

**UNIVERSITY OF TARTU**  
**COLLEGE OF FOREIGN LANGUAGES AND CULTURES**  
**DEPARTMENT OF ENGLISH STUDIES**

**FLIPPED CLASSROOM:**  
**A CASE STUDY OF ESTONIAN BASIC SCHOOL EFL CLASSES**

**MA thesis**

**REET ROSPU**

**SUPERVISOR: *Asst. Lect.* NATALJA ZAGURA, MA**

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## ABSTRACT

The aim of the study was to determine the efficiency of using classroom and home flipped environment in Estonian basic school EFL classes. Flipped Classroom methodology has been in the centre of discussion in recent years for it provides a combination of learning theories that have been thought to be incompatible. There may be tasks in language learning and teaching that need passive absorption of predefined knowledge; on the other hand, learners are changing and new technology is a natural part of the surrounding environment from as early as pre-school and kindergarten which has changed the concepts of education. Learning and teaching process is more effective, when learners are participating actively using their creativity in knowledge and skills construction and when learning goals are determined by the learners. When planning learning process it is vital that the chosen strategy would cause learning and in the centre of it were an active learner.

The thesis consists of two chapters. In the first chapter background information on Computer Assisted Learning, Blended Learning and Flipped Classroom Methodology is provided and the benefits and difficulties in implementing the Flipped Classroom Methodology in EFL classes are discussed. Guidelines for implementing the Flipped Classroom methodology are provided and some case studies are discussed. In the second chapter a case study conducted on implementing the Flipped Classroom Methodology in EFL classroom is discussed and the methodology of the study is provided. The activities created for the case study, the process of implementing them and other activities in lessons are discussed, qualitative data analysis is used, the reflections on the process and experience is provided. The results of the survey are reviewed and followed by a discussion and conclusion.

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## **LIST OF ABBREVIATIONS**

BL – Blended Learning

CALL – Computer Assisted Language Learning

EFL – English as a Foreign Language

FCM – Flipped Classroom Methodology

ICT – Information and Communication Technology

MOOC – Massive Open Online Course

SLA – Second Language Acquisition

## INTRODUCTION

Blended Learning (BL), Computer Assisted Language Learning (CALL) and Flipped Classroom Methodology (FCM) are not any new approaches in English language teaching. Using computers in learning and teaching has a long history and the researchers have been trying to find an answer to the question how to apply technologies so that they helped students to learn more investing less time and effort. The wider use of technology in learning languages started quite recently, in the early 1990s the first materials were presented (Delcloque 2000: 24). Computers have been generally used in learning since the 1960s, for more than fifty years, and during the time there have been many stages of development in the philosophy of teaching and learning languages. The interpretation of how to use computers in learning as well as in language learning more specifically has changed accordingly (Warschauer et al: 1998). In the behaviourist approach teachers use technology for drills and testing while constructivist approach gives way to more creative use of technology when solving problems, using simulations and real world contexts with critical thinking. The question for teachers and researchers is how to "learn *with* digital media rather than how to learn *via* digital media", the first of which gives the opportunity to use many functions of technology (Thomas et al 2013: 3). Each learner is unique and the learning situation depends on the needs of the learner (Bloom 1984: para. 6). Using technology in language learning can provide learners with the opportunity to learn differently and at their own pace and time and maybe this way achieve better results in their learning. In 1984 Benjamin S. Bloom stated that the best teaching-learning condition is one-to-one tutoring when the teacher can immediately intervene when there is a misunderstanding, can correct and give feedback and lead the learning towards the

objective.

In 2001 Marc Prensky (2001a: 2) wrote in his article on Digital Natives that "stimulation of various kinds actually changes brain structures and affects the way people think, and that these transformations go on throughout life". The structure of the brain of the younger students sitting in the classroom today is different from the students finishing high school, so the learning process needs to be different as well. Their ability to grab information from various sources flowing simultaneously is far better than those who did not have computers while going to kindergarten. It may be very difficult for younger students to learn singularly and from level to level, they process information in a different way (Prensky 2001a: 4). Nevertheless, Ray Clifford has declared that, "Computers will not replace teachers. However, teachers who use computers will replace teachers who don't" (Healey et al 2008: 3). At the same time he is worried about the knowledge of teachers because "their understanding of computers lags significantly behind that of their students", which is still relevant, almost 30 years later (Clifford 1987: para. 6).

Conversely, in 2010 Ellen Helsper and Rebecca Enyon (2010: 518) in their article on digital natives showed that there is no unbridgeable differences between young and older people, but also gender, education, experience, and breadth of use technologies are the traits that define whether a person is so called digital native or digital immigrant. There is widely used terminology that relates the time of birth to technology: digital natives, the net generation, the Google generation, the millenials, but in relation to technology 'doing' is more important than 'being', so teachers 'can speak the same language' in spite of the age difference. It is worth notice that the uncritical use of the terminology may have a negative impact on teacher – student interaction (Helsper et al 2010: 518). According to the new paradigm, education is a social process where teachers and students work together to help students to construct, extend and transform their unique knowledge.

One of the tools that facilitates the process of learning languages combining interactive and individualised learning is CALL. It is a broad discipline that comprises teaching and learning at the computer, it is "any process in which a learner uses a computer and, as a result, improves his or her language" (Beatty 2013: 7). CALL started in the United States in the early 1960s when the PLATO (Programmed Logic for Automatic Teaching Operations) project started and culminated in mid- to late 1970s (Thomas et al 2013: 21). One of the earliest books on CALL was written by John Higgins and Tim Johns in 1984. In 2012, about thirty years later, the term CALL was still in use as an overarching term representing many topic areas (Thomas et al 2013: viii). The first studies on CALL were conducted to find out whether CALL provides better results when used in teaching and learning process or not, they were to investigate if CALL is superior to non-CALL (Hegerheimer et al 2004: 186). According to some researchers, in 2014 most of the research conducted on implementing CALL was still not moved away from the comparison between CALL and non-CALL. It was suggested to investigate the Second Language Acquisition (SLA) in the authentic environment in the classrooms and investigate the individual coding elements, which are constructed taking into account the learner and the learning context. It was suggested that the skills (reading, writing, speaking, or listening) and knowledge (vocabulary, grammar or pronunciation) should be assessed and adapted according to the learner to be the base for applying the CALL in SLA classroom (Handley 2014: 49).

Combining CALL and face-to-face learning, BL is more commonly used than pure CALL, but has a great deal of ambiguity in the term (Graham 2004: para. 5). It emerged in the 1970s, when the first popular microcomputers appeared (Graham 2012: para. 2). Contrary to the common understanding, BL does not mean only integrating technology into the classroom, as it has many interpretations and there can be various models of BL (Miller

2013: para. 5). BL is any combination of pedagogies, technologies and learning while doing any work (Freisen 2012: 2). At the same time it is true that, in its essence, "all learning is blended learning" (Masie 2006: 22). One of the latest and more elaborated definitions of BL is from 2012 :

Blended learning is a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home. (Staker et al 2012: 3)

There are other educational practices which BL is different from. Traditional and technology-rich instruction take place in brick-and-mortar environment only – in schools and other places for learning not at home and not online. On the other hand, informal online learning and full-time virtual learning take place only online (Staker et al 2012: 5). BL methodology provides richer learning environment than traditional brick-and-mortar or full-time virtual learning, it enhances motivation to learn the content and make decisions on the learning targets and objectives and helps the learner to start thinking about whether the content is worth knowing at all.

Today most teachers use technologies in their practices, at least for preparing lessons, for communicating and self-improvement. In the classroom in front of them are sitting 'digital natives' waiting for interactive learning tasks and the opportunities to search for information on their own on the Internet, use different strategies for learning and hoping to experience something new every day. Students use new technologies more easily than most of their teachers. In 2003 Stephen Bax wrote about the 'normalisation' of technology in language education which occurs when the teachers do not consider new technologies as something sophisticated and time consuming to use, but innovation has become a part of teaching and learning process and there is no need to focus on the devices and media (Bax 2011: para. 1). This process needs teachers to be familiar with state-of-the-art technology that needs constant learning and bringing the new experience into practice

in the classroom. Modern teachers are keen on implementing new approaches that seem to be useful and interesting and also which have been proved to be profitable by researchers because it is a challenge to the teacher, too. The terms 'digital natives', 'digital immigrants', 'digital divide' and 'digital education revolution' have forced Western governments to provide technology to education, but this is not any solution to social, pedagogical or economic challenges that education reforms need, more and better technology can not improve the amount or quality of knowledge delivered. Using technology in education is an uneven, incremental and complex process with many stakeholders, such as designers, teachers, researchers, commercial material providers, learners and learners as material creators (Thomas et al. 2013: 3, 4). On the other hand, teachers may stick on the traditional teaching methods and the result may be as good as when using new technologies.

The question is, whether there are any opportunities to help students get better results in their learning while using new approaches and applying new technologies in the classroom. In Estonia some students learn English for ten years at school and at the end of their studies at upper-secondary school they are not at B1 level, which is the lowest level needed in the National Examination in English in Estonia (Pärismäa 2016: para. 4). In 2015 there were 1659 students out of 7186, which is 23% of the students taking the English examination, who got less than 50% of the points (Innove 2015a). Nobody can say that they do not want to make the effort to understand and learn the vocabulary and grammar topics and master their skills. There may be many reasons why the result is not good enough for the needed level. In 1968 Bloom wrote that 95% of students, when given enough time, are able to learn a subject up to high level of mastery. The main problem is how to reduce the time needed for achieving the level of mastery for slower students (Bloom 1968: 3). On the other hand, it may be necessary to give every student the opportunity to learn at their own learning pace and level, so that they could follow their

own Learning Pathway.

The once believed future concept, that technology will replace language teachers has vanished and teachers face even more challenging needs when teaching skills needed in the 21st century. It is essential to continue research how people learn languages and how they learn with technology when language learning has focused more on communicative ability (Thomas 2013: 8). One of the impediments in applying CALL is the level of knowledge that teachers should have to cope well with the digital natives in the classroom. In Estonia there are many opportunities for teachers to learn free of charge on the Internet, one of which is via Koolielu webinars and different courses aimed to help teachers in using technology in language learning. A lot of teachers learn from free courses open by top universities and colleges that provide lectures and MOOCs. One of them is European Schoolnet Academy which provides teachers with online professional courses which focus on Innovative Teaching with Technology. In spring 2014 European Schoolnet Academy offered the Future Classroom Scenarios course which consisted of 6 modules and was run by teachers for teachers. It was about technology in education and the impact this has on teaching and learning. Most of the learning was conducted collaboratively and key concepts like 21st century skills were introduced as well as new programs for more effective learning with ICT in the classroom.

Another internet based free learning platform among a lot of others is Canvas Network where universities offer free courses and MOOCs, and sometimes different modules of a course are taught by lecturers from different universities. During the courses and at the end of them learners have to accomplish assessments to get to the next level and at the end is the final assessment to get the certificate.

There are many advantages that can be noticed while using technology in the ESL classroom, for example, students are engaged, there is a wide range of materials to choose

from, studying at learner's own pace, collaboration, flexibility, materials accessible everywhere (students can finish work at home at any time), learning may be more visually entertaining, students may have better results and higher marks. On the other hand, there may be some disadvantages as well: students use Information and Communication Technology (ICT) all the time, some students may find it hard to concentrate in visually noisy environment, new technology is expensive, some students may feel that they cannot keep up with others because of their slower pace, not all students are good at using technologies, some prefer painting or writing. To sum up, although there are some disadvantages or problems, the benefits still seem to outweigh them, and if the amount of using technology is reasonable, its use is justified.

