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ICT as a tool of intrinsic motivation for Early Language Learners
The use of ICT by early language learners in the classroom for promoting their interest and developing intrinsic motivation for studying foreign languages

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The issue of ICT and its influence on students’ intrinsic motivation has been discussed since first attempts to integrate computers into education. Despite general approval of ICT as a tool for enhancing students’ interest in studying, and foreign languages in particular, it has to be noted that this interest should not be taken for granted. There are several factors that may contribute to higher interest among students, for instance, the content of lessons or students’ previous experience of using ICT. In Russia the use of computers is mainly restricted to ICT lessons, and even though the situation is improving, most foreign language teachers do not feel the urge of implementing ICT in their teaching practice. The aim of this study was to evaluate the influence of ICT on primary school students in Russia and see if their intrinsic motivation and interest in learning foreign languages will rise. The research revealed significant increase in interest in foreign languages among the children. The results suggest that further development of the topic is required to see if this interest can be sustained for prolonged periods of time. As a practical outcome, this research suggests a list of ICT resources that can be successfully applied in a classroom.

Avainsanat – Keywords

ICT, motivation, foreign languages, primary school, early language education, interest, intrinsic
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1 INTRODUCTION

Learning languages is never easy. And from my own observations as a teacher, the vast majority of people cannot achieve the desired level not because of difficult rules and vocabulary (unless we speak about Finnish language), but because people are not motivated enough. They have time and abilities, but they prefer some other activities. Some learners feel the need of learning due to some outside factors (bad grades at school or desire to get a better-paid job), nevertheless they do not do their best for the reason that they do not find language learning as interesting as other activities that they do instead. Very few people have sufficient level of self-organisation to make themselves learn only because they “must”, and as regards children, such a case is very rare. Therefore, there should be something else that will “move” people to learn. Motivation, which comes from the inside.

Nowadays information and communications technology (ICT) is ubiquitous in our life. People use their smartphones, tablets, and computers for all sorts of purposes, from 3D-modelling to reminding them to drink a glass of water. People use ICT instead of diaries, watches, maps and… textbooks. There are so many ways to learn languages with the help of ICT that a person only needs to choose what he/she likes – stories, videos, games, vocabulary apps. Most of such resources are more interesting, attractive and easy to use. So, is it the answer? Is it the tool which will motivate students to learn languages?

Surprisingly, many schools around the world do not think so. Due to different reasons, schools remain isolated from the use of ICT that is from the world where we live. Coming to school children see the desks and blackboards that their grandparents used to have in their schools. That certainly cannot promote their interest in learning. Conversely, many children become demotivated and lose interest.

This study presents the matter of personal interest and focuses on the use of ICT in classroom settings in order to promote students’ interest in learning foreign languages. It is especially interesting to see the effect of ICT use in a Russian primary school where educational process has not progressed greatly in the last several decades in terms of new technologies.

As additional value, this study will present a list of different modern educational resources that can be used successfully in classroom settings.

The first chapter consists of two sections. The first one will introduce the main concepts and definitions that will be encountered in the thesis. The second section introduces the findings of
previous research which was related to the use of ICT in classrooms and its motivational effect on learners.

1.1 Key Concepts and definitions

In order to get a clearer understanding of the topic the following concepts have been defined:

**Motivation** forms the main part of the study. The term is broad and has many definitions. The general definition is taken from dictionary.com saying that motivation is “the state or condition of being motivated or having a strong reason to act or accomplish something” (Motivation, n.d.).

As this study is focused on language learning, the concept of intrinsic motivation is defined within this context as “anticipated enjoyment of the language learning activity” (Dörnyei, 2001, p. 151)

The concept of interest can be seen as an independent unit or as a part of intrinsic motivation. This study will look at this term as “The feeling of wanting to give your attention to something or of wanting to be involved with and to discover more about something” (Interest, n.d., Cambridge dictionary).

**Primary school children** will be referred to as “children”, “pupils” or “students” in this study. Collins dictionary defines such a person as “a child who attends primary school” (Schoolchild, n.d.).

This study will focus on the use of information and communications technology or ICT in education. Despite the fact that ICT is a broad term, and it may refer to both hardware and software, the definition in Collins dictionary reflects the narrowed way how ICT is used in this study – “ICT refers to activities or studies involving computers and other electronic technology” (ICT, n.d). This study will also use the term **ICT elements** for such activities.

**Second language** is any language learned in addition to one's native language (Second language, n.d.). In this study it will also be referred to as L2 or foreign language. As the main L2 language in Russia is English, the term second language may be replaced with **English**.
1.2 The context of this study

Since the first computer programs began being used in the classroom, there has been a discussion of how the use of new technology can affect learners’ motivation. The relation between the introduction of computers and the increase in motivation seemed obvious or “inherent” (Stockwell, 2013, p. 157). The main reason for such beliefs was that computers themselves presented great interest for most students, therefore any computer-assisted learning gave a boost to students’ motivation. Another reason was that the use of computers “allowed for individualized instruction and provided opportunities for learner control and non-judgemental feedback (Stockwell, 2013, p. 157)

In 1996 M. Warschauer presented a study which surveyed 167 university students in 12 ESL and EFL academic writing classes in the United States, Hong Kong, and Taiwan. The students had several classes related to technology, following which they answered the question in the survey connected with the use of technology and classrooms and the students’ attitude to computers (Warschauer, 1996, p. 9). The survey revealed that students had “a positive attitude toward using computers” (Warschauer, 1996, p. 9). However, it was not clear what the students liked more – the suggested activities or the use of computers.

In 1997 Campus Watch conducted a survey of Ohio State University students who attended foreign language classes. According to the results, the vast majority of the participants supported the idea of technology-based classes (McBride, 1997).

OECD’s Centre for Educational Research and Innovation (CERI) presented its extensive research programme. The programme included 93 case studies of ICT and organisational change which were carried out in 22 countries in 2001. The case studies investigated the link between ICT and educational innovation. In its report the factor of motivation was also mentioned. As one of the participant teachers explained: “it could probably be written on a piece of paper, but if it is done on the computer it is more entertaining, interesting, giving the students a different taste of action” (Venezky, OECD, n.d., p. 5)

However, the rise of motivation due to the use of ICT should not be taken for granted. In 2013 Keijo Sipilä from the University of Lapland, published his doctoral thesis which reported about how Information and Communication Technology (ICT) has been utilised and implemented in schools. In his thesis, Mr. Sipilä conducted 5 empirical studies, one of which studied the connection between the use of ICT and motivation. The research used quantitative data with a
very large number of respondents (N=758), who were basic education students from 13 municipalities of Finland. The students completed a questionnaire about the use of ICT and motivation.

The study revealed the link of general motivation to study and motivation caused by ICT. The students who were less successful in their studies were not as eager to use ICT or the use of virtual learning environments (VLEs) as their more motivated counterparts. The possible explanation was that students regard ICT tools as the new tools of old pedagogies, they associate them with school as a whole and therefore, do not see the reason why they should be motivated by them more than by conventional tools. The study showed that “ICT alone is not enough to trigger the change for achieving better learning outcomes” (Sipilä, 2013, p. 62). Another conclusion the researcher makes is that despite temporary motivation in the use of ICT “without proper motivation and pedagogically grounded learning strategies, students tend to use new tools for practicing a restricted form of information gathering rather than undertaking a more iterative and expansive process of knowledge building” (Sipilä, 2013, p. 102).

To conclude, most studies have proved the positive effect of ICT on learners’ motivation. However, it cannot be regarded as a straightforward and undisputable conclusion. Several factors should be taken into account, such as students’ general attitude to computers, their previous experience of using ICT in the lessons or their level of motivation to study before the use of ICT. For example, in early studies, when most students did not regard computers as a part of daily learning process, the use of ICT triggered more interest. In contrast, Finnish study, which involved students who were used to ICT, revealed that it could not add extra motivation to the students who were less interested in studying in general.
2 THEORETICAL FRAMEWORK

This chapter consists of five sections: Motivation and its impact on language learning; Intrinsic and extrinsic motivation; Interest in the context of language learning; ICT in educational context; and Introduction of language learning in Primary schools in Russia. Section 2.1 will introduce the concept of motivation, its definitions, classifications and its influence on language learning. Section 2.2 will focus on one of the motivational classifications – Deci and Ryan’s self-determination theory. Section 2.3 will cover the concept of interest, reflect on the four-phase model of interest development in the context of language learning. Section 2.4 will be devoted to ICT and its impact on education in the context of language learning. It will also reveal the situation with the use of ICT in Russian schools. Finally, section 2.5 will introduce the general information about foreign language learning in Russian primary schools.

2.1 Motivation and its impact on learning foreign languages

The English word motivation originates etymologically from the Latin word movere, which means “to move”. Therefore, a conclusion can be made that motivation is something which “moves” or makes people do particular actions.

The encyclopedia of education states that “There is no general agreement among psychologists on how “motivation” and “motivational factors” should be defined or theoretically analyzed”. (The encyclopedia of education, 1971, p. 408). Nevertheless, numerous definitions can be found in works of various researchers who tried not only to give a definition, but also to classify motivation as it is clearly too wide to be defined in one phrase or sentence.

