education

Author: Imran Riaz Chohan

Degree programme / subject: Media education

The type of the work: Pro gradu thesis X Laudatur thesis __ Licenciante thesis __

Number of pages: 97+6 Appendices

Year: 2016

Summary:

Higher education has always been a firm supporter of traditional teacher oriented pedagogical approaches. However, reform of the pedagogical approaches is necessary in order to promote learning outcomes. In this research, the possibility of enhancing learning experiences and atmosphere among students and between students and tutor by group dynamic methods in flipped learning situations was investigated.

Reflection is a key component in learning and group dynamics. Thence, reflection's essentiality with group dynamics in flipped learning is explained. Furthermore, to support the above argument, meaningful learning theory is discussed.

To undertake this research, mixed methods were used to analyse data retrieved with a questionnaire, reflections and observations, giving a diverse and comprehensive view of the subject. Data was collected from Lapland University students during flipped learning course in which group dynamics exercises had been integrated.

Two core changes are proposed; using facilitation methodologies (group dynamics) to make a new pedagogical framework to reform teaching in higher education, and introducing group dynamics to educators and students using flipped learning in order to improve learning outcomes and promote meaningful learning.

Keywords: Group Dynamics, Reflection, Feedback, Group Development, Flipped Learning, Experiential Learning

Furthermore, I give permission the pro gradu thesis to be read in the Library X

I give permission the pro gradu thesis to be read in the Provincial Library of Lapland X

Contents

1 INTRODUCTION	6
2 THEORETICAL FRAMEWORK	9
2.1 Meaningful Learning	9
2.2 Group dynamics	10
2.2.1 Reflection and feedback	13
2.2.2 Experiential learning	14
2.3 Flipped learning	15
2.3.1 Student involvement in flipped classroom	18
2.3.2 Challenges in flipped classroom	19
2.3.3 Limitations in flipped learning	20
2.4 Literature review	21
2.4.1 Studies on flipped learning in higher education	22
2.4.2 Studies on group dynamics in higher education	26
3 MATERIAL AND METHOD	30
3.1 Aims and objectives	30
3.2 Research questions	31
3.3 Procedures	32
3.4 Pre-study and pre-study results	34
3.5 Main Study	39
3.5.1 Participants and ethical issues	40
3.5.2 Course description and Ethical Issues	40
3.5.3 Action Research	43
3.5.4 Action research in this study	46
4 MAIN STUDY PROCEDURES	48
4.1 Activities, Reflection and Feedback	48

4.1.1 Day 1	48
4.1.2 Day 2	49
4.1.3 Day 3	53
4.1.4 Day 4	57
4.1.5 Day 5 and 6	63
4.1.6 Day 7	65
4.1.7 Day 8	66
4.2 Activities, Reflection and Feedback: Results Discussed	71
4.3 Quantitative Results of Questionnaire	74
5 DISCUSSION	81
6 POTENTIAL USABILITY OF RESULTS AND SUGGESTIONS	89
REFERENCES:	92
APPENDICES	
Appendix A Consent form	98
Appendix B Pre study questionnaires A	100
Appendix C Pre study questionnaires B	102
Appendix D Pre study questionnaires C	104
Appendix E Main study questionnaire 1	106
Appendix F Main study questionnaire 2	108

It is now time to look beyond usual disciplinary boundaries to consider more broadly how cooperation among students can enhance their learning (Slavin, 1992, 167).

1 INTRODUCTION

In traditional teaching knowledge is seen as a quantity that should be transferred from one individual to another, a method that is being questioned and criticized by many educators, parents and administrators nowadays (Fyrenius et al. 2005, 61). In order to change methods and develop teaching and learning practices educators are required to design strategies that encourage students to spend time and energy for their education (McCallum 2015, 42). By changing the focus on the students, the conceptions of pedagogy change as the teachers' and students' understanding of learning process develops (Webb 2011, 1). The above argument shows that the role of a teacher is important, however, we can also see teacher's role as a facilitator who facilitates learning rather than transferring knowledge (Fyrenius et al. 2005, 61).

In flipped learning model students are the centre of focus and they work in groups to finish their tasks. Flipped learning gives teachers and students an opportunity to interact, communicate and work together to achieve the required goals. While working in groups students naturally have to deal with issues that are related to group dynamics. If the group does not co-operate well, the atmosphere of the group suffers which can lead to lack of interest in learning altogether. Therefore, the building and maintenance of good internal group environment is essential for class atmosphere and cooperating learning communities.

Flipped learning offers an opportunity for collaboration and communication. In flipped learning there is also the possibility to get feedback from the teacher. However, in flipped learning only the teacher gives feedback, similarly to traditional teaching where teacher also

gives feedback. Subsequently, flipped learning misses the opportunity to help students learn to give each other feedback and reflect on their exercises and share those reflections, and subsequently learn from their experiences. This factor brought about the need for the possible enhancement of the pedagogical model of flipped learning through the experience of this study. This thesis, therefore, looks into the atmosphere that occurs due to the interaction of the students in their groups and in a class as a whole, and sees how to help the students achieve the best possible working environment. Hence, this study also looks at the possibility to see if adding group dynamics to flipped learning pedagogical approach helps students enhance their learning experiences. In this study, together with flipped learning method, the importance of several factors are considered, such as that of peer evaluation, feedback and reflection. These factors have the potential to aid in enhancing the predecessor model of flipped learning. At the same time, group dynamics is a huge field in itself, therefore, I am only introducing the essential and basic concepts of group dynamics that are related to process (reflection, feedback, and experiential learning).

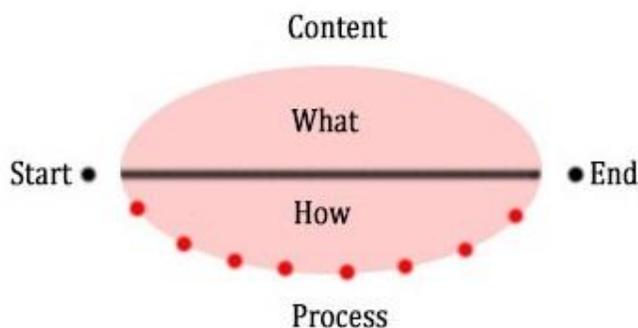


Figure 1. Content and process model, developed to show my point of view with red dots.

Figure 1 shows that content and process go hand in hand. The red dots in the figure 1 indicate to the factor that an educator should pay attention to process while focusing on the content. The figure 1 describes that in achieving goals and learning things, the content and process are intertwined with what we do and how we reached the end. While the focus is on content or ways to do certain things, we tend to forget how we reached to the end or how the teammates worked together to achieve final results. “[...], in learning communities, both the content learned and the process of learning from outside resources are shared more among

the members of the community and become part of the collective understanding” (Bielaczyc & Collins 2009, 276). In other words, teachers do a great deal of work in making content and process work together. Teachers go through many years of training in order to learn how to apply different approaches in teaching and learning. Now possibly many of the approaches could benefit from some group dynamics exercises. Giving students time in classes to practice reflection and feedback could improve student’s learning, increasing overall working atmosphere.

In the following sections the basic concepts of group dynamics, flipped learning, and action research are introduced. I am going to start with group dynamics and subsequently continue discussing flipped learning, in order to facilitate the connection between the two concepts’ similarities.

2 THEORETICAL FRAMEWORK

2.1 Meaningful Learning

Novak (2011) and many others describe meaningful learning as "Meaningful learning is where the learner seeks to integrate new knowledge with relevant existing knowledge (Novak 2011, 1; Fyrenius et al. 2005, 62; Tsai et al. 2013, 179; Howland et al. 2012, 234; Löffström & Nevgi 2007, 315)". Moreover, meaningful learning depends on the student's ability to relate new concepts and propositions to what they already know (Ruokamo, Hakkarainen & Eriksson 2012, 376). Therefore, in order for a student to learn through experience he/she has to have the ability to understand and propose – experiential learning. This can be achieved by doing reflection and giving, as well as receiving, feedback. Meaningful learning also signifies and accomplishes improvements in critical thinking, complex reasoning, and written communication (Stewart & Kilmartin 2014, 53). Learning in a meaningful way is also a question of constantly making choices and being able to view knowledge in relation to other fields and area of applications (Fyrenius et al. 2005, 62). The statements by different researchers of Meaningful learning suggest that the primary responsibility of learning is in the learner's hand (Novak 2011, 2). Hence, Meaningful learning is a combination of reflection, feedback and experiential learning, or as Löffström & Nevgi (2007) said, it is thinking, emotions, and action leading to empowerment, commitment, and responsibility (Löffström & Nevgi 2007, 315).

Engagement in one's own learning process is essential in meaningful learning. Engagement in meaningful learning takes place when the interaction between participants is organized taking to account both, the social, and the pedagogical aspect of the educational setting. Subsequently, learning occurs constantly, and in an enjoyable atmosphere. Therefore, I have chosen to use two characteristics of meaningful learning – reflection and experience as a starting point. I built upon this theory to come up with an idea of enhancing flipped learning (pedagogical aspect) model using characteristics from group dynamics (social aspect) used

by facilitators. Flipped learning and group dynamics similarly to meaningful learning have many characteristics. In this study, I only focus on the common characteristics that are found in flipped learning, meaningful learning and group dynamics, and at the same time try to understand the atmosphere, as well as the perceptions of the students and tutor.

2.2 Group Dynamics

One of the reasons to use group dynamics in this study is because students at the same time work in teams, as well as individually, in a higher education context. In the introduction I suggested that the process of learning, which is as important as the content of learning, could be enhanced by good learning atmosphere. In this study, group dynamics represent the achieved atmosphere during the process that happens throughout a course or group work among students and between students and teacher. This section is, therefore, written in an effort to explain the basic concepts of group dynamics: feedback, reflection and experiential learning, as well as the basics of process.

Michael Sweet & Larry K. Michaelsen define group dynamics as 'the phenomenon of interaction among team members evolving through well-documented stages, and resulting in members of mature groups interacting in very different ways from members of new groups (Sweet & Michaelsen 2007, 34)'. A team or a group can also be understood as a community, which works and collaborates towards a common goal. Subsequently, the members develop a sense and an awareness of themselves as a team, and sees each member of the team as a valuable member and learning resource. (Bielaczyc & Collins 2009, 275.)

Group maturity

Working in teams also affects and improves the ongoing effort, study related or work related. Research has shown that groups mature with time, thus creating different stages of group development (Sweet & Michaelsen 2007, 33; Jackson et al. 2014, 118). Sometimes the project is long and team members end up working together for a long time. During that time members go through different stages of group development. However, not all groups develop to maturity (Sweet & Michaelsen 2007, 35), or evolve into effective teams (Yang 2014, 859). When a group of people starts working together for the first time, the group is considered immature as a group, all the time becoming more mature as the team members work together. Therefore, long term group performs differently compared to newer groups. When a group is new, and members have no prior knowledge of the group's members, they only can assume or guess possible goals of the group work, as well as one another's competences. With the passage of time as a group matures, members can easily understand goals, give feedback, know their own roles and each other's roles and competences. Moreover, the members can observe each other's roles, leading, and focusing on achieving tasks rather than having conflicts. (Sweet & Michaelsen 2007, 38, 40.) Lastly, according to Haines, teams are matured when they complete tasks at least three times. (Haines 2014, 214, 220.)

Group work affecting factors

Team work abilities are required at all levels of education as well as at many work places. Studies have shown that people who are not involved in team work require more effort in learning than those who work in teams or groups (Foldness 2016, 39-40). Individuals will work more effectively in teams as this enhances their sense of task motivation (Maruping & Magni 2015, 2; Sweet & Michaelsen 2007, 41). In order to work as a team, to develop, collaborate (Jackson et al. 2014, 117, 118) and to contribute (Yang 2014, 858; Haines 2014,

214), trust is an important concept as it develops group dynamics (Jackson et al. 2014, 118). Trust means a positive willingness of one to be vulnerable to another (Yang 2014, 859). Trust can be achieved by opening up to the other members of the teams. Giving positive feedback to team members is an excellent way to build trust. Another way to build trust is to reflect at the end of each session and then share reflections. Furthermore, trust affects the effort and performance of a team (Yang 2014, 862). Likewise, if the teams are formed according to demographic factors, such as age, gender and race, there is likely to be distrust and negative results (Yang 2014, 860). In short, heterogeneous, task-oriented or social-oriented factors help build trust, whereas demographic-oriented homogeneous teams build distrust among team members. Positive work environment enhances the collective motivation of team members, and empowers the team (Maruping & Magni 2015, 4; Jackson et al. 2014, 118) and brings trust (Yang 2014, 864).

However, teamwork consists of several other factors additionally to that of trust. These entail task oriented factors - which includes goals, specific activities and connection with teammates. Moreover, social oriented factors - which include atmosphere in the team. (Golonka & Mojsa-Kaja 2013, 32, 34.) Working in teams helps increase interpersonal relations which in turn improves the integrity of the team, attractiveness and communication within the team, as well as leadership within the groups (Golonka & Mojsa-Kaja 2013, 33; Jackson et al. 2014, 122, 123). In other words, the atmosphere of the team can be affected by multiple factors.

In conclusion

In recent years, universities have an overwhelming number of international students and thus diversity is diurnal, a fact that has to be considered carefully in group work. There can be many barriers such as lack of intercultural contact, or cultural dissimilarities among

teammates, language, and willingness to engage with foreign students or vice versa. (Jackson et al. 2014, 119, 120.) Studies have shown that international students are more open to group work as compared to local students (Jackson et al. 2014, 124) and if local students work with international students, they are benefited in developing patience, negotiation skills, respect for alternative worldviews, and ability to listen (Jackson et al. 2014, 125). Therefore, universities and academics need to provide opportunities for working in groups now more than ever before, as the skills learnt will benefit graduates and the future workforce (Jackson et al. 2014, 126). Universities in particular have a role in developing their students' so-called dynamic qualities that allow them to critique, construct and act with a high degree of autonomy and self-determination as well as competencies which will help them to cope with uncertainty, poorly defined situations, and conflicts (Arjen & Jickling 2002, 224). Team working skills could improve these demanding situations. Group dynamic building exercises have through reflection the potential to help achieving better team working skills, and improving people's self-knowledge and social skills.

2.2.1 Reflection and feedback

Reflection is part of group dynamics building exercises. What is more, learning takes place at the hand of reflection (Thomas & Quinlan 2014, 2). It means that extracting the knowledge from experiences and practice (Thomas & Quinlan 2014, 10) creates an understanding of the subject or task at hand. Safe or comfortable and fun learning environment helps students to reflect (Kiener et al. 2015, 10) and create interpersonal relationships (Savage et al. 2015, 699). A study done by Savage et al. (2015) identified that the time and space for personal reflection and exploration was a significant part of participant's learning (Savage et al. 2015, 700). Reflection can be done individually, in pairs, as well as in a large group. The individual reflection is intended to activate the students' thinking processes and pre-understanding. At

the same time, group and pair discussions can get the individual notions challenged by peers. (Fyrenius et al. 2005, 63.) One way of doing reflection is to start with individual thinking and writing down the reflection and then continue by sharing it in pairs or in a group. This helps to get better understanding of the personal reflection. In this study reflections are done in the same way – starting individually and later sharing with other groups. Finally, reflection being the most important aspect of group dynamics makes the learning meaningful (Löfström & Nevgi 2007, 315) and collaborative (Vuopala et al. 2016, 26) for all involved.

Feedback is also an important part of group dynamic exercises. Giving and receiving feedback is a very important skill to learn. This means, that when someone gives feedback he/she should take the responsibility of the feedback and own it. Similarly receiving feedback in itself is a skill and improves with practice. Simultaneously, reflection is highly dependent on feedback. Furthermore, the combination of reflection and feedback in class provides the teacher information about students' learning (Löfström & Nevgi 2007, 315) and in turn, produce learning experiences for the learner. In the main study (section 3.5), students practiced giving and receiving positive feedback in a number of ways.

2.2.2 Experiential Learning

Experiential learning was founded by theorists such as Dewey, Frier, and Piaget (Thomas & Quinlan 2014, 2). Experiential learning has been circulating in higher education in recent times (Groves et al. 2013, 545). This approach emphasizes the holistic perspective of a person as a learner, and attends to behavioural, cognitive, and affective aspects of learning (Thomas & Quinlan 2014, 2) as well as referencing, effective reading and gathering information (Groves et al. 2013, 545).

In experiential learning, the role of the teacher shifts from information provider to facilitator, guide or co-learner (Savage et al. 2015, 694). It provides groups a chance to ‘do’ along with ‘thinking’ (Thomas & Quinlan 2014, 11) or ‘how to think’ rather than ‘what to think’ (Savage et al. 2015, 694,695). Experiential learning is simply about learning skills, competence, and capacity (Thomas & Quinlan 2014, 2) from one experience, feedback and reflection, and consequently using this learning experience in the next one. By using experiential learning, students are able to apply new understandings to similar tasks which will then be completed in an increased, more meaningful and expert way (Groves et al. 2013, 553; Savage et al. 2015, 700, Kiener et al. 2015, 9, 10). Therefore, with this study I have tried to give students an opportunity to work on reflection and feedback skills number of times in an effort to provide them ways to learn from one experience and use it the next time.

2.3 Flipped Learning

There are many examples of how teachers are working individually, and actively changing their ways of teaching and creating unique methods of teaching (Toivola & Silfverberg 2014, 1; Hamdan, McKnight, McKnight & Arfstrom 2013, 4; Huggins & Stamatel 2015, 233). Reform of the pedagogical approaches is necessary, in order to enhance learning outcomes and meet today’s demands. As a result, pedagogical models are available that benefit everybody. Some of the pedagogical methods are all about transforming teaching, learning and creating an increasingly flexible future-oriented higher education system (Wanner & Palmer 2015, 355, 356). These pedagogical methods show that the way information content is transferred to students is constantly changing and under development. Furthermore, in many of these methods educators are trying to find ways to make learning more meaningful,

in order to meet the needs of different types of learners. One of these methods is flipped learning.

Flipped Learning is a pedagogical approach that is these days getting a lot of attention from educators and parents alike. Flipped classroom, flip teaching, backwards classroom, reverse instruction or inverted classroom (Chen et al. 2014, 16; Nguyen et al. 2015, 51), refers to a learning design that overturns the typical division of student work (Baepler et al. 2014, 229). Whereas, flipped classroom means that there is integration of both face-to-face and online delivery methods (Wanner & Palmer 2015, 356). Flipped learning is an alternative method of instruction being used in schools and in higher education, in which digital technologies are used to shift direct instruction outside of the group learning space to the individual learning space, usually via videos (Hamdan et al. 2013, 3; Wanner & Palmer 2015, 355; Chen et al. 2014, 16; Foldnes 2016, 39). Teachers prepare videos to be watched by students before coming to the class and classroom time is used in involving and engaging students in knowledge acquisition of course material (McCallum et al. 2015, 42, 43; Baepler et al. 2014, 229; Kim et al. 2014, 38). Video, however, is not the only way flipped classroom works. The concept is that students look at the reading material in any form provided by the teacher before coming to the class. Therefore, in flipped learning what was once class work is now replaced with the homework (O'Flaherty & Phillips 2015, 85; Chen et al. 2014, 16; Nguyen et al. 2015, 52). Students then come prepared for the work in classes. During class time, teacher and students work and spend time together in understanding, learning and completing tasks and being more interactive (O'Flaherty & Phillips 2015, 85; See & Conry 2014, 585; Nguyen et al. 2015, 52).