By the end of the 3rd stage in basic school when in a good level of foreign language A proficiency, the skills in English are expected to be on level B.1.2. According to the national curriculum of Estonia, this can be achieved by

- 1) listening to and independently reading, different texts appropriate to the students' age;
- 2) using media and authentic audiovisual materials (e.g. newspaper articles, news, films);
- 3) creative writing (e.g. poems, short compositions, personal letters, messages, notices, short reports);
- 4) short reviews and simpler research works;
- 5) project work;
- 6) oral presentations (e.g. project work and book reports);
- 7) role plays and communication games;
- 8) finding information in varied reference sources in foreign languages (e.g. dictionaries, the Internet), etc. (National Curriculum of Basic Schools 2011)

National Curriculum for Basic Schools in Estonia states the activities that are well compatible with using CALL and FCM for SLA. For example, using media and audiovisual materials, independent listening, project work, simple research work are all used in CALL and FCM. National Curriculum is divided into three major sections: goals in the subject level, general competences and goals for cross-curricular teaching and learning. ICT is a part of all the three, so the skills for using ICT should be acquired in accomplishing tasks in various subjects. According to M. Laanpere (Laanpere 2010: 6),

mathematics is the subject where ICT is used more often, followed by biology, geography and foreign languages close to each other compared to the frequency of ICT used in the lessons. It is important in SLA that students could use their knowledge in authentic environment and using CALL fulfils the condition.

In Estonia goals in education are defined by 2020 in the Estonian Lifelong Learning Strategy, the approach to learning continues its process of changing, and creativity, learning to learn and entrepreneurship are to be taught according to this document. In the centre of this approach is the learner with their individual and social development. One of the five strategic goals is modern digital technology with the access to the new generation of digital infrastructure, which is to be used for learning and teaching „effectively and efficiently” (Estonian Lifelong Learning Strategy 2020). Using CALL and FCM gives the students the opportunity to learn according to their individual needs, using ICT in setting their own goals and learning objectives and studying the skills needed for lifelong learning. Another project that continues the process of the big changes in education in the EU as well as in Estonia is the Assessment of Transversal Skills 2020 (ATS2020). The focus is on teaching students the 21st century skills and helping teachers to assess them using modern approaches and innovative tools (ATS 2020). Both the projects need teachers to learn new approaches and implement methodologies for applying ICT in reaching the goals stated in the documents.

The author of the thesis have been looking for ways to improve the performance of the students and therefore the aim to employ FCM in the teaching practice and analyse its effectiveness was a good opportunity. The author of the thesis implemented the FCM in the academic year 2015/2016 in ESL lessons at the 3<sup>rd</sup> stage of study, in form 7, and undertook a research on how the students assessed the changed learning process and what they thought were the advantages and disadvantages of the methodology. It is expected that the

students find the new learning environment more entertaining and useful and it will be a successful experience and their responsibility and motivation will increase.

The thesis consists of two chapters. In the first chapter some case studies using CALL and FCM in SLA are provided and the benefits and difficulties in implementing the methodologies in EFL classes are discussed. Guidelines for implementing the Flipped Classroom methodology are provided. In the second chapter a survey conducted on implementing the FCM in one of the Estonian basic school's ESL classroom is discussed and the methodology of the study provided. In the research qualitative data analysis are used. The results of the survey are reviewed and followed by a discussion and conclusion.

## **CHAPTER I**

### **Flipped Classroom Methodology**

In the first chapter the four models of BL and the place of FCM in the structure is given, the relationship between FCM and motivation is discussed, main features of cognitive load theory and some case studies provided.

#### **1.1 Four Models of Blended Learning**

BL is an umbrella term designating the diverse ways online and face-to-face learning spaces may be combined. The general idea of BL is divided into four major models by Heather Staker and Michael B. Horn: rotation model, flex model, self-blend model and enriched-virtual model. In all of them one part of the learning process is online learning. In rotation model different teaching methods are used; for example, online learning, small-group or full-class instruction, group projects, individual tutoring, and pencil-and-paper assignments. Using flex model provides students mostly with online learning opportunities combined with face-to-face instruction as much as needed, students move on according to flexible and individual schedules. Self-blend model gives students an opportunity to choose one or more asynchronous online courses as supplementary to brick-and-mortar learning, they blend the course individually. Enriched-virtual model is a whole-school experience when every course is divided between brick-and-mortar time and online content. Students do not have to go to school every day, they may learn online content remotely (Staker et al 2012: 15).

The first of the four major models, rotation model, is in turn divided into four

categories: 1) Station Rotation, where students rotate in the classroom between stations where they have various activities one of which is online learning; 2) Lab Rotation where students rotate not in the classroom but between locations in the campus where one of the activities is online learning; 3) Flipped Classroom, where students rotate between face-to-face learning at school and online delivered primary content and instructions which they may access at home or any other location; 4) Individual Rotation, when students have individual schedules and they rotate between learning modalities, one of which is online learning, according to the schedule (Staker et al 2012: 11). The fastest spreading of them is FCM, which is quite easy to implement for it does not need any new facilities nor special curriculum. Students continue learning in the familiar environment using the technologies most of them use all the time and they can learn more thoroughly the applications and programs while learning languages or other school subjects.

## **1.2 Motivation**

In the field of social and emotional learning, all teaching and learning should be conducted in the environment where students feel capable, connected and in control (White-McNulty et al 2005: para. 1). This is the basis for motivation and success in life and school and can lead to lifelong learning. Technology is to be used so that students could use it as a tool for acquiring new skills and knowledge, not as something threatening and difficult, or causing situations where students have to cope with negative attitudes. Learners are motivated when the learning material is important and valuable to them and they are able to understand and learn it putting in reasonable effort. All the learning content is sorted by value and there are three general categories for that: high value content that the learner has to memorize, medium-value content that the learner needs to use in the future

and so tries to become familiar with, low-value content that the learner does not need and does not bother to think about (Masie 2006: para. 9). Teachers have to find out what is valuable for the students, for it may be quite different from what is generally thought or what the teacher tries to pass on.

FCM changes the traditional way of teaching and learning by replacing some learning, traditional face-to-face lecture that has been usually done in the classroom, with independent studying at home. This seems to be a methodology more suitable for higher education, but a lot of teachers have used it in upper-secondary and basic schools too. Students watch videos as preparation for the classroom activities. The videos cover this part of the lesson where the teacher explains something solely transmitting information, that does not need any creative activities from the students. This activity may be recorded by the teacher and students watch the videos at home for gaining the knowledge they had otherwise in the traditional way learned in the classroom. This gives to the students who learn more slowly the opportunity to rewind videos and revise some more difficult parts, or the whole video, many times and work with it. This is also important because the long-term memory is limitless, but working memory is limited and it takes time to transfer information to the long-term memory. The Cognitive Load theory states that human mind can process only seven plus or minus two items or chunks of information at a time (Miller 1956: para. 48). Some theories say that the number is even only half of the amount (Cowan 2015: para. 11). Repeating and reviewing are the foundation of memory and when students apprehend that they can remember and use the information productively, it helps to stay motivated and promotes learning.

In the spring semester of 2013 at Colorado State University-Pueblo, where students found college-level work unexpectedly challenging, the lecturer started to use FCM. The reason was she wanted to use the time in the classroom more efficiently, „enhance the

classroom experience” and interact more with the students. As the teacher made the videos herself, it helped to direct the students' attention and as they were not well prepared for college work, it saved time when pointing out the most important pages and articles in their material. At the end of the semester the students had to fill out a questionnaire and, what helped them most were the in-class discussions which was a great success for the teacher in using FCM. Next step would be to teach students how to take notes watching videos as in regular lectures (Gaugnah 2014: 231). The FCM improves students motivation and facilitates coping with cognitive load. Motivation has direct connection to the underlying attitudes and goals that trigger individual's actions,. The success of using the FCM may depend on how well student motivation is encouraged or hindered, which influences their performance, well-being and satisfaction (Abeyerska et al 2014: 4).

### **1.3 Digital competency**

Along with the trends going on outside our classrooms in the society, technology, politics, our understanding of the process of teaching and learning is changing. The paradigm shift in teaching has taken place in the years since ICT has been implemented in learning environment. The new paradigm that spreads over learning communities proved by theory and research, requires teachers to implement new methodologies while using new technologies, computer-assisted learning environment, flipped classroom scenarios, project-based learning, enquiry-based learning and formative assessment. The role of teachers is aimed at developing students' competences and talents.

Technology provides support for teachers and language learners to reach their goal, but at the same time it may become a challenge itself because the successful use of technology requires self-directed learning skills (Reinders 2013: 359). Technology should not be used in isolation in language learning but teachers should show students where to

find and how to use online tools such as dictionaries, spell-checkers, writing and proofing tools (Godwin-Jones 2010: 5). The availability of excellent tools and programs does not mean that students want to use them, but teachers need to prepare "carefully structured assignments and follow-up work" to be sure that students cope with them and develop their skills, which means that teachers should be able to use online tools effectively and efficiently (Garrett 2009: 722, 730). The rapid development of technology makes it cheaper and easier to use and has changed the mentality in using it for educational purposes. The development of technologies has brought along a favorable opportunity to use the time of students as productively as never before. At the same time applying the new learning scenarios can be very time consuming. Teachers have to assess the curriculum as well as their students, time and resources to choose the best learning activities for their students. The preparation of lessons becomes more time-consuming and needs permanent learning of the new technologies, for the teacher should be accustomed to using the programs, otherwise they may become impediments for reaching desired goals. There are a lot of good and useful learning tools on the Internet and it is not easy to choose the best that provide a potentially better teaching and learning experience. It takes time to get to know all the best internet programmes and applications that are worth using and everyone can choose the best for their needs, and quite soon there will be another application or program that is more developed or far more complex than the previous one.

In the National Curriculum for basic schools in Estonia (2011) in chapter two in the section of cross-cultural topics is declared that the primary aim of learning technology and innovation is for the pupil "to develop into a person who is well-disposed toward innovation and who knows how to use contemporary technologies for the designated purpose, who copes with the rapidly changing technological living, learning and work environment". The rapid development of technology makes it cheaper and easier to use and

has changed the mentality in using it for educational purposes. Digital competency is one of the eight key competences for Lifelong Learning by the European Union and enables to acquire other key competences related to the 21st century skills (Ferrari 2012: 3). In the National Curriculum of Estonia is stated that in learning foreign languages technological competence is developed by using computers whereas computers are used as work tools for seeking information and for communicating (National Curricula 2011: 5).

#### **1.4 Flipped Classroom and language learning**

Over the last 30 years language learning has become the most popular area of education where learning technologies are implemented to a great degree (Michael et al 2014: 26). The availability of free software makes it easier for students to access different learning platforms without any need to install, upgrade or backup anything. Using FCM changes entirely the concept of learning in the classroom. Students watch instructive lectures at home, instructions are delivered online outside of class and students communicate with peers and teachers via online discussions. Classroom time is used for answering questions, doing different activities, discussions and solving problems. When students are to watch videos at home, they should also think about what they have learned by that and therefore teachers should create activities that need to be finished at home and that show how students have understood the part of learning (Miller 2013: para. 7). When using the FCM, students are in the centre of learning process and they have to be active and take the responsibility of their own learning (Abeyskera et al 2014: 7).

