

**UNIVERSITY OF TARTU**

**DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE**

**The Application of Learning Objects in an Estonian Basic School EFL**

**Class:**

**A Pilot Study**

**MA THESIS**

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## **ABSTRACT**

With the advances in technology, the potential for reshaping the way we learn is too great to ignore. While teachers have admitted that using information and communication technology in classrooms has its benefits, they still harbour reservations about using it. Why not focus then on the learners instead? The aim of this study to create digital materials called learning objects to enhance they way students learn English grammar.

The first chapter of this study gives an overview of a field in education called computer-assisted language learning (CALL). It also introduces the concept of learning objects, how to construct them and why should they be used in the first place. The focus of the theoretical chapter of the thesis is on the so-called ADDIE model (Analyse, Design, Develop, Implement, Evaluate). The second chapter presents the results of the empirical study. Three digital learning objects for learning English reported speech were created as a result of this study following the ADDIE model and are now available in the MERLOT repository. These learning objects were applied in an EFL class at an Estonian basic school to get feedback on the learning objects in order to gain useful recommendations for improving them. The initial hypothesis of the study is that the students who use learning objects will perform better when given a test as opposed to the students who learn through more traditional methods. The chapter ends with a discussion on the findings.

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## **ABBREVIATIONS**

ADDIE – analyse, design, develop, implement, evaluate

CALL – computer-assisted language learning

EFL – English as a foreign language

GRÕK – Gümnaasiumi riiklik õppekava (National Curriculum for Upper Secondary Schools)

HTML – Hyper-text mark-up language

ICT – Information and communication technology

IEEE – Institute of Electrical and Electronics Engineers

LO – learning object

PRÕK – Põhikooli riiklik õppekava (National Curriculum for Basic Schools)

## INTRODUCTION

This thesis was born out of the desire for innovation and a passion for teaching. My background in computer science helped to define the field on which this thesis was going to focus. An important aim was to do something practical, something that would benefit the learners of English. One of the possible ways how to combine innovative teaching, computer science and practical output is the creation of learning objects.

Learning objects are not recent inventions. First mentions of a learning material resembling a learning object date back to as far as 1969 when Ralph W. Gerard mentioned curricular units which could be combined with each other. Although a learning object can be any study material that fits one of the many definitions, in recent years, a learning object has become to mean a digital material. With the development of technology, using learning objects and digital materials has become under the spotlight yet research about the effects of learning objects on learners remains scarce.

This study serves as a pilot for future studies and has three broad aims:

- To create digital learning objects for teaching reported speech in English which are made publicly available.
- To test the effects of the digital learning objects created in this study on an Estonian basic school EFL class with the hypothesis being that the learners who have access to the digital learning objects perform better than their peers who study the same topic without the help of the digital learning objects.
- To collect feedback from the learners about their preferences on using the digital learning objects.

This thesis is organised into an introduction, two main chapters and a conclusion. The first chapter gives a theoretical background to the study. It covers the definition of the learning object, why they are needed, how computer-based activities benefit language learners and how are learning objects constructed using the ADDIE (Analyse, Design, Develop, Implement, Evaluate) model. The second chapter presents the methodology and the results of the study together with the discussion on the main findings. The conclusion ties together the findings of this thesis and offers suggestions for possible future studies.

The participants were students from a basic school in Tartu, Estonia. The test group and the group they were compared against were both sixth grade students from the same school. Each group had fifteen students but varied in terms of gender. One of the groups consisted mostly of boys while the other of girls.

A questionnaire was used to collect feedback on the learning objects. It consisted of thirteen multiple choice questions. The answers were then analysed to get feedback on students' attitudes on the learning objects used and using similar learning objects in general.

The use of learning objects is a very specific sub-field of CALL and ICT. To the author's knowledge, the use of learning objects has not been researched much in the world nor in Estonia. This is changing, however, with more research being done on the subject. The number of studies done in Estonia remains scarce with the use of ICT in more general terms being studied but not digital learning objects and their effects specifically. This work aims to contribute to that field and hopefully inspire others to do the same.

I would like to thank my supervisors Liina and Jane. Liina provided everything I needed to start my journey in the world of learning objects and Jane guided me over the finish line. I would also like to thank the teacher who trusted me to teach her students and to apply

these learning objects in her class. My final thank you goes to Mari-Liis. Her love, support and critical eye made the process of writing this thesis seem easier and renewed my hopes even when doubts and indecision started to creep in.



# 1 THEORETICAL BACKGROUND

## 1.1 Computer-assisted language learning

In this study, the focus is on digital learning objects. These are a part of a larger field of research called computer-assisted language learning (CALL). CALL is defined by Levy (1997) as the "search for and study of applications of the computer in language teaching and learning". It is a definition which encompasses a wide variety of methods for using computers for teaching a language. Anything from hardware, such as interactive whiteboards, to software, such as learning objects, is included in this definition.

Although CALL has been around for quite some time, it has been researched more in recent years due to the rapid development of easily available technology. CALL can have a different impact on language learning and teaching. Hashmi (2016) concluded that using CALL in an EFL classroom has benefits such as easy access to authentic materials, promotion of learner autonomy and the possibility of repetition without tiring. While teachers can only repeat something so much before it becomes tiring, it is not a problem with computers (*ibid.*). Students have different learning speeds and may need much repetition which is not a problem for a computer (Hashmi 2016). Ciampa (2013) found that students liked the instant feedback which came with digital exercises. In the study by Aviste (2016), teachers noted that the language learning process should be fun for the students. This could be achieved by having the students use a medium that they are comfortable with – the computer (*ibid.*). Alvarez-Marinelli et al. (2016) studied younger learners over a period of twenty-five weeks in Costa Rica. Total of 868 third-graders from 77 schools took part in this study. The students who were exposed to CALL in their English lessons started out with a lower oral English

proficiency than those in the group that did not have access to CALL. By the end of twenty-five weeks, the group using CALL had developed more than those in the other group.

Zaini and Mazdayasna (2015) looked into the impact of CALL on EFL learners' written skills in an Iranian university. They analysed two groups of students; one of the groups was taught using CALL and the other was not. They found that the group who used CALL outperformed their counterparts in terms of using appropriate articles, tense, plural forms and spelling. These students also tended to write paragraphs of higher quality. Marzban (2011) studied the impact of CALL on EFL learners' reading comprehension skills. He (Marzban 2011), too, concluded that using CALL is beneficial for students as the group who used CALL significantly outscored the other group who was taught by traditional methods.

All three main skills of English language have been the focus of different studies. Reading, speaking and writing all show bigger improvement when taught using CALL as opposed to more traditional methods. The studies (Marzban 2011; Timmi 2017; Zaini & Mazdayasna 2015) have shown that modern technology is beneficial and should be integrated into lessons in some form or another. The benefits of CALL are not limited to only language classes. Kay and Knaack (2008b) researched the benefits of CALL via learning objects in a mathematics class. They found that the learners who had access to the learning objects had made more progress than those without the help of learning objects.

While the benefits of using CALL are an incentive to implement it in a classroom, the process of implementation can be challenging. As noted by Alresheed et al (2015) there are both covert and overt difficulties in implementing CALL. Although the study was carried out in Saudi Arabia, the findings are similar to those in other countries, in Estonia for example (Timmi 2017). The overt difficulties were to do with the lack of technical support or schools

not having enough computers or similar devices. Covert reasons were the negative attitudes of teachers or their presumptions about implementing CALL. According to Timmi (2017), the teachers feared that malfunctioning equipment or technical difficulties during a lesson could make the teachers look unprofessional. They also admitted getting frustrated over technical difficulties. Alresheed et al. (2015) also say that teachers lack the training and knowledge to use CALL in classroom. The teachers in the study also mentioned that "there were no suitable CALL English programs/software for students" (Alresheed et al. 2015:73).

## **1.2 Defining a learning object**

In order to begin analysing why building and testing learning objects was the goal of this study, a definition of what 'learning objects' are must be given. The concept of learning objects itself has been around for a while. Back in 1969, Ralph W. Gerard described a concept of curricular units which "could be made smaller and combined, like standardized Meccano(mechanical building set) parts, into a great variety" which could be custom-made for each learner (Gerard 1969; as quoted in Wiley 2009). This Meccano is a children's toy similar to Lego - meaning that a learning object is something small and independent which could be combined with other learning objects to build something larger. Despite the concept having been around, the term 'learning object' is not quite as seasoned. No clear author of the term has been agreed upon, but Wayne Hodgins is mostly recognised as the person who coined the term 'learning object' (Hodgins 2002).

With the term being agreed upon, its definition still remains somewhat of a divisive topic. There are definitions which are more inclusive such as the definition given by the Institute of Electrical and Electronics Engineers (IEEE) which says that a learning object is

"any entity, digital or non-digital, that may be used for learning, education or training" (IEEE 2002). Wiley (2000) defines learning objects as "any entity, digital or non-digital, which can be used, re-used or referenced during technology supported learning". The key issue here is the word 'digital'. These definitions also include entities which are not digital. There are also definitions which limit learning objects to only those of digital nature, such as the definition by Chiappe, Segovia and Rincon (2007) who define learning objects as a "digital, self-contained, reusable entity with a clear learning aim that contains at least three internal changing and editable components: content, instructional activities (learning activities) and context elements". The lack of proper definition has led to a variety of interpretations of what learning objects actually are (Allen 2010).

No matter if it is digital or not, some aspects of a learning object remain the same - being self-contained and re-usable. Coming back to the Lego analogy, a learning object should be independent from everything else and yet have a possibility to be combined with other learning objects or materials to form something larger, a full course, for example. Beck (2010) defines learning objects as smaller units of learning, ranging typically from 2 minutes to 15 minutes. They have to be self-contained which means that they could be used independently. Learning objects have to be re-usable in multiple contexts and purposes (ibid.). To organise digital learning objects, they are tagged with metadata to make them easily found by an internet based search (Beck 2010). Whilst being independent, learning objects have to have the ability to be aggregated and grouped into larger collections of content (ibid).