According to Hamdan et al. (2013) and McCallum et al. (2012) two rural Colorado chemistry teachers are known to be pioneers of introducing flipped learning. They later wrote a book 'Flip Your Classroom: Reach Every Student in Every Class Everyday (2012)' about it. They also started the non-for-profit 'Flipped Learning Network FLN'. (Hamdan et al. 2013, 3.)

FLN established Flipped Learning definitions and introduced the four pillars, or core concepts of Flipped Learning: **F**lexible Environment, **L**earning Culture, **I**ntentional Content, and **P**rofessional Educator, F-L-I-P (see Hamdan et al. 2013, 5; Chen et al. 2014, 16–18). FLN has a specific definition on their website that states: Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter¹. The four pillars of FLN deal with both content, and learning process, therefore flipped learning not only encourages collaboration in learning the content of any particular course, but also helps in creating environment where learning culture grows. Class time offers more opportunities for faculty to engage and encourage students to build rapport between peers and the instructors (McCallum et al. 2015, 42; Wanner & Palmer 2015, 356). In this way students have the opportunity to become more active and interactive through group activities rather than passively listening to lectures. At the same time, teachers are able to commit more in-class time to monitor student performance, and provide adoptive and instant feedback on individual and group level to the students (Kim et al. 2014, 37). Furthermore, Hamdan et al. (2013) referenced Vygotsky's quote from his 1978 book to explain Learning Culture which is also one of the main pillars of Flipped Learning to explain what Flipped Learning does. That is; Flipped educators help students explore topics in greater depth using student-centred pedagogies aimed at their readiness level or zone of proximal development, where they are challenged but not so much so that they are demoralized (Hamdan et al. 2013, 5).

¹ <http://flippedlearning.org/definition-of-flipped-learning/>

2.3.1 Student involvement in flipped classroom

In flipped classroom setting the involvement of a student is the most important part. The responsibility of learning lies on the student so that the student will actively work towards mastery of the material (O'Flaherty & Phillips 2015, 86). Student involvement is the amount of physical and psychological energy that is directed towards his or her college academic, social experiences (McCallum et al. 2015, 43), and environment (O'Flaherty & Phillips 2015, 85). Therefore, if the environment of a class or college is positive the student will contribute positively to his or her studies and get success in academic level as well as social level (McCallum et al. 2015, 43.). This means that atmosphere of a class or college is as important as the content of the studies in colleges. According to McCallum et al. (2015) there are very few studies done on flipped learning in higher education. However, those studies prove that flipped learning lectures' approach is giving multiple benefits to the students.

One study by McCallum et al. (2015), shows that in-class activities helped students, but by this it meant, content of the course helped students getting to the results. The study however missed the opportunity to address how students dealt within groups, their activities, and the atmosphere of the class. (McCallum et al. 2015, 43-44.) Some of the benefits of flipped class discussed by McCallum et al. (2015) were that students got higher test scores as compared to traditional lecture format. Additionally, students were able to engage in course material prior to class which helped the class time to be spent more efficiently; students were provided with in-class activities that focused on knowledge integration within a supportive environment, and there was now more time for engagement with the teacher. (McCallum et al. 2015, 44.) All in all, students learn actively on multiple levels, as in Webb's words (2015); 'As students engage in reflection, peer teaching, and peer assessment, they are in a way undertaking some of the pedagogical reasoning that is traditionally done by teachers (Webb 2011, 4)'.

2.3.2 Challenges in flipped classroom

Naturally, few challenges concern the application of flipped learning method. Teachers are not necessarily prepared to apply new pedagogies or to support the expanded roles and responsibilities that are associated with student-centred learning. Creating an environment where students can easily challenge themselves creatively is not so easy. (Kim et al. 2014, 37.) Therefore, teachers and students face several challenges in flipped classroom. For the teacher, flipped learning classroom can demand considerable amount of preparation. It is labour intensive and time consuming to make videos of the subjects to be studied, and to review students' reports beforehand. (McCallum et al. 2015, 44.) Teacher's need also to be prepared in the classroom to assist the students individually with any difficulties in understanding the preparative homework, as the students might have questions about different issues. Thus, teachers must be competent and able to answer questions on the spot. Teachers should also prepare engaging in-class activities to avoid students missing class and also keep in mind that someone might come to class unprepared and think ahead how to face such a situation. Moreover, the teacher should encourage further collaborative learning in class. Teachers usually engage with the students who ask more questions, however those who do not ask questions tend to need the most attention. The use of flipped learning approach can help solve this issue, as the teacher will be engaged with all the students (Nguyen et al. 2015, 52.) which can be challenging. Therefore, as the responsibility of learning lies in the hands of the students in the flipped learning situations, it is very important that students work by themselves in and away from class. It is also very important for teachers to remember that the students who do not ask question do get help in class activities in a flipped environment.

At times, teachers have to think also about student's resistance to the active-learning environment (Huggins & Stamatel 2015, 227) who prefer to work on their own with minimal contact with peers and teachers. One model to engage with this can be Susan Wheelan's group development model (Sweet & Michaelsen 2007, 35; Haines 2014, 214). This model

can be employed to maintain an eye on student's developing working behaviour. Even better would be to direct the students to assess their own stage of group evolution. (Wheelan & Burchill 1999, 28.)

Students are overall demanded more effort in flipped classes than in traditional classes. Students are required individual effort prior to class in familiarisation of the course material which requires considerable amount of work. Some students might not be motivated to prepare on their own and might then come to class unprepared. This will naturally cause the students to struggle in class and make it hard for them to participate in-class activities that have been prepared with the notion that all students have done their homework. Also technical difficulties can cause a problem at home when student tries to familiarise with the course material. A new teaching method like this with completely different approach can take time to get used to. Furthermore, the quality or the age of the videos and other course material can be a disadvantage and affect the student's engagement which cannot be effectively evaluated. (Nguyen et al. 2015, 55.)

2.3.3 Limitations in flipped learning

Flipped learning can produce better learning outcomes because it increases levels of problem solving structure and practices (Baepler et al. 2014, 229). However, one aspect that is somehow missing, and can be seen as student perspective, is the focus on atmosphere throughout the class time and in group work outside of the class. Flipped classroom learning models have attempted to address challenges by allocating more class time for active learning approaches and by leveraging accessibility to advanced technologies to support a blended learning approach (Kim et al. 2014, 37). Flipped learning is focusing on student learning and

participation, yet these studies lack in understanding outcomes and perceptions of the student participation (McCallum et al. 2015, 52) that happens throughout the course.

In conclusion, the definition of flipped learning by Flipped Learning Network FLN is innovative, yet still missing something. According to the definition, the focus is still on content (subject) and individual process, however, enhancing the group environment or climate could benefit this pedagogical approach for the whole group. As flipped learning method brings learning to individual level, and subsequently to interaction and collaboration with each other, it should also bring in the time for doing reflection and feedback as well for building group dynamics. This can help enhance the learning atmosphere, and build a learning community, benefiting and encouraging all group members. The content is naturally as relevant as before (Huggins & Stamatel 2015, 228), however, the objective of this study is to keep process and content together while teaching. This has been achieved by the integration of group dynamics exercises to flipped classrooms approach, in order to see to the potential to improve class atmosphere.

2.4 Literature review

The focus of this study is on the integration of group dynamics into flipped learning method. Consequently, I looked for studies with the combination of flipped learning and the three concepts of group dynamics relevant to this study: reflection, feedback and experiential learning. However, finding studies with this combination was challenging. Previous studies focus generally on one concept of group dynamics out of the three mentioned above. A study where flipped learning is seen together with reflection, feedback and experiential learning is missing. Additionally, there seems to be lack of research on social atmosphere in a flipped

classroom. This gives all the more reason to approach this study from a different perspective, focusing on the group dynamics and social atmosphere during the flipped class course.

2.4.1 Studies on flipped learning in higher education

A study conducted in USA by Kim et al. (2014) explored design principles of three flipped classrooms in an urban university, and has some similarities to the current study. Researchers were not satisfied that flipped learning is only about videos and using class time for homework. In their definition flipped learning is an open approach that facilitates interaction between students and teachers, and differentiated learning (Kim et al. 2014, 38). The study was a pilot study based in University of Southern California (USC). In total three instructors were chosen to run three flipped classrooms in three different disciplines: Engineering (ENG), Social Studies (SOC), and Humanities (HUM). Total of 115 students enrolled in the three courses, however, only 41 students responded to the study. The study used both qualitative and quantitative approach. The data collection methods were surveys, interviews, instructor reflections and documents (e.g., meeting minutes, course syllabi and student outcomes). The student perception of flipped learning was overall positive, particularly to the factor that the class time interaction did assist them in grasping the core concepts of this course. The classroom activities were perceived more student-oriented (mean = 3.7 out of 4) in the flipped classroom than in the traditional classroom. Moreover, the students expressed their high level of satisfaction to the Teaching presence (3.18 out of 4) as they sought and received immediate feedback and instructions during class. Social presence, that includes social interaction, learning community, and cohesion, was valued highly as well at 3.08 out of 4. The students also felt that they acknowledged each other's contributions in class which was however, lacking in online discussions. On Cognitive presence, the students did feel academically challenged and able to apply previous knowledge (2.94 out of 4), nevertheless,

they expressed their wish to be more motivated and encouraged to investigate supplementary content related issues. Lastly, the students perceived Learner presence to be level 2.9 out of 4. Self-evaluation and monitoring were promoted by flipped classroom, but students felt the need to advance in these competences. Furthermore, even if the students rated Teaching presence highly, they still expressed the need for more facilitation and support from the teachers. (Kim et al. 2014, 41–42.)

In total nine design principles were drawn out after this study in the attempt to advise teachers to provide students with certain concepts to achieve overall good learning experiences in flipped classroom. All the nine principles are drawn from top down hierarchy approach - from teachers towards students. The principles include issues as providing opportunities for students to gain first exposure prior to class, providing guidance, building a learning community, providing feedback, just to mention a few. All of the nine principles focus on teacher's perspective and responsibility to provide students with certain things, and how the teacher can facilitate flipped classes in future. Studies like these are giving educators much needed information on the needs and perceptions of the students. One can only speculate how group dynamics exercises, student's feedback to each other, and self-reflection could have benefitted and motivated these students.

In another study, McCallum et al. (2015) did a review of three studies that focused on student responses and needs, before getting into their own study on student involvement. In the first study that McCallum et al. (2015) reviewed, 21 students from statistics class gave a mean value of 3.5 out of 4 in favour of flipped learning approach. Similar to the first study, the second was conducted on an industrial engineering course with 74 participants. This study also found out that students preferred flipped learning over traditional learning. Third study used a flipped class as well as non-flipped class approach. In a flipped class two courses in a biology were implemented. In total 430 students, 30 in Genetic Diseases and 400 in General Biology, were examined. During exams students in flip classes scored higher than non-flip

classes. However, these studies lacked in discussing about atmosphere throughout the classes between students, and between students and teachers.

After reviewing the above two cases McCallum et al. (2015) did a study on student involvement that consisted of three flipped courses: two mathematics and one business management course that ran over 15 weeks in an undergraduate course. In total 71 students registered in the three classes but only 60 students participated. Data was collected in the form of 6 interviews and additionally a brief survey was conducted. In the interview the participants were asked to discuss their experiences about the flipped classroom, their perception of this approach's usefulness, and effect on learning, as well as peer and faculty engagement. This study concentrated on the involvement of the students while working together in flipped classroom during the course, and aimed to offer support for the involvement factor of flipped learning method. However, the missing components in this study were reflections, together with peer and teacher feedback. The results of the study by McCallum et al. (2015) showed that students see flipped learning as a supporting factor in academic involvement, peer to peer involvement, and student-faculty involvement. Academic involvement refers to the viewing of the recorded material, the material's accessibility and controllability, the organisation of note taking, the overall in-class experience and collaboration among all involved. At the same time, peer to peer involvement refers to peer learning, and relationship and environment building among students. Lastly, student-faculty involvement refers to the teacher's awareness of the student, and their knowledge level. This also encompasses the approachability and accessibility of the teacher.

Foldnes (2016) did a study on cooperative learning and flipped classroom method. The aim of this study was to compare student-centered teaching method of flipped classroom and traditional teacher-centered teaching method of lecture-based classroom, and see the effectiveness of these methods. The study was conducted in two parts. In the first case, 1569 students (2012-2013) participated in 10 classes, from which 1 class used flipped learning

method and the others lecture-based learning method. In flipped classroom the students worked mostly alone during class, and collaboration between students was not encouraged. Students were given all course material from videos to exercises at the beginning of the semester. At the end of the semester the final exam was same for all the students and the results were compared between the lecture classes and flipped classes. The results from the final exam did not indicate any significant difference between the two pedagogical methods. In case 2, Foldnes made sure that from the participating 235 students, the 93 students in the flipped learning group collaborated in their work. The study material was released weekly and the in class time was structured to encourage cooperative teamwork. The other 142 students attended traditional lecture classes. A pre-test, post-test and final examination was conducted to monitor the differences in the two groups. The results in case 2 post-test indicate statistically significant difference, with mean scores of 63.2 % for the flipped group and 50.1 % for the traditional group. The scores for the examination itself resulted in scores 64.8 % and 54.0 % for flipped and traditional group respectively. These results support that cooperative learning and student involvement in collaborative teamwork can increase academic performance. (Foldnes 2016, 39-49.) The results of Foldnes's study confirm the importance, and multiple benefits of working in groups.

Another study was conducted by Nguyen et al. (2016) on undergraduate student perception on flipped learning method after two flipped classroom sessions. This study was based on 28 in-depth interviews. The interview data were transcribed and coded, enabling the comparison of the data, identification of negative and positive perceptions, and the analysis of consistencies. Generally, the results suggest that students perceive dialogue and engagement as good practices. At the same time, the students also wanted more motivation and involvement from their teachers, pointing out to the significance of a good relationship between teachers and students. Some participants pointed out to the large workload that was expected of them at home, and did not see a point coming to class if all the course material was understood already from homework. Thus, it is important to prepare engaging in-class activities in order to keep the students motivated to participate in the classes and hence make

them realize the value and importance of the classroom activities. (Nguyen et al. 2015, 51-61).

2.4.2 Studies on group dynamics in higher education

In between Dewey (*How We Think 1933*) and Slavin (1992) there are roughly 60 years of evidence that in discourse structures, groups develop through clearly distinct and markedly different stages as groups mature over time. During my research I came across researchers that started with the ideas of Dewey and continuously during the years worked to make students come first in higher education. Slavin in 1992, *The Will to learn*, a book written by Martin V. Covington in 1998, Pasmore in 2001, Sweet & Michaelsen in 2007, and Golonka & Mojsa-Kaja in 2013. These are few examples that pedagogical approaches are constantly developing and changing with time, and making student-centred pedagogical approaches more well-known. Following are few of the studies that have used group dynamic processes incorporated into higher education. One drawback though is that similarly to the studies on flipped learning, the following studies also used reflection, feedback and experiential learning separately. However, these researches are relevant in this field, and that is why I am mentioning them here.

The latest research by Kiener et al. (2015) used experiential learning in an undergraduate statistics course which was 16 weeks long. Students met once in a week for 2 hours and 40 minutes. One of the goals of this study was to give students the real world experience. Total of 12 students signed a consent form and 11 students completed the course. Both qualitative and quantitative data was collected. As reflection goes hand in hand with experiential learning, the researchers made sure that students, as well as both of the researchers, reflected throughout the course. 160 pieces of qualitative data was collected in the form of instructor

planning and process notes, reflective research journal, course observations, and from all student assignments. For the quantitative analysis researchers used The Comfortability in Learning Scale (CLS). This scale is used to answer student perceptions during the study.

Students found out four types of experiences after the study: outsider, pre-novice, novice, and apprentice. The purpose of this research was to find out whether experiential learning increases student's value in research and produces a comfortable learning environment. The results suggest that group dynamics have the possibility to contribute in learning outcomes. The four levels of experiences provide evidence that through reflection students were able to progress and develop in their learning. Due to the fact that students and researchers reflected several times, they were able to discuss their observations and subsequently, were able to learn. This, in turn, resulted in achieving experiences that the students and the researchers can use in future learning situations. The limitations of this study, as described by the researchers, are the small number of participants and that they did not use a control group to compare the results.

The next study by Groves et al. (2013) focused on Kolb's experiential learning cycle (1984). This cycle consists of concrete experience, reflective observation, abstract conceptualization, and active experimentation. A class of sports students in 2010-2011 was chosen for this study. The researchers wanted to see how experiential learning could develop learning skills among students. The researchers wanted to substantiate the idea that a carefully designed course with reflection and experience can result in the most effective learning (Groves et al. 2013, 546).

As the researchers wanted the study to be with experiential learning, they chose to replicate an older study. This way the students in their study had background knowledge and the experience that they could relate to. There were 40 students that signed the consent form.

The method used was focus group interviews. Seven students accepted to participate in focus group interviews but one dropped out at the very last moment. Therefore, in total six students participated in the focus group interviews. The course material consisted of four pre-defined articles. During the first three weeks, students use one article and discussed it during the first and second week, and then found relevant sources for further discussion in the final third week. The process then repeated for the second, third and fourth article.

Data gathered was coded into four categories of the Kolb's model. The researchers had to create one extra category because of the access of the material and that category was also coded appropriately. The use of Kolb's method did clarify two things. Time was not a problem if Kolb's method was used and secondly, curriculum was not compromised at all. Finally, this study revealed to Groves et al. (2013) that with experiential learning approach they were able to see students access higher level critical skills required for successful study at university level. The researchers finished their research by recommending teachers to work with experiential learning approach. This study focused on the tutor's view and their perception, however, the student's perceptions could have been taken into account as well. The study does have all the ingredients for that, such as reflection and experience, therefore, why not just use it that way. Another thing lacking in their research was feedback.