Language learning has become one of the areas in education where the use of technologies is an essential part of the teaching-learning process and language teachers need to have "knowledge of the theory and practice of learning technologies and digital

literacy skills" (Thomas et al 2013: 1). Authentic environment is vital in the process of SLA and students have to use their experience for constructing the knowledge when accomplishing tasks similar to real world situations.

### **1.5 Group work**

Teachers often see group work as added value to the learning and teaching process and an opportunity for weaker students to get additional help when they interact with peers, but there are also students who are not satisfied with the situation. (Fiechtner et al 2016: para. 2). Most successful groups are completed by the teacher, or formed by the teacher and students together, taking into account the interests of the students (Fiechtner et al 2016: 13). To be a success a group needs to remain stable long enough to develop and go through all the stages, otherwise this is confusing for the members (Vaikjärv 2015). In 1984 a survey was conducted in two universities to investigate the forming of groups, classroom activities and grading system. The best were groups of four to seven formed by the teacher, for the communication between new group members is valuable for the group's functioning. Best group experience was in groups where no or only one presentation and about three written assignments were to be done, too few assignments did not support developing a good group either. Peer assessment is necessary but may cause emotional problems when the situations are interpreted differently (Fiechtner et al 2016:18).

Using CALL and FCM seems to be useful for heterogeneous student groups, that consist of good and weaker students, where often some of the students already have understood the material and the teacher has to explain it many times as some of the students ask for more explanation. In a way it shows that the students are not passive and uninterested but they want to understand the material and teachers are usually prone to explain as long as everybody is able to move on to the next activity.

## 1.5 Cognitive load theory and homework

Cognitive load theory is about the load that is placed on working memory during learning processes. Cognitive load theory distinguishes between three main types: intrinsic, extraneous, and germane cognitive load. When students do not process the material and do not take any action, there cannot be any cognitive load. The material itself as 'objects', constitutes intrinsic load, which is the inherent difficulty of a task or idea. This means that higher thinking skills require higher intrinsic load. All that takes place in learning as 'processes', refer to germane load (Jong 2010: para. 15). This refers to the amount of effort that is needed to process any new information or learning concepts. This is modified by the learner's motivation and interest towards the subject matter or presentation methods (Kenny 2009: 47). The third type, extraneous cognitive load is not necessary for learning and teachers may wish to reduce it because the capacity of memory is limited, but this may have negative impact on the whole learning (Jong 2010: para. 9). This refers to different things that accompany the learning material, the outside influences. The three types of cognitive load can be added.

When designing FCM lessons and homework, the three types of cognitive load may affect the results of learning for there may occur many unseen distractors that make learning not so effective as the teacher has anticipated. Certain intrinsic and extrinsic factors need to be managed during learning or knowledge acquisition process. Students learn more quickly the material that is familiar to them and most relevant (germane), and not even the reduced amount of any intrinsic or extrinsic load that somebody else has composed, even in the form of games (Kenny 2009: 47). Cognitive load and memory can also be categorized according to the information that is memorized. Memory can be divided into contextual registers and learners can recall the things that are significant,

according to their inner semantic evaluation given at the time of learning (Kenny 2009: 48). Another important feature is cognitive tempo or cognitive style. Students learned better when they could watch the video at the fastest pace, then they remembered significantly more than the students who watched it at middle or low speed (Kenny 2009: 48).

The success of using the FCM depends a great deal on whether students do their homework, watch the videos or not, which is the question of motivation. How do the teachers know that students have prepared for the lesson, what do they know and whether their pre-class activities were useful (Abeysekera 2015: 2)? The solution to the problem would be to test students. The problems are similar for students in every level. The solutions provided are applicable in basic school level as well, for the students have to be interested in knowing the material before the lessons start. A short questionnaire on the video answered individually and peer assessment after the group work are good triggers for the wish to do the homework (Gaugnah 2014: 231). This is also true that the students who need more time in English lessons need it more for other subjects too and when giving homework it is advisable to be sure that the video is not longer than 4-5 minutes, so that on the whole the students would spend reasonable time on doing homework (Maadvere et al: 2015).

The FCM is discussed a lot by teachers and there are plenty of material about it on the Internet. The efficacy of flipped approaches and the answer to the question, whether the FCM really improves students motivation, is not answered nor proved yet by the researchers (Abeysekera et al 2016: 10). The paper continues with the description of implementing the FCM in form seven in one Estonian basic school. The aim is to monitor the students and by questioning them get to know how do they perceive and what do they think of the methodology.

## **CHAPTER II**

### **Case Study: Implementing Flipped Classroom Methodology**

In the second chapter the case study conducted on implementing the FCM in ESL classroom is discussed, the participants of the survey monitored, the methodology of the study provided. In the research qualitative data analysis is used. The study was carried out to observe whether the FCM would provide a better learning environment to meet the students' needs when using the new methodology. In order to implement the FCM, it was necessary to shift the focus from teacher-centered learning activities to more student-centered learning process. At the same time the number of the topics covered was not reduced, the activities needed more communication among the group mates and also sharing and analysing the work done individually as homework.

#### **2.1 Participants and Data**

The subjects for the study were the students of the 7th form in one of the Estonian upper-secondary schools, between the ages of 13-14. There were two classes of form 7 in the school and all the students were divided and taught in three level-based groups: in an advanced, middle and basic group, the first one being the strongest and the last one consisting of the so-called weaker students. The study was conducted with 19 basic group students, 11 girls and 8 boys with English being their first foreign language which they had up to this point learned for about four and a half years. Three of the students (S1, S2 and S5) were not to belong to the basic group but had chosen to join the group at the beginning of the school year for different reasons. The English level of the students was A1.2 to B1.1

(elementary to pre-intermediate). Using FCM with the basic group students gave the opportunity for the students to spend more time communicating with their group mates in the lessons using English and doing writing exercises together, to learn at their own pace at home while doing homework and reflect more thoroughly on their learning process and the topics covered. To find out whether the students of the basic group find the strategy useful and motivation enhancing the qualitative data collection was accomplished throughout the survey. The students were asked to assess their and their groupmates' participation in the activities in the lessons and their homework which they had to use later in the lessons. In the course of the project randomly chosen students were asked questions on their opinions on the project. The students also were to fill out two longer questionnaires, one before and one after the project.

Most of the research on FCM is performed at university level, for the university students mostly are accustomed to learn on their own and they have already taken responsibility for their studies. Basic school students usually rely on their teachers to decide what and when to learn. While implementing the FCM, it might be possible to teach the students taking responsibility for their own studies much earlier and the methodology enables to combine different tasks to reach more meaningful objectives which are connected to real-life situations. Meeri Sild and Ingrid Maadvere have said that it is advisable to start using FCM with younger students because they absorb the methodology more easily and take responsibility of their own learning as natural part of the learning process and do not show any resistance against it (Maadvere et al 2015: 26). As English is one of the key subjects for all students, mastery of it is vital to be successful in the 21st century, and this also requires developing such vital skills as creativity, critical thinking, collaboration and communication as well as understanding the content at much higher level (P21 2016: 2). The same principles are found in the curriculum of Estonia according to

which the function of basic school is to develop students' self-reflection, critical thinking, creative self-expression and will-based characteristics, knowledge and interest in learning, help them to discern their social and cultural identity (Basic Schools and Upper Secondary Schools Act 2010: para. 4). To be successful in their studying and life, students need to be supported in mastering both skills and content. To prepare students for the world where two thirds of them start working in areas that we cannot imagine today, it is necessary to help students prepare for the future (Great Schools Partnership 2014: para. 10). As students learn differently and at different rates, teachers need to broaden their repertoire of teaching strategies to meet the needs of their students.

The case study was conducted using *New Snapshot* pre-intermediate students' coursebook and language booster. As there were only ten lessons to serve as the basis, the lessons covered some parts of unit 3, "A view which excites me", which is about Cornwall. There were two grammar topics in the unit – defining and non-defining relative clause, and future with going to, will or present continuous (Abbs et al 2008: 20). As the students had already learned future tenses in the previous year, the present simple for the future was also included.

## **2.2 Methodology**

The aim of the study was to investigate how the students feel about and perceive the implementation of FCM and whether this methodology helps to motivate them and get better results in their learning. The working process of the students was monitored to find out whether the learning behaviour of the students changed during the process and whether some new skills, for example collaboration and digital competence, were developed, this gave also the opportunity to investigate whether the students' willingness to do homework

changed. The project lasted for ten lessons and the FCM and tasks for group work were used in most of them but not in every lesson. The students were asked to estimate the result of the work of their peers' in their group as well as the learning of their own, and assess some of the activities they had to perform during the project.

According to Bishop and Verleger, FCM is a new pedagogical method which combines constructivist and behaviourist learning theories (Bishop et al 2013: para. 1). The direct instruction methods of behaviourism were used in instructional lectures and videos, as well as in the tests that check only memorized knowledge. On the other hand, problem-based learning activities of constructivism and active learning methods were used in classroom activities. Vygotsky and social constructionists emphasise that cognitive development is connected to and possible only through language and social communication, and learning development is affected by culture (McLeod 2007: para. 2 and 6). According to this theory, students develop their knowledge and skills through collaborative learning methods. This leads teachers to using methodologies that encourage students to communicate and develop their teamwork skills, as the result of their work may depend on the groupwork and communication.

As there were too few students in the sample to make comprehensive conclusions, the data was used to detect the changes in the participants' attitudes, and the qualitative data analysis was used for assessing the results. The research measurement involved asking questions of respondents (questionnaires in the appendix) and they were monitored during the process of learning by the teacher. The participants had to reflect on their group members' and their own learning and fill out two longer questionnaires.

### 2.3 Group selection and size

The composition of the groups may have significant impact on students' results when working in groups. As all the students knew each other well, the students were asked how they would like the groups to be formed (teacher's choice, students' choice or combination) and the number of members the groups should contain (Fiechtner et al 2016: para. 10). There were only three students who wanted the groups to be formed by the teacher and all the others wanted to choose the groupmates by themselves, so most of the groups were formed by the choice of the students. There were three groups of five students and one smaller group that was formed by the teacher, where the four students not included to any of the groups belonged. There was one group of five students who managed quite well in English and this was also the group that had the best results in all the tasks and the group members gave all positive feedback to the FCM lessons. On the whole, all the groups worked enthusiastically except for the one group that was formed by the teacher, but they still worked as well as they could and all the group members were involved in the process. The situation did not change during the ten-lesson period and a couple of times the students of the smaller group wanted to reorganize the groups, but the other students were content and the groups remained the same throughout the survey. However, the small group managed well and they were happy about their work in the end.

There maybe several reasons why students like or do not like group work. From the perspective of teachers group work is similar to the real world conditions where a single person cannot be successful in comparison with professional management teams (Fiechtner et al : para. 3). On the other hand, using data from the questionnaire performed in the middle of the course, students like to compare their ideas and organize the activities needed for finishing a task and most of them enjoy working with peers (Appendix 6).

## 2.4 Procedure

There were quite many activities in the project: watching videos on Cornwall, translation of the factsheet and learning new vocabulary; watching a video on Eden Project and doing exercises on it; revising and learning more thoroughly relative clauses by watching a video and doing exercises; analysing the situations where different tenses for the future were used and writing a diary entry using the knowledge that the students had acquired from all the previous activities.