Beck's (2010) definition is made under the presumption that the learning object is digital. This allows for the metadata characteristic. One of the ideas behind learning objects is also the ability to share these objects. Tagging the digital learning object with metadata allows

others to easily find the material needed. The requirements for metadata can vary but the most common pieces of metadata include:

- **objective:** the educational aim of the learning object.
- **prerequisites:** what the learner needs to know before using the learning object.
- **topic:** what the learning object is instructing.
- **type of interaction:** how will the learner use the learning object.
- **technology:** what type of technology is needed for the learning object.

Metadata can be applied to any digital learning object. As mentioned, the metadata can vary and this is dependent on the repository or the environment that is used to store or share the learning objects. Some examples of these metadata standards are IEEE's Learning Object Metadata, Dublin Core Metadata Initiative and Sharable Content Object Reference Model. Perhaps the most widely recognised standard is the IEEE standard. The number of repositories for sharing learning objects is also large. Some examples of the repositories are MERLOT – Multimedia Educational Resource for Learning and Online Teaching and ARIADNE – Alliance of Remote Instructional Authoring & Distribution Networks for Europe. The learning objects created for the purposes of this thesis and which are described in detail in the second part of the thesis are made available through the MERLOT repository.

### **1.3 The need for digital learning objects**

This chapter takes a closer look at why learning objects should be used at all and which problems would using them help to solve. The benefits discussed in this chapter are re-usability, cutting time and the cost of producing teaching materials, teacher collaboration and more customised learning for students. The most integral part of a learning object is its re-

usability. Being able to use the same material in different contexts is the main draw of learning objects. There is increasing interest in sharing and developing new methods for learning (Boyle 2010).

Having re-usable learning objects solves one of the problems with online educational materials – producing them is not cheap (Downes 2004). Considering that sharing digital materials has never been easier, it makes little sense for institutions or teachers to create their own online materials which are often on similar topics. The time and money spent on creating digital resources could potentially be reduced if learning objects were used since the underlying principles of their subjects do not change very often. The teacher could integrate learning objects into the lesson without spending time on creating the materials or build an entire course out of learning objects by combining them.

Teachers can also collaborate more easily by using digital learning objects. There is a push and pull situation towards collaboration in educational context (Vangrieken et al. 2017). Vangrieken et al. (2017) explain that due to a large workload and isolation, teachers are pushed towards collaboration, meaning that they need to work together in order to succeed in their field and provide quality education. At the same time, the benefits of teacher collaboration are the pulling factor (ibid.). A study by Reeves, Pun and Chung (2017) found that although it can be specific to each individual school, working together with colleagues in schools can be beneficial to students and to teachers as well concerning their job satisfaction. They (Reeves et al. 2017) list different categories and aspects of collaboration and one of the beneficial categories is planning together with another teacher. This is where learning objects fit in. Having easily shareable materials, which can be connected with each other, opens up

possibilities for teachers for working and planning their classes together without spending too much of their precious time, which teachers seem to be lacking (Ohu 2013).

While there are benefits to be gained from using learning objects in terms of time, money and job satisfaction for teachers, learners could benefit in terms of understanding the topics better and more customised learning. Since learning objects are self-contained, they can be used as needed by the learner. When learning objects are used in a lesson or in a course, students have more choices as to how much material they want to go through. Academically more advanced students can use the learning objects they feel are necessary for them and skip those that they feel do not benefit them as much. At the same time, students who require more time to understand a topic can use more learning objects or use them at their own pace, giving them an opportunity to study at their own pace as well without the teacher having to worry about advanced students getting bored or anxious. Kay and Knaack (2008a) found that using learning objects in secondary school level in Canada had a positive impact on the learners and on the teachers as well. Sakurai and Donelson (2011) carried out a study on using learning objects in an EFL classroom in Mexico and they too concluded that using learning objects has many benefits for the learners. In the study by Sakurai and Donelson (2011), the students became more interested in the topic when using learning objects in school. They also noted that students enjoyed the learning objects because the variety appeals to different learning styles. Kay and Knaack (2008a) also note that student engagement was seen as the most positive effect of using learning objects.

Since learning objects are digital, it gives the 21<sup>st</sup> century student the opportunity to develop their skills needed to navigate the changing world. According to Tõnisson (2014), teachers agree that reading and writing is changing due to technological pressure. This is

where learning objects come into play. Learning does not have to be a passive effort since learning objects can be as interactive and as varied as the teacher or students want it to be. Including videos, audio, interactive exercises (e.g. drag-and-drop) and other types of non-traditional materials into a learning object provides students with ample opportunity for practicing other skills while learning.

In Estonia, these 'other skills' are considered to be an integral part of students' education. These skills are both digital competences and learning competences. Estonian basic school curriculum (PRÕK 2018) dictates that schools are to develop students' digital competences in order to "provide them with the ability to use developing technologies in order to succeed in the rapidly changing world, whether for studying, in personal lives or in communities". The same stands for the gymnasium level (GRÕK 2018). This means that students should not have to rely solely on textbooks for learning.

Research has been done in Estonia regarding teachers' attitudes about using digital materials in class. The common denominator in the results is that teachers do not use digital resources in Estonian schools as much as they could (Timmi 2017; Hirmo 2005). Timmi's (2017) study included 15 English teachers from Estonian schools. She concluded that while the teachers were open to using technology in their classrooms, many did not and were worried about the potential downsides of using ICT. For example, teachers feared that they might look unprofessional in front of their students if a technical malfunction happens and thus lose authority. Almost half of the responding teachers also feared that using ICT in class could cause discipline problems.

Hirmo's (2005) study included students from three different grades from Estonian basic and upper secondary schools. She (Hirmo 2005) concluded that teachers of humanities do not



use digital resources as much as their counterparts in mathematics, physics etc. The reasons for teachers not using ICT were that they do not have the means or relevant training (ibid.). It is important to note that Hirno (2005) conducted her study over ten years ago and therefore the teachers' attitudes and issues related to the accessibility of technology might have changed. These hindrances to using digital materials in classrooms could be removed by learning objects since they are meant to be used by students mostly independently. Teachers only need to know how to find relevant learning objects (LOs) and provide students with access to them. This seemed not to be a problem for teachers since according to Timmi (2017), teachers found a relevant learning object in under thirty minutes.

Another reason for using learning objects in Estonia is the inadequacy of some of the resources used in schools. In this study, the school that was given the opportunity to use learning objects was using, at the time of the study, textbooks from the 'I Love English' series. It is a series of textbooks and workbooks for different levels of English learners. The textbooks were analysed by the author of this study and found to be lacking in necessary content. The reviewer for this material series has been the same for quite some time and has always approved of the textbooks. The textbook which was analysed for this study was 'I Love English 5'. The reviewer has again approved this material and says that it corresponds to the standards of Estonian curriculum (Tera 2016). The study at hand found, however, that this textbook lacked important elements such as the theoretical part for explaining grammar rules. Teachers are expected to come up with their own theory and find ways to explain it to the students and also how to present the material. This means that teachers should spend extra time on compiling handouts or finding relevant theory to give to the students to ensure that the students have enough material to use for learning. Another downside of this textbook,

focusing again on grammar, is that topics are spread out all through the workbook, which means that students have only a few relevant exercises in one unit. To combat this, a teacher again has to combine the exercises into suitable handouts to give students enough opportunity for learning and practicing. This in turn means extra work and effort for the teacher and begs the question why use this workbook and textbook at all if the teacher has to reorganise exercises, find additional materials and come up with theoretical explanations on his or her own.

While reasons such as the potential time and money saved by teachers and institutions and some schools lacking adequate materials are among the more prominent reasons why it would be beneficial to opt for developing and using more learning objects, another crucial reason is that students prefer more varied learning opportunities. The traditional model of homework is no longer working with Estonian students and parents complain more and more about the amount of homework that has to be done and about the time spent doing it (Tasa 2017). While using LOs independently does not always decrease the amount of homework, it can potentially make the homework more enjoyable and increase the student motivation. Having negative experiences with homework can potentially affect students approach to learning. This approach can either be a surface approach or a deep approach to learning (Biggs & Tang 2008). With surface approach, the student only strives to do the minimum, has little motivation and does not delve deep into the material he or she is required to learn (ibid.). With the deep approach, the result is the opposite – the student has high motivation, wants to learn and goes through the material in depth (Biggs & Tang 2008). Cultivating a deep approach to learning among students should be a priority since one of the aims of Estonian curriculum is to have the students be an active participant in the learning process, to have the students want to

learn both independently and together with others and to have the students construct new knowledge based on previously acquired knowledge (PRÖK 2018).

Using learning objects in school, either in classroom or having students use them independently can help teachers tackle the most difficult or less interesting aspects of their subjects. In English language, the less enjoyable part is often thought to be grammar (Jean & Simard 2011; Al-Mekhlafi & Nagaratnam 2011) . Grammar for a language could be viewed as a frame to a house (Wang 2010). It is an integral part of a language and without it, the language could not exist. Knowing grammar is important for producing correct sentences in everyday situations (Anier 2015). A study by Jean and Simard (2011) shows that L2 learners and teachers agree that grammar is an important and necessary part of learning a language but it was not enjoyable for the students. Students see it as a necessary evil (Al-Mekhlafi & Nagaratnam 2011). Samanta (2016) points out that in some cases, grammar has become synonymous with language learning.