Teaching is undeniably one of university's core tasks but the role of the teacher is constantly changing and developing due to technological advances and pedagogical changes. Learner activity takes place when students are involved in mindful processing of information and acknowledge their responsibility for learning as well as construct knowledge through collaboration, set goals and employ new strategies when encountering difficulties and problems. Löfström & Nevgi (2007) describe learning to be a combination of thinking, emotions, and action, that lead to empowerment, commitment, and responsibility (Löfström & Nevgi 2007, 314—315). The studies mentioned above give reason to consider the value

and importance of dialogue, active learning communities, and student involvement. They also call for further investigation into the significance of group dynamics in higher education.

Therefore, this study seeks to find out student's and tutor's perceptions in a flipped learning class which is integrated with group dynamics. Experiential learning is one of the key issues that this study focuses on, and how students perceive their learning experiences when their flipped learning class has been integrated with group dynamics exercises in order to build a motivating learning atmosphere. Experiential learning was described by Novak (2011) and many others as meaningful; "Meaningful learning is where the learner seeks to integrate new knowledge with relevant existing knowledge (Novak 2011, 1; Fyrenius et al. 2005, 62; Tsai et al. 2013, 179; Howland et al. 2012, 234; Löffström & Nevgi 2007, 315)".

3 MATERIAL AND METHOD

3.1 Aims and objectives

This study aimed to look into the student's, as well as teacher's perceptions and experiences of the integration of group dynamics exercises into flipped learning pedagogical model during a University of Lapland course in early 2016. To do so, this study not only looked at the end results but also at the process throughout the flipped classroom course.

Students are the substance of focus in Flipped learning and this means they are encouraged to get together and cooperate more. Students collaborate, reflect, apply and get feedback, and slowly become better at working in groups. In this study, I intended to find out by using group dynamics, the climate and atmosphere of the class throughout the whole duration of one particular course MEDU 3105. Simply put, flipped learning can be seen as a pedagogical approach for the entire class that is used to achieve certain knowledge of the 'content' of the course. At the same time, group dynamics can be seen as the 'process' of working by students in each group of the class.

Importance and reason for study

The development of the group members' interpersonal dynamics into a good working atmosphere can be a lengthy process. The group's collaboration skills develop with practice,

and this development is applicable to education and work places, as the ability to work in teams is necessary in both cases. It is important to know how students work in teams because these are the skills that are required for employability in the future, and these skills need to be taught while a person is still studying (Vuopala et al. 2016, 26). Therefore, teachers must be aware of student's working atmosphere, and students must be aware of their own working atmosphere, in order to learn how to improve it. At the same time, the students learn productive and harmonious team work, that is essential in successful working life, as well as social life.

3.2 Research questions

This research is an action based study. Action based study is required in a situation where teacher-oriented approach is shifting towards learner-oriented approach (Gregory 1994, 43; Zuber-Skerritt 1991, xii). Group dynamic methods were applied by integrating them into flipped learning approach in an effort to promote the active and collaborative learning experiences of flipped classroom. Action Learning is a process by which groups of people are interacting and learning from each other and reflecting, carrying real responsibilities in real conditions (Gregory 1994, 43; Zuber-Skerritt 1991, xii). Therefore, in this study, the student's conceptions and experiences about class social atmosphere's possible affects have been recorded and analysed before and after the course in order to see if any change occurs in the student's views. Additionally, in this study the students worked in teams, as team experience assists students who might otherwise struggle on their own (Huggins & Stamatel 2015, 231).

In this study the following research questions have been investigated:

Research question 1: What were the students' perceptions on the integration of group dynamics into flipped learning?

Research question 2: What were the tutor's perceptions on the integration of group dynamics into flipped learning?

Research question 3: How the class atmosphere was affected by the combination of group dynamics and flipped learning?

3.3 Procedures

This research was divided into two phases (see fig. 2 for overview of study). The first phase covered only group dynamic sessions with three groups. The purpose was to see if students like the idea of doing group dynamic exercises. In phase two I integrated group dynamics exercises into flipped learning course. In the pre-study, workshops on group dynamics were organized independently from any university course. In those workshops data was collected in three stages making pre-study pretest-posttest-design study. In first phase, three questionnaires were used to collect data. The first questionnaire was filled before the workshop, the second questionnaire and reflection report right after the workshop, and the third questionnaire was filled in approximately one month later. This way the potential change in the participant's attitudes towards group dynamics was observed more effectively. In the phase two data was collected using activities, reflections and feedback from students and tutor.

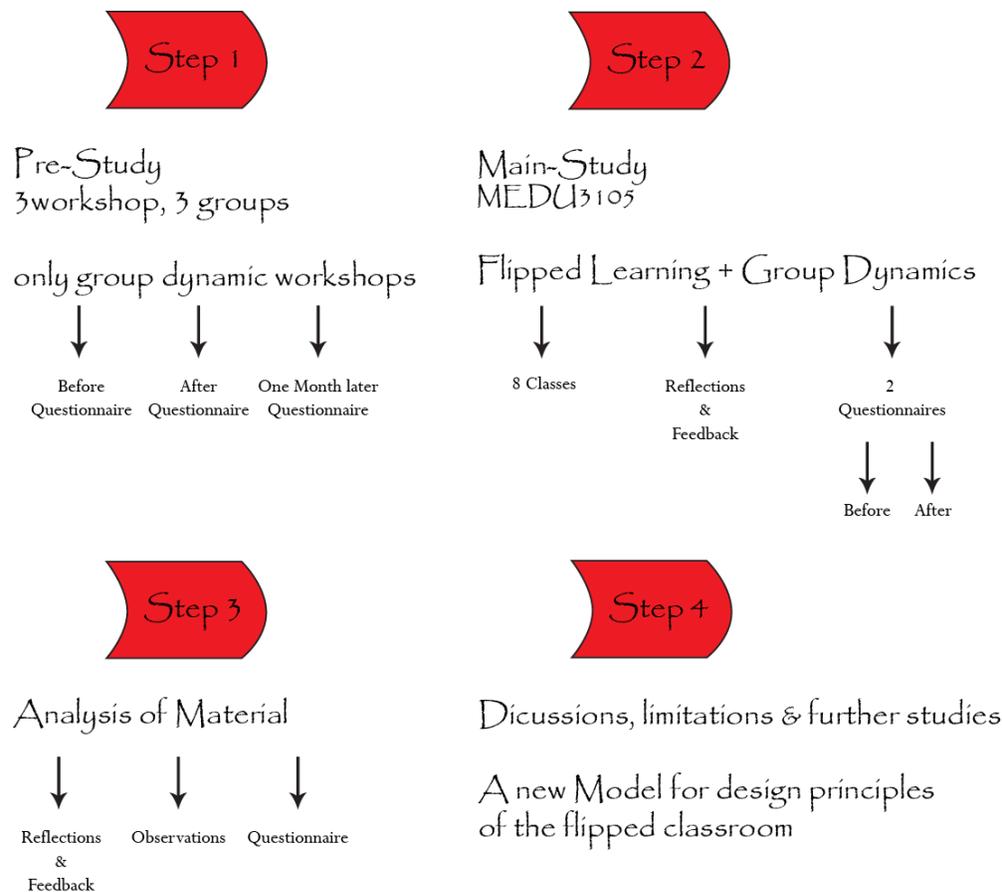


Figure 2 Overview of the whole study

The main study (phase two) took place in January 2016. I collaborated with one teacher on the course MEDU3105 Internet Use and Psychosocial Well-Being. The pedagogical approach of this course was amended into flipped classroom for the sake of this study. Additionally, group dynamics exercises were integrated into the flipped pedagogical method.

Furthermore, mixed methods such as survey questionnaires and reflection reports were used in pre-study and main study. The reason to use different methods was the small sample size of the pre-study, as well as of the main study. Survey in the form of questionnaire was given to the students. Furthermore, students were also asked to write reflections after the workshops. In the reflections students were asked to think about the questions that were raised in their minds and reflect upon those questions. Lastly, during main study observations

were written down during the class activities. The reason to use both qualitative and quantitative approach was that the qualitative data collection sometimes can bring out information that is not mentioned in the questionnaire, but relevant to the research and research results. Therefore, the qualitative data consisted of open ended survey questionnaires, activities, reflections and feedback, whereas, the quantitative data consisted of close ended survey questionnaires. The quantitative data was analyzed using the SPSS analyzing program.

3.4 Pre study and pre-study results

The intention of the pre-study was to find out if students need group dynamics in their collaboration while they are in university and what their thoughts were on group dynamics. Working in groups while at the university with the students from all over the world and from different cultures is sometimes challenging. I, therefore, wanted to bring different nationalities together to work on some tasks in allotted time.

The pre-study was conducted in University of Lapland in autumn 2015 with 24 students from which 4 were male and 20 were female. The students had 10 different nationalities and their ages ranged between 20 and 30 years of age. Students were able to give answers both quantitatively and qualitatively.

There were three groups in total. Two of the groups were from two separate classes and the third group consisted of individuals that I had invited who were at the time were not taking any classes. I divided each group into sub-groups of three to four participants. Each sub-

group had one task (Apple task² and Lost at sea task³) and two questionnaires to fill in before and after the task. The two tasks are used by facilitators in companies and in workshops. Lost at sea is designed and used by USA coast guards for many years. Apple task is one of the most famous tasks that is used for checking creativity and building on ideas from each other. In the questionnaire students were asked some Likert scale questions as well as some open ended questions. The questions were about group dynamics, reflection, feedback, atmosphere and working together as compared to working alone (see appendix B, C & D). Therefore, the groups started with the questionnaire, then moved towards the task and finished with the second questionnaire. This way I aimed to learn if students had done group dynamic tasks or exercises before and what are their expectations of such tasks. Finally, the final third questionnaire was filled in by the participants approximately after one month. The gap of one month was intentional because I wanted to see if the student's responses changed in any way. Furthermore, right after the workshop ended and as the students filled in the second questionnaire I also gathered extra reflections from the students. Reflections gave me extra material for qualitative analysis. In the questionnaires open ended questions were added for the purpose of getting qualitative data, however the extra reflection data that I collected gave more data than the open ended questions of the questionnaire.

To do the tasks the groups were divided into three to four members each and at first they were invited to work individually (ten minutes) to rank the items and then work in group (15-20 minutes) to rank the items again. They were encouraged to listen to each other and only rank an item if all the members were satisfied. Rank 1 was for the most important item and so on. The scores were then compared for the individual results and group results. The idea

² In this task participants were divided into groups of 3-6 members. The task was to come up with many shapes of apple as they can. Different color markers and big sheet of paper was provided to the participants. To do the task they had to divide paper into 36 boxes without speaking with each other and after wards start drawing. Only one person at a time could draw and rest of the people would only watch. There was no verbal communication allowed during the task. Depending on the size of the group I decided to give them maximum 20 minutes for the whole task.

³ It is a team building activity to encourage interaction and teamwork. The scenario is that four friends on a boat comes across with an accident and they manage to save 15 items along with a rubber boat for four people and box of matches. All they have to do is to survive till they are rescued by prioritizing the items in order of importance – from 1 to 15 and make use of them.

was to show the groups the importance of working together. With the help of this task, majority of the times group scores are better than individual scores. It is an activity enriched with group discussions, listening to each other and working together in a limited amount of time.

Both these tasks come with certain learning capabilities and I used these tasks to help students understand the importance of working together and sharing their ideas. The reason to choose two tasks was the time limitation as the teachers had their course content to deliver as well. Both these tasks help students understand importance of communication whether it is verbal or visual. In both tasks students learned to work in groups. They were able to get more ideas after they listened to each other's explanations and they all understood how creativity works during these discussions.

In the pre-study I only wanted to introduce group dynamic concepts to the students and document their responses. In response to the question about group dynamics motivating factor students responded using Likert scale from 1 to 5 where 1 was “No difference at all” and 5 “Very big difference”. The mean values (table 1) for before the workshop were 4.33, right after the workshop were 4.54 and after one month the mean values were 4.38. Mean values right after the workshop increased but after one month reduced again but still were higher than the first mean score 4.33. Overall, the mean values in the responses to this question indicated that students believed group dynamics making generally a big difference in motivating students.

Table 1. How big difference group dynamics make in motivating a student.

	Before workshop	After workshop	One month later
N Valid	24	24	24
Mean	4,33	4,54	4,38
Median	4,00	5,00	4,50
Std. Deviation	,637	,658	,770
Minimum	3	3	2
Maximum	5	5	5

Another question asked from the students was about the atmosphere in the class and does it affect their attitudes towards their class. The Likert scale again was 1 to 5 where 1 was “Strongly disagree” and 5 was “Strongly agree”. In table 2 mean values improved from 4.04 to 4.42 and finally to 4.46 one month after the class. Once again students realized the importance of the positive atmosphere in the class and its effects on their attitudes.

Table 2. The general atmosphere in the classroom affects my attitude towards that class.

	Before workshop	After workshop	One month later
N Valid	24	24	24
Mean	4,04	4,42	4,46
Median	4,00	4,00	5,00
Std. Deviation	,751	,504	,658
Minimum	2	4	3
Maximum	5	5	5

The question “Does doing reflection in class affect your learning?” was asked with the scale from 1 to 3, where 1 indicated “yes”, 2 indicated “I don’t know” and 3 indicated “No”. Mean values before workshop were 1.25 which then reduced to 1.04 and after one month increased slightly to 1.08 (table 3). Most of the students had no idea about reflection at first. It was only after the task and extensive discussions, that we had about the task, that students realized the importance of reflection and almost all of them choose option “yes” in the questionnaire after one month.

Table 3. Does doing reflection in class affect your learning.

	Before workshop	After workshop	One month later
N Valid	24	24	24
Mean	1,25	1,04	1,08
Median	1,00	1,00	1,00
Std. Deviation	,442	,204	,282
Minimum	1	1	1
Maximum	2	2	2

Students also wrote reflections right after the workshop. The reflections provided some qualitative results for the pre-study. In the figure 3 some of the reflections are mentioned from the students.

STUDENT'S REFLECTIONS

"You can build on other's ideas and take inspirations from them."

"Group work gives us responsibility."

"Being in team made me much more creative than I would be on my own."

"It is amazing to be part of group work where each work has the same value."

"Creativity is not just born out of the blue, person has to challenge him/herself into putting an action into practice and dare to do something."

"People around us can motivate and inspire you to attain great heights."

Figure 3. Student's reflections.

Students when filling in the questionnaire for the first time did not know anything about the tasks that they were about to do. Therefore, at first when they filled in their questionnaire they had reasonably high expectations about group dynamics. After the workshop those expectations were met to their standards as it shows in their responses to second questionnaire (after workshop) and the final questionnaire (one month later). It is interesting to see that

there is not much difference after one-month delay in the students' response. After one month, the mean value is much more realistic because the students had time to think and they choose carefully to fill in their responses. Overall, students anticipated higher expectations and the workshops did meet their expectations. The results also show that students opted for group dynamics in their classrooms. This made it easier to move on to the main study where I then integrated group dynamics into flipped learning.

After establishing that students like the idea of having a group dynamic sessions at first I wanted to do one week sessions of group dynamics with the new incoming students. I also wanted to look at the atmosphere of the class after the students go through with group dynamic sessions. This was not possible as there was no such course available in the university of Lapland that only teaches students group dynamics. As an alternative to group dynamic class I was suggested to work in a flipped learning class. One of the teachers in the faculty accepted to flip her class and let me integrate group dynamic exercises.

3.5 Main study

The current study focuses on one course in the University of Lapland in which two changes were made. First the teaching method was changed into flipped classroom method. Secondly, group dynamics were integrated into flipped classroom method. In order to investigate the social atmosphere of the class, I needed to look at a number of things, such as: teamwork – working individually and together in a team, feedback, reflection, level of motivation and experiential learning. In short, I was looking at the group dynamics. Teamwork abilities were looked at in this scenario by using different tasks taken from group dynamic exercises. Therefore, during each meeting of the University of Lapland course, group dynamic building exercises were performed.

3.5.1 Participants and ethical issues

In total of 18 students registered for the course. Students that actually attended the first class and filled in the consent form and first questionnaire were 14. On the final day 12 students filled in the second questionnaire. Two students dropped out from the course.

The subjects of this research were informed prior to the participation of the workshop about the research. The data collection and participation in this research is voluntary and that they all were acting at their own consent. They were told that any information retrieved during the data collection would be treated confidentially which included their identities, images, and their reflection reports. Student signed the written consent form to certify the above facts. (National Advisory Board on Research Ethics 2009, 5-7.)

3.5.2 Course Description

Previous and New structure of the course MEDU3105

Internet use and psychosocial well-being MEDU3105 is a 5ECTs course in Master of Media Education program at the University of Lapland. All course descriptions are available for all the students considering any course on a platform called WebOodi. The course description explains the specific aims, contents, method of teaching and requirements for participating in the course. University of Lapland has a system that any student of the university can join any course in any department. Therefore, there is a requirement section from which the students see what the course entails, and can then decide whether to take a course or not.

The aim of MEDU3105 is that after completing the course the student:

Understand interactions, gets skills to analyze critically, and reflect on the problems that can arise from Internet use or non-use. Students will also be able to work as researchers and can also apply the knowledge learned to real life cases.

The course was previously organized as following:

The content was taught through lectures and course readings. Students acquainted themselves with psychological and social psychological theories, concepts, and research results pertaining to the relationship between internet (non) use and psychosocial well-being through analyzing real-life or imaginary cases in small groups. Students were provided with some suggested material, but were also encouraged to find their own material for the case they were working on. Students were to construct, read and discuss the cases in the small groups, and consequently, the cases were presented in class and as well as discussed in a social media website.

The teaching method used in the course was case-based teaching with lectures (10h), and students' case presentations and discussions (10h). In order to construct and discuss a case, the student was to acquire knowledge from multiple sources (lectures, course readings, media, experts, social networks) in small groups. The requirement for the course was to attend the classes and participate in discussions, construct a case in groups, present it online in a wiki, present the case in class, and to receive and give feedback.

The purpose of working with real life case during this course is to prepare students beforehand for the practical life experiences in the digital world of today. Students most probably will be working with people and not exclusively with books or theories. Therefore, applying knowledge to real life can be challenging at times. As a media education student it is necessary to know how theories work in practice and how to critically observe phenomena and interpret through theoretical lenses. By doing so, media educator is able to argue and discuss an issue from a broad and historical perspective and is able to solve problems and devise strategies.

Overall, this course is about working in groups with real life cases, and in the end presenting those cases and getting and giving feedback on the critical work of each group. A challenge arises, however, already in the description of the aims of the course; it describes the aims for individual participants, when this course is clearly all about working in groups. While working in groups we need to consider many factors such as feedback, communication, reflection, collaboration and experiential learning. Traditional teaching method restricts students to use these factors to their full extent.