Before the project started students were to answer to the introductory questionnaire. The majority of respondents did not know exactly what the FCM is and only a third thought that it could help them in learning (Appendix 2). The questions about homework showed that the students considered homework necessary to understand the material better and almost a third learned English more at home in addition to the homework and more than a half of the respondents willingly used the Internet to find additional information for school subjects. More than a half of the students spent about a half an hour a day for doing homework and that is a lot even when they have only three lessons per week. For homework they did not want to watch instructional videos or make their own videos and a third of the respondents even thought that they did not need any homework for they know English well enough. In relation to group work most of the respondents answered that it were useful for understanding any learning material and they wanted to participate actively in discussions. Three fourths of the students responded that they would like to choose the topics for studying on their own. The short summary of the students' statements before the project indicated that the FCM were suitable for the students because emphasis on the skills such as collaboration and being creative, relevant knowledge and digital competence are to be learned at school to help students to cope in the changing world. To develop the skills needed in their future life, students are to be put in the role of a problem solver and

move to the position of setting their own learning goals and the ways to get there, and teachers are to be guides and counsellors in the process.

The purpose for using the FCM was to make studying more enjoyable for the students and do things differently from what they were used to and expected. The introductory questionnaire showed that students wanted to participate more in group work and use the Internet for studying (Appendix 2). Implementing the FCM was planned (lesson plans in the appendix) in accordance with the *New Snapshot* pre-intermediate students' book (Abbs et al 2008: 20). There is a text at the beginning of every unit that students can listen to, read and translate. According to the lesson plan, in the first lesson of unit 3 students worked with the text and vocabulary which for some of the students was easy but not for all of them (Appendix 1). At the end of the lesson students discussed with their deskmates and wrote down some reasons for and against living in a remote part of the country. This was quite a confusing question for most of them because it was difficult to connect it with their own life. As the students had watched at home a short video on Cornwall, they knew more about the nature and scenery of the place and could imagine it when speaking about it knowing that they had to write about Cornwall later. The hardest part of the lesson was the discussion for some students did not want to speak but only listen to the others. There is a big difference for the students whether to write or only discuss something, the latter is a good task for the students who willingly take part in every activity but is not a challenge for those who start working only when they have to do the same task in written form. The result of using the FCM depends on the students in the class and their willingness and ability to be cooperative and creative, make decisions according to their interests, and communicate with others when solving and analysing problems.

In the second lesson the students read the text aloud answering individually and

then did the exercises in the workbook applying the new vocabulary (Appendix 1). Next activity was connected to the four pictures about Cornwall (the students were also allowed to find a picture by themselves from the Internet) and the students had to write four to five sentences about the place as if they were there. Writing is not a very easy task for the basic group students, they cannot just avoid doing it or let the others do. At home the students had to watch the video 'Aerial views of Cornwall' again for many of them had not watched it yet. In the lesson students were shown four pictures taken in Cornwall. They had to choose one of them and write five to seven sentences about it. Some students were able to write more than seven and some wrote only three or four sentences because it takes time to imagine that you are there and also describe the place. The pictures were chosen from the Internet, students had ten minutes for the task and then they worked in groups to share their sentences and write ten sentences together which they had to hand in. They all took part actively in the groupwork and discussed the sentences they had written and later they had to decide whose sentences were the most interesting. As the groups consisted mostly of friends and the relationship between them was good, they discussed the sentences of all the group members before they started to write the sentences down. The hardest part of the lesson was that the students did not want to speak in English but tried to explain everything in Estonian although there was one member in each group who was responsible for that. At the end of the lesson they had to give some feedback.

Table 1. Survey on group work.

	<b>Give points to your groupmates and to yourself</b>	<b>Who had the best sentences</b>	<b>Was it useful for you to write the sentences as groupwork</b>
Group 1	Everyone got 5	S1	* we saw the sentences of others * there were more sentences to choose from
Group 2	S9 – 1 All the others got 5	S7, S8	* we could finish the work faster * we had more sentences and so could write more sentences * we could work together * more interesting ideas and therefore

			more interesting sentences
Group 3	Everyone got 5	everyone	<ul style="list-style-type: none"> <li>* everyone has different sentences</li> <li>* everyone thinks along</li> <li>* I do not know</li> </ul>
Group 4	S17 – 3 S18 – 3 and 4 S16 and S19 – 5	S14, S17	<ul style="list-style-type: none"> <li>* others had interesting ideas</li> <li>* practising cooperation</li> <li>* I liked working together</li> </ul>

According to the table, students were enjoying working together and they appreciated the ideas other group members had. They also participated actively deciding on which sentences were better and had to decide which sentences to choose.

For the next lesson students had to watch a video on St Ives and I had prepared a worksheet for them to fill out during the video but as two of the groups did not finish their sentences and promised to rewrite the sentences at home, so they did not get any additional homework (appendix 7). Four texts were put on the walls when the fourth lesson started and every group had to send somebody to read it silently memorizing as many expressions and sentences as they can and come back to say them to another group member who then had to write them down. They also had to translate the words they did not know to understand the text (Appendix 3). Unfortunately this did not work, for the students found the text too difficult and as there were 19 students in the class, it was not easy to move between the rows and some groups were too near to their text and others had to come from the end of the classroom which left the groups in an unequal situation. So I had to cancel the activity and every student got a slip of paper with the part of the text for their group on it and the groups started to translate their part. Every group had a different text and all students were enthusiastic and took part in the process for they could use their mobile phones and they had to write down the translation in Estonian. In addition to the online dictionaries they could ask the words and the meaning of the sentences from the teacher because they had to decide also which words were suitable for the text for some words had

many different translations. There were only four sentences for three of the groups to translate and one group had seven sentences. The text about Cornwall was compiled to give some interesting and general facts about the area, the people and their traditions. For accomplishing the task the groups divided the work to be done differently. For example, one group decided that every member has to translate one sentence. Another group chose a member who was responsible for writing the translation, another member of the group said to the other group members which word they had to translate and this way they hoped to translate the whole text. Although all the students answered to the short questionnaire at the end of the lesson that the text was not too sophisticated and was appropriate, the translation took much more time than it was expected.

Table 2. Group work assessment

	<b>The translation was</b>	<b>Points for your groupmates</b>	<b><i>I understood well what to do and how I can implement the translated text in the next task</i></b>
<u>Group 1</u> (one was absent)	<i>Easy</i> – S2 <i>Difficult</i> <i>Just right</i> – S1 S4 S5 <i>I don't know</i>	S1 – 555 S2 – 555 S4 – 555 S5 – 555	<i>Yes</i> – S1 S2 S4 S5 <i>No</i> <i>I don't know</i>
<u>Group 2</u>	<i>Easy</i> – S2 S7 S9 <i>Difficult</i> <i>Just right</i> – S6 S8 <i>I don't know</i>	S6 – 5551 S7 – 5551 S8 – 5551 S9 – 1111 S10 – 5551	<i>Yes</i> – S2 S7 S6 S8 <i>No</i> <i>I don't know</i> <i>Maybe</i> – S9
<u>Group 3</u> (one answer missing)	<i>Easy</i> <i>Difficult</i> <i>Just right</i> – S11 S12 S13 S15 <i>I don't know</i>	S11 – 5555 S12 – 5555 S13 – 5545 S14 S15 – 5554	<i>Yes</i> – S11 S12 S13 S15 <i>No</i> <i>I don't know</i>
<u>Group 4</u> (two were absent)	<i>Easy</i> <i>Difficult</i> <i>Just right</i> – S16 S17 <i>I don't know</i>	<i>They translated separately</i>	<i>Yes</i> – S16 S17 <i>No</i> <i>I don't know</i>

The answers show that the students did not consider the text too difficult for them and some students even thought it to be quite easy. In group two one student (S9) did not participate in the translation process and other group members did not accept that. The

student as well as the groupmembers were not able to solve the problem and the student expressed it by giving only one point to the group members, who did the work.

At the end of the lesson the students were satisfied and willingly sent their translations as they had taken pictures of their work. In conclusion, the text should have been a bit easier, maybe it was too difficult for the basic group. On the other hand, the vocabulary was useful and together with the teacher's comments it gave a lot of knowledge not only about Cornwall but also about Celts, cooking, mining and spare time activities. The students were supposed to use the knowledge later in their writing where they had to describe the country when writing a diary entry. For homework they had to watch a video which introduced a place for nature lovers, the Eden Project, and find two reasons why the place was important and why people went there. Unfortunately, next time there were only three students who had written down the reasons and the others said that they did it orally but had still watched the video. So I asked some questions about the place to be sure they had understood the video. The Eden Project was shortly described also in the first text of unit 3 that we had already read. Then the vocabulary in Quizlet was revised to help them understand better the text and the speech in the video when they watched it at home again (Appendix 5). Then the fact sheet texts were distributed and the students could compare their translation to the new variant. The Collection of Facts worksheet was to be filled out to revise the vocabulary individually and then the groups compared the answers so that everyone had all the correct answers written down and this took more time than I had expected (Appendix 4). The groups worked together to help the weaker students so that everyone had the correct answers at the end of the activity. At the end of the lesson students were supposed to read their part of the text to the other groups but there was only as much time left that one group had time to read it and that was much harder than they had expected.

The findings from the research show that the impact of students' willingness on participating in group work is more complex than previously assumed. As using the FCM in ESL classroom needs a lot more group work, some students may find it difficult to participate in the lessons. For example, one of the students (S9) who had to take part in the group work activities, ordinarily preferred not actively take part in the classroom activities but he silently followed the discussions and somehow absorbed the material so that he was able to cope with the exercises and tasks well enough. When in the new situation he had no other choice than work with others, he could not use the usual learning pattern any more. The other members of the group did not accept the situation and for not taking part in the discussions the other group members did not get on with that one and he soon found himself outside the activities. The reaction was clearly seen by the marks the other students gave for their peers at the end of the lessons. It is possible that changing the groups more often this student may start taking part in the activities, but it may happen also that he gets his better marks for the tasks that are not connected to group work. It is the question of personality, and maybe it is not a very good idea to force the student. In everyday situations he gets on well with his classmates even so he is a bit different. As there were also individual tasks in the project, he did not suffer for the unwillingness to participate in group work.

In the fifth lesson of the project the vocabulary on the video in Quizlet was revised and this time the students understood much better the meaning of the expressions and everyone wanted to be good at it. They also confessed that watching the video many times helped to understand the written text as well as the speaking much better. Then students worked again in groups using their homework to find the reasons why the Eden Project was important, so they had to compare their understanding and choose what to write. Everyone worked and took part in the discussion to finish the activity successfully. There

were a couple of students who had still not written down the two reasons, they were not left out of the discussions but even tried to work harder to compensate the missing homework. After collecting the worksheets relative clause was shortly introduced, the main rules explained and some example sentences given. For homework the students had to watch a video and make notes on defining and non-defining relative clauses, which was a topic familiar from the previous years (Appendix 10). In the next lesson the grammar topic of relative clause was revised, students worked independently on workbook exercises and did some additional exercises on worksheets. About half of the students had taken notes on the video and liked it a lot saying that everything was well explained. At the same time there were students who said that they had not watched the video but promised to do that for the next time. The last third of the lesson was dedicated to groupwork and the students had to solve the problem of writing a short Travel Diary entry. To start writing they knew that a plan was to be made but they had to find five steps that every writer had to follow. After a short discussion the steps were explained using a web page (Appendix 5). The last task in the lesson was to make a plan for writing a short diary entry. The exercises on relative clause were easy for the better students but the weaker students would have needed more time for them. Even when they had watched the videos and understood the explanations in the lessons, the exercises seemed too sophisticated and they needed more help. At this point I started to understand that I had planned too many activities for the ten-lesson period for the basic group. For homework students had to watch a video about writing a diary and revise their plan for the writing. There were two videos, students were to decide whether watch both of them or choose only one. It was recommended to make notes but it was not compulsory, so only the better students had taken them.