Although grammar is seen as an integral part of language learning, it is also important to keep in mind how it is taught. Ahmad, Hussain and Radzuan (2017) point out that teachers can have the theoretical knowledge of how to teach grammar in a way that is well-received by their students, but still resort to methods of a more traditional nature which are not always enjoyable for the students. This means that teachers focus more on the form rather than function: however, it is the latter that is expected by the students. Learners want to have more context as opposed to the exercises without it which focus on rules (Ahmad et al. 2017). Using learning objects provides the opportunity to provide additional context via videos or audio or passages of text or even descriptions of situations which could make learning grammar a more enjoyable task for the learner.

## **1.4 Constructing a learning object**

A number of aspects are needed to be kept in mind whilst constructing a learning object. First is the definition which gives the idea of what the learning object is. Second part is what is known as the ADDIE model (Villems et al. 2012). It stands for A – analyse, D – design, D – development, I – implementation and E – evaluation. These stages depict the lifecycle of a learning object. This chapter focuses on how to construct a learning object following the two aspects mentioned previously.

Based on the numerous definitions, there are four characteristics that a learning object should have. These are reusability, being self-contained, supporting learning and compatibility. The first characteristic of a learning object is that it should be reusable. A learning object has to be usable by different groups of people and not be dependent on any one institution, material or hardware. The second characteristic is that a learning object should be self-contained. Learning objects are meant to teach a certain topic and they should do just that. They should provide the student with everything from theory and practice to evaluation without the student having to look up additional materials. These aspects connect together with the third characteristic which is that a learning object has to support learning. Everything included in a learning object should have a specific goal related to the study aims and students' needs. The fourth and final characteristic is that a learning object has to be compatible. This means that digital learning objects have to be compatible with all of the more common operating systems and hardware. It enables learners to have easy access to these objects without requiring special software or additional programs being set up in their computers or other devices.

Next, this section discusses the ADDIE model. Following this model helps teachers to build learning objects and also make improvements to achieve a higher quality of learning objects. First step in this model is A – analyse. This is perhaps the most important step in building the learning object. In this step, the author of the learning object is required to analyse the aims of the object, who will be using it, should other people be included in the building process, the content of the object, available resources for building the object and which licence will be used to publish the learning object (Villems et al. 2012). If all these aspects are analysed and the result is that building the learning object is possible and beneficial, then the development can move on to the next stage which is D – design. In this stage, the blueprint for building the object has to be constructed. During the design process everything is worked out starting from writing down the aims and skills the student will have reached after finishing the object to more content related questions ranging from which media to use, the structure of the object, level of interactivity and finally which software is going to be used to build everything.

Following the constructed blueprint, the learning object can be built. This is the D – development phase. By the end of this phase, the learning object should be ready to be handed to the learners. This phase includes building the object and testing both the technical and content related aspects. On the technical side, the object has to work without bugs on all of the more common operating systems and devices. On the content side, it is wise to hand the learning object over to a colleague or specialist in order to get feedback on the content and make necessary improvements (Villems et al. 2012). Once the final object has been deemed ready, it can be handed over to the learners, which leads to the I – implementation stage. Together with the implementation, the E – evaluation stage also occurs. In this stage, the teacher gets feedback from learners or bases it on the results of the self-tests, should the

teacher choose to collect them, and makes improvements to the learning object for a more qualitative experience in the future.

## **2 EMPIRICAL STUDY**

### **2.1 Methodology**

For this study, three learning objects were created using the ADDIE model. For the initial implementation and evaluation stage, the learning objects were then applied in a classroom at a basic school in Tartu. Two groups of students participated in this study. One of the groups had access to the learning objects while the other group did not. Both groups continued to work normally in their classroom environment with the exception of one of the groups being able to use the learning objects. After completing the unit, tests were administered in both groups. To collect feedback on the learning objects, a questionnaire was used. For this study, convenience sampling was used.

#### **2.1.1 Learning objects**

The main aim of this study was to create learning objects and apply them in class. Therefore, the first and arguably the most crucial step was creating the objects. In this study, the ADDIE model was taken as the guiding principle of compiling and developing the LOs. Three different LOs were created during this study. With the ADDIE model as the guide, the first step was analysing. In this stage, the final topic and the exercises were decided on after talking with the teacher of the sample group, supervisor and after pinpointing the weak spots in language instruction in the students' textbooks. Considering the lack of instruction in the students' textbooks, the LOs were all built to teach English grammar, more specifically the reported speech constructions. The exact topic of reported speech was decided on based on the students' curriculum. In order to not disturb their work schedule, reported speech was chosen

since it was the topic that the students were starting to learn when this study was to be carried out. This, however, should not influence the results of the tests nor the usage of learning objects. Considering the students level, the reported speech constructions chosen had no backshift since that was not appropriate for the learners' level at the time of the study. This means that the LOs dealt only with reported speech where the reporting verb is in the present tense and changes occur only with pronouns and verb endings. The approximate time for fully working through a single learning object was estimated to be about half an hour.

The second stage of producing LOs was the designing of the objects. All three LOs incorporated free software called HotPotatoes (Half Baked Software Inc 2018). This software was used to create the practice exercises for the LOs developed in this study. The practice exercises consisted of eight questions per set with each learning object having three sets of questions. The learning objects were designed so that learners received instant feedback on their practice in the form of percentage of correct answers while the wrong answers were left in place for students to have an opportunity to correct them. An example screenshot of the exercises can be seen in Figure 1 below.

The screenshot shows a web interface for a practice exercise. At the top, there are navigation links: 'IMPERATIVES', 'HOME', 'THEORY', and 'PRACTICE'. The main heading is 'Imperatives practice 2'. Below this is a section titled 'Gap-fill exercise' with the instruction 'Fill in all the gaps, then press "Check" to check your answers.' The exercise contains three numbered items:

- 1) "Open the window," Mom says to him.  
Mom  open the window.
- 2) "Go to bed," Mike says to his sister.  
Mike tells his sister  go to bed.
- 3) "Don't watch so much TV," Kate says to Meg.  
Kate tells Meg  watch so much TV.

*Figure 1 Example exercises*



The HotPotatoes software enables its user to create various types of exercises ranging from the gap-fill type which were used in this study to multiple-choice questions and other types of questions. It also provides different output settings for the exercises, enabling the user to choose the best one. For this study, HTML code was chosen as the output which allowed the exercises to be put directly and easily to the final website of the learning object. The software allows for other customisations to be made to the questions according to the wishes and skills of the person developing the learning objects. It is a popular choice of software for language teachers and comes with an active user community and a detailed manual (Half Baked Software Inc 2018).

The exercises were evaluated by the researcher and other professionals before finalising the choice of questions. The LOs were designed with the learning aim – student knows the basics of forming reported speech – in mind. Weebly (Weebly Inc 2018) was chosen as the platform for publishing the final learning objects. This platform was chosen due to its simplicity and user-friendly interface. The website building is done using drag-and-drop elements which then automatically generates the HTML code. This does not mean that the websites that are built have to be simple – depending on the skills and wishes of the developer, there are various opportunities to customise the webpage. These aspects make Weebly a good choice for a beginner and a more advanced user alike.

In the design phase, the content of LOs was also decided on. Due to time restraints, the chosen medium for conveying the content was text. In order to avoid learning objects taking too much time to go through, three separate objects were designed. One object was about reporting statements, the second about imperatives and the third about questions. Each object could be worked through independently and separate from others with no particular order

required. The four characteristics of learning objects that are mentioned in the first chapter were the guiding principles for creating the objects for this study.

The basic layout for all the learning objects was similar. The first page of the learning object gave a brief introduction to familiarise the student with the LO. It also made it clear that it is a part of three learning objects and that although it can be used separately, it is good to combine it with the other two to get a full overview of the topic of reported speech without backshift. Next was the theoretical part of the LO. The first page of theory was the same for all three LOs. It introduced the concept of reported speech and gave an overview as to how it is formed. Next came the object specific part of theory. Following the theoretical part was the practice/self-test part. Three sets of eight questions with varying difficulty were provided. Students got instant feedback on how they did. The practice sentences were chosen randomly while keeping in mind the students' level and age to get maximum engagement and interest from the students.

The first learning object dealt with reporting statements or declarative sentences. The theoretical part of the first LO was about declarative sentences and how they are formed. The second learning object was about imperative sentences. After the introduction and the general theory about reported speech, students were able to study the formation of imperative sentences. The practice part was again three sets of eight sentences. The third and final learning object taught the students about how to report questions. This LO differed from the others since it used visual aids in its theoretical parts. While the others were solely comprised of text, this LO also had pictures depicting the formation of the reported speech. The decision to present information only through text and not via video or audio was made due to time constraints. It was desired that each of the learning objects can be fully completed within thirty

minutes. Having the information presented through multimedia such as a video would potentially lengthen the time it takes to use the learning object. It would also mean that if a student wanted to hear something multiple times, s/he would have to find the specific place in the video which could be time-consuming. Still, presenting the theoretical material in the form of an audio recording or a video is an appealing alternative for the text-based presentation and could be a potentially interesting research topic for another study about the benefits and drawbacks of using learning objects to teach and learn grammar.

With the design decided on, the three learning objects were created. As mentioned previously, HotPotatoes software was used to create the exercises and Weebly, to publish the final learning objects. The LOs were created with the aim of them being able to be used on different operating systems and devices as well. The final websites were adaptive and would fit to different screen resolutions without the content being unusable or inaccessible. During the developing process, the LOs were constantly given feedback by one of the supervisors in terms of design and user experience.

Since the learning objects were an original work, a lot of time went into producing the theoretical and practical parts. As mentioned previously, the textbook series which was used by the participants had no theoretical explanations for the grammatical parts. This meant that it was the teacher's task to explain the grammatical rules in an understandable manner. Since the idea of learning objects is that they are quite small or short in terms of time required to use them, it was a challenge to provide enough theory to make the students understand the reported speech constructions and yet prevent the learning objects from taking up too much time. If a truly original learning object was to be produced, it tested the creators' ability to explain grammatical constructions in a sufficient yet concise way. Another side of the learning

objects was the practical part. Figuring out the sentences that are used to practice the reported speech and to test what the students had just learnt proved to be quite time-consuming. It was important to not copy anything from textbooks and also to appeal to the age group of the participants. To increase the potential engagement level of the students, some pop-culture references were used to practice the reported speech.