We can look at several examples of providing a definition for “motivation”. Sipilä (2013, p. 42) says that motivation “concerns the psychological processes behind student behaviour in learning situations”. Dörnyei (2001, p. 1) mentions that “strictly speaking there is no such thing as “motivation”” He further explains what he means by saying that “motivation” is “an abstract, hypothetical concept that we use to explain why people think and behave as they do” (Dörnyei, 2001, p. 1). Encyclopedia of educational psychology defines motivation as the energization and direction of behavior (2008, p. 687). In simple words, motivation is something that makes you want to achieve some goal.
But in fact, motivation is a very complex term. The image of a motivated learner will be similar for most people, it is someone who is “keen, committed and enthusiastic, … who studies with vigour and intensity” (Dörnyei, 2001, p. 1). Yet, it will be hard to say what drives this person to behave this way. Does he/she like languages or he/she can have a better salary if he acquires some language level? Is this person going to immigrate and need to use the language on daily basis or he/she just wants to understand his/her favourite songs? This issue leads to necessity to distinguish different types of motivation.

Modern psychology sees no lack of various, widely-accepted theories on motivation. In his book, Dörnyei (2001, pp. 10-11) provided an overview of 10 most well-known contemporary motivation theories in psychology, most of which were introduced in the last two decades of the 20th century. Each theory focuses on different motivational components, which all seem sensible and well-explained. However, while focusing on one component, other sides of motivation are not taken into account. As Dörnyei notices: “Pure’ theories of motivation, that is, models that represent a single theoretical perspective and are therefore anchored around a few selected motivational factors, while largely ignoring research that follows different lines, do not lend themselves to effective classroom application” (2001, p. 13).

It is clear that the term of motivation in educational settings is bound to be transformed and expanded. Within the study of second language learning (L2), motivation refers to “the combination of effort plus desire to achieve the goal of learning the language” (Gardner, 1985, p. 208). Foreign languages as a subject presents its own facets of the broad concept of motivation. It stands out from other school subjects due to the fact that it “entails learning a second culture” (Brown, as cited in Dörnyei, 2001, p. 14). Therefore, a student’s attitude to the culture of this country may affect his/her motivation for learning this foreign language. It is clear that a teenager who is interested in American music and films is likely to learn English with more motivation than his/her counterpart without such an interest.

Robert Gardner was one of the first researchers to present an elaborate scheme of L2 motivation, which was divided into three main components (integrativeness, attitude toward the learning situation and motivation), which, in their turn, were subdivided into more categories. This model was further developed by other researchers. For instance, Dörnyei presented a 3-level framework of L2 motivation, while Williams and Burden divided all motivational factors into 9 internal and 4 external ones with around 40 sub-categories (Dörnyei, 2001, pp. 16-20).
Overall, the research of each separate factor already presents a challenge which requires time and effort. It is virtually impossible to encompass all of them, which leaves us a possibility to focus on one or several factors of our particular interest.

This study is set to research the motivational input of ICT into language learning, and since ICT is something which provokes interest and brings joy and pleasure, the most suitable theory for this research is Self-determination theory which was presented by Deci and Ryan in 1985 and elaborated by Vallerand in 1997. Its main motivational components are intrinsic and extrinsic motivation.

2.2 Intrinsic and extrinsic motivation in language learning

Introduction to intrinsic and extrinsic motivation

In 1971 the Encyclopedia of education suggested that “Of late there has been a movement toward on intrinsic motivation, including curiosity”. Harry Harlow was one of the first researchers to use the term “intrinsic motivation” when he carried out his research on primates in the 1950s. In his experiment monkeys solved puzzles without any reward which explained their intrinsic motivation. The term intrinsic motivation is defined by the absence of obvious external factors such as extrinsic rewards (Encyclopedia of educational psychology, 2008, p. 556).

Deci and Ryan defined their own self-determination theory (1985), according to which motivation is divided into two types: intrinsic and extrinsic. Intrinsic motivation (IM) generally refers to “the innate natural propensity to engage one’s interests and exercise one’s capacities, and in so doing, to seek and conquer optimal challenges” (Deci & Ryan, 1985, p. 43). Vygotsky expressed a similar idea by saying that any kind of learning is possible because it is based on a child’s own interest. The question is only to what extent this interest is related to the subject itself rather than to outside influence, such as rewards, punishment, fear, desire to please etc. Therefore, the rule for the teacher should be the following: before you start explaining, make a child interested; before you make a child act, prepare him/her for acting; before you say something new, make him/her want to hear it (1991, pp. 117-118).

Vallerand, Pelletier, Blais, Briere, Senecal & Vallières, (1992) proposed a three-part taxonomy of Intrinsic Motivation.
1. Intrinsic motivation to know (IM-to know). It can be subdivided into exploration, curiosity, learning goals, intrinsic intellectuality. (Vallerand et al., 1992, p. 1005). In general, it is related to motivation for doing an activity on the grounds of positive feelings that an individual experiences while exploring new information and developing knowledge.

2. Intrinsic motivation towards accomplishments (IM-to accomplish things). It refers to carrying out activities in order to get pleasure or satisfaction related to accomplishing a task or creating something new.

3. Intrinsic motivation to experience stimulation (IM-to experience stimulation). It relates to motivation based on sensations, such as aesthetic appreciation or fun and excitement while performing a task.

All these subtypes are connected by “pleasurable sensations experienced during the self-initiated and challenging activity”. (Noels, 2003, p. 38)

Extrinsic motivation is driven by some goals such as earning a reward or avoiding a punishment (Noels, 2003, p. 39). Deci and Ryan (1985); Vallerand (1997) divided extrinsic motivation into external regulation, introjected regulation, and identified regulation.

If an activity is driven by external sources, “such as tangible benefits or costs”, it is defined as external regulation. (Noels, 2003, p. 39) This kind of motivation disappears as soon as the reward or punishment is taken away. It can be seen in some Russian schools, when a teacher announces: “This task will not be marked,” and the students’ involvement vanishes instantly.

Noels defines introjected regulation as “reasons that pertain to performing an activity due to some type of pressure that individuals have incorporated into the self, such that they compel themselves to carry out that activity” (2003, p. 39). For example, a student who lags behind his/her classmates in some subject feels ashamed of that fact and it drives him/her to study more.

Identified regulation is the form of motivation when individuals do an activity for “personally relevant reasons” (Noels, 2003, p. 39). For instance, a student has to pass an exam or would like to go abroad and feels the need to improve his/her current language level.

Deci and Ryan (1985, p. 150) also proposed the concept of “amotivation” or “amotivated behaviours”, which are “initiated and regulated by forces beyond the person’s intentional
control”. It means that learners have no reasons, intrinsic or extrinsic for doing some activity, but are driven by uncontrolled forces, either inside themselves or outside circumstances.

**Intrinsic and extrinsic motivation and language learning**

As far as early language learners are concerned, the question arises – what motivates them? There is a variety of possible factors. Some of them are intrinsic, such as:

a) they are interested in the language itself;

b) they are interested in language-related activities. For example, they want to learn English to understand the lyrics of their favourite songs or play video games in English;

c) learning languages is easy for them and they get satisfaction and sense of achievement from the tasks completed successfully.

Extrinsic factors may be:

a) fear of punishment for bad grades from their parents;

b) fear of teacher’s anger for bad performance in class or home;

c) desire to be better than other students in class, or desire not to be worse than other students in class;

d) parent’s promise of some reward for good grades;

e) desire to pass an important test well.

There may be a large number of other factors, I listed only those that I have personally come across both as a learner and a teacher.

But what is more effective, intrinsic or extrinsic motivational factors? Most researchers agree that intrinsic motivation is more efficient.

Ur (1996, p. 275) defined 7 characteristics of successful language learning: positive task orientation, ego-involvement, need for achievement, high aspirations, goal orientation, perseverance and tolerance of ambiguity. It can be suggested that most of these characteristics are related to intrinsic motivation.

A number of other researchers emphasized greater importance of intrinsic motivation. For example, Deci and Ryan stated that intrinsically motivated behavior was the prototype of self-determined behaviour: “They are perceived as wholly volitional, as representative of and emanating from one's sense of self, and they are the activities people pursue out of interest when they are free from the press of demands, constraints, and instrumentalities” (Deci & Ryan, 1994, p. 5).
Can IM and EM coexist? That is another question that researchers are trying to answer. According to the Encyclopedia of educational psychology, it depends on the way extrinsic motivation is expressed:

In general, on high-interest tasks, rewards were found to undermine intrinsic motivation when they were tangible, expected (promised beforehand), and loosely tied to performance. In contrast, tangible rewards increase intrinsic motivation when they are contingent upon achieving a specific level or standard of performance. Verbal praise and positive feedback also lead to positive effects on measures of intrinsic motivation. (2008, p. 557)

2.3 Interest in the context of language learning

When I, as a teacher, asked my students about some activity: “Why do you like it?” in most cases I got the same answer: “Because it’s interesting for me”. But what is “interest”? Cambridge dictionary (n.d.) defines it as “The feeling of wanting to give your attention to something or of wanting to be involved with and to discover more about something”. Google dictionary (n.d.) suggests another definition: “the quality of exciting curiosity or holding the attention”. Many researchers provide their own definitions of interest related to different fields of science. Ainley (2010, p. 612) looks at interest from the aspect of psychology calling it “state in which attention is focused on a particular object or event”. Hidi (1990, pp. 549-571) sees interest as a “mental resource for learning”. Silvia (2006, p. 68) names attention, effortless engagement, and feelings of pleasure as features of interest.

Researchers have recognized the influence of interest on learning since the beginning of the 19th century (Hidi, 1990, p. 549). They paid attention to contribution of interest in better learning and memorizing. However, with the development of the topic it became clear that interest is too broad a term and it should be classified and sub-divided. For example, Berlyne (1960, p. 18) mentioned four key factors for interest arousal: complexity, novelty, uncertainty and conflict. One of the most accepted approaches is the division of interest into personal (or individual) and situational.
Situational interest occurs accidentally after a person has encountered a piece of information (a video, a text, etc.) which seems interesting to him/her. Such interest is “evoked by certain features or characteristics of stimuli” (Hidi, 1990, p. 551). It refers to “focused attention and the affective reaction that is triggered in the moment by environmental stimuli, which may or may not last over time” (Hidi, Renniger, 2006, p. 113).