The seventh lesson of the project started with a short check whether students had watched the video on writing a diary entry (Appendix 6). They compared their answers

with their deskmates and started to write using all the materials they had about Cornwall but they had to write their own sentences which needed paraphrasing and drawing conclusions. This was not an easy task for them and many students wanted to write it at home which was not a solution, but as the task took a lot of time, they had to finish the writing at home. At the end of the lesson I shortly explained how to use the future tenses. As this was already familiar from the previous year, they were to watch the video at home with more explanations and take notes. In the next lesson after revising the tenses the groups were to make mindmaps with example sentences. In the course of the lesson I had to explain the topic for many times for in spite of all the materials they had, it took a lot of time and effort and they also had many questions, but as a group work it helped the weaker students to participate and understand it better. After the group work it was not easy to start doing the exercises in the workbook. The first reaction was that they did not understand the exercises, so we started to do them all together.

The end of the project was mostly dedicated to the future tenses. Students had to write three sentences about their own life using the future and share them with their deskmate, nobody wanted to read them aloud. Then the workbook exercises were discussed and there were students, who managed well and others who did not understand why their answers were wrong. To clarify the problems, some additional exercises were done on worksheets and then students continued with the workbook exercises. At the end of the lesson students listened to the dialogue and read it (Abbs et al 2008: 22). Reading dialogues aloud is one of their favourite activities. In the last lesson students did exercises in the students' book and more exercises on future tenses. I had planned a short test for the last lesson but I did not do that because most of the students needed more time for practising.

After the ten-lesson period students were asked to fill out the final questionnaire to

make it possible to assess the impact of using the FCM when comparing the results with the answers to the pre-survey questionnaire. After finishing a half of the students considered the FCM to be helpful for getting better knowledge, while before the study only a third thought it to be useful, but majority of the respondents did not want it to be used all the time. As Andrew Miller (2013: para. 7) has stated, when using the FCM, classroom time is used for discussions, answering questions and solving problems. When watching videos at home students need to think what they have learned and it is helpful making notes and answering questions along with it. This needs a lot of concentration and takes time and this may be one of the reasons why the students did not want the FCM to be used all the time. Before the project almost all the students thought that doing homework is necessary for understanding educational material, but after it only 69% of them considered it to be useful. This may indicate that some of the students understood the material in the lessons or knew it before. On the other hand, there may be students who did not do their homework and still were able to participate in the groupwork and in other classroom activities. To avoid the latter there should be very precise methods used to check and assess students' homework and also peer assessment would trigger the wish to learn at home. The opinion that teachers should explain new material in the lessons had fallen from 75% to 62%. Before the project about 19% of the students wanted to learn at home watching instructional videos, but the number had risen to almost half of them after it. The same number of students, more than a half would like to use the Internet for searching additional information for the lessons. A third of the students thought that they knew English well enough and did not want to learn it at home, but on the contrary, the number of the students who did not think so had risen a bit. The number of students who were sure that discussing with peers helped to understand any material did not change being 70%, the number of the students who liked to participate in groupwork had risen from 75% to 87.5% and the

number of students who were active in group work had risen from 50% to 75%, which was definitely also a good result.

In conclusion, it might be said that the project was very intensive and full of different activities. Students had to work a lot and they were participating in the process with enthusiasm and it seemed that they did not notice that it was quite difficult for them. Some of the weaker students were happier than they had been earlier. Definitely they worked a lot and maybe the process itself was enjoyable for them. There were not many tests during the time and that may be one of the reasons that caused the positive during the lessons. On the other hand, students did not concentrate on the activities for very long and the activities were different from the usual lessons and developed other skills, such as listening to others, collaboration, expressing their thoughts in discussions. The last short question students had to answer was about the whole project, they had to describe what was different and what did they like or did not like.

Table 3. Students' attitudes towards the FCM

<i>Write about your attitude towards Flipped Classroom Methodology</i>	
<ul style="list-style-type: none"> <li>- I understood the material a bit better</li> <li>- I liked the group work a lot</li> <li>- I liked the group work better than learning alone</li> <li>- I liked it more because I could learn more</li> <li>- I think it was a good method but I undersood everything in the lessons and the videos did not help me much, but I still wrote everything down at hflome from the videos, all the information, and when I think about it I know exactly what it was about</li> <li>- I liked to work together with my group members</li> <li>- All the students worked in the lessons</li> </ul>	<ul style="list-style-type: none"> <li>- I didn't like it</li> <li>- Everything seemed to be the same</li> <li>- I did not like the group work because I had to do a lot more at home</li> <li>- We could do more group work</li> </ul>

Using data from the questionnaires discussed above it is possible to indicate some minor changes in the students' attitudes towards learning when using the FCM. They had

time to speak and express themselves more using English, they developed self-confidence in social situations and they used technology more than earlier for studying. On the other hand, there was not much time for practising the grammar.

## **Discussion**

In spite of being in the centre of discussion for many years, there is very little evidence of effectiveness of the FCM and no clear concise definition of what it exactly is that were acknowledged by all the researchers (Abeysekera et al 2014: 1). The main purpose of educational technology is helping people to learn, but how technology is used in learning processes depends on what the teacher believes or knows about the ways how people learn (Robinson et al 2014: 19).

There is growing support for the claim that the FCM generates better learning experiment for the students and increases their motivation. This study on implementing the FCM in ESL classroom with basic school students was conducted to investigate how the students feel about and perceive the use of the methodology. As was expected, most of the students participated willingly in the group work and were enthusiastic over the achievements when completing the tasks. Interestingly enough, some weaker students (S6, S8 and S17) felt that their efforts to learn a lot gave them advantages over the students who did not do homework or who did not participate in the group work with whole of the heart (S9, S10 and S15). This enhanced their self-esteem and they were more content with their learning outcome and therefore wanted to achieve more. Moreover, some students who had been not at all interested in learning and found the traditional learning process not inspiring, started doing homework for every lesson and participated actively in the processes and activities (S5, S11 and S13).

On the other hand, the use of the FCM depends on the students in the class and their ability to be cooperative and creative and communicate with others when solving problems. Some students did not feel comfortable in the groupwork situations and it was difficult for them to analyse their own as well as their groupmates' work and be creative (S9, S15 and S16). The students and their needs in the class are versatile, so it would be a good solution to use various methodologies and one of them could be the FCM. In addition to that, there were also so-called excellent students among the others in the class, who worked a lot and were interested in their results, the marks and the knowledge, and they thought a lot about what they are doing and why (S1, S2, S4 and S7). They were working hard and devoted a lot of time to learning from the activities. They also gave a lot of positive feedback to the entire project because they enjoyed the process and participated actively in the groupwork and they had a clear vision of the outcome of every activity.

One of the impediments may be that the instructional videos are not suitable for the learners. To avoid the situation, the teacher could make the videos themselves as he or she is familiar with the needs of their students and therefore may emphasize some points or aspects that need more attention. It is also recommended to start with some videos that are already uploaded in the Internet, because it saves time and there are a lot of videos to choose from that are good enough to start with (Vaikjärv 2015).

Another point to remember is the amount of time students spend using technology. The findings from the research conducted from 2012 to 2015 by the National Institute for Health Development and the University of Tartu on digital addiction 'Digital Child' (Digilaps) showed that using digital devices a lot may cause lower learning outcomes, behavioural problems, health problems and family relationship problems (National Institute for Health Development 2016: para. 1). The most of the subjects for research conducted in Estonia have got their digital devices when going to the kindergarten

(Konstabel 2016: para. 13). Students want to make choices by themselves and they do willingly things that are valuable for them and then they are motivated and devoted to learning and this does not need to be closely related to digital devices.

## CONCLUSION

In the national curriculum of Estonia it is stated that students should become competent in using technologies and they should be prepared for lifelong learning. Maybe it is not exactly a basic school problem but it takes time to understand the need of and become familiar with taking responsibilities for the learning outcomes as a part of learning. Brighter students can manage easily but the students who need more help and do not learn very quickly need more support from their teacher. They are often not able to learn from the prepared materials on the Internet and their own teachers should prepare the videos and other learning materials for homework. Students need different methodologies to achieve the goal and flipped classroom is worth trying.

The aim of the case study was to determine the efficiency of using the FCM in EFL classes during a ten-lesson period. This was an attempt to lead the learning process towards the student-centered learning environment. The students had to assess the changed learning process and appraise the advantages and disadvantages of the methodology. In the course of the study the students were monitored by the teacher and they had to fill out a couple of shorter and longer questionnaires, and at the end of the lessons they assessed their own and their groupmates' activities and the learning process. The data were collected through quantitative methods and analysed.

When starting with something new in the classroom, it also needs some effort from the teacher to become accustomed with the situation and change the methods that would bring along desired outcomes. Some of the people who have practised the FCM had recommended not to start with making the instructional videos from the start, for there are plenty of them on the Internet and recommended to start with something small. The

process of implementing the FCM and the conclusions that were drawn from the data analysis gave to the author more confidence to continue with the methodology, and also change some aspects of the practice that did not help all the students to progress. Every teacher has to design their own plan how to implement the methodology so that the outcomes were satisfying and students could improve their performance, exert their talent and build their skills. The amount of group work forces to lower the pace to give students more time to discuss the topics and express themselves. It is good that the groups are small and every member of the group is in the middle of attention in some point of the activities. The students expressed their wish to decide on their own on the topics to be learned, so this can be done by planning the learning process so that they could choose and decide on some topics of their interest in the framework of the course materials. It takes time to understand the need of and become familiar with taking responsibilities for the learning outcomes as a part of learning. Brighter students can manage easily but the students who need more help and do not learn very quickly need more support from their teacher. They are often not able to learn from the prepared materials on the Internet and their own teachers should prepare the videos and other learning materials for homework. Students need different methodologies to achieve the goal and flipped classroom is worth trying.

On the basis of the study results, it might be concluded that implementing the FCM can be considered a success. The students were mostly motivated to participate actively in group work in the lessons and they contributed to tasks with enthusiasm. In the end of the project almost all students prepared for the lessons. The reason was not that their peers assessed their participation and gave feedback to the group work. The reason was that they wanted to participate in the discussions and feel confident when somebody asked about their opinion. One reason that helped students to become more self-confident was that when checking the knowledge gained at home, the questions were not difficult, but were

easy to answer when the video was seen. Students were forced to reflect on their and their groupmates' learning by filling out the questionnaires and participating in the group work. Some students worked more than expected and made every effort to be successful, which means they were motivated. The next step would be to prepare materials to assess the learning outcomes and enable students with different learning styles to experience continuous learning, this means to develop differentiated lessons.