Once the learning objects were developed, they were implemented in class. Two classes were part of this study. Both were learning the topic of reported speech with one class having access to the learning objects. After the lessons had concluded, feedback was collected from the students who had access to the LOs in order to evaluate the learning objects and improve them for future use. The following chapter where the results of the study are presented focuses on the two final stages of the ADDIE model – implementation and evaluation. The final learning objects were uploaded to the MERLOT repository to be used by anyone under the Creative Commons licence. They were tagged with metadata such as the topic, author, field, prerequisites and the technology required to use them.

### **2.1.2 Participants**

As mentioned in the previous sub-chapter, convenience sampling was used for this study. Convenience sampling is used for pilot studies and is chosen based on the convenient access to the participants (Õunapuu 2014). For this study, a convenient access was to two groups of students from a basic school in Tartu, who were at the same level and studied from the same materials and had the same topics. The students were in the sixth grade and from two different classes which limited their interaction with each other. Both groups had fifteen students whose age ranged from 12 to 13.

Group A was given access to the learning objects. This group was made up from mostly boys. Group B consisted of mostly girls. This is the group which had no access to the learning objects during the study. The full compositions of Group A and Group B can be seen in Tables 1 and 2 below. Huang (2013) concluded that at a younger age, academic self-efficacy is not very different for boys and girls. Considering this, the composition of the two groups was not seen as an issue when conducting this study.

| <b>GROUP A</b> |                     |                   |
|----------------|---------------------|-------------------|
| <b>Gender</b>  | <b>No. in class</b> | <b>% of class</b> |
| Male           | 10                  | 66.7%             |
| Female         | 5                   | 33.3%             |

*Table 1 Students in Group A*

| <b>GROUP B</b> |                     |                   |
|----------------|---------------------|-------------------|
| <b>Gender</b>  | <b>No. in class</b> | <b>% of class</b> |
| Male           | 3                   | 20%               |
| Female         | 12                  | 80%               |

*Table 2 Students in Group B*

### **2.1.3 Test**

Both groups followed the school curriculum with Group A also having access to the learning objects. The LOs were introduced in class and students were instructed how to use them. After having finished the unit, both groups had a test which included reported speech

items which can be seen in Figures 14 and 15 (see Appendix 2). There were two versions of the test so that students sitting next to each other would have different exercises. The reported speech items for the test were chosen based on the students' previous exercises. Small alterations were made to avoid the students simply memorising the sentences and copying them in the test. The tests were analysed to confirm the hypothesis that students who learned with the help of learning objects would perform better than their counterparts. Since the topic was new to the students, no pre-test was done to compare the previous knowledge of the participants. It might be beneficial to carry out a pre-test as well in similar studies depending on the participants and the aim of the study.

#### **2.1.4 Questionnaire**

In the final stage of this study, to evaluate the usage of the learning objects, a feedback questionnaire was produced. It was given to Group A to get their opinion on the learning objects and their usage habits of those learning objects. It consisted of eleven questions and included both closed and open-ended questions. It was compiled using the Google Forms platform and administered in class with students filling in their answers through a smart device. The questionnaire was revised based on the initial pilot questionnaire. The pilot was done with the same number of students as the final questionnaire which was thirteen. The first version included more open-ended questions and the students could write their answers in a longer paragraph format. Some questions were not compulsory if a student had not used the learning objects. After the pilot questionnaire, it became clear that this format did not work with the sample students and thus a second version of the questionnaire was developed which

remained as the final version. In that version, all questions were compulsory and had options for the student to choose from.

## **2.2 Results**

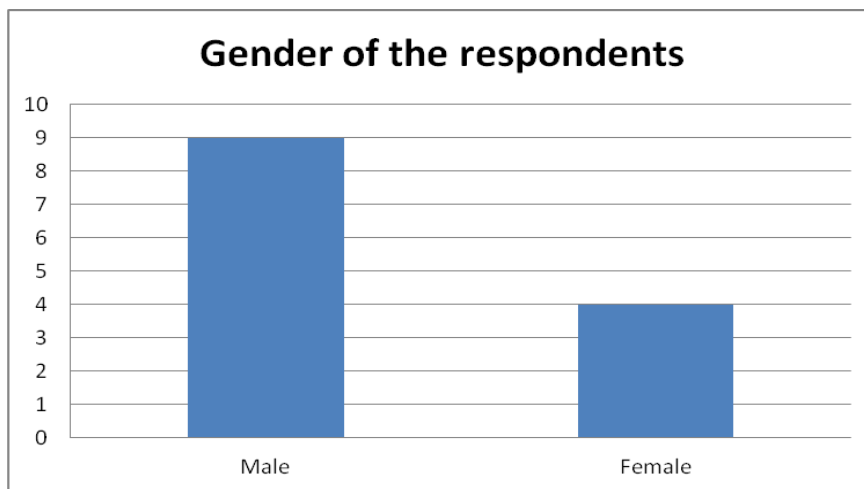
The following sub-chapter takes a look at the results of the final tests and the feedback questionnaire. The results are briefly explained while a more detailed discussion follows in the next sub-chapter.

### **2.2.1 Results of the tests**

In the tests, it was possible to get twenty points in total. Ten of these points came from knowing vocabulary items and ten from reported speech questions. Points were given at 0.5 increments. The vocabulary items were chosen based on previous short tests and the topic of the unit that the students were studying at the time of this study. Table 3 and Table 4 (see Appendix 3) show the results of the final tests for Group A and Group B respectively. In Group B, all fifteen students took the test while in Group A two students did not. As seen in Table 3 and in Table 4, both groups performed similarly in the reported speech portion of the test. The average score for Group A was 4.15 out of the possible 10 for the reported speech items. The other group scored higher, but not significantly as their average score was 4.67 out of 10. This was not the hypothesised result since using the learning objects was hypothesised to make the students perform better than those who do not use them. On the whole, Group B performed better as their average total score was 11.93 which was more than two points higher than the average of Group A - 9.04.

### 2.2.2 Results of the questionnaire

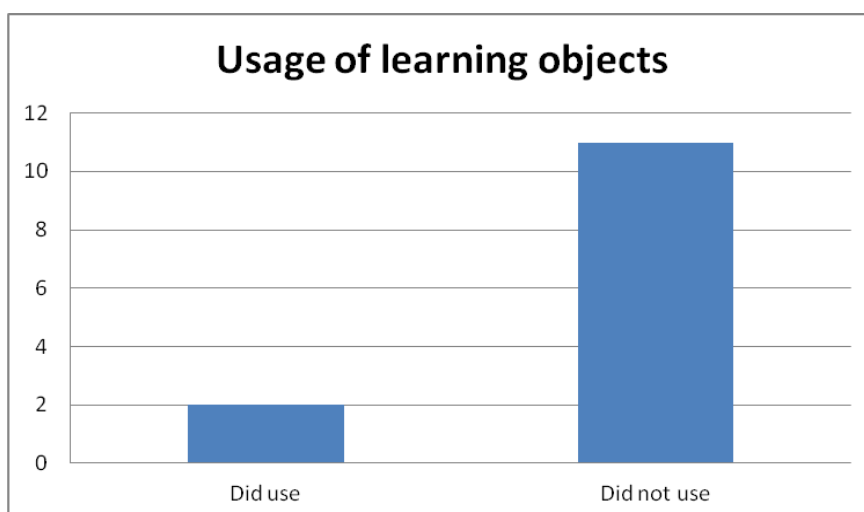
The feedback questionnaire consisted of thirteen questions with twelve of them being questions related to learning objects and one for gender. Thirteen out of the fifteen students gave feedback and filled the questionnaire. The first question was about gender of the respondent. The results are shown in Figure 2 below.



*Figure 2 Gender of the respondents*

Out of the thirteen respondents, nine were male and four female. The next question asked the students if they had used the learning objects at home. Out of the thirteen respondents, only two had used the learning objects at home as seen in Figure 3.





*Figure 3 Usage of the learning objects*

One of the users was female while the other male. Due to the questionnaire being anonymous, it is not possible to connect the two with their test results.

Since only two of the students had used the learning objects, the hypothesis remains untested. The answers of the two students do shed some light on the usefulness of the learning objects but no far-reaching conclusions can be drawn from them. The rest of this section is divided into two parts – the first part focuses on the answers of the students who did use the learning objects while the second part focuses more on the students that did not use the learning objects and their reasons for not doing so.

Both of the students who used the learning objects found that the learning objects had enjoyable exercises and that they helped to understand the topic of reported speech better. They also liked the possibility of doing the exercises individually. One of the students found the learning objects easy to use. Both of the students had different dislikes about the learning objects. One of them found them to be too time consuming and the other student disliked the theoretical parts.

Since time spent on learning objects is also one of the potential benefits of using them, the students were also asked about their time spent on the learning objects. It should be noted that since in this study, the learning objects were presented as individual study, it is not possible to control whether the students spent this time only on the learning objects or did they do anything else whilst using the learning objects. Each learning object was intended to be possible to be worked through within half an hour. One of the students who used the learning objects did fit into that time frame. The first student chose the option "10 – 30 minutes". The other student however spent considerably more time on each learning object as seen from the answer of "1 hour – 1.5 hours".