Individual (or personal) interests are “predispositions or trait-like personal organizations that have been developed over time” (Ainley, 2010, p. 612). Krapp (2002, p. 383) describes it as “a relatively stable tendency to occupy oneself with an object of interest”. Hidi (1990, p. 551) adds that such interests have “long-lasting effects on a person’s knowledge and values”.

But how can situational interests evolve into personal interests? All our hobbies started with some occasion which triggered situational interest at first and then developed into something that made us want to be engaged in this activity again. Hidi and Renniger (2006, pp. 113-116) developed the four-phase model of interest development. As the main focus of this research is the effect of ICT on interest and intrinsic motivation of language learning, we will try to look at this model by reflecting it onto the topic of this research. Ainley (2010, p. 612) claims that ICT can be used to “trigger situational interest in a variety of tasks for a wide range of students”. We will try to suggest how a situational interest can be developed.

1. Triggered Situational Interest.

The first phase starts with an accidental involvement of a person in some activity. According to different researchers, interest in this case “can be sparked by environmental or text features such as incongruous, surprising information; character identification or personal relevance” (Hidi & Renniger, 2006, p. 114). In the case of this study, the first lesson with ICT can be such a triggering factor which will make children interested not only in the ICT tools, but also in the language.

2. Maintained Situational interest.

It refers to a “psychological state of interest that is subsequent to a triggered state, involves focused attention and persistence over an extended episode in time, and/or reoccurs and again persists” (Hidi & Renniger, 2006, p. 114). In the case of this study we can mention a number of ICT lessons which will maintain the level of interest in foreign languages.

3. Emerging Individual interest.
It refers to “a psychological state of interest as well as to the beginning phases of a relatively enduring predisposition to seek repeated reengagement with particular classes of content over time” (Hidi & Renniger, 2006, p. 114). In the case of this study it means that some students will become so engaged in learning foreign languages that they will start learning it not only at school but also in their free time (by using ICT tools or without them).

4. Well-developed individual interest.

“It refers to the psychological state of interest as well as to a relatively enduring predisposition to reengage with particular classes of content over time” (Hidi & Renniger, 2006, p. 114). In the case of our study it means that some students may maintain this interest for a longer period of time, and it may affect their choice of further education or career.

2.4 ICT in educational context and its effect on development of interest in language learning.

As it is suggested in the previous chapter, there are different ways to affect motivation. “One way to increasing learners’ motivation to learn is by using a variety of interesting topics and activities in order to keep learners engaged and interested in what they are doing in the classroom”. (Harmer, 2001, pp. 53-54). Modern ICTs are designed just for this purpose.

The first attempts of using ICT in education began at the end of 1970s when first microcomputers became available for general public. The first ICT lessons were connected with programming. Later, at the beginning of 1990s ICT began to be used in other subjects and language learning was the most suitable subject as it involved repetitive vocabulary and grammar exercises. With the appearance of the Internet, language learning got more possibilities for variety. Nowadays it has evolved into the space with countless resources of different kind and quality.

The use of ICT in education is recognized globally. According to UNESCO (n.d.), “Information and Communication Technology (ICT) can contribute to universal access to education, equity in education, the delivery of quality learning and teaching, teachers’
professional development and more efficient education management, governance and administration”.

Nowadays, in the civilized world it is hard to imagine a child who has never come across the ICT. It is also clear that the vast majority of girls and especially boys like using electronic gadgets. They play games on their tablet PCs and smartphones, use social media, watch videos. ICT makes most children excited. “The current ICTs are fundamentally changing the ways in which youth today read, write and communicate” (Yunus et al, 2014, p. 765). The current generation of young people process information in a different way compared to their older counterparts. Instant messengers, social media create a new way of processing information.

Information communication technologies seem obviously beneficial for promoting interest in learning among primary school children. “ICT has the potential to play an important role in making English in schools more relevant, interesting and motivating for students. Therefore, consideration needs to be given to develop IT-based English activities in classrooms” (Yunus et al, 2014, p. 764).

The use of ICT varies greatly around the world. In some countries, ICT is an indispensable part of learning process whereas in other countries only a small proportion of teachers apply ICT in their practices, and everyone does it individually without general guidelines. Lewis (as cited in Al-Mohammadi, 2014, p. 181) believes that the technological advances compelled language teachers as well as learners to acquire and enhance new skills and abilities in order to cope with the new context. But in all sorts of ICT use, the challenges for teachers and students are similar.

**Teachers**

A list of challenges for future teacher education was published by A European consortium (Ziegler et al., 2009). One of the main challenges that they see is that teachers may be familiar with ICT in their personal lives but insecure about how to use it in language teaching (Ziegler et al., 2009, p. 7). Most teachers realise that out of school most children use ICT. But they either rely on conventional ways of teaching because they used to be efficient in the past, which means they will be efficient forever, or they just do not see how ICT can be used in their classroom. A national research on the use of collaborative learning environment by Finnish teachers further suggests that teachers may have no difficulty using new software, but many teachers, especially, in secondary schools, find it problematic to promote real collaborative knowledge building with their pupils due to the fact that they simply have to time for new
experiments because of “tighter curriculum” and “stronger demands for efficiency” (Lakkala, Lallimo, & Hakkarainen, 2005, p. 352).

It is also important for a teacher to keep up with the modern technology. ICT in 1998 and 2018 differ as much as a calculator differs from a computer. Therefore, old-fashioned programs can discourage children from learning instead of promoting their interest.

Another thing that may pose difficulty for teachers is that the number of resources available online is large and growing. It is impossible to include all or even a small part of ICT resources in a curriculum. Therefore, a teacher should be aware what kind of resources are suitable for this or that group of learners. While, on the one hand, it enables teachers to find an individual approach to the needs of every student, on the other hand it makes teachers switch from the language teacher's perspective to the learning advisor's or facilitator's. It is often challenging to “strike a balance between guiding and prescribing” (Morrison & Navarro, 2012, p. 355).

**Students**

In the developed world most children know how to use a computer better than adults. Unlike most teachers, they were born in the digital world, they did not see life without computers and so they take them naturally. So, when they come to class and see only the traditional means of learning, such as blackboard and books, they “drop out mentally” (Tileston, 2011, p. 113). In most developed countries modern technology is used widely, and children are exposed to ICT since their birth. They use computers and tablets actively; many primary school children have smartphones. It results in the situation that when these children come to school, they come to the past where schoolbooks, blackboards, pens and pencils are still the main tools of education. No wonder, it leads to loss of interest, no matter how talented their teachers are, they cannot make them motivated enough.

On the other hand, there is always a risk in introducing new methods of learning, especially for those teachers who have shown excellent results for several years or more. Despite the fact that most children like ICT as out-of-school activity, it does not necessarily mean that they will be interested in the materials that a teacher will suggest. The reasons may be:

- low interest in the subject itself. So low that even very interesting resources will not change much.
- too easy or too difficult materials
- unclear and confusing instructions of the teacher
- materials that students find old-fashioned and out-of-date
There may be other reasons, these are just examples of the fact that interest will not come automatically.

**ICT in Russia.**

Unfortunately, Russia lags behind the Western world in the aspect of using ICT in education. The general use of ICT in the country has risen dramatically in the last few years. Only 43% of Russian citizens had access to the Internet in 2010, whereas in 2016 this figure reached 110 million people or 73%. Globally Russia holds 45th place on the ICT Development Index (IDI), which ranks countries’ performance according to ICT infrastructure and uptake (International Telecommunications Union (ITU), 2017). It is higher than some European countries, such as Italy (47th) or Romania (58th), but lower than, for example, Finland (22nd) or Belarus (32nd). According to D. Light, who wrote his article based on the ITU data in 2013, “This weak policy environment extends to national educational ICT policies” (Light, 2014, p. 50).

In 2007, under a work of a federal program all schools in Russia were to be connected to the Internet (Nikolaev & Chugunov, 2012, p. 35). However, it turned out in practice, that according to the law, every school was responsible for the Internet-using policy. “In practicality each Russian school has to build its own technology infrastructure and integration plan; the federal government provides very little of the equipment or instructional resources” (Light, 2014, p. 50). So, a lot of schools have either very low speed of the Internet, or very strict filters that may block such useful educational resources as YouTube or Wikipedia, or the use of the Internet is for school staff only. Another reason is that very few schools in Russia are properly equipped. Interactive boards are becoming more and more common, but still the proportion of schools that use them is very low. Moreover, those who do have good access to the Internet are not in a rush of applying ICT resources in their classrooms. Preparing lessons with ICT takes time, especially when you are only learning to use and integrate it in your lessons. A lot of teachers cannot find the desire and strength or, sometimes, free time to try and introduce something new. Nikolaev and Chugunov (2012, p. 35) conclude that “the capacity of ICT to support independent or collaborative learning, development of creativity and research abilities, and interactive activities is insufficiently used”.