Two changes were made to the course MEDU3105 in order to conduct this study. First, we flipped the course teaching method to flipped learning and secondly, we integrated group dynamics exercises to the flipped learning methodology. Aims, content, and requirements remained the same after the flip. The structure of the course MEDU3105 was however changed because of the flip. In new structure the students would meet in classes 8 times. The first 4 times each class session would be 135 minutes long and during the last 4 times each class session would be 90 minutes long. The first 4 sessions would be about an introduction to the subject, dividing students into groups, assigning group work, and starting the group work. During these sessions I was the ‘student facilitator’ and my purpose was to introduce group dynamics to the class, use the facilitation tools to help the teacher to make groups, and to make rules for the class. Also during group formation and starting the case study, I introduced tools that helped students to formulate their work strategies. Moreover, I discussed and practiced reflection and feedback during these first 4 sessions. In short, the teacher was responsible for the content of the course, and I was responsible for the process during the course. During last four sessions, students presented their group work. There was one week between each class and students worked together during the week. Therefore, the practice that students did with me during the first 4 sessions had continued during this time. I also encouraged groups to use group dynamics tools during their group work that they practiced in the first four sessions with me. During their final presentations I facilitated the feedback and reflection sessions. Overall the MEDU3105 students had done the group work, practiced group dynamics, and then during their presentations they had given feedback and reflected on their work and on others’ work. In order for me to collect data for this study I

asked students to fill in two questionnaires, one during first class sessions and the second during the last session. Finally, I observed and noted down my observations for each class session to collect data for the study.

3.5.3 Action Research

The focus of this study is on the integration of group dynamics into flipped learning pedagogical model and how this pedagogical model can be enhanced by this integration. The research method used is action research. As my focus is on flipped learning and group dynamics integration, action research is one of many suitable options. Action research goes hand in hand with reflection which is integral part of group dynamics, as it is a collective, self-reflective, as well as collaborative. Hence, it is used by participants to justify actions that they took in their social or educational practices (Zuber-Skerritt 1991, 3; Cohen et al. 2011, 345; Yasmeeen 2008, 46, 47.) Action research has therefore, a lot to offer in educational institutes and I wanted to take advantage of these potentials. Action research helps researchers to understand reflective thinking, collaboration and helps teachers, researchers to give their students learning experiences. Action research can be used in a variety of areas: Teaching methods, Learning strategies, Evaluative procedures, Continuing professional development of teachers and more (Cohen et al. 2011, 344). These concepts are pretty much the same concepts used in group dynamics (figure 2). Therefore, it is a suitable choice to use such a research method. It is a research method that is best suited when we talk about change, reflection, problem solving, meaningful learning and overall group dynamics.

Teachers enable students to attain effective learning outcomes by using action based processes (Philips 2014, 376). Furthermore, in an educational setting, action research has some principles, introduced by Richard (1989), to get started with the research. The principles are: Reflexive critique, Dialectical critique, Collaborative critique, Collaborative

Resources, Risk, Plural Structure, and Theory, Practice, and Transformation (Yasmeen 2008, 48.) In order to do an action research, one has to be aware of the risks, critiques and resources at hand.

Background of Action research

The credit to use science in addressing practical social problems is often given to John Dewey, the American philosopher who wrote about *democratizing* education. In his book *How We Think* (1933) Dewey identified five phases of reflective thinking: suggestion, intellectualization, hypothesizing, reasoning and testing hypotheses in action. Dewey needed a practical solution for practical problems and he wrote extensively about reflective thinking process. (Pasmore, 2001, 38, 39.) Dewey's ideas were subsequently picked up by other philosophers, researchers, and scientists and one name is considered to be the pioneer of coining the term action research. The origin of action research is not clear, however, some researchers have argued for Kurt Lewin to be the origin of conceptualizing this term in his paper 'minority problem 1946' (Yasmeen 2008, 46). The term 'action research' further developed by Kolb (1984), Carr & Kemmis (1986) and others (Zuber-Skerritt 1991, xiii). According to Peter Holly between 1960s-1984 action research started to hold its foot into social sciences. The time period was all about initiating action research and implementing it into the system. During this time the talk was about key issues such as: development versus accountability, bottom-up versus top-down, classroom reforms versus organization development, process versus content, school-based versus system based, decentralized versus centralized and teachers versus manages (Zuber-Skerritt 1991, 40).

In mid 70s action research gained popularity and was discussed in four major types of research fields: **Traditional** - applied within organizations in the area of organizational development, **Contextual** - relations between organizations, **Radical** - deals with a high focus on freedom and the overcoming of power inequalities, and in **Educational Traditional Action Research** - based on John Dewey (1920s-30s) who believed that professional educators should become involved in the community problem-solving. (Yasmeen 2008,

46.) Researchers examine the problems, co-generate related information about the problems, take actions and deduce the results of actions based on experiential learning. This act is known as action research (Martin 2001, 167.) Furthermore, action research is a type of inquiry that is; **practical** as it involves making change to practice, **theoretical** as it is informed by theory and can generate new insights, and concerned with **change and improvement** (see Arnold 2015, 4).

Role of Action research

A researcher using action research tries to analyze different points of view and consequently come up with different, or more points of views of the same phenomena. This is why and how action research comes into play and helps researchers understand views and hence, change occurs (Arnold 2015, 4). Moreover, researchers draw conclusions and further develop their ideas via action based research, therefore, action research is also commonly known as ‘learning by doing’ (Yasmeen 2008, 46). Simply put, the research is only action research when it is done in collaboration and through the critically examined action of individual group members. (Cohen et al. 2011, 345; Zuber-Skerritt 1991, 3, 4; Kemmis 2001, 95.) According to Stephen Kemmis, action research is first and foremost *a research by practitioners* – something they do, not done ‘on’ or ‘to’ them (Kemmis 2001, 94). “It is a systematic and orderly way for teachers to observe their practice or to explore a problem and a possible course of action (Johnson 2012, 1).”

Action research is, therefore, a collaborative approach which uses reflection as its key component (Cohen et al. 2011, 348; Philips 2014, 374). Gail Philips (2014) also sees action research as a participatory method (Philips 2014, 374). According to Phillips, action research is particularly well suited to practice based research (Philips 2014, 374). Additionally, action research is known to be a small scale research field, as using action research can basically affect your thinking and change your perceptions (Arnold 2015, 4). Thus, action research is all about focusing on the right areas at the time of research.

3.5.4 Action research in this study

In this study I followed the steps that were mentioned by Johnson (2012) and also by Cohen et al. (2011). The process of this study starts from pre-study and finishes at the main study.

Johnson (2012) wrote some steps that bring clear focus to the research: Action research is systematic; you do not start with an answer. Furthermore, an action research study does not have to be complicated, however, you must plan your study adequately before you start collecting data. Action research projects vary in length. (Johnson 2012, 1-4.)

Action research follows a pattern, or cycle, which involves planning, making a change, and then reviewing the situation to generate learning (Arnold 2015, 4). The planning includes analysis and strategies, whereas action refers to the implementation of the strategic plan. The observation part includes an evaluation of the action by appropriate methods and techniques, and finally, reflection means reflecting on the results of evaluation and on the whole action and research process (Zuber-Skerritt 1991, xiii, xiv). In other words, initially, a problem is identified, followed by collective-collaborative possible solutions are hypothesized and through those hypotheses single plan of action is devised. Furthermore, data is collected and analyzed and at this point the problem is re-assessed again and the whole process begins all over. (Yasmeen 2008, 47.)

How have I adopted this approach?

As action research is about identifying a problem and trying to find solutions using hypothesis and finally devising a plan of action, I did the following. I identified that in flipped learning students are advised to collaborate, reflect and communicate with each other but are not taught and given proper amount of time to do so. I hypothesized that students need to first of all learn what reflection and feedback is and then practice it. This way both content

and process is covered. I planned to do so with the help of group dynamic exercises. I used reflection and feedback after such activities in a flipped class.

During each class session I started with group dynamic exercises where students did their tasks and then at the end reflected or gave feedback. My role was to provide a framework in which students performed their tasks and moved forward with their flipped learning class content. This way I kept content and process together at the same time.

4 MAIN STUDY PROCEDURES

4.1 Activities, Reflections and Feedback

Activities are an important form of analyzing data and I used them to analyze class atmosphere (process) during eight sessions of the course (MEDU3105). Activities are also important as they blend together with action research. I had prepared my tasks for students and tutor in a way that they would give me sufficient information to understand learners' and tutor's performance during the course. By taking the data from number of sources I was able to comprehend students' conceptions and the atmosphere of the class.

The following Activities, reflections and feedback are divided into separate days. I was only able to get reflections three times out of eight times from students and tutor. I have also discussed and analysed students' reflections along the way as they reflected in the following days. Therefore, in the following sections you will be able to read details about activities that students were involved in, reflections and feedback of the students and tutor. The interpretation of the reflections and feedback is discussed in results afterwards.

4.1.1 Day 1

Day	Tasks	Activities, Reflections & Feedback
1	a. Introduction b. Rules	<ul style="list-style-type: none"> • Introduction to Flip learning approach • Introduction to group dynamic tasks • No reflection or feedback happened on this day

First day of the class was planned to introduce flipped learning approach, as well as my presence as a group dynamics facilitator to the students. I had prepared some group dynamic exercises for the students in order to get to know each other. Flipped Learning was introduced to the students and assignments were then available for them to look at online later on. Two group dynamics exercises were executed. First, they were asked to introduce themselves. The introduction was a bit different as they were asked to present something personal that will help others to get to know the person better and know little bit about their skills. The introduction proved to be helpful later on as it became easier for the tutor to recognize the skills of the students. The second task that I introduced to the class was to ‘talk about responsibilities’ and come up with rules that all the students and tutor will follow during the whole course. Students were asked to work in groups and discuss, explain and came up with rules. After this workshop the whole class and tutor came up with rules that were then displayed in the class for the rest of the course. As the tutor was also involved in this task I was worried that other students will be more or less intimidated by a tutor’s presence as a participant, but I am glad that I was wrong and it all went well as if the tutor was not even there. At the end of the class the students were reminded to start their assignments by watching video material at home and in the next class the tutor would be available for them for their questions.

4.1.2 Day 2

Day	Tasks, Model	Activities, Reflections & Feedback
2	a. Check-in b. Divergent/Convergent model for making groups c. Feedback	<ul style="list-style-type: none"> • Check-in was introduced and students had mixed feelings about the task/activity. • Students started working on case study concepts using model and groups were formed. • Student were introduced to feedback. • No reflection was done.

Transitioning into the second class after a week came with some challenges. Some new faces were in the class and some students were absent. I asked students from first week's class to explain the new students about the previous week and within minutes the new students were updated. I did that because I wanted the students to take responsibility for their classmates. As planned by the tutor and I earlier that week, the class started with check-in. Check-in is a task that facilitators do in order for a group to talk about things that happened before coming to the class. This way everybody says something that is on their mind and then it is easy for students and teachers to be focused on the topic at hand.

The main discussion topic for the day was to discuss and come up with concepts that students will work in groups later in this course and then present a case study related to their topic in the end. I facilitated this session and used a simple framework (fig. 4) i.e. start with only thinking individually, then share ideas to the rest of the group members but without discussion (divergent phase), and when all the members have shared their ideas then they discuss and present arguments (exploration phase) and finally come up together with one topic that everyone is agreed upon (convergent phase). I call this divergent-explore-convergent phase. Therefore, by using the framework students individually talked about their interests and came up with the topics by following the steps of the model. Next they were invited to write their ideas on the walls (I hanged 4 charts on the walls before the class started) and finally looking at the ideas on the walls teacher divided students into groups who have similar ideas/concepts.

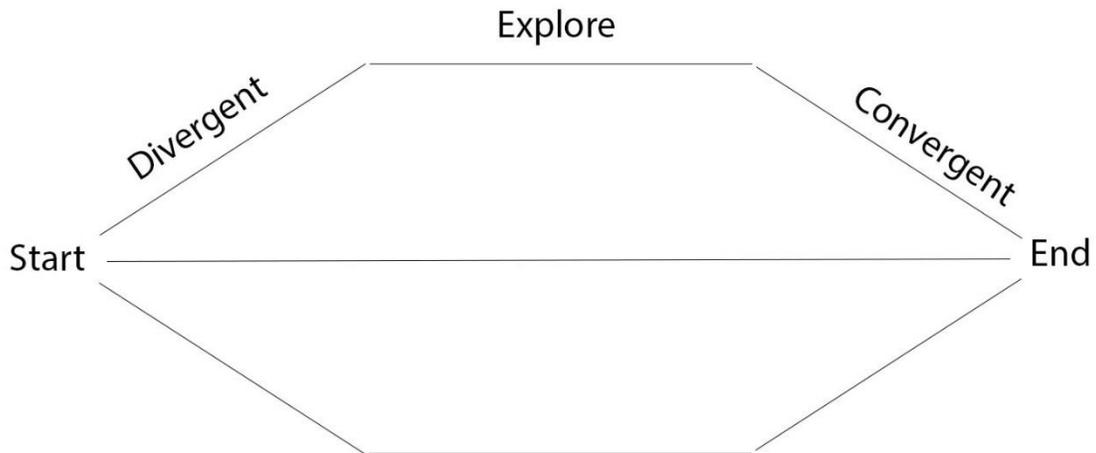


Figure 4. Divergent - Convergent Model.

Once the groups were made they were asked to sit together in their groups and start working on refining their ideas by keeping in mind the above provided frame work. The groups then discussed for some time while tutor and I were going to the groups and listening and observing. Tutor was helping students with the content of the topic at hand (as it should be done in a flipped classroom setting) and I was observing and helping the students to work within the framework that I had provided. Groups started to come up with the initial ideas of their concepts in the form of questions. Next task was to keep on working over the week in their groups. They had one week to work together and finalize their concepts and come up with a case study. Case study was the main part of this course where these groups had to use their concepts and then present their findings about the case.

At the end of the day I discussed about feedback. Students were now in groups and therefore, it was very important for them to know about basics of feedback and how to give and take feedback. I just introduced feedback and in next class I planned to have a practice session with at least one group on giving feedback. After feedback discussion, students were invited to write on a board about that day's activities in one word or sentence. This was a simple feedback for the tutor to know how students retain information. They were also made clear that they cannot repeat something that was already written on the board. Therefore, all of the

students had to come up with something that was not written. Writing feedback on the board went very quickly and tutor seemed happy with the feedback students had written on the board. Such as:

More focused, organize ideas, specify on a topic, found mutual interests, to get a conclusion, Shared knowledge with each other, Heard about giving feedback, heard about new interesting theory, discussed about interesting topics, know different points of view, and Choosing directions and emerge some surrounding questions.

Looking at these phrases above tells us a lot about students' interests in class. Some of them were happy with content such as *Shared knowledge with each other, Heard about new interesting theory, discussed about interesting topics* but this also tells us about how the students used a framework to come up to this conclusion. They were able to listen to each other (*know different points of view*) without arguing or commenting and because they were just listening to others made them interested in others' ideas and then they build on those ideas to come up with a better topic all together.

Tutor also said that she followed all the rules of the class (pointing to the rules made in day 1). She also gave me her feedback voluntarily by saying that she was happy with the process and the way the days have passed. She also mentioned that she is going to use Divergent/convergent framework in her other meetings and classes.

Finally, I made sure that student groups take responsibility of their group members. Hence, in next classes if a group member is missing or late then it is the groups' responsibility to make sure the missing member stays in the loop and do not miss anything. In my experience making a group of students responsible for each other helps build a trust and stronger bond.

4.1.3 Day 3

Day	Tasks	Activities, Reflections & Feedback
3	a. Check-in b. Analyse one previous case study (homework) c. Creating presentation criteria d. Feedback e. Reflection	<ul style="list-style-type: none"> • After the check-in first discussion was on previous week home assignment on analysing previous case study • Another task that students worked on was to prepare presentation criteria. • Students practiced feedback • First reflection in the class by tutor and students

After the second class students had a whole week to continue working on their topic as well as analyze one previous case study. Students came prepared with the case analysis except for few students. The tutor and I prepared a plan to work on case analysis during class, to create a presentation criteria and to collect feedback in the form of reflection from the students and the tutor.

I started with the group by having them to do check-in. The tutor also participated and said 'I feel like I have to use this check-in for my other classes'.

For the case analysis discussion, and for creating presentation criteria, I used the same framework of divergent-convergent model (figure 4: students at first individually shared their ideas and then collectively discussed and came up with ideas). To make presentation criteria, students at first worked in small groups and came up with few criterions. Next, the whole class looked at criterions of each group and together came up with the finalized version that summed up into 6 rules (fig. 5). Discussions during these two tasks were very lively among students and tutor as tutor participated where it seemed necessary. For example, during formation of presentation criteria after all the groups presented their ideas, the tutor discussed the criteria and suggested some additional criterion which students accepted. One criteria that

is relevant here to discuss was ‘open communication. By this they meant that during presentations audience participate and reflect as well as give feedback. Additionally, tutor was able to use this presentation criterion to use it as a tool to evaluate final credits for the class.

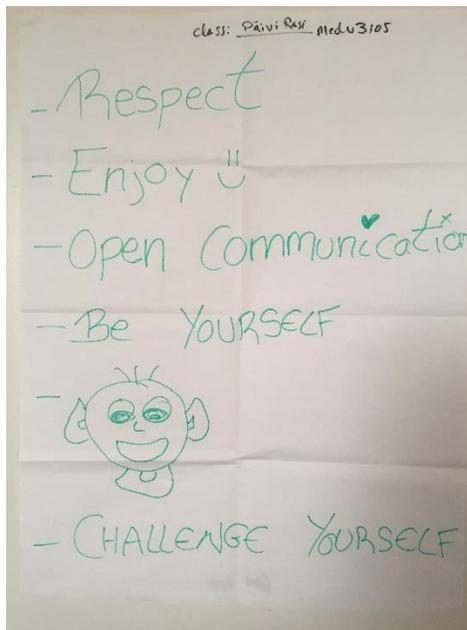


Figure 5 Finalized version of presentation criteria

As for the process facilitation of the day I planned to have groups give feedback to their group members and I also invited the tutor to give feedback to the whole class. Feedback is important as it will help students to focus on the project at hand. I used two simple starting sentences which then followed by students’ own comments for the peers. I asked them to start with sentences:

What I like about you...

What I want to see more in you...

This is one way to give someone a positive feedback in a short amount of time. In this class’s context it was about studies and overall working atmosphere for the group. Therefore, the

words 'like' 'want to see more' relate to the content and atmosphere of the class. Due to lack of time I only asked one person in each group to give a feedback by standing up, facing towards the person, and give a feedback to him/her. It went very well and some groups immediately afterwards continued the process. The purpose of this task was to show them that giving positive feedback to each other helps in motivating a person and the results can be a good working atmosphere for studying.