The students were also asked how much did the learning objects help them understand the topic. They were given a scale from one to five with one being the lowest, meaning that the student did not need the learning objects at all, and five being the highest which meant that the learning objects were absolutely vital to understanding the topic and without them, the student would not have understood at all. Both students found the learning objects to be helpful. One of them thought that both classroom work and the learning objects were of equal importance to understanding reported speech. The other student found the learning objects to be more important since s/he answered that without the learning objects, the topic might have been eventually understood but the learning objects were absolutely necessary.

The students were also asked to name the devices they had used to open and work through the learning objects. The preferred choice of the device was a smartphone. Both of the students had used a smartphone for using the learning objects. In addition, one of them had also used a tablet and the other had used a laptop. Neither of them had used a desktop computer.

While the benefits of the learning objects remain untested, since a large number of the respondents did not use the learning objects, a lot of information was given by those students as to why they did not use them and what was the students' stance on learning objects in general. The students were asked about the reasons for not using the learning objects, how to improve them, if they would like to use them in the future and if they would like to use them in other classes besides English. The data collected gives an idea of what the students learning habits are and also some of the subjects, where additional help in the form of learning objects might be needed.

Figure 4 shows the most common reasons for not using the learning objects. Five out of eleven said that they could not find the learning objects. This is contradictory to the students' actual skills and knowledge. The learning objects were explained in detail in class. The students were given the links personally during a lesson and the links were also provided through the schools' study system. Since students did not have problems finding homework from the study system, it should not have been a problem to find the learning objects as well since the links were provided through the same place as homework was. Therefore, not finding the learning objects can be considered as an illegitimate reason for not using the learning objects. The next two reasons for not using the learning objects were simply being too lazy or that the students thought they understood the topic without them. Considering the results of the tests it can be said that the students misjudged their abilities.

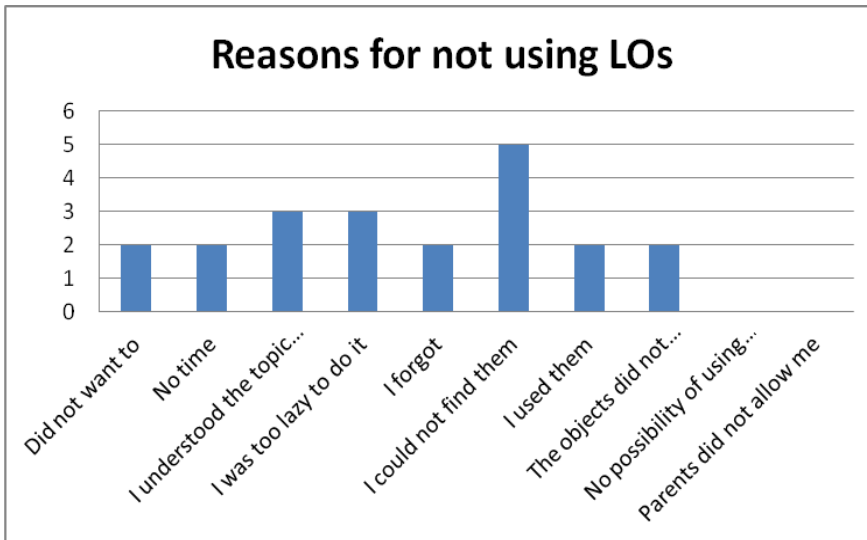


Figure 4 Reasons for not using the learning objects

While only two of the students used the learning objects developed during this study, over half of the respondents indicated that they would like to use similar objects in the future as seen in Figure 5.

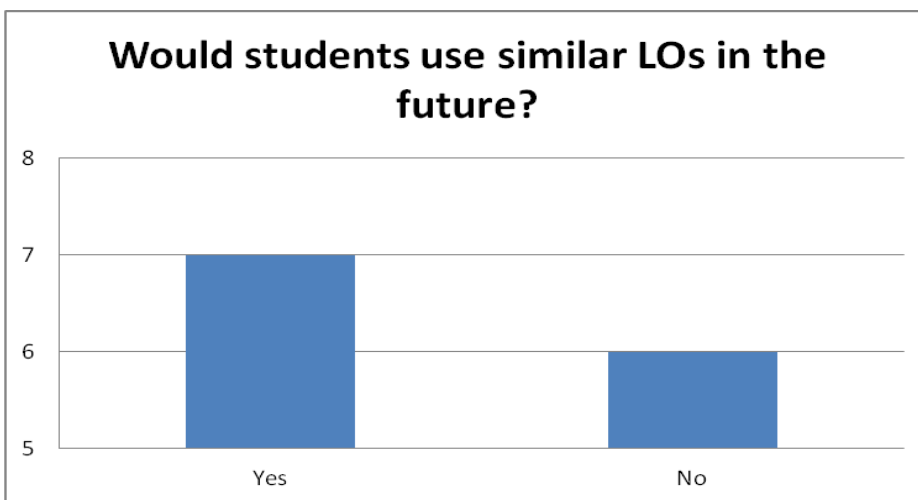
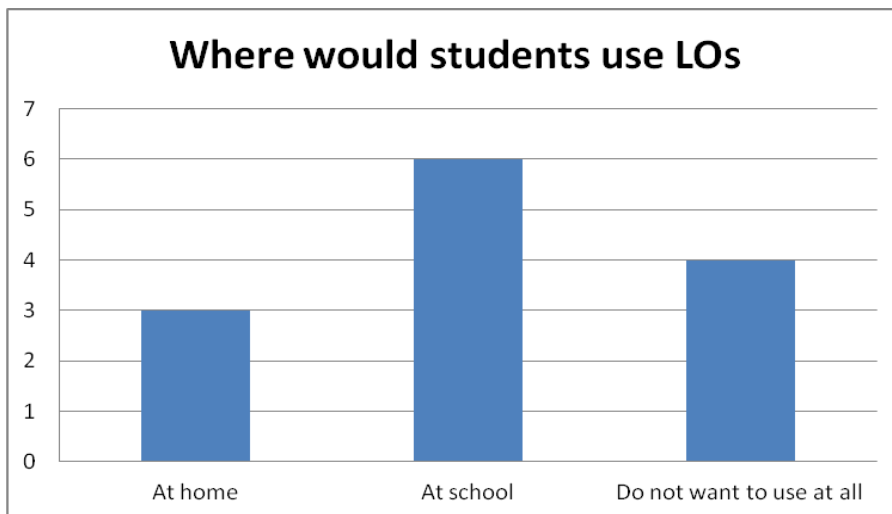


Figure 5 Would students use LOs in the future

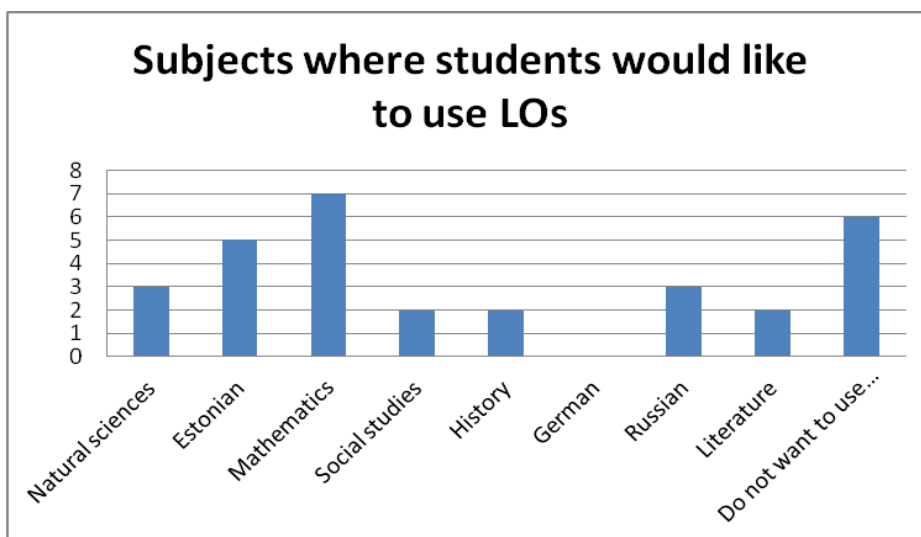
If this result is combined with the answers to the question which asked the students where they would prefer to use the learning objects, a possible reason for the students not

using the learning objects in this study unfolds. As seen in Figure 6, most of the students would prefer using the learning objects at school.



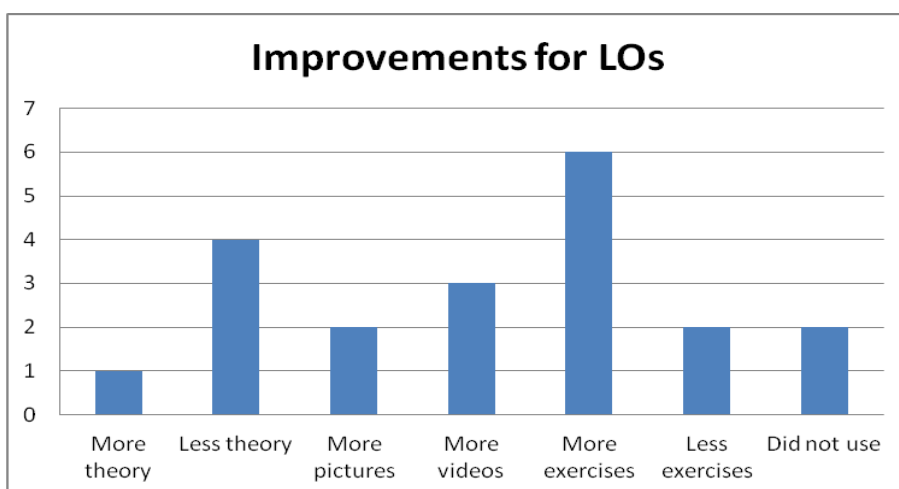
*Figure 6 Preferred locations for using LOs*

The students also had the opportunity to name the subjects where they would like to use similar learning objects. All of those who wished to use learning objects in other subjects picked mathematics. This indicates possible difficulties in studying this subject. More detailed results can be seen in Figure 7. The languages were not the most popular choices. Students seemed to need additional help in the so-called "hard sciences" instead.