Another important factor that influences the use computers at schools is the guidelines of authorities. Light (2014, p. 51) refers to Regulations from the Russian Ministry of Health, which in 2003 regulated the time limit for the use of computers for children of different ages: “15 min per day for students in grades 1–4; 20–25 min for grades 5–9; and 30 min for grades 10–11” (Light, 2014, p. 51). Later the amount of time was increased. According to Sanitary-
Epidemiological Requirements in Russia (2015), the length of using computers with LCD display in the lessons is: for students of grades 1 and 2 – up to 20 minutes, for students of grades 3 and 4 – up to 25 minutes, for students of grades 5 and 6 – up to 30 minutes, for students of grades 7 to 11 – 35 minutes. Continuous use of an interactive board in the lessons in grades from 1 to 4 must not exceed 5 minutes, in grades 5 to 11 – 10 minutes. The total time of using an interactive board during one lesson must not exceed 25 minutes in grades 1 and 2, and 30 minutes in other grades, provided that the lesson is organised in compliance with hygienic rational organisation (studying takes 60-80% of the lesson added by physical activities and vision training). In order to prevent tiredness of students, it is not allowed to use more than two different means of ICT during one lesson.

This looks contradictory to the situation in many homes where children spend hours playing computer games. However, at schools these regulations are observed carefully. In the school where the experiment took place the teachers reminded me about these guidelines. They mentioned the parents’ factor – if some parents find out that the school does not comply with health regulations, it may lead to a scandal. Therefore, these regulations were observed during the experiment.

2.5 History and current trends of studying foreign languages in Russia.

Systematic learning of foreign languages in Russia began in the second half of the 18th century when it first became a school subject. Throughout time different languages took over as the most popular foreign language such as German, French and English. In 1940 foreign language became compulsory in secondary schools, i.e. from the 5th grade. In 2004 foreign language became a compulsory subject in primary schools starting with the 2nd grade. According to Federal State Educational Standard (FSES), which lies in the base of school curricula in the Russian Federation, “A foreign language is introduced as a compulsory subject starting with the second grade of all types of comprehensive schools on condition of presence of relevant staff and methodological materials for foreign language lessons” (Solovova, 2015, p. 6).

The vast majority of school pupils study English as their first foreign language. Other foreign languages may be German, French, Spanish, Chinese and others. In 2015 Second foreign language was made compulsory, it is studied from the fifth grade. Most schools have two language lessons a week. The total number of hours at primary school (2-4 grades) amounts to 204 per academic year. However, a school has a right to introduce advanced language
education with 5 or 6 language lessons a week. Thus, the total number of hours increases significantly.

FSES for primary schools presents requirements for all the school subjects. Learning results for the subject of foreign languages must reflect:

1) Acquiring basic skills of oral and written communication with native speakers of a foreign language on the base of their own speaking skills and needs; learning rules of verbal and non-verbal behavior;
2) acquiring primary linguistic insight which is necessary for learning oral and written speech at elementary level, enriching linguistic outlook;
3) forming friendly attitude and tolerance to native speakers of other languages based on getting to know life of peers in other countries, with child folklore and available samples of fiction literature for children (FSES for primary comprehensive education, 2009, p. 8).

The underlying principle in the curriculum document for the subject of foreign languages at primary school is the principle of communicative orientation. It consists of:

- selecting communicative situations which are close to real life situations for communicating with the students’ peers and adults;
- selecting and arranging language material which is necessary and sufficient for fulfilling various communicative goals within these situations;
- using communicatively oriented instructions for exercises and assignments;
- providing opportunities for every student to take part in communication;
- priority of games in speaking and communicatively oriented tasks (Solovova, 2015, pp. 8-9)

It can be noted that ICT is not mentioned in the exemplary curriculum document about English language, the document which is used by most schools for working out their curricula. However, a more general document, FSES, mentions ICT as one of required metadisciplinary results of primary education: students should be able to use the Internet for searching information, type texts, prepare presentations with the use of audio and video resources (FSES for primary comprehensive education, 2009, p. 6).

Teaching materials which are used in Russian schools in English lessons support this discrepancy. On the one hand, teaching materials must comply with FSES requirements. On
the other hand, the most popular English textbooks which are used in Russian schools are very poorly supported with ICT resources. Most books provide only CDs or electronic files for listening. The books do not have any extra computer-based activities which can be used in lessons. Therefore, extra ICT activities can be used only if a teacher has enough desire and enthusiasm to make his/her lessons more diverse.
3 RESEARCH QUESTIONS

The research questions present my personal interest and attempt to find out how important and useful ICT can be for learning English in the context of Russian primary schools. The overall aim of the study was to introduce ICT elements to Russian primary schoolchildren during well-planned lessons and see how it will affect their interest in learning English. It was also interesting to see if the use of ICT would affect the students’ attitude to the use of ICT in English lessons. The following research questions were formulated as a result:

1. How does ICT influence primary school children’s interest in learning English?
2. To what extent can the use of ICT in English lessons at primary school raise learners’ intrinsic motivation for learning foreign languages?
3. To what extent can the use of ICT in English lessons affect the students’ attitude towards applying ICT tools in English lessons?
4 METHODOLOGY

This chapter presents the methodology of the study. Apart from the methods which were used in the study and explanation of the reasons for their selection, it also discusses the issues of validity, reliability and ethics.

The chapter contains six sections. The first section introduces the general information about the experiment, such as the stage of arrangement and the description of classes. The second section focuses on the design of the research and presents the activities which were used during the study. Sections three and four are devoted to methods of data collection and analysis. Section five presents the reasons why the findings of this research should be considered valid and reliable. The last section of the chapter deals with the issues of ethics.

4.1 General information about the experiment

The stage of arrangement
As the idea was to carry out the experiment in Russia, I started to search for appropriate options for my project. I approached two schools, one in Saint-Petersburg, one in Gatchina which is the suburb of Saint-Petersburg. The teachers in both schools appeared to be quite enthusiastic about the idea and agreed to help. I decided to choose the school in Gatchina for a number of reasons.

Firstly, the technical equipment of the school is much more advanced than at the other school – each classroom has a computer with the Internet, some classrooms have an overhead projector. Besides, IT classrooms offer a lot of computers, as well as an interactive board and an overhead projector.

Secondly, in Gatchina I contacted the English teacher via the school headteacher which also meant administrative support.

Thirdly, logistically, the school in Gatchina was easier to reach.

This is a usual comprehensive school which is considered to be one of the best in Gatchina. It is also ranked in top-500 schools of Russia (out of over 15,000 schools in the Russian Federation).
I first met the teachers in person in June 2017, I told them my plan and got their consent to participate. We chose the class, the topic and the convenient time for carrying out the activities. Then I came back to Finland and we kept communicating in a Facebook group.

The original idea was to take one class, which is divided into two groups, and add the elements of ICT to both groups. But then the idea was changed to having two grades and carry out the project in the form of a quasi-experiment where one group of each class will be exposed to ICT elements and the other one will not. I contacted the teachers again and asked if we could get the control group. The teachers replied that it was possible. At the beginning of September, we got in touch again. It turned out that due to the beginning of the school practice I was not able to stay for the whole month of October as it had been arranged, and the teachers were unable to start earlier. Therefore, we arranged to have fewer lessons that it had originally been planned.

When I arrived in Russia and met the teachers, we finalized our plan. There were two classes – 4¹ and 4² (the school has a custom of defining grades with two numbers where the first number stands for the year of studying and the second number is equal to what originally has letters “A”, “B” etc. Therefore, instead of 4A there is 4¹). Each class consists of two groups which makes 2 experimental groups (one in each class) and 2 control groups (one in each class). The lessons of one class (i.e. one experimental group and one control group are carried out simultaneously in different classrooms.

Description of classes

Class 4¹. There are 27 students in the class, aged 10-11, 15 boys and 12 girls. The experimental group consists of 15 students (8 boys, 7 girls) while there are 12 students in the control group with 7 boys and 5 girls. According to their English teachers, the average skills in English are quite good, most students have equal language skills. They are active and enthusiastic in the lessons. They seem interested in new activities and are not afraid of participating in them.

Group 1 (Control group)

As there is a computer and an overhead projector in their classroom, the students have previous experience of using ICT in the lessons – the teacher sometimes shows them English videos or cartoons. However, this is the only way how ICT is used in the lessons. Most lessons involve grammar tasks, vocabulary dictations, writing new words into their notebooks and occasional speaking tasks. The teacher explains the situation with two main reasons – the intensive content
of the curriculum when there is no time left for optional activities, and the conservatism of some parents who can be unhappy if there are some curriculum deviations. There are no personal computers or tablets for students in the lessons and there is no homework connected with computers or any other devices. The same information was proved by the students of this group in their pre-test survey.

Group 2 (Experimental group)

The classroom for group two contains only the teacher’s computer, no other ICT elements are available. Therefore, the students of this group are not exposed to any ICT elements at all. The lessons’ content seems very similar to the one in Control group. In their pre-test survey, the students of this group confirmed this information.

For the sake of the experiment, the groups changed classrooms. We were also allowed to use a computer classroom once a week. This way we had 2 lessons in a computer classroom and 3 lessons in the classroom with a computer and an overhead projector.

Class 4.

There are 25 students in the class, aged 10-11, 15 girls and 10 boys. The experimental group contains 12 students (7 girls, 5 boys) whereas the control group has 13 students (8 girls and 5 boys).

Group 1 (Experimental group)

According to the teacher, the group’s average skills are slightly lower compared to the other experimental group, some students have good language skills for their age while other have difficulties in learning the language. However, the difference in skills does not reflect their attitude to the subject – all the pupils are active during the lessons and seem to be interested in class activities. The situation with ICT is the same as in the other experimental group. The students had similar answers about the content of the lessons in their pre-test survey answers.