Finally, it was time to do some reflection. Reflections is important to be done in early stages of a project or if the group is new. In this context we had groups and it was the start of the project work. Reflection process at initial stages help place the content of a course/project in a relevant and motivating context (Fyrenius et al. 2005, 63). I asked the class to write reflection on the day's events and for the following question.

What can you do to take even more active part, contributing to this class work?

Students as well as tutor were invited to do this reflection. Only problem that rose at that point was some students had to leave because of another class and they had to eat before the next class started. Therefore, to reflect on the above question and the day's events became a difficult task as reflection requires deep thinking which cannot be done when someone is in a hurry. Hence, the reflection became a feedback because some students just talked about not having enough time etc. Some students however, gave it a try, and wrote a reflection, and here are some of those feedback and reflections both from students and the tutor.

Student reflected on the issues such as time. Many students thought that they needed more time to discuss in class. Another reflection was about more activities to be done in class, by that some students meant activities done by me where they were interacting, sharing, and giving feedback. Some reflected about being open minded and not afraid of speaking in class. It is very common issue that some students never speak in class and remain quiet. Such students have also knowledge to share and they need an atmosphere where everybody shares and listens too. A similar comment from a student who realized that they should read more

in order to discuss in the class. Another student commented that he/she needed a constructive feedback and that he/she have got it in this class session. Overall, students were reflecting both about content of the course and atmosphere of the class. One student had a problem in understanding a connection between different activities. I obviously know the connection but somehow I missed explaining it to the class and the reasons for activities done in a certain way. For example, usually I ask students and tutor to sit in a circle and then work. In circle we feel close to each other which brings unity, trust and closeness. It strengthens the bond and creates positive atmosphere in the class. Also the tutor is involved and is considered as a member and not a higher authority. Another student added that because of the hurry the 'nice atmosphere broke down' at the end of the class. Some students appreciated tasks that they did in the class. One student said that the class is no more monotonous. One student liked the fact that because of the feedback exercise he/she was now able to know how to present a presentation. Another student was motivated with the content of the course due to the positive atmosphere. Finally, some students liked the way group discussions made it easy for sharing and understanding each other's opinions in the class.

It was clear to me after reading their reflections that reflection is not an easy task for them at the moment. The students felt difficult in writing reflections on specific things. As during the day there were many tasks that they did in groups. None of which were mentioned in the reflections and feedback. It is not a problem that can be solved, all we need is to do more practice as practice makes it perfect.

4.1.4 Day 4

Day	Tasks	Activities, Reflections & Feedback
4	a. Check-in b. Check-out c. Reflections	<ul style="list-style-type: none"> • Started the day with check-in • Tutor and I talked with groups about their progress • Students and tutor did reflection • No feedback was done.

Fourth session was the last session for the groups to work with the tutor on their topics. It was important day for groups but one group was absent. We started with check-in session which was initiated by the tutor itself. After check-in tutor asked the groups to start discussing in their groups about the topic. They were asked to individually tell their group members about their part of the work. While listening to the conversations I realized that only one group out of three groups present had worked during the week. Rest of the two groups had not had a chance to meet during the past week. After the group members shared individually within their own groups, the three groups presented their topics or cases to the class. Tutor took the advantage of this discussion and gave feedback and many important ideas to each group.

After the discussion tutor and I went to each group one by one and asked them questions about content and process. I took care of the process and discussed briefly about group dynamics within each group while the tutor took care of the questions that the groups had about their topics.

During my rounds I asked about responsibilities/rules that students and tutor came up with during the first session. I asked about check-in and check-out, feedback, and I asked about the participation of each member in the groups. Then I asked about if everyone is participating or his/her ideas are being listened. The important thing was that all the participants are participating and no one was left behind. The ideas when combined make more sense to everybody in the group. This point came up at the end when I asked everybody

to talk about the day's events and many of the students pointed out that listening to each other and their ideas help them to improve their own ideas.

Tutor and I started our rounds to get to know the groups and where they were in their project work. My first group was discussing about the timetable for the week to meet and continue working on the project at hand. When I asked if they have met in the past week they replied with 'No'. This group, however, had a good understanding among themselves and they were very comfortable working with each other. Everybody replied positively about being able to share in the group and be able to say and contribute easily. In response to the question about participation they all said that they were happy with each other's participation. I also asked if they have practiced check-ins or given feedback to each other and their reply was negative. Later they all decided to do the check-in and feedback in a group because they clearly understood the significance of the check-in and feedback while discussing with me about their experiences from the previous class sessions.

The second group was discussing their ideas. I quietly sat there for a while and just listened to them. The group was missing one member and this group also did not meet the whole week. Earlier when they were telling about their ideas to the rest of the class I noticed that only one member came up with the ideas and the other members just followed and agreed with this member. This was alarming for me and I wanted to discuss it with the group. Therefore, when I went to this group I openly shared my experience from the past about not sharing my own ideas and in the end looking myself way behind then my group mates. After I shared my experience I asked why they did not participate and only one member came up with ideas. The group members explained that they were not able to meet during the week because they had no ideas in their mind and they were not confident. Hence they thought that as they have no ideas so no need to talk to the group members. They waited the whole week without contacting each other. The same group in the class took 5 minutes and came up with three ideas to share with the other groups. It was matter of just discussing and trusting in each other's abilities that would have made them few steps ahead of other groups. Later, the group

members agreed with me that they were not participating as they should be and assured me that they will make up this deficiency by working hard and do as much as they can.

Another issue that this group had was to update the missing member. As this was a group work, therefore, if someone was missing then the group had to update the missing member and let the tutor know if the missing member had participated. The group also like the previous group did not do any of the group dynamics exercises such as check-in, feedback and reflections as they did not meet in the whole previous week. However, this group also gets the usefulness of these exercises and promised to do them during their future meetings. Also they liked the idea because it will bring in trust which they were clearly lacking. Finally, I asked if they were happy with the participation of each member and they all said that they will participate fully and were happy with each other's participation.

The third group was well on the track and the tutor also acknowledged it. They have been meeting in the past week and were going to continue doing so. As far as working together goes, they were all comfortable within the group. Similar to other groups they also told me that the participation of each member of the group was satisfactory and all the members were sharing and listening to each other. They also mentioned that because of listening to each other's ideas they had managed to come up with nice idea which the tutor had already liked in the earlier conversation. The atmosphere of this group was quite positive although some members of the group needed to be a little more open to discussion when it comes to discussion with other groups. When I asked that they should talk in the class they all said that they feel a bit shy speaking in English. They were getting good feedback from the other groups which they acknowledged and they understood that they should also give feedback to the other groups in return.

It is true that a group will not say to me that someone in the group is not participating. I know that but I also know that just asking this question about participation of group members will be enough. After that day as they all said about each other that they were all participating so

each one of them will try to not let each other down. Hence, this is what my goal was when I asked about participation of the members of the groups.

After my discussion about group dynamics with the groups I asked the groups and the tutor to reflect. Once they finished writing the reflections I asked them to share one by one so that everybody speaks and the tutor gets an idea about the students' thinking process and how far have they worked in the class. Here are few of the reflections:

I feel motivated with this work because we can have a good thing that we can use in the future as media educators.

This is a perfect example of experiential learning. This particular participant is motivated because of the group work and the feedback that this participant's group got from the rest of the class. This reflection helped this participant to understand the usefulness of the work and that is why this participant decided to use this learning in the future.

Another participant writes about many factors related to group work such as

Our group plays well together and I feel easy to work in our group.

Here the participant is talking about the atmosphere of the class that how easy it is to work together and share ideas. The participant continues:

Everyone shares their opinions and participates in group work. We get new ideas about our theories as well and all of us know what to do to make our group work progress smoothly.

Hence, a day's work in collaboration and giving as well as receiving feedback helps this participant to come to such conclusions.

For one participant importance of feedback was very clear and the participant sees it clearly that feedback is crucial for everyone but the participant also complains about lack of time for each class session. The participant thinks that all the time that they had in a class was still something and within that time this participant also learned a lot from others.

I have never think deeply about my points so I feel excited during these sessions because I get help from feedback of the other groups. Sometimes I feel pressure to

give feedback as the time is short and I have less time to think and then I just say things in a hurry.

Hence, this participant was worried about lack of time for thinking or reflecting before saying something useful towards other's works. Similarly, another participant also mentioned the accomplishments from the day's work but still talked about lack of time.

One participant was worried about one group's work.

I am very happy that one group of students, who previously kind of 'lost' with the learning assignment, had now made great progress. They had chosen a case and a topic for their group.

This shows the concern for each other in a class and I would never have found out without this reflection. This is why it is important for us to do reflection in every class. This participant was also worried about own participation.

I am not sure whether I was able to provide enough support for all students.

Atmosphere of the class for this participant was so relaxed and inviting that contributing a lot seemed less and this participant wanted more time to contribute more and be more helpful.

One participant mentioned about atmosphere.

I really like the atmosphere in this course and I believe that we are going to see very good and interesting presentations later! :)

With good atmosphere it is easy to predict good results as this participant said with a smiley face.

One participant was worried about teamwork and less time and being not able to work in the previous week with the group outside of the class. This participant also mentioned about personal lack of inspiration. Still this participant was eager to work with the group.

The working time outside the class is somehow difficult to arrange. And in the class, we were doing other tasks that somewhat limited time for discussion.

This participant explains about lack of inspiration as:

The personal issues such as lack of inspiration and ideas about the case are not really solved and we were stuck at the individual phase so we could not turn to group work phase.

Clearly this is matter of trust in each other like many other students understood and gave their opinion in the reflections above.

Finally, the last participant talks about reflection,

When you put into words your thoughts, they become more 'real' and 'handy'.

This participant is also motivated,

I see my group more focus and optimistic, which means more motivation.

Participant continues talking about the participation,

Imran's (facilitator) talk make me think about my participation and make me feel proud of my work and also, challenging myself in order to improve.

Altogether each participant mentioned about the day's discussion and liked it. Some said the ideas were interesting and different from each other's. Discussion made them realize that every opinion matters and ideas are generated and developed from each other's ideas. Here are some more short words and statements that participants used to conclude the day.

Atmosphere, Motivated, Ideas developed, Lot of activity, Improvement, Group work, Giving ideas to each other, Today was easy going, Time is less and need more time.

4.1.5 Day 5 & 6

Days	Tasks	Activities, Reflections & Feedback
5&6	Day 5: There was no class, only group work Day 6: First day of presentations <ol style="list-style-type: none"> a. Check-in b. Introduction: Group member introduced other members of the group. c. Check-out 	<ul style="list-style-type: none"> • On the presentation day, students initiated check-in by themselves. • In each group students introduced other member of the group • Only one group presented, which followed by feedback from tutor and students using presentation criteria made earlier. • Students filled-in my second questionnaire • No reflection done • Finished the day with check-out

Day 5 had no class scheduled and students were advised to work in their groups and make use of the day 5 as well as the whole week to continue working on their presentations. One group that I would like to mention here took an initiative and put me in their process so that I can get more data for this study. This initiative of adding an outsider in the group was a new development.

Day 6 was the first day for the groups to present their work. Tutor arrived and she wanted to start the day with the first presentation right away. I was keeping myself quiet as I wanted to see if someone wants to do the check-in. Surely there was one student who reminded the tutor to start with the check-in.

The one other special thing about this day was another observer was present to observe tutor's method of teaching. He later liked check-in and check-out routine along with other activities that I did during the day.

The other activity that I did was to ask students in their groups to choose one member of the group and write an introduction about that member. I gave them 5 minutes to think and write some lines about their group members. Once they were ready I asked them to introduce the members of their group. This task helped team members to get to know each other and it motivates interaction.

Some of the common themes that came out during that small introduction were as follows:

Members liked to work in their groups, they understood importance of group dynamics like feedback, and reflection. They get lots of ideas from each other. They also feel the atmosphere is nice and cozy because of their group members and they appreciated about the support and hard work of the members of their groups.

There was only one group scheduled to present. Therefore, after the introduction the group started to present their work. This group started with three members but one student dropped out due to personal problems. Thus, during their presentation they mentioned a lot about the member who left and they felt lost a bit. After the presentation the group got lots of feedback from the tutor and students.

We asked students to sit in their groups and discuss with each other first and then say something about the presentation and presenters. Therefore, after the group presented the tutor asked the other groups to discuss what feedback they want to give to the group and then give a feedback. Similarly, the group who presented was also asked to discuss within their group about their own presentation. This also took 5 minutes and then there was a long lively discussion about the group's performance by keeping in mind the presentation criteria that whole class had made earlier in this course.

I also asked the group some questions on the process of their group work. As they were only now two members in a group they were satisfied with their group work. They also mentioned that they feel a gap after the third member left the team. I motivated them to reflect and

discuss about the role of the member who had left the team so that they can divide the extra work.

After the presentation and long discussion, I asked the class to answer my second questionnaire. The first questionnaire was filled in by the students on the day one. These questions (before and after) will help me make some quantitative data analysis on the dynamics of this class.

Finally, it was time for check-out. Most of the checking-out was about learning from the first group's work, learning from the discussions after the work and getting ideas from each other.

4.1.6 Day 7

Day	Tasks	Activities, Reflections & Feedback
7	a. Check-in b. Check-out	<ul style="list-style-type: none"> • Started with check-in • Two presentations followed by feedback from tutor and students using presentation criteria • No reflection this time • Finished with check-out

There were two presentations scheduled for the day. Therefore, there was no extra task scheduled. We only did check-in and check-out. For the presentations we kept the same structure like the previous time. A presentation followed by quick small group discussion and then a feedback from students and tutor.

The first group presented in the given time and afterwards got feedback from the class. I asked some questions that were related to the rules specified for the course by the students. I asked about challenges and how much did they challenge each other during the group work. They had clear roles defined for each member of the group, therefore, it became easy for the

members to work and produce results. The only challenge that this group had was related with structure of the writing of case study and coming up with a suitable title of the case study.

The second group's presentation was interactive and it involved audience. Two problems that the class discussed during feedback were, a long presentation that went over time, and the coordination between each member was also a bit chaotic. The group mentioned that it was because of lack of practice as they were spending more time in collecting data. Therefore, this was the reason of going over time as they had a lot to say about their case study and forgot to device method for presenting e.g. who speaks first and so on.

After the two presentations and giving feedback to the presenters the class dismissed with the check-out. Again during check-out students talked about learning from each other and developing on each other's ideas.

4.1.7 Day 8

Day	Tasks	Activities, Reflections & Feedback
8	<ul style="list-style-type: none"> a. Reflection b. Evaluation 	<ul style="list-style-type: none"> • One last presentation along with feedback • Final reflection from students and tutor • Student evaluated flipped learning and group dynamic exercises

On the final day there was only one last presentation. Only 7 students showed up. Due to time availability I planned to get one more reflection from the students. I also prepared one last activity for the groups that included a small evaluation about the content and the process of the course.

The final group presented their findings and they also involved the whole class to make it an interactive presentation. The group presented very relevant concepts and delivery of the presentation was also very collaborative. Each participant knew when to speak and it clearly showed that they practiced their presentation well beforehand and learned from the mistakes of previous presentations. The presentation was followed by feedback from the students and the tutor. During feedback I asked the presenters to say one word about other members of their group. This was to help them to give each other positive feedback which in return motivates further collaboration and interaction. They used the words such as: *Amazing, Fun and Affective* for each other. These words tell a lot about process that had happened during past few weeks. The experience for the group was amazing, fun and at the same time it was affective.

After the presentation and feedback about their case study I asked the class and the tutor to do one more reflection. The goal was to get them reflect one more time and also to get a bit more data for this study. I saw an improvement in student's reflections from the first to this final reflection. Some of the reflections were as follows:

One student liked the activities a lot and mentioned words such as gratifying, highly important, motivating and flexible. The student continued after liking the activities: "*I feel the activities are quite "automatic", what I mean is that even if the class were enjoying an activity, all of a sudden came a group dynamic*". This student did not realize that everything they did in class was a group dynamic activity. If this student thinks that after an activity the things such as reflection and feedback were the boring group dynamic exercises that came out of nowhere and spoiled the fun, then I can say two things. First, that I have failed to tell this student that feedback and reflection was part of group dynamic activities this student did in class and that reflection and feedback were helping this student to learn from those activities. Secondly, we need to spend more time on group dynamics so that students like this student get to know group dynamics better.

Another student also liked the activities in the class and this student's understanding was a bit deeper than the first student above. According to the student activities helped him in order to know his peers and made him relaxed and comfortable in the class. Thus, this student was very much comfortable working with this class and the fact that earlier activities helped him know his peers better (earlier getting to know exercises and positive feedback that we did in day 1 and 2). The student also mentions that he got help in ideas and concepts due to the feedback and different activities that they did in class. He also mentioned that in the class it was very easy to freely talk and communicate ideas. This student understood that ideas are always better when they are combined. Finally, this student finished by saying "*All these activities are good strategies to use in class in order to get a nice atmosphere in class*". Therefore, this student thinks that ideas flow in a nice and comfortable environment where everyone is listened to.

Third student also liked the activities during the whole course because it helped this student to learn more about his peers and to establish a sense of patterns to start and to follow the course. This student wanted a good start and a nice atmosphere where this student would be relaxed and comfortable. This student also mentioned about ideation, that, *the activities gave him capacity by reflecting about the general ideas that developed during the course*.

Another student was struggling with reflection and feedback. In the reflection this student started with writing feedback about different activities. Some this student liked, and some activities were just needless and waste of time in this student's opinion. Only when she talked about idea and development she reflected about some deep personal thoughts. Like other students, she also liked the way ideas were developed in the class and she gave credit to some of the participants and of course to the tutor. She said, "*Small number of participants helped but the biggest credit goes to the teacher and motivated students*". This statement made me think about it for a while. At first I did not understand the difference between participants and students. The word motivated helped me understand the meaning. According to this student not everyone in class was helpful and there were few motivated students who helped this student to develop during the course. It does not mean that few of the students were

wasting this student's time. It was just that ideas of some students were more appealing for this student than others.

This next student gave me some constructive and negative feedback in her reflection on the different activities. *Some activities were useless for higher education environment and could only work for children* according to this student. She continues by saying that *the activity on the day one "introduction using drawings" was very interesting but will not work if people know each other beforehand*. This student also thought that giving feedback in whole class was not necessary but it was good to give feedback in smaller groups whenever it was needed.

Another student thought that activities were helpful to some extent but for him he was still interested in problem-based or theoretical-based learning. The student finishes its reflection/feedback by thanking for the nice creative experience.

In the previous reflections tutor also participated in the reflections but I did not mention her reflections separately. This time, however, I wanted to share the tutor's thoughts. Here are her thoughts:

I think that the group dynamic exercises have helped to build a better, more relaxed learning atmosphere.

On second thought, I would have preferred more inter-cultural small groups. Now we had all Spanish and all Finnish group.