*Figure 7 Preferred subjects*

The questionnaire allowed the students to offer ideas on how to improve the learning objects. The most popular suggestion was to include more exercises into the learning objects. At the same time they would like to see less theory. While only two students used the objects independently, all of them were familiar with the learning objects. The LOs were introduced in class and briefly used as well to give the students an idea of what to expect. This meant that every student could voice their opinion about the improvement of these learning objects. The detailed results can be seen in Figure 8 below. Students could pick as many choices as they wanted and they could also add their own ideas. It was also indicated that the students would prefer more visual aids like videos.



*Figure 8 Improvements for learning objects*

### **2.3 Discussion**

Although creating the learning objects and providing them to be used in school was a success, the hypothesis, that learners who have access to learning objects will perform better in terms of test scores than the learners who do not use learning objects, remains untested. The learners in this study showed considerable interest in using these learning objects, but not independently. They would prefer using them at school. All three learning objects were requested by the teacher of the class to be made available for use in other classes as well. The teacher of the groups found the learning objects to be useful and a good alternative to traditional methods. She had never come across such learning objects before and wished to see how it would be possible to create them. This is similar to findings by Timmi (2017). She (Timmi 2017) mentions that very few teachers learn new ICT skills independently and expect their school to provide the training. Due to the vast amount of possibilities for using ICT or CALL in a classroom, it should not be expected that a school can organise all the relevant training. Therefore teachers might lack useful skills as was the case in this study.

The secondary aim of this study was to test whether students who have access to learning objects and can use them independently at home would perform better when given a test. Two groups of students were analysed. One group was given access to the learning objects while the other was not. Both groups studied the topic in class and could also use their workbooks and student's books. This hypothesis remains untested since the group which was given access to the learning objects did not use them. This result indicates problems in student motivation and learning habits. Using the learning objects was not made mandatory for the students. They received neither a negative mark for not using the objects nor did they have the possibility of getting a positive mark if they used the objects or received good feedback. The objects were presented as an alternative method for learning and practicing the topic of reported speech. The students had the possibility of using the objects at home and learning the material that way thus removing the need for doing it in class which would have left time for different activities in the classroom. The reason for not enforcing the students to use the learning objects was to do with learning styles. While previous studies (Kay and Knaack 2008a; Sakurai & Donelson 2011) have shown that using learning objects is proven to be beneficial, it is still important to consider different learning styles of students and provide them with the opportunity to learn the way they want to – using a textbook for example.

As mentioned the test group did not use the learning objects. This is evident from the test results as well. Group A had been previously getting lower test results than Group B and this remained unchanged. Group A was given access to learning objects to see if their test results would improve. Group B performed better in all areas of the test. Both the overall points and the points for reported speech items were higher than in Group A. The results of the tests indicate that grammar remains a difficult topic for students. The average points for both



groups for the reported speech items were below half of what was possible—4.15/10 and 4.67/10 for groups A and B respectively. While Group B had a significantly higher average score in total points—11.93/20 against Group A's 9.04/20—their points for reported speech items remained quite equal with Group A.

The final questionnaire provided some valuable insights into students' reasons for using or not using the learning objects. As is evident from the second question, only two students out of the thirteen who gave feedback had used the learning objects. This is contradictory to the verbal feedback given by students during the lessons. In these lessons, students indicated that they had been using the learning objects and had found them useful and enjoyable. The students were introduced to the learning objects and similar exercises were done in class as practice. Most of the students were often absent-minded and would talk loudly in class. When presented with the opportunity to do similar exercises to those in the learning objects, the students' behaviour changed. They became more motivated to work in class and focused on the topic at hand. Since the exercises were done on a computer, the students had to come in front of the class, one by one, to type in the correct answer while the exercise was projected on a wall for the whole class to see. At one point, one of the students who would often talk to others during class ordered his classmates to settle down and give the person typing the answer time to think. The contrast in the students' motivation and engagement, between doing regular exercises and doing those on the computer, was significant. Due to the observed level of engagement and interest, there was no reason to doubt that the students were not using the learning objects.

This thesis serves as a pilot for a larger scale study of using learning objects in an EFL class. The difficulties of implementing learning objects in a class became apparent through

this study and thus can be avoided when conducting future studies. One of the main difficulties is ensuring that the students, in fact, use the learning objects if the instructor intends them to use the LOs independently. As became evident from this study, no matter the interest and engagement from students, if not enforced to do a task, students of this age group opt out from doing it. The test group was familiar with ICT, but had never used learning objects of similar kind before. Therefore, an incremental implementation is recommended. Due to the short time-frame of this study, such an approach was not possible. Having students gradually use learning objects independently could provide better results. This was also concluded by Sakurai and Donelson (2011) who found that the classroom engagement and excitement could lead to gradual rise in interest to a point where the students would be interested enough to use the LOs independently. The other option is to have the students use the learning objects in school. Seeing the level of interest and engagement from the students in this study, it is possible to say that students are interested in using the learning objects but they prefer doing it in a classroom environment.

When creating a learning object it is important to keep in mind that people have very different habits when using computers. As was evident from this study, students used tablets and smartphones when using the learning objects. While some might think that reading from a phone is absolutely out of the question, others might prefer it. That is why it is important to make the learning objects, if done similarly to the ones in this study, compatible with different devices.

How much time teachers put into preparing their classes is a very personal matter. Therefore it is imprudent to predict whether creating learning objects would be time-efficient when considering the students' interest in these learning object. The learning objects

developed in this study were well worth the time for they consisted only of text-based instruction which kept the development time short and the level of interest that they sparked from the students was considerably higher than that of traditional materials.

As with many things in life, step-by-step approach is often the best way of introducing new ideas, methods and concepts. The same applies for computer-assisted language learning and learning objects. The students' learning habits, their age and the composition of the learning objects(only text-based) did play a role in the students not using them independently at home, but it can be concluded that the short time-frame of the study was the true enemy. If CALL or learning objects are to be implemented in a classroom to be used by students independently, a teacher should be prepared to take the time necessary to make it work. For a short-term implementation, it is recommended to use the objects or CALL in school and under the teacher's supervision.

## CONCLUSION

The main aim of this study was to produce learning objects for teaching the topic of reported speech constructions in English which have the reporting verb in the present tense. The secondary aim was to test the hypothesis that students who have access to learning objects perform better in terms of understanding the topic taught at school and they do better when given a test. The same learning objects produced for this study were used in testing the hypothesis.

Total of three learning objects were developed. Each learning object could be taken separately with no particular order required for understanding them. Combining them together enables the teacher to teach the students everything needed to know about forming reported speech constructions where the reporting verb is in the present tense. All three learning objects are available in the MERLOT repository under a Creative Commons licence.

The participants of the study were sixth grade students from an Estonian basic school. They were from two different classes but the language level was similar. The author of this thesis developed the learning objects, introduced them in class and taught both of the groups as well.

This study focused on English, but the learners expressed their desire to use similar learning objects in other subjects as well, namely in mathematics. The learners in this study lacked the motivation to use the learning objects independently even though they thought them to be interesting and useful. Using the computer based exercises similar to the ones in the learning objects in class made the students become more engaged and more motivated to work which is similar to the findings of previous studies done on using CALL.

Due to the small sample size, no generalisations can be made. A future study with a larger sample is recommended. To test the hypothesis of this study, learning objects should be used at school and not independently to prevent low motivation and surface approach to learning from becoming a disrupting factor. Studies in different subjects should be carried out to get more detailed data on the benefits of learning objects. If time is not of the essence then an incremental implementation of learning objects is recommended to spark enough interest in students to have them using learning objects independently.

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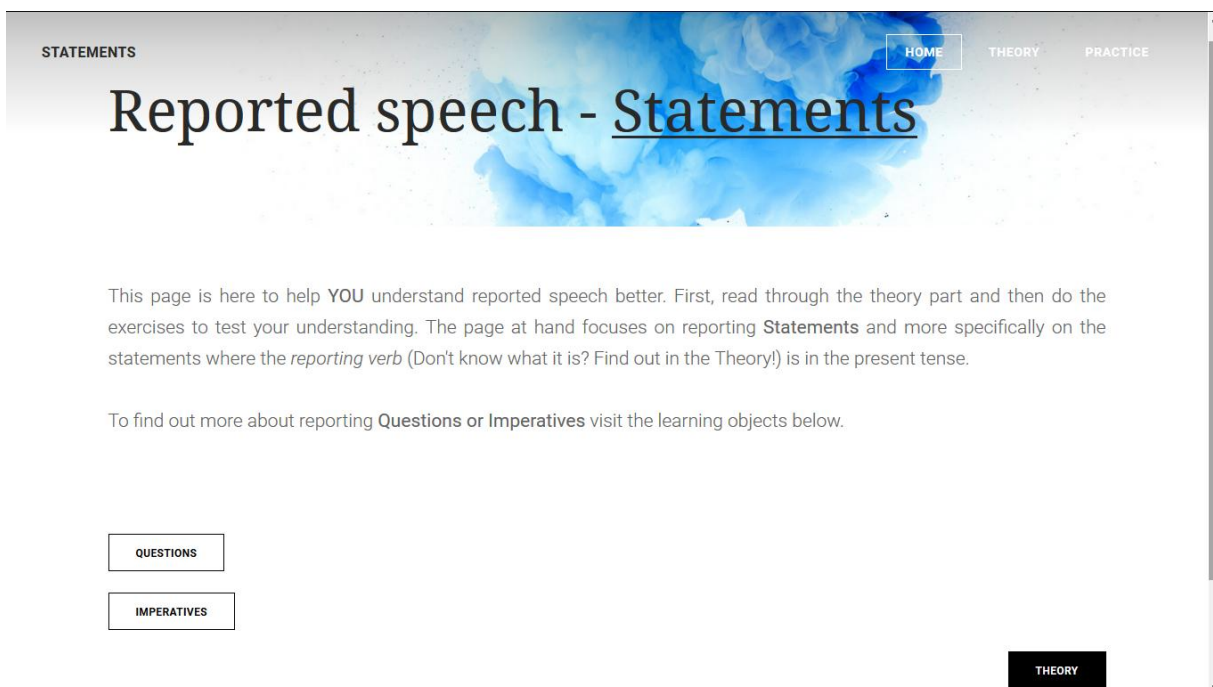
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## APPENDICES

### Appendix 1 – The learning objects

The full learning objects are available at their respective web-pages and in the MERLOT repository.