Group 2 (Control group)
I was able to contact briefly with the teacher of the control group as we had not arranged with her personally before. She was not interested in taking part in the interview, so I only managed to get more information about the content of the lessons from the student rather than from the teacher. According to the students of this group, the content of the lessons was traditional without implementing any ICT elements.

The overall table for the classes and number of students is presented in chapter 5.

Preparation for classes
It was decided to stick to the curriculum and use the topic which was coming next in the plan. Before each class the teacher of both experimental groups and I discussed the plan of the lesson. We decided which book exercises can be omitted and then I suggested the ICT activities instead of them. It was decided that ICT activities would take a part of each lesson, but not the whole, due to two reasons:

1) There were some tasks in the book that had to be covered. Skipping them would mean that the teacher would have to do them after our experimental period which would have led to lagging behind the curriculum.

2) The teacher of the class referred to the existing Russian sanitary norms that would let the limited use of ICT materials during the lesson (25-30 minutes max).

The preparation went very well, it was easy to come to an agreement.

4.2 Research design

Two main methods that constituted this study were the method of quasi-experimental design (with both pre-test and post-test), and mixed-method approach also known as “methodological triangulation”.

Quasi-experimental design
The term “quasi-experiments” refers to a set of designs which were first described by Campbell and Stanley (1963, p. 34). Like other experiments, quasi-experiments are used to “test hypotheses about the effects of treatments that can be actively manipulated to achieve some outcome (Shadish & Luellen, 2006, p. 539). The simplest kind of experiments and quasi-experiments is the one with two groups. One group is called “experimental” and it has one or more conditions that the other group called “control” does not have. In my situation, the
treatment the students received was the use of ICT. Another difference was the teachers in charge of each group, but it was the condition which could not be changed, and which had existed before the quasi-experiment. All other conditions such as the location of school, the classrooms, and the non-ICT study materials were the same.

Why was quasi-experiment chosen instead of an experiment? Gribbons explains that the main difference of an experiment from a quasi-experiment is random assignment: “It is only through random assignment that evaluators can be assured that groups are truly comparable and that observed differences in outcomes are not the result of extraneous factors or pre-existing differences” (Gribbons, 1997, p. 2). Shadish and Luellen (2006) define quasi-experiments as “experiments that lack random assignment of units to conditions but otherwise have similar purposes and structural attributes as all other experiments (p. 539). I was not able to assign students to groups randomly. Therefore, my design was quasi-experimental.

There are several basic quasi-experimental designs which are widely used. Some designs are considered weak, as they do not include a pre-test, or they use only one group. My decision for doing both pre-test and post-test is explained by the fact that “the nonequivalent group, pretest-posttest design partially eliminates a major limitation of the nonequivalent group, posttest only design” (Gribbons and Herman, 1997, p. 1). Morgan (2000, p. 795) agrees that “post-test only” design is weak on equivalence of the groups on participant characteristics as “it is impossible to determine the similarity of the groups prior to the treatment”. Despite the possible pre-test results, the groups will be considered non-equivalent, because “there may be characteristics that have not been measured that may interact with the treatment to cause differences between the 2 groups that are not due strictly to the intervention” Morgan (2000, p. 795). Gribbons (1997, pp. 1-2) states similar conclusion: “Some problems still might result from students in the comparison more motivated or involved parents, etc.” The choice of two experimental and two control groups is explained by the attempt to minimize the possible risks.

Another factor that adds strength to the quasi-experimental design is the fact that a researcher has control over the independent variable (Morgan, 2000, p. 795). In my research this is exactly the case as the independent variable, that is the use of ICT elements in the lessons, was tailor-made for the certain groups of children. Moreover, the development was discussed and approved by the teacher of the experimental groups.
**Methodological triangulation**

To enhance validity of the research additional methods were used such as interviews with teachers, observation and interviews with students. A variety of methods that are used for the same purpose of studying something can be defined as “triangulation”. The main point of the concept is to examine a certain phenomenon from different points of view. Denzin (1989, p. 236) describes it as “a plan of action that will raise sociologists above the personal biases that stem from single methodologies”. Bogdan and Biklen (2007, p. 115) explain that the term “triangulation” was used in the social sciences “to convey the idea that to establish a fact you need more than one source of information”. They continue explaining that in qualitative research this term changed its original definition and “came to mean that many sources of data were better in a study than a single source because multiple sources lead to a fuller understanding of the phenomenon you were studying”. (Bogdan & Biklen, 2007, pp. 115-116).

Cohen (2013, p. 195) also underlines vulnerability of single methods: “The use of multiple methods, or the multi-method approach as it is sometimes called, contrasts with the ubiquitous but generally more vulnerable single-method approach that characterizes so much of research in the social sciences”. Drouin (2015, pp. 405-406) supports this opinion by saying that “A fundamental assumption of this approach is that each of the multiple sources of data could give a slightly different picture of the phenomenon; therefore, each is considered individually but then combined for a comprehensive view”.

There are different concepts of triangulation that are widely used in sociology, medicine, education and other fields. The one which was used in this research is called “methodological triangulation”. Denzin (1989, pp. 243-244) divides methodological triangulation to “between” (or “across”) and “within” methods. While “within” approach uses only one method with “multiple strategies within that method” (Denzin, 1989, p. 243) for data examination, “between” method “combines dissimilar methods to illuminate the same class of phenomenon”. It may be a combination of two or more methods. I used “between” approach where I employed different ways for collecting data (interviews with teachers, interviews with students and personal observations and students’ assessment of the lessons). As an example of previous research with a similar approach, Drouin (2015, p. 406) describes the study of Schaap et al.(2011) who used mixed methods (i.e., concept maps, interviews, and self-reports) in their report. They came to the conclusion that more structured methods with various sources of data collection provided a significantly more useful data than just one source.
Activities

Before the experiment, I searched and tested a large variety of ICT activities. The full list of the activities can be found in Appendix. The activities that I selected for the experiment had to meet several criteria:

- the activities must be legally free to use;
- they must be appropriate for the level of the students;
- they must be relevant to the topic;
- they need to be user-friendly and easy to handle;
- they cannot take too long to create a new task;
- they need to look appealing to the students (attractive interface, bright colors, etc.);
- they must be interesting for the students.

All in all, the activities were to be convenient for teachers, so that teachers would not have to spend too much time preparing for the lessons. Therefore, the implementation of such activities would be profitable for both sides in the classroom. As for relevance in terms of level and curriculum, these requirements referred only to pre-created activities, such as YouTube videos. In most activities the tasks are created by teachers for their own groups.

As far as interest is concerned, it is hard to predict how the students will react to this or that activity. Therefore, it was sensible to test them before using them in the experiment. The selected activities (except for the videos) had been tested during the teaching practice in Normaalikoulu, Joensuu, and on individual students online.

The following activities were used during the experiment:

1. YouTube videos. Youtube.com

The selected videos were relevant to the topics (Places in a town, Days of the week) and were not too easy or too difficult for the students. As there is a large variety of educating videos on YouTube, it is not too challenging to find one corresponding to the teacher’s needs.

2. Quizlet. quizlet.com
It can be used for introducing, practising and revising vocabulary. It can also be applied to grammar rules. The most frequently used mode is the mode of flashcards, but it also has other activities to practice the required set of words. The sets for the experimental lessons were created by me. It took 10-15 minutes for each set. Each set can be used a limitless number of times.

3. Kahoot. kahoot.com

This is an online interactive game that can be played from a computer, tablet or smartphone. The students see the question on the main screen, then they select the answer on the screens of their own devices. It can be used for reviewing vocabulary and grammar. The games are created by teachers. The games for the experiment were created by me. Each game took 20-30 minutes to create.

4. Educaplay. educaplay.com

Educaplay offers a variety of activities such as word search, crossword, alphabet games and many more. This resource is mainly suitable for revising vocabulary. The activities can be done on computer. They can also be converted to pdf files and used in a printed form. There is a large collection of already existing activities. However, it is always best to create a tailor-made activity that is suitable for this or that group. The crossword that was used in the experiment was created by me. It took around 20 minutes.

5. Baamboozle. bamboozle.com

This is an interactive game where students play in teams. Each team answers questions and earns points. The game can be used for revising vocabulary and grammar. The game for the experiment was created by me. It took 15-20 minutes.

All the activities that were used in the experiment meet all the above-mentioned criteria. The links to the sets and games that were used in the experiment can be found in Appendix 7.

The main reason why only a limited number of the activities from the full list were used was the length of the experiment. It was not possible to fit more activities in the given number of lessons. It does not mean that the other activities from the full list are not reliable, they can also
be used in class. The preference for the selected activities can be explained that they had been tested before. A lot of activities mentioned in the full list can be used instead.

4.3. Data collection.

I collaborated with a Russian school. There were two classes of 4th graders which are both divided into two groups for their English lessons. One group from each class became a control group, the other group from each class became experimental. During the period of three weeks the experimental groups had their English lessons with the elements of ICT specially designed for their study topics. The control group had the same study topics but without the elements of ICT. Both experimental groups were taught by the same teacher. The control groups were taught by different teachers. It was made for the convenience of the experiment.

Both pre-test and post-test consisted of two parts – drawings and questionnaire.

**Questionnaires for students**

A questionnaire is one of the most common forms for a pre-test. It is a “written list of questions, the answers to which are recorded by respondents” (Kumar, 2005, p. 126). The reason for choosing this form of self-report was due to main advantage of questionnaires, which is the fact that “it can be easily administered to a large group of individuals” (Ho et al, 2006, p. 210). Mukherji and Albon (2010, p. 119) add another reason in favour of interviews by saying that questionnaires take less time compared with interviewing.