This year the peer-to-peer feedback was much better, in terms of amount of feedback and the quality of feedback.

In short she said that the atmosphere was relaxed, groups must be more inter-cultural and feedback quality had improved due to the integration of group dynamics.

After the reflection session I asked students to give an evaluation for both content (flipped-class) and process (group dynamics) of the course. At first, students had difficulties in understanding what I meant with group dynamics and what to evaluate. Flipped learning was easy to understand but group dynamics was not. The reason for this was the fact that I used

group dynamics in two ways: I used group dynamics exercises by integrating them into flipped learning method, and I used group dynamics exercises to discuss day's events, such as the use of reflection and feedback. Therefore, with the explanation about content and process at this stage, tutor and I left the room. This way the students were free to choose where to put dots on the evaluation charts (fig. 6). Students were asked to just put dots on a chart that had starting percentage of 0% up till 100%. Most of the students put dots between 60% to 100% for the content and between 24% to 50% for process.

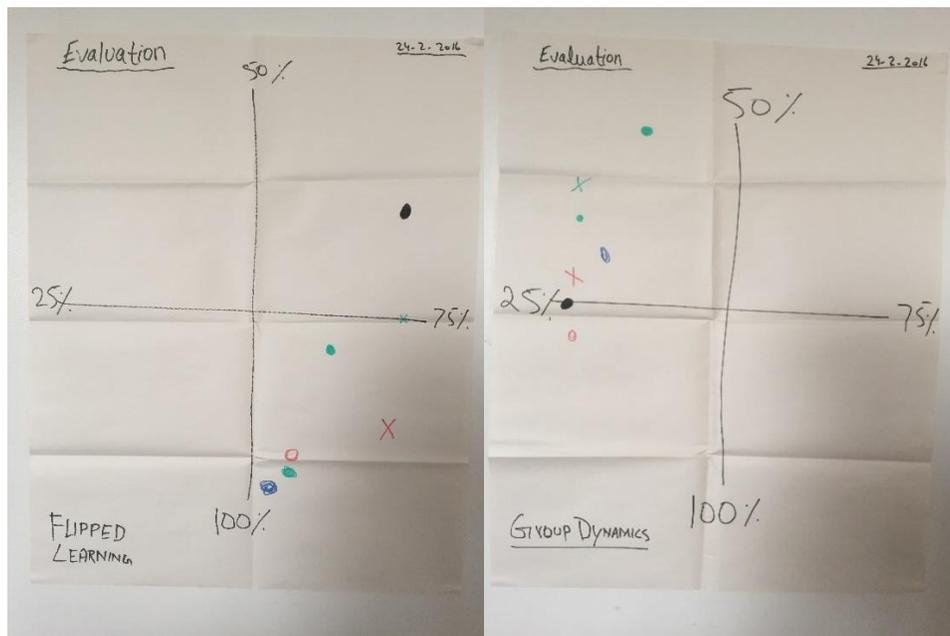


Figure 6 Evaluation for both Flipped learning and group dynamic Exercises

The result of this evaluation for the process part was not what I was expecting. I was hoping for similar results to flipped learning. Later, when I read all the individual reflections that are mentioned above, the evaluation made sense. In the reflections many students said that activities were good but later actions, when they had to reflect or give feedback were not so good. The above evaluation result of the *content*, i.e. *flipped learning method*, is also due to the fact that group dynamic methods were integrated in content. In case of the process, as I have mentioned before, students were critical and realistic of change and gave a score accordingly. Additionally, this evaluation was done only by seven participants, and this

evaluation would have certainly been more reliable if all the participants of the course would have been present during this final day.

Finally, I asked students to give only positive feedback to each other. I taped paper on each student's back and then everybody in the class wrote positive comments on the papers. This activity's aim was only to finish things off on a positive and memorable note. If they keep their comments and look at them after a year or more they will have a nice memory to look back at.

4.2 Activities, Reflections and Feedback: Results discussed

The study is both qualitative and quantitative. First, the results of the qualitative data will be presented, and thereafter the results of the quantitative data. In this section student's perceptions, tutor's perceptions and evaluation done by students on the last day are discussed, hence, answering the research questions 1 and 2:

What were the students' perceptions on the integration of group dynamics into flipped learning?

What were the tutor's perceptions on the integration of group dynamics into flipped learning? Reflection from the day 8 about group dynamic exercises (reflection and feedback), flipped learning and integration of group dynamic activities into flipped learning that students did as tasks, sums many issues in a single comment. This comment also helps to discuss about student's perception on the integration of group dynamics into flipped learning. What is more, this comment also gives us an opportunity to look at the atmosphere of the class. The comment was:

"I feel the activities are quite "automatic", what I mean is that even if the class were enjoying an activity, all of a sudden came a group dynamic".

What possibly went wrong or what was misunderstood? The study was to enhance pedagogical model and not to do a course on group dynamics. It was my lack of experience and explanation that some students thought that group dynamics and flipped learning are two

separate things. During a class session I integrated some of the methods of group dynamics with flipped learning. I called those methods activities. By using such activities, I provided a framework for students to use to interact during the class. Almost all the students liked those activities. These were the activities that I used to enhance collaboration among students, as well as between students and tutor, and ultimately believing that this integration would enhance the flipped learning model. Some students did like the integration but some missed the point. The last part of the reflection: 'suddenly there was group dynamics' means that the student felt the reflections and feedback sessions interrupted other enjoyable learning activities. This means that before the students started reflecting or giving feedback, they were doing something that was interesting but when they did reflection or feedback, it was not considered interesting or part of the classroom learning activities any more. However, the learning activities before reflection and feedback was also group dynamic activity that was integrated into flipped learning. This student had clearly not realized this. In other words, the content of flipped learning was done through framework provided by group dynamic activity. This means that students liked the part where they were doing something practically about the content but when it came to reflection or giving feedback, it was something new and not so interesting for some students. Perhaps reflection and feedback were perceived as less important as they did not have directly anything to do with the content. Again, some students liked these sessions, whereas some didn't.

In order to improve atmosphere of the class it is required to encourage students to talk to each other, know each other's skills and have a trusted environment. Doing reflection, sharing thoughts, giving and receiving feedback can help achieving such goals. I had one more goal in mind for using reflection and feedback. Experiential learning is a final outcome that I wanted students to have. Each time they reflected and shared their thoughts, the students got an experience. The process then repeated several times during this short 8 week course and each time students got an experience. Therefore, I can safely say that students did get some experiential learning. Of course the next step for the students would be to apply reflection and feedback in their next classes and continue learning. Coming back to atmosphere in the class. Both teacher and students said on number of occasions that they liked the atmosphere

of this class. Some students said that atmosphere is different from any other class they have attended in the university. On the Day 4, one student reflected:

I really like the atmosphere in this course and I believe that we are going to see very good and interesting presentations later! :)

The study indicates that students like interaction and collaboration. Many students were able to give their opinions. As we all know some students do not speak in class due to shyness or many other reasons. During this study as everyone worked in small groups we did not face any such problems. Everybody liked to work and share their thoughts.

In my questionnaires to students I asked many questions that can be summed up as quantitative questions. The results are discussed in the next section. The quantitative answers clearly described the perceptions of the students as well as answers to individual activities such as feedback and reflection. Before we go into quantitative data results I must talk about tutor's perception here.

The tutor from the start participated in all the activities and reflections. You saw her reflection on the Day 8. Here are her thoughts again:

I think that the group dynamic exercises have helped to build a better, more relaxed learning atmosphere.

On second thought, I would have preferred more inter-cultural small groups. Now we had all Spanish and all Finnish group.

This year the peer-to-peer feedback was much better, in terms of amount of feedback and the quality of feedback.

She was happy with the feedback as it was much better quality and quantity. She wanted to have inter cultural groups and this shows that she was already thinking to do another course. Finally, she saw that atmosphere was good for learning environment. In a way she touched upon all the things that I was looking into in this study.

4.3 Quantitative results of Questionnaires

During the main study I used two questionnaires. One questionnaire at the start of the course and one at the end of the course. With the responses from the questionnaires, we find the answer to research question 3:

How the class atmosphere was affected by the combination of group dynamics and flipped learning?

There were only 14 students who filled in the questionnaire at the start and only 12 at the end. Therefore, data collected from 14 Students restricted me to use only methods suitable for small sample sizes. After discussions with University of Lapland statisticians, Cross Tabulation method was chosen because of small sample size and it also helps in comparing results from before and after questionnaires.

There were ten Likert scale questions in the questionnaires. 14 students replied at the start of the course and 12 students replied at the end of the course. As the test only show comparison between before and after results, therefore, two values are missing in the result comparisons and only 12 answers were compared.

In the questionnaire, first five Likert scale questions were asked from the students to find out there understanding towards group dynamics, motivational factors that may or may not affect their input in class, a question on reflection and behavioral factors in classes on individual and group level in regards to effective learning. The questions (before and after) were:

1. About subject of group dynamics (class atmosphere); How much can group dynamics motivate a student?
2. How much does reflection in class affect your learning?
3. How much can your behavior affect the class atmosphere?
4. How much can your behavior help the group to achieve effective learning?
5. How much can the behavior of others help the group to achieve effective learning?

And the Likert scale values were:

- I. To very high degree
- II. To high degree
- III. To moderate degree
- IV. To small degree
- V. Not at all

To start with the results from the above questions the very first result to look at, were the mean values. Frequency statistics were taken to see mean values, median values and standard deviation. In the Frequencies table below students in the before questionnaire replied with the mean values between 1.64 and 2.43. For the same questions in an after questionnaire the mean values were between 2.10 and 2.50. It can be seen that mean values had reduced on average but still were between Likert scale 2 and 2.50. According to the Likert scale overall results were positive and in favor of a need towards group dynamics in the classes.

Table 4. Mean values.

	Mean	Median	Std. Deviation	Minimum	Maximum
Q1_Before	1.64	2	.50	1	2
Q2_Before	2.15	2	.87	1	4
Q3_Before	2.43	2.5	.85	1	4
Q4_Before	2.14	2	.66	1	3
Q5_Before	1.85	2	.77	1	3
Q1_After	2.10	2	.90	1	4
Q2_After	2.25	2	.87	1	4
Q3_After	2.50	3	.67	1	3
Q4_After	2.17	2	.84	1	3
Q5_After	2.17	2	.84	1	3

After looking at the stats, next step was to dig deep into these results and find some significant results. Crosstabs were used to see the individual percentage of responses and also to analyze them more deeply.

Cross tabulation

Cross tabulation or crosstabs method was used for small scale samples that fit to my sample size. The Likert scale values were:

- I. To very high degree
- II. To high degree
- III. To moderate degree
- IV. To small degree
- V. Not at all

Crosstabs shows results for each question. The interpretation of all the questions is quite similar, therefore, I am only documenting one question and interpreting it in my results here. Nevertheless, my interpretation of the significance of the data was after looking at the entire answers of the Likert scale responses. The question that I am using to interpret here was:

- About subject of group dynamics (class atmosphere); How much can group dynamics motivate a student?

In the crosstabs we read results by comparing rows and columns. In this case first column shows Before results and second column shows After results and the third column shows total results of the responses both in numbers and percentage. As we can see that two students replied with “To very high degree” both times. Four students replied with “To high degree” both times. It means six students did not change their responses in before and after responses. One student changed his/her response from “To high degree” to “To very high degree”. Two students changed their responses from “To very high degree” to “To high degree”, one student changed from “To very high degree” to “To moderate degree”, one student changed his/her response from “To high degree” to “To moderate degree”, and one student changed his/her response from “To high degree” to “To small degree”. In case of percentages 50% of the responses remained neutral in this result. 8.3% of the responses changed from lower value to higher value on Likert scale and 41.6% responses were changed from higher to lower values on a Likert scale.

Table 5 Crosstab results for one question

Crosstabulation

			Q1_After				Total
			To very high degree	To high degree	To moderate degree	To small degree	
Q1_Before	To very high degree	Count	2	2	1	0	5
		%	16,7%	16,7%	8,3%	0,0%	41,7%
	To high degree	Count	1	4	1	1	7
		%	8,3%	33,3%	8,3%	8,3%	58,3%
Total		Count	3	6	2	1	12
		%	25,0%	50,0%	16,7%	8,3%	100,0%

The fact that is obvious here is about the expectations. It is a common observation that in the start people have high expectations and by the time when they get to know the material that they are dealing with only then the expectations become more realistic. This is why I needed Before and After responses to see these difference and find out differences and realistic answers. By looking at the test, at first students had expected high expectations and they graded questions with higher mean values but after they went through different tasks and exercises the expectations became realistic. This phenomenon made me understand about students' perceptions about this integration of flipped and group dynamics approach.

Furthermore, by analyzing this data and rest of the cross tabulations for the first five Likert scale questions it is clear that first of all it is difficult to see significant results because of the small sample size and secondly it also shows that student's conceptualization became more realistic. It is, however, also to be noted that even though trend of the answers is trending downwards it still lies towards positive side on the Likert scale. These realistic values are although slightly lower than before but still lie above 3 closer to 2.50 on Likert scale. Thus, a better atmosphere, reflection in class do affect behaviors and motivates students.

The trend of high expectations then becoming realistic expectations can also be seen in the following final five Likert scale questions. This time I wanted to find out perceptions about the atmosphere that would improve learning environment in the class. For that I asked students in the questionnaire if they like to work alone or in groups, do they need feedback

and if the positive atmosphere helps to create good learning environment. These were the questions that I wanted to ask and below you can see Before and After questions.

6. I like working alone.
7. I like working in pairs or groups.
8. The general atmosphere of the class affects my attitude towards that class.
9. Feedback about my work and assignments is important for me.
10. The atmosphere in the class affects my work input of the assignments

And the Likert scale values were from strongly agree to strongly disagree:

- I. Strongly agree
- II. Agree
- III. Neutral
- IV. Disagree
- V. Strongly disagree

Again I looked at the mean values to determine if the expectations have a same trend as before. Expectations being high at first and then became realistic afterwards. Table below shows the mean values, median values and as well as standard deviation of the responses from the above questions 6 to 10 below.

Table 6. Mean values for question 6 to 10.

Statistics					
	Mean	Median	Std. Deviation	Minimum	Maximum
Q6_Before	2.4	2	.51	2	3
Q7_Before	2.10	2	.47	1	3
Q8_Before	2.22	2.50	.89	1	3
Q9_Before	1.50	1	.65	1	3
Q10_Before	2.36	2	1.09	1	4
Q6_After	2.67	2	.99	2	5
Q7_After	2.0	2	.74	1	3
Q8_After	2.25	2	.87	1	4
Q9_After	1.75	2	.63	1	3
Q10_After	2.67	2	.99	1	4

In the Frequencies table above students in the before questionnaire replied with the mean values between 1.50 and 2.36. For the same questions in an after questionnaire the mean values are between 1.75 and 2.67. It can be seen that mean values have reduced on average but still are between Likert scale 2 and 3. According to the Likert scale overall results are positive and in favor of a need or a better learning environment.

Cross tabulation

In order to find some significant results in these questions we again looked at crosstabs. Again only one crosstab was analyzed here as the results were quite similar.

The question that was analyzed is:

- The general atmosphere of the class affects my attitude towards that class

Table 7. Crosstab for Q: The general atmosphere of the class affects my attitude towards that class.

			Crosstabulation				Total
			Q8_After				
			Strongly agree	Agree	Neutral	Disagree	
Q8_Before	Strongly agree	Count	2	1	0	0	3
		% of Total	16.7%	8.3%	0.0%	0.0%	25.0%
	Agree	Count	0	1	1	0	2
		% of Total	0.0%	8.3%	8.3%	0.0%	16.7%
	Neutral	Count	0	4	2	1	7
		% of Total	0.0%	33.3%	16.7%	8.3%	58.3%
Total	Count	2	6	3	1	12	
	% of Total	16.7%	50.0%	25.0%	8.3%	100.0%	

As we can see that two students replied with “Strongly agree” both times. One students replied with “Agree” both times. Two students replied with “Neutral” response. It means five students did not change their responses in before and after responses. Four students changed their response from “Neutral” to “Agree”. One student changed his/her response from “Strongly agree” to “Agree”, one student changed from “Agree” to “Neutral”, one student

changed his/her response from “Neutral” to “disagree”. In case of percentages 41.7% of the responses remained neutral in this result. 33.3% of the responses changed from lower value to higher value on Likert scale and 24.9% responses were changed from higher to lower values on a Likert scale.

Thus, was this study meaningful? This study as you now know focuses on process more than content. Therefore, I only talk about learning that happens in process and not the content. Content is what students produced at the end of the course and get their grades from the tutor. How well did they do that is between tutor and students? I focused on the process and learning that was associated with it. My goal was to help students learn in meaningful ways and I used reflection, feedback and experiential learning to guide students to learn meaningfully. Students were able to show that they have realistic expectations in their final comments and reflections. A student can achieve a learning experience when he/she knows how to critically think, reflect and make meaning out of the work that he/she has done. During this study each time that the students reflected and shared their reflections they managed to gain new experience. Utilizing this experience in future studies or work places is what learning is about. At this stage, at least the students reduce their high expectations to the more realistic expectations. Tutor, on the other hand, also learned a lot which was apparent from her final reflections as mentioned in the results above. I see the potential and I trust in the abilities of students and that is why I want more classes to be flipped and I want every new student to learn and practice reflection, feedback and know experiential learning.

5 DISCUSSION

This thesis is about change. If I want to get out of my comfort zone and learn new ideas, I have to change myself. Therefore, when I started to talk about integration of group dynamics, I was also urging readers to think about their comfort zones and see the ways they can step out of their comfort zones and embrace change. Change at first seems difficult but it is not. It is very rewarding as we learn new things and ideas and make meaning. Integration of group dynamics into pedagogical models is not a new idea. It has been here for a long time. Although its implementation requires some effort. This thesis is one step forward in achieving such goal and possibly changing the minds.

In my discussion about group dynamics, I mentioned about trust building among teams. I also discussed about group dynamics in regards to content and process. Students when working in a group need to work together and if they do not know how to work more effectively, it can end in two ways. One way is that by the end of the group work, the work is complete but no one in a group is happy with each other's performance. In the other case, the work is done in a way that everyone is satisfied with each other. Yet, there is one small matter that needs more attention. That is atmosphere. To make a positive atmosphere we have to bring trust and to bring trust we need to collaborate. The best way to communicate is to give and receive feedback and finally at the end of the day reflect and share. In the section 2.2 (page 10) under the heading 'group maturity', Haines talked about doing task at least three times in order for the group to mature. The students during the main study did reflection three times. They gave and received feedback a number of times. The framework (divergent and convergent model) that I provided was used at least three times. This way, not only the students, but also I was subjected to experiential learning through this process. Upon reflecting on this learning experience, I decided to repeat the pre-study, in order to clarify previous results and see if simplifying workshop to the core aim of trust helps new students to build a good learning atmosphere.