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## APPENDICES

## Appendix 1. Lesson plans for implementing the FCM in form 7

<i>Lessons</i>	<i>Lesson in the classroom</i>	<i>By solving this task, learners practice and enhance their ...</i>	<i>Homework</i>	<i>By solving this task, learners practice and enhance their ...</i>
	- Introductory Questionnaire (Appendix 1)		- Introduction to Cornwall: watch the video ' <a href="#">Aerial views of Cornwall</a> '	
<i>Objective: Students fill out the questionnaire and they know where is Cornwall</i>				
<b>Lesson 1</b>  book  video  <i>vocabulary of the unit</i>	1) Book pages 20-21: Look at the pictures and think what the story will be about, discuss it with your deskmate 2) Exercise 1: vocabulary 3) Exercise 2: reading Kate Winslet's 'Cornish Retreat' in the book 4) Exercise 3: would you like to live somewhere 'away from it all'? Discuss it with your deskmate and write the reasons into your notebook.	<ul style="list-style-type: none"> <li>• <b>language competence</b> by               <ul style="list-style-type: none"> <li>- applying topic-related vocabulary items</li> </ul> </li> <li>• <b>social competence</b> by               <ul style="list-style-type: none"> <li>- working cooperatively</li> </ul> </li> </ul>	1) Read and translate the text Book p.20.  2) Learn the vocabulary in the context  3) watch the video ' <a href="#">Aerial views of Cornwall</a> '	<ul style="list-style-type: none"> <li>• <b>factual competence</b> by               <ul style="list-style-type: none"> <li>- obtaining topic-related information</li> </ul> </li> </ul>
<i>Objective of lesson 1: Students know some facts about Cornwall and can describe the surroundings and topography. They read the text fluently and can translate it, they can describe places and decide what is good and explain their thoughts to the deskmate.</i>				
<b>Lesson 2</b>  book  workbook  four pictures  writing on a picture	1) Revising the text and vocabulary B. p. 20-21 2) Workbook p.13 ex. 1-2 3) Find a picture of Cornwall in the Internet (or in pairs) 4) Write four to five sentences on the picture 4) Dividing students into groups of four to five 5) Group work: writing ten sentences about Cornwall using the sentences in their	<ul style="list-style-type: none"> <li>• <b>language competence</b> by               <ul style="list-style-type: none"> <li>- applying topic-related vocabulary items</li> </ul> </li> <li>• <b>social competence</b> by               <ul style="list-style-type: none"> <li>- working cooperatively</li> </ul> </li> </ul>	1) Workbook p.14 ex.1-2  2) <a href="#">Watch the video on St Ives</a> . Visit Cornwall. 2013.	<ul style="list-style-type: none"> <li>• <b>language competence</b> by               <ul style="list-style-type: none"> <li>- applying topic-related vocabulary items</li> </ul> </li> <li>• <b>media competence</b> by               <ul style="list-style-type: none"> <li>- using web-based applications</li> </ul> </li> </ul>

	notebook			
	<i>Objective of lesson 2: Students can use new vocabulary can choose a picture of Cornwall using mobile phones or tablets, can describe the picture in written and collaborate deciding on and creating the sentences written as groupwork. They watch the video at home and can draw some more knowledge from it.</i>			
<b>Lesson 3</b>  book  vocabulary list  fact sheet  Quizlet  video  questionnaire	1) Competitive learning: four sentences on the wall 2) Fact sheet vocabulary list 3) Every group got a slip of paper to translate 'The factsheet on Cornwall' (Appendix 2). They used their own mobile phones and school tablets. 4) At the end of the lesson they had to send the translation into the teacher's e-mail account. 5) At the end of the lesson students had to assess the activities and their groupmates participation (questionnaire 1)	<ul style="list-style-type: none"> <li>• <b>language competence</b> by <ul style="list-style-type: none"> <li>- applying topic-related vocabulary items</li> </ul> </li> <li>• <b>factual competence</b> by <ul style="list-style-type: none"> <li>- obtaining topic-related information</li> </ul> </li> <li>• <b>self-competence</b> by <ul style="list-style-type: none"> <li>- evaluating themselves</li> </ul> </li> </ul>	1) Finish the Cornwall fact sheet translation of the part of your group  2) Send the translation into your teacher's e-mail account  3) Watch the video and write into your Notebook at least two reasons why <a href="#">the Eden Project</a> is important.	<ul style="list-style-type: none"> <li>• <b>self-competence</b> by <ul style="list-style-type: none"> <li>- evaluating themselves</li> </ul> </li> <li>• <b>media competence</b> by <ul style="list-style-type: none"> <li>- conducting (online) research and evaluating the received information</li> <li>- using web-based applications</li> </ul> </li> </ul>
	<i>Objective of lesson 3: Students can share responsibility and cooperate while translating a new text. They can finish the task in the lesson. They can write meaningful translation. They can find from the new video at least two reasons why the Eden Project is important. They listen to the video attentively and develop their listening skills.</i>			
<b>Lesson 4</b>  Eden Project video discussion  Quizlet  fact sheet translation  questionnaire	1) Short discussion on Cornwall 2) <a href="#">Quizlet vocabulary</a> on Eden Project video to understand the video better (Appendix 3) 3) The groups get Estonian translation of the Fact sheet and compare it to their work. 4) The students fill out the Collection of facts worksheet (Appendix 5). 5) The groups read their part of the text to the others	<ul style="list-style-type: none"> <li>• <b>social competence</b> by <ul style="list-style-type: none"> <li>- working cooperatively</li> </ul> </li> <li>• <b>self-competence</b> by <ul style="list-style-type: none"> <li>- evaluating themselves</li> </ul> </li> </ul>	1) Revise the <a href="#">Eden Project vocabulary</a>  2) Watch the <a href="#">video on Cornwall</a> again and try to understand the written text as well as the speech of the people. Write into your notebook at least two reasons why the Eden Project is important	<ul style="list-style-type: none"> <li>• <b>factual competence</b> by <ul style="list-style-type: none"> <li>- obtaining topic-related information</li> </ul> </li> <li>• <b>media competence</b> by <ul style="list-style-type: none"> <li>- using web-based applications</li> </ul> </li> </ul>
	<i>Objective of lesson 4: Students can speak about and discuss the video they watched at home and draw conclusions, they compare and demonstrate their knowledge on new vocabulary and they learn together, they can listen to others and can explain their part of the text.</i>			

<p><b>Lesson 5</b></p> <p>Eden Project video discussion</p> <p>decide and write four reasons</p> <p>grammar: relative clauses</p>	<p>1) Revising Eden Project video vocabulary</p> <p>2) Students work in groups discussing the video on the Eden Project: why do people go there / why would you go</p> <p>3) Group work: compare the reasons that you wrote as homework</p> <p>3) Group work: find seven to ten reasons why the Eden Project is important and write your answers down on a sheet of paper collected later. Use your homework</p> <p>4) students assessed the activities and their groupmates participation (Questionnaire 2)</p> <p>5) Short introduction to Relative Clause</p>	<p>• <b>social competence</b> by</p> <ul style="list-style-type: none"> <li>- working cooperatively</li> </ul> <p>• <b>language competence</b> by</p> <ul style="list-style-type: none"> <li>- applying topic-related vocabulary items</li> </ul> <p>• <b>factual competence</b> by</p> <ul style="list-style-type: none"> <li>- obtaining topic-related information</li> </ul> <p>• <b>self-competence</b> by</p> <ul style="list-style-type: none"> <li>-evaluating themselves</li> </ul>	<p>1) Watch the <a href="#">video on Relative Clauses</a>. Take notes into your notebook.</p> <p>2) Do the exercises on relative clauses</p> <p>1) <a href="#">Exercise on relative clauses. My English Pages.</a></p> <p>2) <a href="#">Exercise on defining relative clause</a></p> <p>3) <a href="#">Exercise on non-defining relative clause</a></p>	<p>• <b>media competence</b> by</p> <ul style="list-style-type: none"> <li>- using web-based applications</li> </ul> <p>• <b>language competence</b> by</p> <ul style="list-style-type: none"> <li>- applying topic-related vocabulary items</li> </ul>
<p><i>Objective of lesson 5: Students explain their thoughts to each other and decide on the best reasons about the Eden Project, they divide the responsibilities in the group and write working together seven to ten sentences. They assess and select the sentences and they check spelling and style elements. They know how to choose the relative pronoun.</i></p>				
<p><b>Lesson 6</b></p> <p>grammar: relative clause exercises</p> <p>Travel Diary</p> <p>steps of writing</p> <p>writing a plan</p>	<p>1) Revising relative clauses: uniting sentences using who, which and where.</p> <p>2) Relative clauses: WB.14/5 and 94/1</p> <p>3) WRITING: “Imagine you are asked to write a short Travel Diary entry for your school magazine. What do you do in order to solve this task?”</p> <p>4) Group work: brainstorming – what are the steps of writing</p> <p>5) Discussion on the <a href="#">steps on writing</a> and a short explanation. Life Rich Publishing 2016.</p> <p>6) Make a plan for your group: imagine you visited Cornwall and you are going to write your Travel Diary entry</p>	<p>• <b>language competence</b> by</p> <ul style="list-style-type: none"> <li>- applying topic-related vocabulary items</li> </ul> <p>• <b>social competence</b> by</p> <ul style="list-style-type: none"> <li>- working cooperatively</li> </ul>	<p>1) Watch the <a href="#">video on writing a Diary entry</a> by Miranda Botha</p> <p>2) Another <a href="#">video on writing a diary entry</a> by Iken Edu.</p> <p>3) Revise your plan for writing the Diary entry</p>	<p>• <b>media competence</b> by</p> <ul style="list-style-type: none"> <li>- using web-based applications</li> </ul> <p>• <b>factual competence</b> by</p> <ul style="list-style-type: none"> <li>- obtaining topic-related information</li> </ul>

	on this country			
	<i>Objective of lesson 6: Students can use their knowledge on relative clauses, they can creatively solve the problem of writing a short diary entry and find the steps of writing in groups. They can easily write down the topics about what to write. They watch the videos at home.</i>			
<b>Lesson 7</b>  test on homework  writing the diary entry  vocabulary  grammar: future tenses	1) Short test on homework video about writing a diary (Appendix 4) 2) WRITING. A diary entry on Cornwall (about 120-150 words). Working individually. <i>Imagine that you have been or travelled to Cornwall. Write about its people, the nature, the activities, the food.</i> (You have to write your own sentences only using the materials). 3) Short introduction on future tenses: will / be going to / present continuous / present simple	<b>• factual competence</b> by - obtaining topic-related information  <b>• language competence</b> by - applying topic-related vocabulary items	1) Finish your Diary entry (if necessary)  2) Revising: Eden Project vocabulary (Quizlet)  3) <u>Future tenses video</u> . Web English 2016.	<b>• media competence</b> by - using web-based applications  <b>• factual competence</b> by - obtaining topic-related information
	<i>Objective of lesson 7: Students are able to write a short Diary entry using the plan. Students revise the future tenses. They write down the example sentences and understand the different situations. Students watch the video on future tenses at home and take notes. They develop the listening skills and can express themselves a bit better.</i>			
<b>Lesson 8</b>  future tenses mind map  workbook  grammar	1) Revising future tenses 2) Group work: In your group make a mindmap on future tenses, write also the sample sentences 3) All the mind maps are put on the wall at the end of the lesson 4) WB. 94/2, WB.95/3,4	<b>• language competence</b> by - applying topic-related vocabulary items  <b>• social competence</b> by - working cooperatively	1) Exercise on future tenses: WB.14/4  2) Finish the exercises WB. 94/2, WB.95/3,4	<b>• language competence</b> by - applying topic-related vocabulary items
	<i>Objective of lesson 8: Students review, contrast and summarise their knowledge on future tenses in drawing a mindmap as a groupwork. They all take part in the activity. They can apply the knowledge doing exercises.</i>			
<b>Lesson 9</b>  speaking about yourself  exercises on future tenses	1) With your deskmate make three sentences about your life using future tenses 2) Checking homework 3) WB.96/5-6 4) Worksheet exercises 5) Dialogue (book p.22)	<b>• language competence</b> by - applying topic-related vocabulary items  <b>• social competence</b> by - working cooperatively	1) Revise for the test: <u>video on future tenses</u>  2) <u>Exercise on future tenses</u> . Englisch-Hilfen.de. 2016.	<b>• media competence</b> by - using web-based applications  <b>• factual competence</b> by - obtaining topic-related information

web of ideas				
<i>Objective of lesson 9: Students can create imaginary situations and demonstrate their knowledge on speaking about the future. They can work together making a mindmap. They can work independently.</i>				
<b>Lesson 10</b>	1) Working in pairs - Book p.22/5-7 - B.23/8-11 2) Exercises on future tenses	• <b>language competence</b> by - applying topic-related vocabulary items	1) B.22/5 Read the dialogue, learn the first part of it by heart.	
<i>Objective of lesson 10: Students can solve the problems independently using the knowledge they have gained. They learn by heart a part of the dialogue to develop their speaking skills and command of language.</i>				
	1) Final Questionnaire (Appendix 11)	• <b>self-competence</b> by -evaluating themselves		