Both pre-test and post-test questionnaires were designed, handed out and administered by the researcher. Unfortunately, there was no group of children who could have answered the pilot tests, thus, there was a risk of missing some important information. For the purpose of minimizing the risks, the questions were discussed with the research tutor. This contributed to a more organized and correct structure of the questions.

The pre-test questionnaire contained 33 questions and some space for free comments. Several types of questions were used, such as: quantity or information (e.g. “name”), categories (e.g. “How many years have you been studying English?”), lists or multiple choice (e.g. “Studying English is …”), scales (e.g. “Assess your school teacher on the scale from 1 to 5”). There were also some dichotomous questions with an additional line for further explanation (e.g.: “Do you study English only at school? If not only at school, where else?”). Most questions were
designed to elicit some quantitative data while the space for free comments was assumed for additional qualitative information.

The questionnaire pursued several goals:

- to obtain additional information about the students;
- to obtain information about the course of their regular lessons;
- to look into their attitude to English and ICT technologies;
- to learn what children currently thought about the idea of using ICT elements in English lessons.

Two questions from the last purpose group were supposed to retrieve the most essential data for the experiment. The first question was “Using computers/tablets in the lessons for studying English is…”. The students’ task was to select the category which reflected their opinion – “It is a great idea / it would be interesting to try / it is not a very good idea / it is a terrible idea / other (with a space for the answer)”. The second question was “Computers/tablets in English lessons should be used…”. The students were to choose of the categories – “All lesson in every lesson / several minutes in every lesson / once a week / once a month / less often than once a month or never”. Pre-test and post-test answers to these two questions were to be compared in both control and experimental groups.

The activity of completing the pre-test questionnaire and drawing picture was held before the beginning of the experiment (i.e. lessons). In both cases it was held with the whole class, the children first completed their drawings and then did the questionnaire. The total time of the activity was 35 minutes in class 4¹ and 45 minutes in class 4². For the convenience of the reader, the results of two experimental groups were combined (N=26) as well as the results of both control groups (N=24).

The post-test questionnaire was different for the experimental and the control groups. The control group students were to answer similar questions to the pre-test (not all of them), including the two main questions which are mentioned above. The goal was to check whether the members of control group had experienced any changes in their attitudes towards ICT and the use of ICT in English lessons. The experimental group had different questions, which dealt with the results of the experiment, their change in attitude towards ICT and the use of ICT in
English lessons. The post-tests for the experimental and control groups consisted of 15 and 10 questions respectively.

**Drawings**

Most children like to draw. For many of them this is the way of expressing themselves. So, why not use it in the research? Drawing can be “employed creatively in early childhood research” (Mukherji & Albon, 2010, p. 173). Robert-Holmes (2005, p. 118) agrees that drawing and painting are “an excellent inclusive and participatory research technique with which to listen to children”.

Another goal of the drawing was their further use during the interviews with the children where they were asked questions related to their drawings.

The research suggested two stages of drawing pictures – they were a part of the pre- and post-tests and were held with the children of both control and experimental groups before the questionnaires.

In the pre-test the children were given a blank sheet of paper. They were asked to divide the sheet into two parts. The instruction went as follows: “Draw how you study English. On the left side draw how you do it at school. For example, you can draw your workplace, your classroom and what you usually need for studying English. On the right side draw how you study English at home. You can draw the place where you do your English homework and what you need for it”. The aim of this activity was to find out whether the students draw something related to ICT that they might use in the lessons or at home.

The drawing task in the post-test was also the same for all the students. This time they were asked to draw only one picture. The instruction was the following: “Draw how you would like to study English at school, draw everything that you need for studying English”. I did not ask them to draw how they study English at home, as I assumed that it would not change much compared to the first drawing. As for studying English in the classroom, I expected to see some changes for two reasons. Firstly, the instruction was slightly different compared to the pre-test. In the pre-test they were asked to describe how they study English at school, whereas this time they were asked to describe how they would like to study English at school. Secondly, I had expectations to see more ICT-related drawing in the experimental group as the reflection of their interest in the ICT-based activities.
Like any other method, drawing has its downsides. First of all, not everyone is “comfortable with this medium of expression” (Veale, 2005, p. 265), which may be crucial for effective interpretation. Another point for criticism is that “drawings might be open for multiple interpretations” (Mukherji & Albon, 2010, p. 173). For example, the pre-test drawings in the research asked the question about the place where children do their homework. Some children depicted their computers, laptops or smartphones in their drawings. But did it really mean that they used those devices for doing their homework? It was another reason to use the drawings in the interviews with the children so that they could explain what they had drawn and why.

**Interviews with the teachers**

The concept of interview is familiar to virtually all researchers. Johnson and Christensen (2008, p. 203) give their definition of an interview as “a data collection method in which an interviewer asks an interviewee questions”. However, oral conversations with respondents are not always classified as interviews. Apart from a standard open-ended interview which Brenner defines as “interviews in which the intent is to understand informants on their own terms and how they make meaning of their own lives, experiences and cognitive processes” (2006, p. 357), there are other forms, such as surveys and tests. They can also be conducted orally, but unlike interviews, they are structurally more organized in methods and content (Brenner, 2006, p. 357).

The interview with teachers had various nature. The pre-experiment interview with the teachers of both control and experimental groups was a mix of a survey and a qualitative (open-ended) interview. The survey was used to “find particular pieces of information” (Brenner, 2006, p. 357). Two other interviews with the teacher of the experimental group were typical open-ended interviews which were aimed at “giving an informant space to express meaning” (Brenner, 2006, p. 357).

As regards the interview structure, the choice was made for a semi-structured interview, which “has the advantage of asking all informants the same core questions with the freedom to ask follow-up questions that build on the responses received” (Brenner, 2006, p. 362). This allowed more freedom in interviewer’s response in case of unexpected answers from the interviewees. As Mukherji and Albon (2010, p. 123) explain: “There is a greater flexibility to probe for detail in relation to a particular response given”.

As the main goals of the interview were to check the consistency of the students’ data from the pre-test, and to find out the teachers’ perceptions and attitudes to ICT, the interviews did not
last long, around 7-8 minutes. I had three interviews with the teacher of both experimental groups and one interview with the teachers of control groups. The teacher of one control group refused to answer the questions for the recorder. The answers of two other teachers were recorded.

The first interview with the teachers had a purpose of collecting additional data about the students, checking consistency between the data from the teachers and the students, and the regular teaching process before the experiment. The interview questions concerned the frequency of ICT use in the classrooms, the content of regular lessons the teacher’s view of students’ attitudes to English as well as their own opinion about ICT and the use of ICT in the classroom.

The second interview was held in the middle of the experiment. The teacher of both experimental groups expressed her opinion about the course of the experiment.

The same teacher was interviewed for the third time after the end of the experiment. She shared her impressions about the experiment and about the further use of ICT in her work.

Interviews with the students of the experimental groups
Even though the structure and nature of the interview remains the same, interviewing children has a number of differences.

First of all, the social position of children should be taken into account. Eder and Fingerson (2002, p. 182) state that “Children are taught all their lives to listen to, respect and obey adults”. It is especially clearly seen in Russia which, according to Hofstede Insights, has a power distance index of 93 out of 100. Therefore, there was a risk that the children would not be willing to share their negative thoughts. In order to avoid it, researchers “need to be sensitive to this power imbalance” (Eder & Fingerson, 2002, p. 182).

In order to make such an imbalance less prominent, a number of measures can be taken. The first thing to be done is carrying out interviews in pairs. Different researchers (Parish et al, 2012, p. 270), (Graue & Walsh, 1998, p. 114), (Eder & Fingerson, 2002, p. 183) agree upon this idea. As Eder and Fingerson conclude: “The group setting is also important for minimizing the power differential between the researcher and those being studied” (2002, p. 183).

Another measure that should be taken is interviewing children outside their classroom where they feel extra pressure. The classroom setting might “remind youths of classroom lessons
based on “known-answer” question” (Eder & Fingerson, 2002, p. 184). In order to avoid it and create a more natural atmosphere, the students were interviewed in the place where they spend their breaks between their lessons. In that place the students spend time with their peers, therefore, it was assumed that they would feel more natural.

Using children’s own drawings during the interviews was another attempt to create a more natural setting. Brenner (2006, p.365) states that “Younger children are more comfortable when pictures, toys, or other props are used during a discussion with an adult”. Graue and Walsh (1998, p. 114) agree that it facilitates the process of communication.

The last but not least measure to be mentioned was that the interviews were held after a period of observation. This way the children felt more comfortable with someone who they had met before. It also gave the interviewer some information about the respondents.

The structure for the interviews was also semi-structured. One difference was a number of dichotomous (yes/no) questions. Even though such questions are not regarded as the best option for the interviews, they might be “useful with younger informants” (Brenner, 2006, p. 365). Eder and Fingerson argue that open-ended questions with young respondents are essential as “…the children will have more opportunity to bring in the topics and modes of discourse that are familiar to them” (2002, p. 184). Open-ended questions were included in the interviews.

The interviews of students were carried out after three or four lessons in each of the groups. The students were interviewed in pairs, one boy answered the questions individually. Altogether 25 students took part in the interviews. On average, each interview took around 7 minutes. A part of the questions concerned their pre-test questionnaire and drawing. They were asked to explain what they drew and answer some questions about their use of computers/tablets before the experiment. Then the questions were related to the experiment, the students expressed their opinions and impressions about the course of the experiment, what they thought about the use of ICT in the lessons. The interviews were held in Russian and later transcribed into English.