I asked the new students a very simple question before coming to the workshop; Do you want to know how to build a trust among each other, and get to know the abilities of your classmates? The students accepted my invitation and I did a three-hour workshop on group dynamics with the students. Total of 15 students both male and female participated in the study. Out of 15 students only 14 students gave permission to use their data. During this workshop I had only two goals, hence I only talked about trust and atmosphere. Similarly, to the pre-study, in this workshop students performed one task, discussed it, reflected upon it, and gave each other feedback. At the end of the workshop, a separate reflection was not collected, as in the pre-study. They only filled in the same three questionnaires as in the pre-study: first questionnaire before the workshop, second immediately after the workshop and third questionnaire after one-month. Some results are worth mentioning, as they provide a good ground for comparison. Again, in the table 8 the results indicate high expectations after the workshop, which then reduce to realistic expectations after one-month delay. These results are quite consistent with the results of both pre-study and main study.

Table 8 How big difference group dynamics make in motivating a student

	N	Minimum	Maximum	Mean	Std. Deviation
Before	14	3	5	4.00	.679
After	14	4	5	4.57	.514
One Month delay	14	3	5	4.21	.579

The study in itself started with an assessment on whether group dynamics were needed in class using a small pre-study. After establishing the fact that at least University of Lapland students were seeking group dynamics approach to be implemented in classes. I continued by doing an action research where I integrated group dynamics methods into flipped methodology and then tested the student's and tutor's perceptions. I used both qualitative and quantitative data to find out the results. After discussing group dynamics, I moved towards flipped learning. I wanted to elaborate that there are common characterises both in group

dynamics and flipped learning that when combined may give us enhanced pedagogical model. Hence, using that approach students will be able to get more autonomy and trust in their abilities and their learning. Lastly, this study was action based study as it involved interaction among students, between students and tutor and among students, myself and tutor. The usefulness and relatedness of action research to my study can be best defined in the words of Martin (2001) and this also sums up my whole idea very clearly:

According to Martin (2001), action research is useful in the following ways: It can help you to learn more about pedagogical models which are interactive such as flipped learning, teaching using ICTs or learning in formal space. It helps in communication, listening to one another, getting ideas and developing on them.

I worked with a tutor to see if this new method helps students in their conceptions and experiences. Also whether the atmosphere becomes more friendly among students and between students and tutor. My interest was in the characteristics of group dynamics and flipped learning that deal with process and atmosphere of the class. Therefore, I focused on reflection, feedback and experiential learning in this thesis.

By looking at the pre-study and the main study results both qualitative and quantitative it is a clear observation of mine that pre-study results were better in regards to the understanding of group dynamics by the students. Whereas, in the main study students were bit confused in differentiating flipped learning with group dynamics integration. Even though my focus was still on group dynamics in the main study but it seemed that I somehow was not able to help students differentiate group dynamics from the flipped learning. They considered group dynamic activities as flipped learning activities. Therefore, many students thought that the activities when done in the class about content were not group dynamic methods. They only considered reflection and feedback as group dynamic activities that were done after class activities were over at the end of each session. Another issue that needs to be looked into, is the final evaluation on the last day in which students valued the flipped learning method

higher than group dynamic tasks. Is it because they were more concerned in using their time to work on the content?

During the study, I was looking and observing the atmosphere in the class. In the reflections during the main study, I saw many comments that were related to atmosphere. Students were learning from each other. They wanted to help the ones who needed help and trust was building among group members. Overall, atmosphere became positive during group work in classes.

The tutor of the course wrote in her reflection that the next time she will make groups that are not based on demographic-oriented teams. During the main study, we had all Spanish students in one group and all Finnish students in another group. Earlier in this text I referenced to demographic-oriented teams as being not a good idea which was also supported by research (Yang 2014, 860). Generally, groups function better when members are a combination of different races and nationalities. This can help the team members learn patience, and negotiation skills (Jackson et al. 2014.)

Time restriction and the feeling of not having enough time in hands was an issue both during the pre-test and the main study. During the pre-study I had three main groups. Out of those three, two groups were attending a university course during which I was given limited amount of time to conduct the group dynamic enhancing exercises. One group, on the other hand, was invited to come for group dynamics workshop on a Saturday when all the participants were free. This group on Saturday had ample time in their hands, and they spent three hours with me discussing, reflecting, and giving feedback about the task. This process no doubt brought them new perspective and experience on group dynamics. During the analysis I realized that the third group never mentioned anything about time constraints whereas the other two groups mentioned the time factor and the lack of it several times. Similarly, in the main study, time, specifically the lack of it, was the main factor that students raised repeatedly in the three reflections that they did during the 8 sessions. According to Savage et

al. (2015), already mentioned in group dynamics section, the time and space for personal reflection and exploration is a significant part of participant's learning. Therefore, when students mentioned that they needed more time and that the time was not enough then obviously they learned less and it also affected the atmosphere. I also discussed the teacher's perspective on the issue of not having extra time because of schedule, and content of the course being too much.

The time constraint problem can be solved by altering the pedagogical model in use. Every teacher follows one pedagogical model in his/her work, and if the model has a time already allocated for specific things, such as content and process, then the teacher will follow accordingly. In case of flipped learning, as we are enhancing this model, we can add for example 15 minutes of group dynamics session for feedback and reflection. In simple words, if the pedagogical model has built-in time for reflection and feedback then there will be no discussion on time issue.

On the other hand, as this was flipped learning course, students were given ample time (one week before next class) to work in their groups before coming to classes. They had a time to work on their issues and come prepared with the questions. I noticed that many groups did not work during the weeks between classes and then in the class tutor had to go through with their issues from the start. That is why students were unable to ask all the questions that they had and I must say that they blamed it on time. Now that we know what went wrong it can easily be addressed in the future. Tutor can motivate students more to work outside of the class and students should also manage their time better outside of the class.

Students in both pre and main study had high expectations at the beginning. Pre-study workshops met with their expectations as we saw in the quantitative results section but in the case of the main study I was unable to find any significant changes. In the main study, even though the results of quantitative data were not significant, the values on Likert scales were still above neutral values and leaning towards high scales. Those values in main study together with the results from pre-study show that students were in need of group dynamic

sessions. The results also show that students had very realistic understanding of the group dynamic methods and their need in the higher education.

This study has some limitations

In this study I have tried to promote the term facilitator as compared to the term teacher. This means teacher should give more responsibility to the students, have a trust on the student's abilities and by doing this a teacher becomes a facilitator. This also means that teaching becomes student oriented. Some would say that this is a wild idea and teacher cannot be called or become a facilitator. In this study, I have mentioned many researchers that have discussed about a need of a facilitator in schools, colleges and universities. The change that I have talked about is also the change of role of the teacher by getting into the role of a facilitator. Obviously this will take time and effort and this is my first limitation in this study.

In this study I only worked with one teacher. This teacher likes change as she called herself a tutor. One step close to facilitator and away from term teacher. In my opinion, a start that I am looking for. Another related limitation about this idea of mine is that every teacher is not the same. Some like to teach better in teacher – oriented environment and some are better at student – oriented approaches. Teachers who are comfortable with teacher – oriented approach are the ones who I am targeting and asking them to consider to take a step towards change and have some trust in student's abilities.

Online material that we used for flipped class was very limited in itself. Tutor made her own videos for the course. The resources were limited and students were advised to find more resources on their own, therefore, there is a need to update our flipped course with more resources. The class was generally interactive because of the group dynamics integration. The atmosphere was good and encouraging according to student's and tutor's reflections, as well as my own observations.

In our faculty of education, only in one course, we used flipped learning method. We cannot make huge decisions on the results that are based on one course. As I was looking into student's and tutor's perspective, it is not right to make huge claims on the basis of one course. I believe this study to be the start of a change and I need to continue with more courses and with more students and in different subjects. I need to do this study with different subjects and faculties to make sure group dynamics and flipped learning provides students a better learning platform and atmosphere.

One such limitation that I have seen in so many researches is about number of students and control group studies. Even though number of students were less but was accepted by my supervisor. Nevertheless, in future I would like to do the research with more students and with more teachers and obviously I will do the study with control group approach as well.

The next steps would be

First and foremost, flipped learning should be continued in University of Lapland. I consider my study to be the starting point. I introduced group dynamics to the students of University of Lapland. During this process students also were introduced to flipped learning for the first time. As my focus was on the group dynamics I still did not forget flipped learning and its impact on students. I think flipped learning in itself impacted a lot on the students during this study. In general, flipped learning is changing the ways of learning. Flipped learning, encourages students to collaborate and it also encourages students to collaboratively work formally and informally - at schools and away from schools. It allows students to work at their own pace and from anywhere (Toivola & Silfverberg 2014, 1; Hamdan, McKnight, McKnight & Arfstrom 2013, 4, 7; Nguyen et al. 2015, 52). A study done by Nguyen et al. (2015) also suggests that continues innovation is needed in flipped learning approach. Furthermore, flipped teaching is considered by many researchers and teachers that it is a start of improving future educational model and it can transform future classrooms (Nguyen et al. 2015, 52). Due to the fact that change is needed and there are some drawbacks in flipped learning researchers asked for improvements. The integration of group dynamics and keeping

an eye on atmosphere (figure 1) during the class is one step closer to improving flipped learning. During first year of studies it is very crucial to keep student engaged and provide them with sense of belonging (McFarlane 2016, 78).

Keeping in mind Dewey's ideas of problem solving teachers, process versus content, and classroom versus organization development we can use action research in our education system. Some teachers do use action research as mentioned by Yasmeeen (2008) that action research is a progressive form of study that is commonly used by teachers in schools (Yasmeeen 2008, 46).

6 POTENTIAL USABILITY OF THE RESULTS AND SUGGESTIONS

The question that arises now is how to proceed with the results of this study. Dewey urged educators to teach students how to think, rather than teach facts (Pasmore 2001, 38, 39). This idea to teach students how to think is still relevant after so many years. Why is it that an idea that brings change is still waiting to be implemented after such a long time?

Students need employability. Students expect universities to provide them with the necessary skills and competences to be employed upon completion of studies. Universities' objective is to provide students with the best courses that will lead to better employability. Statistics from one Australian research shows different results about these university expectations. A total of 852 participants (students, graduates, staff and employers) participated in a graduate employability survey conducted in 2014 in Australia. Out of all these participants only 14 percent were optimistic for graduates to get employed after graduation, whereas, 51% were pessimistic about getting a job, and rest were neutral. In the same research employers said that they recruit graduates with the top three skills, such as of communication skills (75%), motivation/initiative skills (55%), and leadership skills (50%) (Kinash et al. 2016, 1-15).

There are many researchers who are saying that university resources, curriculum for the students and other services provided to the students are not enough for employability (Kinash et al. 2016, 2; Bridgestock 2009, 32; Jackson 2013, 778; Jackson & Chapman 2012, 113; Smith & Trede 2013, 633). Employability means that universities are providing enough support, resources and a curriculum that enable students to get employment after graduation. The fact that universities hire researchers, and these academics tend to focus on theory rather than training students into learning skills practically, can lead to challenges later when looking for work. University lecturers and researchers keep students busy with theories and assignments (Kinash et al. 2016, 2), leading to no practical knowledge. This in turn, affects the students' employability after graduation. Universities could easily support and create practices, such as reflective practices and self-directedness, that promote the graduates'

employability (Kinash et al. 2016, 2; Bridgestock 2009, 33; Jackson 2009, 30; Smith & Trede 2013, 634; Su 2014, 1209).

Two core changes are proposed to student-centered learning approaches, such as flipped learning; first, using facilitation methodologies (group dynamics) to enhance flipped learning pedagogical framework to reform teaching in higher education, and second, introducing group dynamics to educators and students in order to improve learning outcomes and promote meaningful learning. In order to do so, a model by Kim et al. (2014) was taken in to consideration. The model is called nine design principles of the flipped learning. I, however, added two more principles in this model (Fig. 7) in blue and with underlining. Thus, the new model has eleven principles. The changes to the model are proposed here in order to show that written changes in a pedagogical model makes it easy for the users of the pedagogical models to have time to adopt and implement any changes.

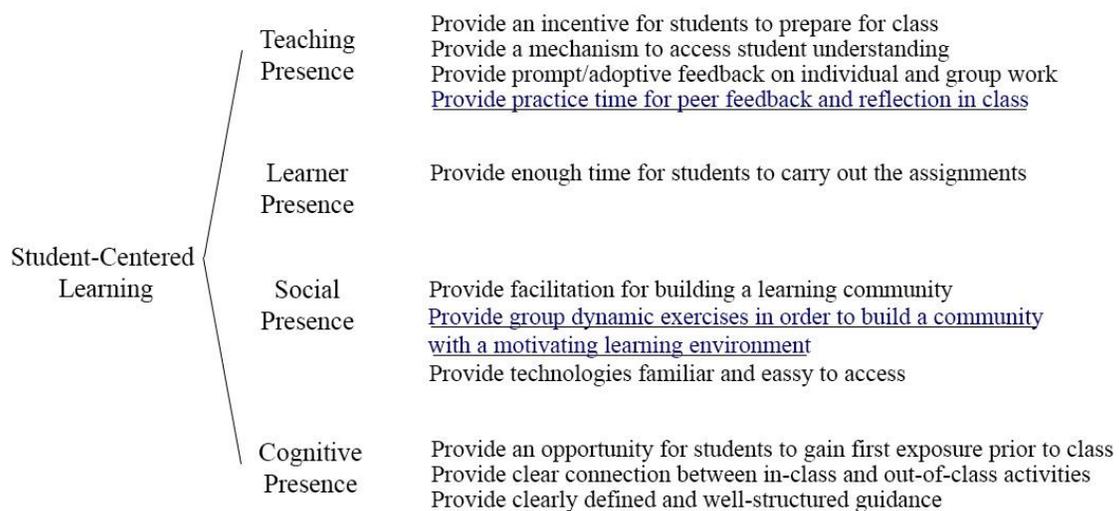


Figure 7 eleven design principles of the flipped learning based upon Kim et al. (2014) nine design principles of the flipped learning

I suggest that in our department we arrange a session at the start of each academic year. This session would take a week and by the end of the week we aim to facilitate students in the basics of group dynamics. After this week students proceed to their normal class schedules

and build on the learning that took place over the week. This is one way to move ahead after this study. Another way, which has already been implemented, is to continue with the flipped learning approach integrated with group dynamics. The results, as I have discussed before, were not significant but we can make them better during the next course. It has been proven by research that interactive and collaborative interaction are more likely to encourage students to learn more deeply. Thinking deeply in return help students to have higher learning outcomes (Hardman 2016, 65).

Students get motivation from the teachers as well as many other things, like atmosphere, their own interests in the subjects and facilities provided by universities. The university of Lapland is a far most university in the country. Every year many students at the last moment change their mind and go to a university that is in a big city and close to capital and if not in capital. We here at the university need to do a bit more to get the students come here. There is a lot of competition for the international students and with the fee implementation it will be more challenging to attract students to come to a place with limited job opportunities. We need to make our courses attractive. We also need to show new students that we can provide them tools and experience to find job or helping in establishing their own businesses. Providing them with classes three days in a week is not an option anymore. In simple words "great institutions respond with thoughtfulness and creativity, driven by compulsion to turn unrealized potential into results, whereas, mediocre companies follow leaders and only try to survive in a hope to not fall behind (Garrison & Kanuka 2004, 103)".

References:

- Arjen, E.J. & Jickling, W.B. 2002. "Sustainability" in higher education. *International Journal of Sustainability in Higher Education* 3(3), 221–232.
- Arnold, L. 2015. Action research for higher education practitioners: A practical guide. Retrieved 20. February 2016 from <https://lydiaarnold.files.wordpress.com/2015/02/action-research-introductory-resource.pdf>
- Baepler, P., Walker, J.D. & Driessen, M. 2014. It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. ScienceDirect. Elsevier.
- Bielaczyc, K. and Collins, A. 2009. learning Communities in Classrooms: A Reconceptualization of Educational Practice. In C.M. Reigeluth (Ed.) *Instructional-Design Theories and Models: A New Paradigm of Instructional Theory*. Volume II. New York. Routledge, 269–292.
- Bridgestock, R. 2009. The graduate attribute we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development* 28(1), 31–44
- Chan, K.-Y., Uy M.A., Chernyshenko, O.S., Ho M.-H., R. & Sam, Y.-L. 2015. Personality and entrepreneurial, professional and leadership motivations. *Personality and Individual Differences* 77, 161–166.
- Chen, Y., Wang, Y., Kinshuk, Chen, N.-S. 2014. Is Flip enough? Or should we use FLIPPED model instead? *Computers & Education* 79, 16–27.
- Chughtai, A.A. 2015. Creating safer workplaces: The role of ethical leadership. ScienceDirect *Safety Science* 73, 92-98.
- Cohen, L., Manion, L. & Morrison, K. 2011. *Research Methods in Education*. 7th edition. New York. Routledge, 344–361.
- Dewey, J. 1933. *How We Think. A restatement of the relation of reflective thinking to the educative process* (Revised edition), Boston: D. C. Heath.
- Ellis, A.R. 2016. Qualitatively different university student experiences of inquiry: Associations among approaches to inquiry, technologies and perceptions of the learning environment. *Active Learning in Higher Education* 17(1), 13–23.
- Foldnes, N. 2016. The flipped classroom and the cooperative learning: Evidence from a randomized experiment. *Active learning in higher education* 17(1), 39–49.
- Fyrenius, A., Bergdhal, B. & Silén, C. 2005. Lectures in problem-based learning- Why, when, and how? An example of interactive lecturing that stimulates meaningful learning. *Medical Teacher* 27(1), 61–65.