## Appendix 2. Result of the Inductory Questionnaire

<b>Questions</b>	<b>Answers</b>	<b>Questions</b>	<b>Answers</b>
1) 16 respondents 2) Eight students were 13 and eight students were 14 years old 3) All from form 7		4 Do you think FCM is helpful for getting better knowledge?	Yes 6 – 37.5% No 5 – 31.3% I don't know 5 – 31.3%
5 I have heard about Flipped Classroom before.	Yes 3 – 18.8% No 13 – 81.3%	6 Doing homework is important for understanding educational material.	Yes 15 – 93.8% Other 1 – 6.3%
7 In addition to homework I often learn English a bit more at home	Yes 5 – 31.3% No 9 – 56.3% I don't know 1 – 6.3% Other 1 – 6.3%	8 Teachers should explain new material in the lesson and homework is necessary for better understanding.	Yes 12 – 75% No 2 – 12.5% I don't know 1 – 6.3% Other 1 – 6.3%
9 When doing homework in English I spend	less than 30 minutes 6 – 37.5% about 30 minutes 9 – 56.3% Other 1 – 6.3%	10 I like doing homework using books and notebooks.	Yes 7 – 43.8% No 6 – 37.5% I don't know 3 – 18.8%
11 I like doing homework using questionnaires on the topic.	Yes 8 – 50% No 4 – 25% I don't know 4 – 25%	12 I like making my own tests and questionnaires.	Yes 2 – 12.5% No 11 – 68.8% I don't know 3 – 18.8%

<i>13 I like doing homework using instructional videos.</i>	Yes 3 – 18.8% No 9 – 56.3% I don't know 4 - 25%	<i>14 I like doing homework using voice recording programmes (e.g Vocaroo).</i>	Yes 2 – 12.5% No 11 - 68.8% I don't know 3 - 18.8%
<i>15 I like doing homework using the Internet for finding additional materials for the lesson.</i>	Yes 9 – 56.3% No 3 – 18.8% I don't know 4 - 25%	<i>16 In which subjects have you watched videos as homework?</i>	Maths Estonian English
<i>17 I like making videos for my homework.</i>	Yes 3 – 18.8% No 11 - 68.8% I don't know 2 - 12.5%	<i>18 In which subjects have you made videos as homework?</i>	1 student - Russian 1 student – Human studies
<i>19 I know English well enough and do not want to do homework.</i>	Yes 5 – 31.3% No 6 – 37.5% I don't know 3 – 18.8% Other 2 - 12.5%	<i>20 Discussion with peers is helpful for understanding any material.</i>	Yes 11 - 68.8% No 2 – 12.5% I don't know 2 – 12.5% Other 1 - 6.3%
<i>21 I like to participate in groupwork.</i>	Yes 12 - 75% No 2 – 12.5% Other 2 - 12.5%	<i>22 I am active in groupwork.</i>	Yes 8 – 50% No 2 – 12.5% I don't know 4 – 25% Other 2 - 12.5%
<i>23 I like to listen rather than speak myself when others are discussing a topic.</i>	Yes 9 – 56.3% No 3 – 18.8% I don't know 3 – 18.8% Other 1 - 6.3%	<i>24 I like doing things on my own rather than participate in groupwork.</i>	Yes 5 – 31.3% No 10 - 62.5% I don't know 1 – 6.3%
<i>25 I would like to choose myself the topics to study.</i>	Yes 12 - 75% No 2 – 12.5% I don't know 2 - 12.5%		

### Appendix 3. Fact sheet about Cornwall

1

Cornwall is a peninsula, it is one of the sunniest areas in the UK. It is between the Celtic Sea, the English Channel and the River Tamar. The population of Cornwall is 530,000. The only city in Cornwall is Truro. In history tin mining was important and in 19<sup>th</sup> century large copper mines were used. In the 1900s, half of the world's tin came from Cornwall. Fishing and agriculture have also been very important parts of the economy.

2

Cornwall is the homeland of the Cornish people. The Cornish are the second smallest of the six Celtic nationalities – the Irish, Manx and Scots, the Welsh, Bretons and Cornish. They were the first Celtic nation to lose their language in the nineteenth century. In 2000 there were around 300 people who spoke Cornish fluently and in 2002 Cornish was officially recognised as a UK minority language.

3

Kayaking and canoeing are for those who just want to take things nice and easy. Compared to the rest of Britain, Cornwall has relatively warm and sunny weather, making it a perfect beach destination. You can learn or improve your dinghy sailing or you can enjoy a full day of canoeing, snorkelling and cliff jumping for all the family. Cornwall and its beaches attract more than 5 million visitors a year.

4

Cornwall is perhaps best known for its pasties. Today's pasties usually contain a filling of beef steak, onion, potato and swede with salt and white pepper. Pasties are often locally referred to as *oggies*. Cornish clotted cream has protected under EU law and can not be made anywhere else. There are more than 75,000 cows in Cornwall, making Cornwall famous for its ice cream and Cornish fudge.

### Vocabulary list

peninsula	fluently	location
dinghy	relatively	expert tuition
mining	officially	savoury dish
copper	recognised	pasty
tin	minority	filling
agriculture	compared to	fudge
economy	destination	clotted cream
second smallest	stunning	
nationality	coastal	

### Appendix 4. Collection of facts worksheet

Economy	
Celtic people	
Activities in summer	
Food	

## Appendix 5. Words from the Eden Project video

disused clay pit	projects in progress on every continent
world class tourist destination	transforming things
charitable enterprise	plug in the sand
earth shift	can write their own narrative
largest and tallest scaffolding	take the future in their own hands
the largest rainforest in captivity	give them an opportunity
an educational charity	create a neighbourhood
connects us with each other	in some cases
exploring how we could work towards a better future	community
out of this world	put simply – it is an attitude
a miracle	hopeless
the most mind-blowing classroom	their own version
runs courses for apprentices	scratch the surface
inspiring them	on a start of a journey
co-founder	transformation - it's in our nature

## Appendix 6. Test on writing a diary entry

Answer the questions TRUE or FALSE

- .....1. You start your diary with words „Dear Friend”.
- .....2. You don't need to write a date.
- .....3. You write your diary in the 1st person PLURAL, for example, „WE went to school yesterday”.
- .....4. You have to start your entry with a topic sentence, where you write what is uppermost in your mind or what is very important for you.
- .....5. You have to write into your diary every day.
- .....6. You have to write your diary in FORMAL style.
- .....7. You don't need to write what you FEEL, but you have to write what you did or what you are going to do in the future.
- .....8. You usually write in your diary in INFORMAL style.

..... 9. You always need to write a date.

.....10. You write your diary in the 1st person SINGULAR, for example, „I like going out with my friends a lot”.

## **Appendix 7. Questionnaire on Cornwall video**

1. Is Cornwall a part of England, Scotland, Ireland or Wales?
2. Where is St Ives located, in Cornwall or in Kent?
3. Look at the map of England. Where can you find Cornwall and Kent? Are they in the east, south, west or north of England?
4. Is St Ives in the east, south, west or north of Cornwall?
5. Write two activities you can do in St Ives according to the video.
6. When talking of pottery, did the video show bowls, children or houses?
7. Did the Queen of England visit St Ives by plane?
8. How long is the sand beach area in St Ives? Is it 3 miles, 4 miles or 5 miles?
9. What is the name of the book written by Philip Moran? Is it Bobby, Soggy or Teddy?

## **Appendix 8. Videos and pages on the Internet**

1. Visit Cornwall. Aerial views of Cornwall. Available at:  
<https://www.youtube.com/watch?v=boNT46BMyWg>, accessed on April 29, 2016.
2. Visit Cornwall. 2013. St Ives Bay in West Cornwall, a video guide. Available at:  
<https://www.youtube.com/watch?v=dksyH4JmfKE>, accessed on April 29, 2016.
3. Edenprojecttv. Eden Project: an overview. Available at:  
<https://www.youtube.com/watch?v=f8unx8-pZxg>, accessed on April 29, 2016.
4. Learn more English with the Shepherd School of English. Learn English: Sentences

- Relative Clauses (1- 'that' & 'who'). Available at: <https://www.youtube.com/watch?v=r90ElvSDQ60>, accessed on April 29, 2016.
5. My English Pages. 20156. Exercise on relative clauses. Available at: [http://www.myenglishpages.com/site\\_php\\_files/grammar-exercise-relative-clauses.php](http://www.myenglishpages.com/site_php_files/grammar-exercise-relative-clauses.php), accessed April 29, 2016.
  6. Oxford University Press. 2016. Exercise on defining relative clause. Available at: [https://elt.oup.com/student/solutions/int/grammar/grammar\\_03\\_012e?cc=ee&selLanguage=en](https://elt.oup.com/student/solutions/int/grammar/grammar_03_012e?cc=ee&selLanguage=en), accessed April 29, 2016.
  7. Oxford University Press. 2016. Exercise on non-defining relative clause. Available at: [https://elt.oup.com/student/solutions/int/grammar/grammar\\_03\\_022e?cc=ee&selLanguage=en](https://elt.oup.com/student/solutions/int/grammar/grammar_03_022e?cc=ee&selLanguage=en), accessed April 29, 2016.
  8. Miranda Botha. Flipped Lesson. How to Write a Diary Entry. Available at: <https://www.youtube.com/watch?v=p92Ll8DdZYk>, accessed April 29, 2016.
  9. Iken Edu. Learn English Writing: Writing a Diary. Available at: [https://www.youtube.com/watch?v=n6\\_Gg\\_1riow&ebc=ANyPxKrmsU0UOwVrKB6NB0gA6tVMQDnUzl5EVHb23LQ\\_5kKawY0YvYTRq9ALqivDHCM052GFNGCyXEQW47kEhD9RDpiwWgbo1w](https://www.youtube.com/watch?v=n6_Gg_1riow&ebc=ANyPxKrmsU0UOwVrKB6NB0gA6tVMQDnUzl5EVHb23LQ_5kKawY0YvYTRq9ALqivDHCM052GFNGCyXEQW47kEhD9RDpiwWgbo1w), accessed on April 29, 2016.
  10. Web English. Future tenses (English grammar). Available at: <https://www.youtube.com/watch?v=KsTXIxqk-Ro>, accessed on April 29, 2016.
  11. Visit Cornwall. 2013. St Ives Bay in West Cornwall, a video guide. Available at: <https://www.youtube.com/watch?v=dksyH4JmfKE>, accessed on April 29, 2016.