The learning object for reported speech statements is available at **lo-reported-speech-1.weebly.com** and in the MERLOT repository.



The screenshot shows a web page titled "Reported speech - Statements". The page has a blue and white abstract background. At the top left, it says "STATEMENTS". At the top right, there are navigation buttons for "HOME", "THEORY", and "PRACTICE". The main heading is "Reported speech - Statements". Below the heading, there is a paragraph of text: "This page is here to help YOU understand reported speech better. First, read through the theory part and then do the exercises to test your understanding. The page at hand focuses on reporting **Statements** and more specifically on the statements where the *reporting verb* (Don't know what it is? Find out in the Theory!) is in the present tense." Below this paragraph, there is another line of text: "To find out more about reporting **Questions** or **Imperatives** visit the learning objects below." At the bottom left, there are two buttons: "QUESTIONS" and "IMPERATIVES". At the bottom right, there is a button labeled "THEORY".

*Figure 9 Learning object – statements*

STATEMENTS HOME THEORY PRACTICE

## What is reported speech?

We use speech to communicate. When your friend says something to you, it is called direct speech. When you want to tell what your friend told you to somebody else, then it is REPORTED SPEECH.

Example:

Three people are talking....

A: "I like ice cream!"

B asks C: "What did he say?"

C answers: "He says he likes ice cream."

Here we can see both direct speech and reported speech. A says he likes ice cream. B did not hear him well and so he asks C what A just said. C now uses reported speech to repeat what A said.

When we want to report some one else's speech, we use the reporting verb.

*Figure 10 Learning object – statements*

STATEMENTS HOME THEORY PRACTICE

### Practice forming reported speech.

Fill in all the gaps, then press "Check" to check your answers. Wrong answers are left in place, so you can try and change them. If you want to practice again, just reload the page.

1) "I went to London in July," says Helen.

Helen says  went to London in July.

2) "We have national parks here in the US," says Tom.

Tom  have national parks  in the US.

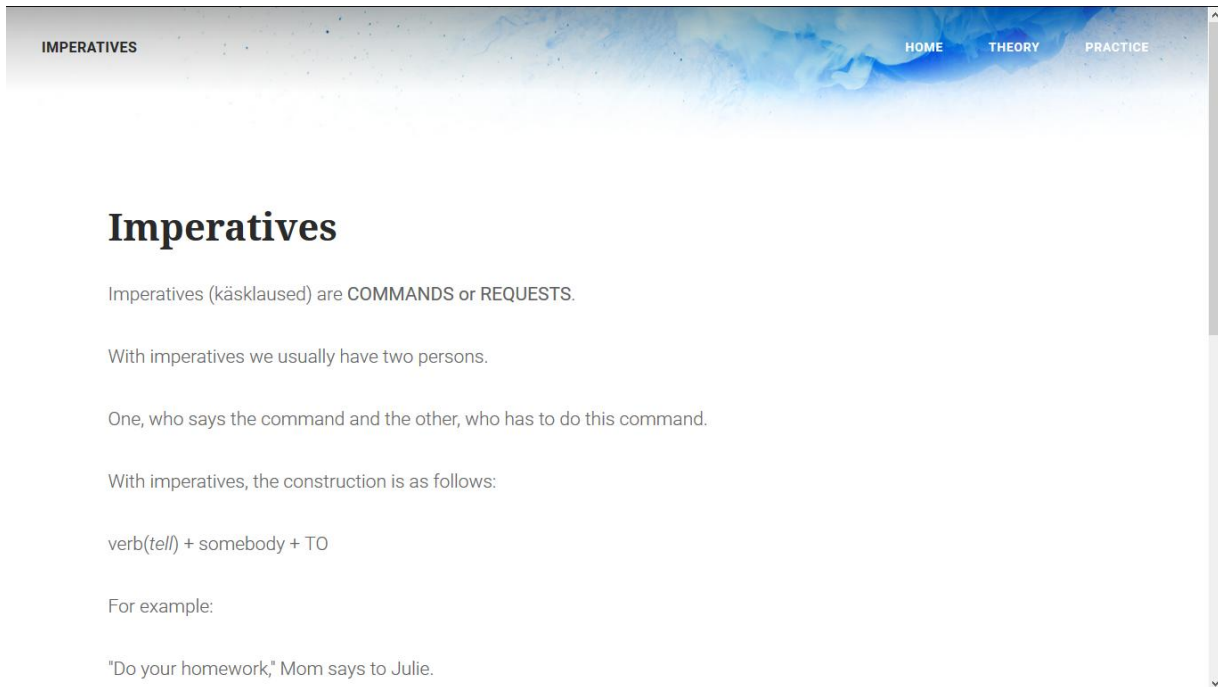
3) "Our car broke down," says Matt.

Matt  car broke down.

<https://lo-reported-speech-1.weebly.com/practice.html>

*Figure 11 Learning object – statements*

The learning object for reported speech imperatives is available at **lo-reported-speech-2.weebly.com** and in the MERLOT repository.



The screenshot shows a web page with a blue and white watercolor-style header. The word 'IMPERATIVES' is on the left, and 'HOME', 'THEORY', and 'PRACTICE' are on the right. The main content area has a large heading 'Imperatives' followed by several paragraphs of text explaining the concept of imperatives in Swedish grammar.

IMPERATIVES

HOME THEORY PRACTICE

## Imperatives

Imperatives (kåsklausad) are **COMMANDS** or **REQUESTS**.

With imperatives we usually have two persons.

One, who says the command and the other, who has to do this command.

With imperatives, the construction is as follows:

verb(*tell*) + somebody + TO

For example:

"Do your homework," Mom says to Julie.

*Figure 12 Learning object – imperatives*

The learning object for reported speech questions is available at **lo-reported-speech-3.weebly.com** and in the MERLOT repository

QUESTIONS HOME THEORY PRACTICE

YES/NO questions

These are questions that you can only answer with "yes" or "no".

"Do you like dogs?" he asks his sister. - *Direct speech*

If it is a yes/no question then we use the word IF.  
IF + Person + verb(tegusōna)

He asks his sister IF she likes dogs. - *Reported speech*

1  
"Do you want to read a book?" teacher asks me.  
Teacher asks me

2  
"Do you want to read a book?" teacher asks me.  
Teacher asks me if

*Figure 13 Learning object – questions*

## Appendix 2 – The reported speech items in the final test

### II Write the sentences in reported speech!

1) "My bike is missing," says Tom.

.....

2) "Are you doing the exercise?" the teacher asks Julie.

.....

3) "Don't follow me," Kate says to Linda.

.....

4) "This weather is my favourite," says Uncle Henry.

.....

5) "Are the cows and horses in the shed?" Aunt Em asks Dorothy.

.....

6) "I fell asleep," says Dorothy.

.....

7) "Close all the windows," Matt says to Angela.

.....

8) "I am Batman," says Bruce.

.....

9) "Don't copy my answers," Judy says to Mike.

.....

10) "What is the time?", Uncle Henry asks Dorothy.

.....

*Figure 14 Final test - reported speech items (A)*

**II Write the sentences in reported speech!**

1) "I like ice cream," says Tom.

.....

2) "Are you following the instructions?" Tom asks Julie.

.....

3) "Don't climb this tree," Rose says to Nick.

.....

4) "This horse is my favourite," says Aunt Em.

.....

5) "Are all the clothes in the washing machine?" Aunt Em asks Dorothy.

.....

6) "I fell down," says Jerry.

.....

7) "Go to the cyclone cellar," Matt says to Angela.

.....

8) "I am Batman," says Bruce.

.....

9) "Don't talk about me," Judy says to Mike.

.....

10) "What is the time?", Dorothy asks Uncle Henry.

.....