The children described their pictures, explained their answers in the pre-test questionnaire and shared their impressions about the use of computers. All the children were eager to describe their own pictures, but when it came to other questions, many children felt a bit shy to speak for a long time. Sometimes I had to paraphrase the questions into a yes/no question in order to get the answer.
Observation
Child observations is an old method which was used by a multiple number of researchers including Darwin, Freud and Piaget. Observations may be used as an independent method or as a part of a research study.

Cohen (2013, p. 456) explains that “The distinctive feature of observation as a research process is that it offers an investigator the opportunity to gather ‘live’ data from naturally occurring social situations”. Questionnaires and interviews are certainly helpful, but when it is complemented by personal impressions from observing a natural course of a lesson, it adds reliability to the whole research process.

Mukherji and Albon (2010, pp. 106-107) present a number of dimensions of observation. We can look at these dimensions and reflect them to the current study.

- Laboratory or naturalistic? As the observations were carried out during regular lessons, they should be called naturalistic.
- Quantitative or qualitative? Here the choice was for qualitative observations as they suit naturalistic setting and, according to Mukherji and Albon, during qualitative observations the researcher’s records are “guided by the overall aim of the research and interesting things they see at the time” (2010, p. 107).
- Participant or non-participant? I was present in all the lessons during the experiment. As it had been arranged with the teacher of both experimental groups, I had a role of an observer in the part of the lessons without ICT and took part in the lessons as a teacher when the tasks were related to ICT.

I had a chance to observe the class both as a teacher and as a free observer. I was not involved in the activities without ICT elements, therefore I could observe such activities with more attention.

Before observation I devised the codes that I used to describe signs of being interested in the lesson content and signs of being bored. Signs of interest included:

- being focused on the activity
- listening to the teacher and looking at the teacher during instructions or explanations
- willing to answer (raising hands).

Signs of boredom were:

- getting distracted from the activity (lack of attention)
- talking to other students
- yawning
- drawing in a notebook
- putting his/her head on his/her hands.

Assessment of the lessons by students
After each lesson the students were asked to evaluate the part of the lesson with ICT activities by giving their grade. The grading system from 1 to 5 was used as it is familiar to all the students in Russia. 1 was the lowest mark, 5 was the highest. The grading process was secret and anonymous. After each lesson each student was given a piece of paper. The students were to write their grade to the lesson, fold the piece of paper and put it into a cup that the teacher was holding. They did not write their names on a piece of paper.

The instructions were repeated after each lesson before the students were given the pieces of paper.

Overview
Table 4.1 presents the overview of all the methods which were used in the research.

Table 4.1. Overview of data collection methods.

<table>
<thead>
<tr>
<th>Methods</th>
<th>Name and kind of group</th>
<th>4-1 group 1</th>
<th>4-2 group 1</th>
<th>4-1 group 2</th>
<th>4-2 group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>experimental</td>
<td>experimental</td>
<td>control</td>
<td>control</td>
</tr>
<tr>
<td>Pre-test questionnaire and drawings</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Interviews with teachers</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Lessons with the elements of ICT</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>Students’ assessment</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>Interviews with students</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>Post-test questionnaire and drawings</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td></td>
</tr>
</tbody>
</table>
Most lessons went according to the plan. Some lessons started with regular activities and then ICT tasks followed. In some lessons the regular and ICT activities were mixed. The lack of time was the main factor which prevented from introducing a wider variety of resources. In three lessons there was not enough time to finish the ICT activity properly.

4.4 Data analysis
Collecting the data was an important step, which was followed by another essential procedure – data analysis. “The ‘success’ of a research project is very much contingent on the analysis of data” (Gibson & Brown, 2009, p. 1). As the collected data was of various nature (both qualitative and quantitative), it was not possible to use one kind of analysis. For qualitative data (interviews, drawings, observation) content analysis was used, while descriptive statistical analysis was applied to analyzing quantitative data (questionnaires, students’ assessment).

Qualitative data analysis
The nature of qualitative analysis is harder to describe compared to quantitative analysis. According to Gibson & Brown (2009, p. 3): “there are few tangible practices that can be discussed as features of work that ‘constitute’ [qualitative] analysis”. Cohen (2013, p. 535) adds that data “are multilayered and open to a variety of interpretations”. Gibbs (2007, p. 2) mentions the opinion of different researchers who believe that “analysis involves interpretation and retelling and that it is imaginative and speculative”. Therefore, the role of a researcher is crucial in analyzing the data as the researcher is the tool of analysis, unlike in the situation with quantitative data where a researcher uses other tools for analysis.

I had four different kinds of qualitative data – texts (interview transcripts), free comments from the questionnaires, drawings and participant observation. For all of them the method of content analysis was applied.

Cohen (2013, p. 564) explains the nature of content analysis: “Content analysis takes texts and analyses, reduces and interrogates them into summary form through the use of both pre-existing categories and emergent themes in order to generate or test a theory”. This research tested the hypothesis that the lessons with ICT affect children’s interest in learning English. Therefore, the question tested had existed before the process of data collection, and the aim of data collection was to prove this hypothesis.

Content analysis is widely used in texts, but it can also be used in analyzing visual images, such as drawings, “through ‘reading’ the meanings, through disclosing our own views, perspectives, backgrounds and values (reflexivity)” (Cohen, 2013, p. 588). In this case the
method of content analysis “is based on counting the frequency of certain visual elements, and then analysing those frequencies” (Rose, 2012, p. 87).

According to many researchers, a major feature of qualitative data analysis is coding (Cohen, 2013, p. 559). A code “simply defines the process of summarizing and reporting written data – the main contents of data and their messages” (Cohen, 2013, p. 559).

Anderson and Arsenault (1998, p. 102) give a simple explanation of coding, reflecting its quantitative nature: “at its simplest level, content analysis involves counting concepts, words or occurrences in documents and reporting them in tabular form”.

Having summarized the information above, the content analysis of this research was performed in several steps:

1) Working out a hypothesis
2) Collecting data
3) Devising codes
4) Finding and counting the codes in the data
5) Analysing the results

The codes which were used in the collected qualitative data are presented in table 4.2

Table 4.2. Codes according to the type of data

<table>
<thead>
<tr>
<th>Type of data</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews with students</td>
<td>Positive words about ICT lessons (e.g. “interesting”)</td>
</tr>
<tr>
<td></td>
<td>Negative words about ICT lessons (e.g. “confusing”)</td>
</tr>
<tr>
<td>Students’ drawings</td>
<td>The presence of ICT tools in the pre-test and post-test drawings (Computers, tablets, smartphones etc.)</td>
</tr>
<tr>
<td>Open-ended answers in the questionnaires</td>
<td>Positive words about English, ICT in general, and ICT lessons (e.g. “interesting”)</td>
</tr>
<tr>
<td></td>
<td>Negative words about English, ICT in general, and ICT lessons (e.g. “boring”)</td>
</tr>
<tr>
<td>Observation of ICT lessons</td>
<td>Observing signs of interest (e.g. raising hands, listening carefully etc.)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Observing signs of boredom (e.g. distraction, talking to classmates etc.)</td>
</tr>
</tbody>
</table>

The results of analysis of interviews, drawings and open-ended answers were counted and presented in the quantitative way whereas observational data was only analysed qualitatively by describing the researcher’s overall impressions.

**Quantitative data analysis**

The quantitative data of this research was analysed by the method of descriptive statistics which “are brief descriptive coefficients that summarize a given data set, which can be either a representation of the entire population or a sample of it” (Descriptive statistics, n.d.). Cohen (2013, p. 606) explains that descriptive statistics are “concerned simply with enumeration and organization” without trying to infer population parameters. It explains the aim of this research – only to see the results of influence of ICT lessons on a certain group of students.

The questionnaires presented two types of data for analysis. Firstly, the data which was extracted from one questionnaire (either pre-test or post-test). It referred to the questions which explained the situation before the experiment and also to the questions which showed the reactions and attitudes of experimental group students to ICT lessons.

Cohen (2013, p. 622) notes that “in descriptive statistics much is made of visual techniques of data presentation. Hence frequencies and percentages, and forms of graphical presentation are often used”. The results of the given research were presented graphically with written explanations. The following statistics were used:

- central tendency (mean, median, mode)
- summary statistics (comparison of pre-test and post-test results)

The second type of data dealt with both pre-test and post-test answers. Two questions, which were asked in both tests, were of a particular interest – “Using computers/tablets in the lessons for studying English is…” and “Computers/tablets in English lessons should be used…” (for more information see 4.3. Data collection. Questionnaires). The answers to these questions were analysed graphically and also with the help of statistical methods. For this purpose, the
answers were transformed into a 4-point Likert scale for the first question ("It is a great idea – 4; it would be interesting to try – 3; it is not a very good idea – 2; it is a terrible idea – 1; other – depending on the answer (e.g.: the answer “You can’t do this” was equated to “It is a terrible idea”)), and the 5-point Likert scale for the second question (All lesson in every lesson – 5; several minutes in every lesson – 4; once a week – 3; once a month – 2; less often than once a month or never – 1). Therefore, the data for both questions in focus was ordinal. According to Encyclopedia of Research Design, “on an item level, it is pretty much understood that the level of measurement [in Likert scale] is ordinal and comparisons on an item level should be analyzed using nonparametric methods (Salkind, 2010, p. 717). According to Cohen (2013, p. 642), “The t- test is used to discover whether there are statistically significant differences between the means of two groups, using parametric data drawn from random samples with a normal distribution”. Robertson (2012, p. 6) agrees that “for ordinal data, one should use nonparametric statistical tests…, which do not assume a normal distribution of the data”. However, there are opinions that “item distributions are close to being normal and are thus additive, giving an approximate interval scale” (Salkind, 2010, p. 717). Therefore, in order to select the appropriate statistical test, we have to investigate whether the data was normally distributed. To assess normality, we can look at Q-Q plot and/or histogram and assess it visually. Or “results of normality tests such as the Kolmogorov–Smirnov test, Lilliefors test, and the Shapiro–Wilk test can be conducted” (Salkind, 2010, p. 930). The rule of thumb suggests that with a few samples (N=50 or less), the Shapiro-Wilk test should be applied. “The Shapiro–Wilk and the Anderson–Darling tests have been noted to perform better with small sample sizes”. (Salkind, 2010, p. 933). Moreover, many researchers believe that Kolmogorov-Smirnov test should not be used as “most small samples will pass the test even when they are decidedly non-normal” (Howell, 2013, p. 79).