## Appendix 9. List of Competencies and 21<sup>st</sup> century skills in ESL classroom

<b>Competency</b>	<b>Description</b>	<b>Tasks in the project</b>
<b>Creativity</b>	Confidence to err, use imagination, to work using inspiration, take risks, learn from mistakes, assess your own work and make it work better.	*Find reasons why the Eden Project is important *Deciding and writing things as groupwork *Writing a diary entry *Mind map on future tenses
<b>Communication</b>	Literacy in writing and speaking, express yourself in other languages	*Factsheet on Cornwall *Describing pictures *Speaking about videos *Writing Travel Diary
<b>Cooperation</b>	To have respect, support and develop different opinions in different situations, to take different roles and solve problems using discussion methods and digital technologies.	*Writing ten sentences on Cornwall as a group work *Translating factsheets *Deciding on the steps of writing *Making a plan for writing a diary entry *Mindmap on future tenses
<b>Digital competence</b>	Digital literacy, competence to use and choose appropriate technological solutions for solving problems and for social communication, to use social media, to protect user's own privacy, to take responsibility.	*Watching films *Finding pictures on Cornwall on the Internet *Doing exercises on relative clause and future tenses on the Internet *Sending their translation to the teacher
<b>Critical thinking</b>	To be able to assess the possibilities, solve problems, to develop understanding, to make decisions, to analyse.	*Deciding why the Eden Project is important *Deciding on steps of writing *Groupwork: deciding on the ten sentences about Cornwall *Discussion: why should you visit the Eden Project *Mindmap on future tenses
<b>Personal responsibility</b>	To learn to learn, take responsibility for your own learning, metacognition on learning and thinking, planning, adopt with changes, enjoying learning knowing your own weak and strong points, to become who you would like to be and cope with the problems in the world, collective thinking and acting.	*Learning the vocabulary *Watching videos at home *Writing down some new words *Doing as well as possible the writing tasks *Taking notes on videos *Being active in speaking tasks *Active participation in group tasks

Based on the notes of the course *Flipped Classroom* (Vaikjärvi 2015).

## **Appendix 10. Questionnaire in the middle of the course**

Randomly chosen students S1, S7, S8 answered to some questions after the 8th lesson of the research study during a break.

Q1 What was different compared to a regular English lesson?

S7: There were too many tasks.

S8: There were more tasks for the whole group.

S1: And we had to fill out short inquiries at the end of the lessons assessing our own learning and the participation of the group members.

Q2 Did you like this kind of division between learning at home and in the classroom?

S7: Yes, I liked it but we could watch the videos in the lesson where we could ask the words we do not know and then we would learn more and better from the videos. And in the lesson the teacher could rewind the video where necessary and explain the words.

S1: I like it more the way we do now.

Q3 Did you watch the videos at home?

S7: A bit, when I found time for that, there were a lot of words I did not know. I did not like watching the videos.

S8: I watched the videos every time.

Q4 Usually I pre-explained the part of the theory and then let you watch the video at home.

Was it useful and did it help you to understand the material?

S1: Yes, it was useful, otherwise we would not understand anything at home.

Q5 In the traditional lessons I explained the material in the lesson and let you finish exercises in the workbook at home. Could you compare the two different approaches and how did you feel?

S7: I like it when we do exercises in the classroom for then I do not need to take the

workbook home and the school bag is not so heavy.

S1: I like better the variant where we watch videos at home and do the exercises in the lesson because when you do not understand what you have to do in the exercise you may ask right away.

Q6 Did you rewind the videos at home?

S7: Yes, I did it many times when I did not understand what was said.

S1: Yes, I have done that and I have even watched the whole videos many times. Usually I take notes on the video to understand the material better.

S8: Yes, I have rewound the videos, too.

Q7 Once I gave you the new words list in the lesson and then you had to watch the video at home. Was it helpful?

S7: Yes, it was very useful, then you get the spelling in the lesson and at home you learn the pronunciation and context of the word.

S1: Yes, it helped a lot and once we had to translate the words at home, too. Then we understand the words better.

S8: And we memorize the words.

Q Which activities would you like to do more in the lessons?

S7: I like it when we do writing tasks in the lesson and watch videos at home.

S8: I would like to do more group work.

S7: Yes, me too, because when you do not understand, the other members in your group may explain it to you and there are more different answers for the problems and questions.

S8: You may ask your group members to help you or to explain something to you.

S1: I like more creative tasks where you have to create something on your own or with your group mates. I like the pictures on the walls where we drew different kinds of birds and endangered animals.

## Appendix 11. Result of the Final Questionnaire

<b>Questions</b>	<b>Answers</b>	<b>Questions</b>	<b>Answers</b>
1) 16 respondents 2) Three students were 13 and thirteen students were 14 years old 3) All from form 7		4 Do you think FCM is helpful for getting better knowledge?	Yes 8 – 50% No 2 – 12.5% I don't know 5 – 31.3% Other 1 – 6.3%
5 In my opinion, Flipped Classroom Methodology should be used in learning and teaching English all the time.	Yes 2 – 12.5% No 10 – 62.5% Other 4 – 25%	6 Doing homework is important for understanding educational material.	Yes 11 – 68.8% No 1 – 6.3% I don't know 2 – 12.5% Other 2 – 12.5%
7 In addition to homework I often learn English a bit more at home	Yes 4 – 25% No 5 – 31.3% I don't know 4 – 25% Other 3 – 18.8%	8 Teachers should explain new material in the lesson and homework is necessary for better understanding.	Yes 10 – 62.5% No 2 – 12.5% I don't know 4 – 25%
9 During the Flipped Classroom Project I did all the homework needed in English	Yes 9 – 56,3% No 3 – 18.8% I don't know 3 – 18.8% Other 1 – 6.3%	10 I did not do my homework during the project because	5 – I didn't understand 3 – I did all the exercises 1 – I was outside 1 – I didn't see it in my e-school 6 – I did
11 During the Flipped Classroom Project I spent more time than usual doing homework in English	Yes 6 – 37.5% No 5 – 31.3% I don't know 4 – 25% Other 1 – 6.3%	12 During the Flipped Classroom Project I spent less time than usual doing homework in English	Yes 7 – 43.8% No 4 – 25% I don't know 3 – 18.8% Other 2 – 12.5%
13 I like doing homework using books and notebooks.	Yes 8 – 50% No 7 – 43.8% I don't know 1 – 6.3%	14 I like doing homework using questionnaires on the topic.	Yes 7 – 43.8% No 6 – 37.5% I don't know 3 – 18.8%
15 I like making my own tests and questionnaires.	Yes 4 – 25% No 9 – 56,3% I don't know 2 – 12.5% Other 1 – 6.3%	16 I like doing homework using instructional videos.	Yes 7 – 43.8% No 7 – 43.8% I don't know 2 – 12.5%
17 I like doing homework using voice recording or video recording programmes.	Yes 4 – 25% No 10 – 62.5% I don't know 2 – 12.5%	18 I like doing homework using the Internet for finding additional materials for the lesson.	Yes 9 – 56,3% No 4 – 25% I don't know 3 – 18.8%
19 I like making videos for my homework.	Yes 4 – 25% No 10 – 62.5% I don't know 2 – 12.5%	20 I know English well enough and do not want to do homework.	Yes 6 – 37.5% No 7 – 43.8% I don't know 2 – 12.5% Other 1 – 6.3%
21 Discussion with peers is helpful for understanding any material.	Yes 11 – 68.8% I don't know 3 – 18.8% Other 2 – 12.5%	22 I like to participate in groupwork.	Yes 14 – 87.5% No 1 – 6.3% Other 1 – 6.3%

23 <i>I am active in groupwork.</i>	Yes 12 – 75% No 1 - 6.3% I don't know 1 - 6.3% Other 2 - 12.5%	24 <i>I like to listen rather than speak myself when others are discussing a topic.</i>	Yes 8 – 50% No 3 - 18.8% I don't know 4 – 25% Other 1 - 6.3%
25 <i>I like doing things on my own rather than participate in groupwork.</i>	Yes 3 - 18.8% No 12 – 75% I don't know 1 - 6.3%	26 <i>I would like to choose myself the topics to study.</i>	Yes 10 – 62.5% No 1 - 6.3% I don't know 4 - 25% Other 1 - 6.3%

## RESÜMEE

TARTU ÜLIKOOL

INGLISE FILOLOOGIA OSAKOND

**Reet Rospu**

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Lehekülgede arv: 70

Annotatsioon:

Antud uurimuse eesmärk oli katsetada pööratud klassiruumi metoodikat kümne järjestikuse tunni jooksul ja empiirilise uuringu käigus saada andmeid selle kohta, kuidas põhikooli seitsmenda klassi õpilased kohanevad uue metoodikaga ja kuidas sellesse suhtuvad.

Töö koosneb teoreetilisest ja empiirilisest osast. Esimeses osas kirjeldatakse mõisteid kombineeritud õpe (*Blended Learning*), arvutipõhine keeleõpe (*Computer Assisted Language Learning*), überpööratud klassiruum (*Flipped Classroom*), kognitiivne koormus (*Cognitive Load*) ja nende omavahelisi seoseid. Samuti arutletakse motivatsiooni ja digitaalpädevuse seostest õppimisega kaasaegses õppekeskkonnas. Empiirilises osas kirjeldatakse tegevusi pööratud klassiruumi metoodika rakendamisel. Järelduste tegemiseks koostati kaks pikemat küsitlust ja mitu lühemat hinnangulehte, et tulemusi võrrelda ja üldistada, ning saada täpsemaid andmeid selle kohta, mida õpilased mõtlesid ja tundsid projekti vältel.

Pööratud klassiruumi metoodika aitab paremini kasutada tunni aega, andes õpilastele võimaluse rohkem osaleda meeskonnatöös, arutleda ja koos tehes õppida. Osa õppematerjali omandatakse kodus vaadates õppevideoid. Tunnis rakendatakse saadud teadmisi, arutletakse ja lahendatakse probleeme. Kuna ühiskonnas järjest enam tehakse otsuseid pigem koos, jõutakse järeldustele erinevaid seisukohti arvesse võttes, mitte üksinda mõeldes, siis käesolev metoodika annab võimaluse arendada oskusi, mis on vajalikud tuleviku jaoks.

Enamus õpilasi kohanesid uue olukorraga kiiresti ja meeleldi osalesid meeskonnatöös. Esialgu oli keeruline see, et kodus ei vaadatud videot või ei tehtud märkmeid. Kodutööde tegemine paranes aja jooksul. Üks järeldusi oli, et tuleb aeglasemalt liikuda ja rohkem aega jätta harjutamiseks ning täpsemalt planeerida.

Märksõnad: Inglise keel, inglise keele didaktika, inglise keele õppimine, õpilaste tajud, õpilaste suhtumine, tehnoloogiliste vahendite kasutamine inglise keele tundides, überpööratud klassiruum.

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Mina, \_\_\_\_\_ Reet Rospu \_\_\_\_\_,  
(*autori nimi*)

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FLIPPED CLASSROOM:

A CASE STUDY OF ESTONIAN BASIC SCHOOL EFL CLASSES

Überpööratud klassiruum: Uurimus ühe Eesti põhikooli inglise keele tundide põjal

(*lõputöö pealkiri*)

mille juhendaja on Natalja Zagura,  
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Reet Rospu