*Figure 15 Final test - reported speech items (B)*



**Appendix 3 – Final scores for the participants**

| <b>GROUP A</b> |               |                     |                               |                   |
|----------------|---------------|---------------------|-------------------------------|-------------------|
| <b>STUDENT</b> | <b>GENDER</b> | <b>TOTAL POINTS</b> | <b>REPORTED SPEECH POINTS</b> | <b>FINAL MARK</b> |
| 1              | Female        | 6                   | 3                             | 2                 |
| 2              | Female        | 0.5                 | 0.5                           | 2                 |
| 3              | Female        | 5.5                 | 4.5                           | 2                 |
| 4              | Male          | 10                  | 5                             | 3                 |
| 5              | Male          | 7                   | 3                             | 2                 |
| 6              | Female        | 15.5                | 7.5                           | 4                 |
| 7              | Male          | 11.5                | 4.5                           | 3                 |
| 8              | Male          | 14.5                | 7.5                           | 4                 |
| 9              | Male          | 15.5                | 5.5                           | 4                 |
| 10             | Female        | 10                  | 6                             | 3                 |
| 11             | Male          | 6.5                 | 2.5                           | 2                 |
| 12             | Male          | 9.5                 | 4                             | 3                 |
| 13             | Male          | 5.5                 | 0.5                           | 2                 |

*Table 3 Final test results for Group A*

| <b>GROUP B</b> |               |                     |                               |                   |
|----------------|---------------|---------------------|-------------------------------|-------------------|
| <b>STUDENT</b> | <b>GENDER</b> | <b>TOTAL POINTS</b> | <b>REPORTED SPEECH POINTS</b> | <b>FINAL MARK</b> |
| 1              | Female        | 7                   | 1                             | 2                 |
| 2              | Male          | 6.5                 | 0.5                           | 2                 |
| 3              | Female        | 16                  | 7                             | 4                 |
| 4              | Female        | 6                   | 1                             | 2                 |
| 5              | Male          | 4                   | 0                             | 2                 |
| 6              | Female        | 6.5                 | 1.5                           | 2                 |
| 7              | Female        | 14.5                | 5.5                           | 4                 |
| 8              | Female        | 15                  | 5                             | 4                 |
| 9              | Female        | 19                  | 10                            | 5                 |
| 10             | Female        | 15                  | 6                             | 4                 |
| 11             | Male          | 5                   | 2                             | 2                 |
| 12             | Female        | 16                  | 7                             | 4                 |
| 13             | Female        | 15.5                | 7.5                           | 4                 |
| 14             | Female        | 16                  | 8                             | 4                 |

|    |        |    |   |   |
|----|--------|----|---|---|
| 15 | Female | 16 | 8 | 4 |
|----|--------|----|---|---|

*Table 4 Final test results of Group B*

## Appendix 4 – The feedback questionnaire

### Õpiobjektide kasutamine

\* Required

#### 1. Sugu \*

Mark only one oval.

- Mees  
 Naine

#### 2. Kas kasutasid kodus õpiobjekte? \*

Mark only one oval.

- Jah  
 Ei

#### 3. Kui ei kasutanud kodus õpiobjekte, siis miks? \*

Check all that apply.

- Ei leidnud õpiobjekte üles  
 Ei viitsinud  
 Sain ilma nendeta ka aru  
 Kodus õpiobjektid ei avanenud  
 Unustasin  
 Ei tahtnud  
 Ei olnud aega  
 Ei olnud võimalust arvuti/interneti kasutada  
 Vanemad ei lubanud  
 KASUTASIN ÕPIOBJEKTE  
 Other: \_\_\_\_\_

#### 4. Mis meeldis õpiobjektide juures kõige rohkem? \*

Check all that apply.

- Lihtne kasutada  
 Ülesanded  
 Võimalus individuaalselt teha  
 Aitas õpitud paremini mõista  
 EI KASUTANUD ÕPIOBJEKTE  
 Teooria  
 Other: \_\_\_\_\_

#### 5. Mis meeldis objektide juures kõige vähem? \*

Check all that apply.

- Teooria  
 Võttis liiga palju aega  
 Liiga keeruline  
 Ülesanded  
 Iseseisev lahendamine  
 EI KASUTANUD ÕPIOBJEKTE  
 Other: \_\_\_\_\_

Figure 16 Questionnaire part 1

**6. Kui kaua kulub õpiobjektide läbitöötamisele? \***

*Mark only one oval.*

- vähem kui 10 min  
 10 min - 30 min  
 30 min - 1 tund  
 1 tund - 1,5 tundi  
 1,5 tundi - 2 tundi  
 rohkem kui 2 tundi  
 EI KASUTANUD ÕPIOBJEKTE  
 Other: \_\_\_\_\_

**7. Kas tahaksid sarnaseid õpiobjekte tulevikus kasutada? \***

*Mark only one oval.*

- Jah  
 Ei

**8. Kas eelistad selliseid õpiobjekte kasutada kodus individuaalselt või koolis koos klassiga? \***

*Mark only one oval.*

- Kodus  
 Koolis  
 Ei taha selliseid objekte kasutada

**9. Kui palju aitas õpiobjektide kasutamine teemat paremini mõista? \***

*Mark only one oval.*

- 1 - sain ilma nendeta ka teemast aru  
 2 - veidi, aga peamiselt õppisin tunnis  
 3 - nii tunnis õppimine, kui õpiobjektid aitasid võrdselt  
 4 - oleksin lõpuks teemat mõistnud, kuid õpiobjektid aitasid palju  
 5 - ei oleks ilma nendeta teemast aru saanud  
 EI KASUTANUD ÕPIOBJEKTE

**10. Kas tahaksid selliseid õpiobjekte kasutada teistes ainetes? \***

*Mark only one oval.*

- Jah  
 Ei

**11. Kui vastasid eelmisele küsimusele "Jah", siis millistes ainetes? (Kui vastasid ei, siis vali variant "EI TAHA ÕPIOBJEKTE KASUTADA") \***

*Check all that apply.*

- Loodusõpetus  
 Eesti keel  
 Matemaatika  
 Ühiskonnaõpetus  
 Ajalugu  
 Saksa keel  
 Vene keel  
 Kirjandus  
 EI TAHA ÕPIOBJEKTE KASUTADA  
 Other: \_\_\_\_\_

*Figure 17 Questionnaire part 2*

**12. Milliseid seadmeid kasutasid õpiobjektidega töötamiseks? \***

*Check all that apply.*

- Lauaarvuti
- Sülearvuti
- Nutitelefoni
- Tahvelarvuti
- EI KASUTANUD ÕPIOBJEKTE
- Other: \_\_\_\_\_

**13. Kuidas saaks õpiobjekte paremaks/huvitavamaks muuta? \***

*Check all that apply.*

- Rohkem teooriat
- Vähem teooriat
- Rohkem pilte
- Rohkem videoid
- Rohkem ülesandeid
- Vähem ülesandeid
- Other: \_\_\_\_\_

---

*Figure 18 Questionnaire part 3*

## RESÜMEE

TARTU ÜLIKOOL  
ANGLISTIKA OSAKOND

**Rene Õunapuu**

### **The Application of Learning Objects in an Estonian Basic School EFL Classroom: A Pilot Study**

Õpiobjektide kasutamine Eesti Põhikooli võõrkeele tunnis: pilootuuring inglise keele õppeaine näitel

Magistritöö  
2018

Lehekülgede arv: 62

Annotatsioon:

Tehnoloogia arenedes ei saa mööda vaadata asjaolust, et ühel hetkel võib täielikult muutuda see, kuidas inimesed õpivad. Kuigi õpetajad on enamasti arvamusel, et tehnoloogia kasutamine klassis on kasulik, siis suhtutakse sellesse endiselt eelarvamustega ning see leiab rakendust küllaltki vähe. Võib-olla oleks kasulik keskenduda hoopis õpilastele? Selle töö eesmärk ongi luua digitaalsed õppevahendid – õpiobjektid, mis muudaks inglise keele grammatika õppimise tõhusamaks.

Antud töö koosneb kahest suuremast peatükist. Esimeses peatükis antakse teoreetiline ülevaade arvutite kasutamisest keeleõppes, õpiobjektide definitsioonist, kuidas õpiobjekte luua ning miks neid üldse vaja peaks olema. Teises peatükis antakse ülevaade selle töö käigus tehtud empiirilisest uuringust. Esmaseks eesmärgiks oli luua kolm õpiobjekti, mis aitaks inglise keele grammatikat tõhusamalt õppida. Teine eesmärk oli neid õpiobjekte rakendada klassiruumis ning seejärel leida vastus hüpoteesile, et õpilased, kes kasutavad õpiobjekte, omandavad õpitava teema paremini, kui need, kes õpiobjekte ei kasuta. Kolmandaks eesmärgiks oli saada tagasisidet õpiobjektide kohta. Õpiobjekte rakendati ühes Eesti põhikoolis. Katses osalesid kaks rühma kuuendatest klassidest, mis valiti mugavusvalimi põhimõtete järgi. Antud töö autor oli ka katseperioodil antud rühmade inglise keele õpetajaks.

Töö käigus loodud õpiobjektid on vabalt kasutatavad ning leitavad MERLOT keskkonnast. Tööst selgus, et õpilased omavad suurt huvi digitaalsete õpiobjektide kasutamise suhtes. Klassis suurenes märgatavalt aktiivsus ning õpilaste huvi õpetatava teema vastu. Samas luhtus katse leida vastus püstitatud hüpoteesile, kuna õpilased ei olnud varem selliseid objekte kasutanud ja selleks, et õpilased neid iseseisvalt kasutanud oleks, mis oli antud töös üheks kriteeriumiks, tulnuks leida rohkem aega, et õpiobjektide kasutamine harjumuseks kujundada.

Märksõnad: õpiobjektid, inglise keel, grammatika, IKT

## **Lihtlitsents lõputöö reprodutseerimiseks ja lõputöö üldsusele kättesaadavaks tegemiseks**

Mina, Rene Õunapuu

1. annan Tartu Ülikoolile tasuta loa (lihtlitsentsi) enda loodud teose

The Application of Learning Objects in an Estonian Basic School EFL Classroom: A Pilot Study

mille juhendajateks on Liina Tammekänd ja Jane Klavan

1.1.reprodutseerimiseks säilitamise ja üldsusele kättesaadavaks tegemise eesmärgil, sealhulgas digitaalarhiivi DSpace-is lisamise eesmärgil kuni autoriõiguse kehtivuse tähtaja lõppemiseni;

1.2.üldsusele kättesaadavaks tegemiseks Tartu Ülikooli veebikeskkonna kaudu, sealhulgas digitaalarhiivi DSpace'i kaudu kuni autoriõiguse kehtivuse tähtaja lõppemiseni.

2. olen teadlik, et punktis 1 nimetatud õigused jäävad alles ka autorile.

3. kinnitan, et lihtlitsentsi andmisega ei rikuta teiste isikute intellektuaalomandi ega isikuandmete kaitse seadusest tulenevaid õigusi.

Tartus, 15.05.2018

Rene Õunapuu