- Garrison, D.R. & Kanuka, H. 2004. Blending learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education* 7, 95–105.
- Golonka, K. & Mojsa-Kaja, J. 2013. Emotional intelligence and team roles - Analysis of interdependencies with regard to teamwork effectiveness. *International Journal of Contemporary Management* 12(4), 32–44.
- Gregory, M. 1994. Accrediting Work-based Learning – A Model for Empowerment. *Journal of Management Development* 13(4), 41–52.
- Groves, M., Leflay, K., Smith, J., Bowd, B. & Barber, A. 2013. Encouraging the development of higher-level skills using an experiential learning framework. *Teaching in Higher Education* 18(5), 545–556.
- Haines, R. 2014. Group development in virtual teams: An experiential re-examination. *Computers in Human Behavior* 39, 213–222.
- Hakkarainen, P. & Vapalahti, K. 2011. Meaningful Learning through Video-Supported Forum-Theater. *International Journal of Teaching and Learning in Higher Education* 23(2), 314–328.
- Hakkarainen, P. 2009. Designing and implementing a PBL course on educational digital video production: lessons learned from a design-based research. *Educational Technology Research and Development* 57, 211–228.
- Hamdan, N., McKnight, P., McKnight, K. & Arfstrom, K.M. 2013. A review of Flipped learning. *Flipped learning Network*. George Mason University.
- Hardman, J. 2016. Tutor-student interaction in seminar teaching: Implications for professional development. *Active Learning in Higher Education* 17(1), 63–76.
- Howland, J. L., Jonassen, D. H., & Marra, R. M. 2012. *Meaningful learning with technology* (4th ed.). Boston (Mass.): Pearson.
- Huggins, C. M. & Stamatel, J.P. 2015. An exploratory study comparing the effectiveness of lecturing versus team-based learning. *Teaching sociology* Vol. 43(3) 227–235.
- Jackson, D., Hickman, L.D., Power, T., Disler, R., Potgieter, I., Deek, H. & Davidson, P.M. 2014. Small group learning: Graduate health students' views of challenges and benefits. *eContent Management private limited Contemporary Nurse* Vol. 48(1), 117–128.
- Jackson, D. 2009. An international profile of industry-relevant competencies and skill gaps in modern graduates. *The International Journal of Management Education* 8(3), 29-58.
- Jackson, D. 2013. Business graduate employability – where are we going wrong? *Higher Education Research & Development* 32(5), 776–790.

Jackson, D. & Chapman, E. 2012. Empirically derived competency profiles for Australian business graduates and their implications for industry and business schools. *The international Journal of Management Education* 10, 112–128.

Johnson, A.P. 2012. Introduction to Action research. Retrieved 20. February 2016 from https://www.academia.edu/8651842/INTRODUCTION_TO_ACTION_RESEARCH

Kakosimos, K.E. 2014. Example of a micro-adaptive instruction methodology for the improvement of flipped-classrooms and adaptive-learning based on advanced blended learning tools. The institute of Chemical Engineers. Elsevier.

Kemmis, S. 2001. Exploring the Relevance of Critical Theory for Action Research: Emancipatory Action Research in the Footsteps of Jürgen Habermas. In P. Reason & H. Bradbury (eds.). *Handbook of Action Research*. Los Angeles, London, New Delhi, Singapore. Sage Publications, 94–105.

Kiener, M., Zelinske, A. & Green P. J. 2015. Utilizing Experiential Learning in a Research Methods Course to Increase Value and Comfort in Research. *Transformative Dialogues: Teaching and Learning Journal* Vol. 8(1), 1–15.

Kim, M.K., Kim, S.M., Khera, O. & Getman, J. 2014. The Experience of three flipped classrooms in an urban university: an exploration of design principles. *Internet and Higher Education* Vol. 22, 37–50.

Kinash, S., Crane, L., Judd, M, & Knight, C. 2016. Discrepant stakeholder perspectives on graduate employability strategies. *Higher Education Research & development*, 1–15.

Lornudd, C., Tafvelin, S. & von Thiele Schwarz, U. 2015. The mediating role of demand and control in the relationship between leadership behaviour and employee distress: A cross-sectional study. *International journal of Nursing Studies* Vol. 52, 543–554.

Lussier, N.R. & Achua, F.C. 2015. *Leadership: Theory, Application and Skill Development* Sixth Edition. Cengage Learning USA.

Löfström, E. & Nevgi, A. 2007. From strategic planning to meaningful learning: diverse perspectives on the development of web-based teaching and learning in higher education. *British Journal of Educational Technology* Vol. 38(2), 312–324.

Martin, A.W. 2001. Large-group Process as Action Research. In P. Reason & H. Bradbury (eds.) *Handbook of Action Research*. Los Angeles, London, New Delhi, Singapore. Sage Publications, 166–175.

Maruping, L. M. & Magni, M. 2015. Motivating employees to explore collaboration technology in team contexts. *MIS Quarterly* Vol. 39(1), 1–16.

McCallum, S., Schultz, J., Sellke, K. & Spartz, J. 2015. An examination of the flipped classroom approach on college students' academic involvement. *International Journal of teaching and Learning in Higher Education* Vol. 27(1), 42–55.

McFarlane, J. K. 2016. Tutoring the tutors: Supporting effective personal tutoring. *Active Learning in Higher Education* 17(1), 77–88.

Nguyen, B., Yu, X., Japutra, A. & Chen, C-H. S. 2016. Reverse teaching: Exploring student perceptions of ‘flip teaching’. *Active learning in higher education* 17(1), 51–61.

Novak, J.D. 2011. A Theory of Education: Meaningful Learning Underlies the Constructive Integration of Thinking, Feeling, and Acting Leading to Empowerment for Commitment and Responsibility. *Meaningful Learning Review* 1(2), 1–14.

O’Flaherty, J. & Phillips, C. 2015. The use of flipped classrooms in higher education: A scoping review. *Internet and Higher Education* 25, 85–95.

Pasmore, W. 2001. Action Research in the Workplace: The Socio-technical Perspective. In P. Reason & H. Bradbury (eds.) *Handbook of Action Research*. Los Angeles, London, New Delhi, Singapore. Sage Publications, 38–48.

Philips, G. 2014. The production-based PhD: an action research model for supervisors. *Quality Assurance in Education* 22(4), 370–383.

Poikela, E. & Poikela, S. 2005. The strategic points of problem-based learning—Organising curricula and assessment. In E. Poikela & S. Poikela (Eds.), *PBL in context: Bridging work and education*. Tampere, Finland: Tampere University Press ,7–22.

Ruokamo, H., Hakkarainen, P. & Eriksson, M. 2012. Designing a Model for Enhanced Teaching and Meaningful E-Learning. In A.D. Olofsson & J.O. Lindberg (Eds.) *Informed Design of Educational Technologies in Higher Education: Enhanced Learning and Teaching*. Hershey, USA. Information Science Reference, 375–392.

Seaboyer, J. 2015. Flipped Classroom Case Study. University of Queensland, Australia. Retrieved from <http://www.uq.edu.au/teach/flipped-classroom/docs/cs-seaboyer.pdf> 25.10.2015

Savage, E., Tapics, T. Evarts, J., Wilson, J. & Tirone, S. 2015. Experiential learning for sustainability leadership in higher education. *International Journal of Sustainability and Higher Education* 16(5), 692–705.

See, S. & Conry J. M. 2014. Flip my class! A faculty development demonstration of a flipped-classroom. St. John's University College of Pharmacy and Health Sciences, Jamaica, Ny. Published by Elsevier.

Slavin, R.E. 1992. When and why cooperative learning increase achievement? Theoretical and empirical perspectives. In R. Hertz-Lazarowitz & N. Miller (Eds.), *Interaction in cooperative books: The Theoretical anatomy of group learning*. New York: Cambridge University Press, 145–173.

- Smith, M. & Trede, F. 2013. Reflective practice in the transition phase from university student to novice graduate: Implications for teaching reflective practice. *Higher Education Research & Development* 32(4), 632–645.
- Stewart, K. & Kilmartin, C. 2014. Connecting the Dots: The Decline in Meaningful Learning. *Journal of Faculty Development* 28(2), 53–61.
- Su, Y. 2014. Self-directed, genuine graduate attributes: The person-based approach. *Higher Education research & Development* 33(6), 1208–1220.
- Sweet, M. & Michaelsen, L.K. 2007. How Group Dynamics Research Can Inform the Theory and Practice of Postsecondary Small Group Learning. *Educational Psychology Rev* 19, 31–47.
- Thomas, G. 2004. A Typology of Approaches to Facilitator Education. *Journal of Experiential Education* 27(2), 123–140.
- Thomas, G. 2010. Facilitator, Teacher, or Leader? Managing Conflicting Roles in Outdoor Education. *Journal of Experiential Education* 32(3), 239–254.
- Thomas, R. & Quinlan, E. 2014. Teaching and Learning Focus Group Facilitation: An Encounter with Experiential Learning in a Graduate Sociology Classroom. *Focus Group Facilitation. Transformative Dialogues: Teaching & Learning Journal* 7(1), 1–15.
- Toivola, M. & Silfverberg, H. 2014. Flipped learning - Approach in Mathematics Teaching - A Theoretical Point of View. A preprint of article in *Matematiikan ja luonnontieteiden opetuksen tutkimusseuran tutkimuspäivät 2014 Oulun Yliopisto*.
- Tsai, C.-W., Shen, P.-D. & Chiang, Y.-C. 2013. Research trends in Meaningful Learning research one-learning and online education environments: A review of studies published in SSCI-indexed journals from 2003 to 2012. *British Journal of Education Technology* 44(6), E179–E184.
- Vuopala, E., Hyvonen, P. & Jarvela, S. 2016. Interaction forms in successful collaborative learning in virtual learning environments. *Active Learning in Higher Education* 17(1), 25–38.
- Wanner, T. & Palmer, E. 2015. Personalising learning: Exploring student and teacher perceptions about flexible learning and assessment in a flipped university course. ScienceDirect, Elsevier.
- Webb M. 2011. Changing models for researching pedagogy with information and communication technologies. Published by Blackwell publishing Ltd. *Journal of Computer Assisted Learning* 1–15.
- Wheelan, S.A. & Burchill, C. 1999. Take teamwork to new heights. *Nursing Management*. 30(4), 28-31.

Yang, I. 2014. What makes an effective team? The role of trust (dis)confirmation in team development *European Management Journal* 32, 858–869.

Yasmeen, G. 2008. Action research: An approach for the teachers in higher education. *The Turkish Online Journal of Educational Technology – TOJET*. 7(4) Article 5, 46–53.

Zuber-Skerritt, O. (ed.). 1991. *Action Research for Change and Development*. Adelshot, Brookfield USA, Hong Kong, Singapore, Sydney. Avebury.

Appendix A

Consent Form for Participation in a Research Study

Lapland University

Title of Study:

Group Dynamics in Flipped and Social Learning Situations in Higher Education

Description of the research and your participation:

You are invited to participate in a research study conducted by Imran Riaz Chohan for his Master's Thesis. The purpose of this research is to investigate the possibility of enhancing learning experiences by group dynamic methods.

Your participation will involve group dynamics workshop, reflection sessions at the end of particular university lectures, and a questionnaire before and after your particular course.

Risks and discomforts:

There are no known risks associated with this research.

Potential benefits:

This research may help to understand the benefits of group dynamics and reflection in collaborative learning.

Protection of confidentiality:

The confidentiality of records identifying the participants is of utmost importance. We will do everything we can to protect your privacy. Your identity will not be revealed in any publication resulting from this study.

Voluntary participation:

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Contact information:

If you have any questions or concerns about this study or if any problems arise, please contact Imran Riaz Chohan at Lapland University at ichohan@ulapland.fi

Consent:

I have read this consent form and have been given the opportunity to ask questions.

I give my consent to participate in this study.

____ YES ____ NO

I give my consent to be photographed during this study and to the use the photographs in the context of this study.

____ YES ____ NO

Participant's Name: _____

Participant's signature: _____

Date: _____

A copy of this consent form should be given to you.

Appendix B

**Pre-Study about Group Dynamics in Flipped and Social Learning Situations in
Higher Education**

Questionnaire A

1. Your gender:

1. Female _____ 2. Male _____

2. Your age: _____**3. Country of your origin:** _____**4. The course you are taking after group dynamics workshop:** _____

5. On a scale from 1 to 5, how big difference can group dynamics (positive atmosphere) of the classroom make in motivating a student?

No difference at all

Very big difference

1

2

3

4

5

6. Does doing reflection in class affect your learning?

1. Yes
2. I don't know
3. No

7. Can my behavior make it easier for the group to achieve effective learning?

1. Yes
2. No

8. Can the behavior of others make it easier for the group to achieve effective learning?

1. Yes
2. No

9. Please indicate your opinion of the following

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I like working alone	1	2	3	4	5
I like working in pairs or groups	1	2	3	4	5
The general atmosphere in the classroom affects my attitude towards that class	1	2	3	4	5
Feedback about my work and assignments is important for me	1	2	3	4	5
The atmosphere in the class affects my work input of the assignments	1	2	3	4	5

10. Does doing reflection in class affect class atmosphere?

1. Yes
2. I don't know
3. No

11. What do you think, or how do you see group dynamics (feedback, reflection, team atmosphere)?

Appendix C

Study about Group Dynamics in Flipped and Social Learning Situations in Higher Education

Questionnaire B

1. Your gender:

1. Female _____ 2. Male _____

2. Your age: _____

3. Country of your origin: _____

4. The course you are taking after group dynamics workshop: _____

5. On a scale from 1 to 5, how big difference can group dynamics (positive atmosphere) of the classroom make in motivating a student?

No difference at all

Very big difference

1

2

3

4

5

6. Does doing reflection in class affect your learning?

- A. Yes
- B. I don't know
- C. No

7. Can my behavior make it easier for the group to achieve effective learning?

- A. Yes
- B. No

8. Can the behavior of others make it easier for the group to achieve effective learning?

- A. Yes
- B. No

9. Please indicate your opinion of the following

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I like working alone	1	2	3	4	5
I like working in pairs or groups	1	2	3	4	5
The general atmosphere in the classroom affects my attitude towards that class	1	2	3	4	5
Feedback about my work and assignments is important for me	1	2	3	4	5
The atmosphere in the class affects my work input of the assignments	1	2	3	4	5

10. Does doing reflection in class affect class atmosphere?

- A. Yes
- B. I don't know
- C. No

11. What do you think, or how do you see group dynamics (feedback, reflection, team atmosphere)?

12. Did this workshop change your view about group work? Why? How?

Appendix D

Study about Group Dynamics in Flipped and Social Learning Situations in Higher Education**Questionnaire C****1. Your gender:**

1. Female _____ 2. Male _____

2. Your age: _____**3. Country of your origin: _____****4. The course you are taking after group dynamics workshop: _____****5. On a scale from 1 to 5, how big difference can group dynamics (positive atmosphere) of the classroom make in motivating a student?**

No difference at all

Very big difference

1

2

3

4

5

6. Does doing reflection in class affect your learning?

- A. Yes
- B. I don't know
- C. No

7. Can my behavior make it easier for the group to achieve effective learning?

- A. Yes
- B. No

8. Can the behavior of others make it easier for the group to achieve effective learning?

- A. Yes
- B. No

9. Please indicate your opinion of the following

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I like working alone	1	2	3	4	5
I like working in pairs or groups	1	2	3	4	5
The general atmosphere in the classroom affects my attitude towards that class	1	2	3	4	5
Feedback about my work and assignments is important for me	1	2	3	4	5
The atmosphere in the class affects my work input of the assignments	1	2	3	4	5

10. Does doing reflection in class affect class atmosphere?

4. Yes
5. I don't know
6. No

11. What do you think, or how do you see group dynamics (feedback, reflection, team atmosphere)?

12. Did you observe any change in group dynamics (class atmosphere) after workshop in this course? How?

13. Did you do something differently in this class after the workshop?

Appendix E

Group Dynamics in Flipped Learning Situations in Higher Education**Questionnaire for MEDU3105 (Before)**

- 1) Your gender?
 - 2) Your age?
 - 3) Country of your origin?
 - 4) Have you done team building exercises before?
 - a) Yes
 - b) No
 - 5) Elaborate on your experience. Skip if you said “No” in question 4.
-
- 6) Please indicate your opinion of the following:
 - a) About the subject of group dynamics (class atmosphere); How much can group dynamics motivate a student?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - b) How much does reflection in class affect your learning?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - c) How much can your behavior affect the class atmosphere?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - d) How much can your behavior help the group to achieve effective learning?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - e) How much can the behavior of others help the group to achieve effective learning?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all

- 7) Can your behavior make it easier for the group to achieve effective learning?
- (1) Yes
 - (2) I never thought of it before
 - (3) No
- 8) Can the behavior of others make it easier for the group to achieve effective learning?
- (1) Yes
 - (2) I never thought of it before
 - (3) No
- 9) Please indicate your opinion of the following:
- a) I like working alone
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - b) I like working in pairs or groups
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - c) The general atmosphere of the class affects my attitude towards that class
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - d) Feedback about my work and assignments is important for me
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - e) The atmosphere in the class affects my work input of the assignments
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
- 10) Does good class atmosphere make you feel more positive about the course? Please explain how:

Appendix F

Group Dynamics in Flipped Learning Situations in Higher Education**Questionnaire for MEDU3105 (After)**

- 1) Your gender?
- 2) Your age?
- 3) Country of your origin?
- 4) Please indicate your opinion of the following:
 - a) About the subject of group dynamics (class atmosphere); How much can group dynamics motivate a student?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - b) How much does reflection in class affect your learning?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - c) How much can your behavior affect the class atmosphere?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - d) How much can your behavior help the group to achieve effective learning?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
 - e) How much can the behavior of others help the group to achieve effective learning?
 - i) To very high degree
 - ii) To high degree
 - iii) To moderate degree
 - iv) To small degree
 - v) Not at all
- 5) Can your behavior make it easier for the group to achieve effective learning?
 - (1) Yes
 - (2) I never thought of it before
 - (3) No

- 6) Can the behavior of others make it easier for the group to achieve effective learning?
- (1) Yes
 - (2) I never thought of it before
 - (3) No
- 7) Please indicate your opinion of the following:
- a) I like working alone
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - b) I like working in pairs or groups
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - c) The general atmosphere of the class affects my attitude towards that class
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - d) Feedback about my work and assignments is important for me
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - e) The atmosphere in the class affects my work input of the assignments
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
- 8) Does good class atmosphere make you feel more positive about the course? Please explain how:
- 9) How different is the atmosphere in this class from the other classes you are in at the moment?
- 10) I am happy to be in a flexible learning atmosphere?
- i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree

- 11) Would you like to have a flexible learning atmosphere in other classes?
- i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
- 12) To involve you in a presentation evaluation process is an excellent idea?
- i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
- 13) Group Dynamics exercises (done by Imran in class) helped you understand:
- a) Group work
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - b) Idea development
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - c) Reflection
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree
 - d) Feedback
 - i) Strongly disagree
 - ii) Disagree
 - iii) Neutral
 - iv) Agree
 - v) Strongly agree

Acknowledgment

I thank my colleagues (The Great Mediators 2.0) from the University of Lapland, Master in Media Education, who provided insight and expertise that greatly assisted the research, although they may not agree with all of the interpretations or conclusions of this thesis.

I thank Satu-Maarit Frangou for comments that greatly improved the manuscript. I am also immensely grateful to my class mates for their feedback and comments on earlier versions of the thesis, although any errors are my own and should not tarnish the reputations of these esteemed persons.

Finally, I am grateful to my parents, brother and sisters in their support in the completion of this thesis.