In the case of this research, we had a small data sample (N=50) with two groups: experimental (N=26) and control (N=24, with one missing sample in the post-test). Therefore, to assume normality, it was required to observe the histogram and also to conduct a Shapiro-Wilk test.

In case the data is normally distributed, parametric tests, such as t-test was to be applied. There are two different types of t-test – for independent and paired samples. The paired sample test is often used in experiments when the same group is measured on two occasions (e.g. pre-test and post-test) (Cohen, 2013, p. 644). The independent sample test compares two different groups (e.g. experimental and control groups). Therefore, both kinds of t-tests were set to be
used for analysis in this research. All comparisons were considered significant at $p < 0.05$. Data were to be presented as means $\pm$ SD.

In case the data was not normally distributed (which was more likely), non-parametric analogues of $t$-test were to be used. According to Cohen (2013, p. 655), “the non-parametric equivalents of the $t$-test are the Mann-Whitney U test for two independent samples and the Wilcoxon test for two related samples, both for use with one categorical variable and a minimum of one ordinal variable”. Apart from significance level at $p < 0.05$, the effect size ($r$) will be presented. “The APA style guidelines require authors to publish effect size as well as significance results” (Robertson, 2012, p. 7). Cohen (2013, p. 616) mentions many international journeys that give effect size a higher priority than statistical significance.

4.5 Validity and reliability of the research

The efficiency of the research greatly depends on its validity. “Validity is an important key to effective research. If a piece of research is invalid then it is worthless” (Cohen, 2013, p. 179). It is required to observe validity for both qualitative and quantitative research. Nevertheless, “threats to validity and reliability can never be erased completely” (Cohen, 2013, p. 179, the researcher’s task is to attempt to minimize such threats in their research. In qualitative research it can be done through honest data which is wide in scope, as well as having good contact with the participants and the extent of triangulation. In terms of quantitative data, it is crucial to select proper sampling and statistical tools for data treatment (Cohen, 2013, p. 179).

This research paid a lot of attention to the issue of validity. It was important to provide enough proof that the introduction of ICT elements in the lesson had a real impact on the students. Selecting only one method of data collection would have been too risky as there are always factors that can distort the collected information. As Cohen (2013, p. 195) noted: “Exclusive reliance on one method, therefore, may bias or distort the researcher’s picture of the particular slice of reality she is investigating”.

Thus, it was decided to approach the research by using methodological triangulation where a number of qualitative methods were supported by quantitative data. A higher number of methods may enhance researcher’s confidence. “If, for example, the outcomes of a questionnaire survey correspond to those of an observational study of the same phenomena, the more the researcher will be confident about the findings” (Cohen, 2013, p. 195). Separately,
the questionnaires, the interviews with students and teachers, personal observation, the students’ assessment would not have had such an effect as the one they had all put together. Even if some part of the research did not reveal sufficient data, it was complemented by the data from the other parts of the research.

Cohen (2013, p. 208) mentions that “without internal validity an experiment cannot possibly be externally valid”. Therefore, internal validity had the top priority in the research.

Using a quasi-experimental design may pose certain threats to internal validity. There is always a question whether it was the introduction of treatment that caused changes in the outcome or it was some other factor. Shadish and Luellen (2006, p. 541) suggest three questions that need to be answered to evaluate each threat:

1) How would the threat apply in this case?
2) Is the threat plausible rather than just possible?
3) Does the threat operate in the same direction as the observed effect so that it could partially or totally explain that effect?

We can look at the list of threats to internal validity presented by Campbell and Stanley (1980, p. 5) and check if such threats occurred during my experiment by means of answering the above-stated questions:

1. History: events occurring concurrently with treatment that could cause the observed effect. It may have applied to the experiment as it is impossible to know what happened to the children outside the classroom. However, the plausibility of this is not very high according to the questionnaire results and the interviews with the students.
2. Maturation: processes occurring simultaneously with the course of the experiment as a function of the passage of time (e.g. growing older). It is not the threat of a three-week experiment.
3. Testing: too many tests may lead to the effect that students stop trying to do their best, which may affect the scores and can be confused with the treatment result. My research had a pre-test and a post-test, and, as the students are not exposed to testing very often, I may assume that this threat was also unlikely.
4. Instrumentation: the nature or an instrument of a measure may change over time and conditions that could be confused with the treatment effect. Due to the short period of the experiment, I doubt that this threat affected the research.
5. Statistical regression: selecting units with the extreme scores that may lead to less extreme results which can be confused with the treatment effect. My research did not have such a luxury as selection, the control and experimental groups consisted of the same students that had been in these groups before, during their usual English lessons.

6. Selection: systematic differences over conditions in respondent characteristics. It does not apply to this research as the respondent characteristics were similar which will later be explained in the results.

7. Experimental mortality: loss of respondents to treatment or measurement may lead to different result at the end of the experiment. In my case the number of students at the post-test changed insignificantly compared to the pre-test.

8. Selection-maturation interaction: the combined effect of two factors may be confined with the effect of the experimental variable. As neither of the threats is applicable to the experiment, their combination does not pose a threat either.

Thus, the threats to internal validity were minimized. At the same time, it is impossible to claim that the experiment was 100% internally valid. It is impossible to take all the factors into account as the students spent a considerable amount of time outside school and, therefore, they could have been affected by other factors. Nevertheless, all the combined methods of data collection and analysis give sufficient ground to claim that the research had a high percentage of internal validity.

As regards external validity, there are several reasons to state that it was also at the proper level. One reason to think so was the fact that the experiment was held in two different groups, which had very similar results. Naturally, external validity cannot be as high as internal validity, as it requires several experimental groups, preferably of different age and location.

Reliability, according to Cohen (2013, p. 199) is closely connected with dependability and replicability. “For research to be reliable it must demonstrate that if it were to be carried out on a similar group of respondents in a similar context (however defined), then similar results would be found”. This makes it similar to the issue of external validity. It is impossible to prove it for 100% unless similar experiments are held elsewhere. Nevertheless, the collected data and their analysis give considerable confidence to state that the experiment was reliable.
4.6 Ethical issues

Ethical issues present an indispensable part of every research. While striving to retrieve valid and reliable data, a researcher should keep the ethical side of the research in mind. “Each stage in the research sequence raises ethical issues” (Cohen, 2013, p. 76).

This research had little difficulty complying with all the ethical considerations, despite the fact that it had to take into account ethical guidelines of two different countries. The nature of this research, its context, the course of the experiment, data collection methods, the nature of participants, the type of collected data did not have any sensitive nature that might have harmed any of the participants. Nevertheless, all the standard procedures related to ethics were complied. The key factors such as access, informed consent, anonymity, confidentiality and privacy were taken into account. The integrity of the research was also observed.

According to Cohen (2013, p. 81), the first stage of the research is gaining an access to the venue of the research. “This will mean contacting, in person or in writing, an appropriate official and/or the chairperson of the governors if one is to work in a school, along with the head teacher or principal”. I contacted the head teacher of the school and later met her in person in order to get permission to hold the experiment in the school. Cohen (2013, p. 77) notes that “whilst some cultures may not be stringent about informed consent, in others there are strict protocols for informed consent”. Holding research in Russia has its own specific features. Most arrangements are made orally, no written consent is usually required. Therefore, it was not challenging to meet a new person (e.g. a class teacher) and get his/her consent for an activity. It was sufficient to explain who I was and what this activity was for. I got informed consent from the head teacher of the school, which contributed greatly to the research as she gave me her permission to hold the research at school and introduced me to the English teachers and class teachers. The English teachers and the class teachers also agreed to help me conduct my research. The English teachers (one of both experimental groups and one of the control groups) also gave their consent for the interview.

According to National advisory board on research ethics (TENK), informed consent of parents or guardians is not required if the study is conducted in schools and it is “carried out as part of the normal work of the school” (TENK, 2009, pp. 6-7). “It is not necessary to request a guardian’s permission if the director of an institution of early childhood education and care or the head teacher of a school has evaluated that the study would produce useful information for
the institution or school and can be carried out as part of the normal activities of the institution or school” (TENK, 2009, pp. 6-7). The permission of the head teacher was received.

“In experimental studies sufficient information must be provided concerning the design of the experiment. Experimental designs vary considerably from one field to another” (TENK, 2009, p. 7). The head teacher and the English teachers were aware about all the details of the experiment. The class teachers got all the necessary information that concerned their involvement (questionnaires and interviews with children).

The research faced an ethical issue concerning video recording. According to the Russian legislation, video recording of any individuals, including children, is permitted. However, the head teacher explained that it could be done only with the informed consent of parents (guardians). Otherwise, the school might face parents’ misunderstanding and it may lead to a conflict. As it was very hard to get informed consent of several dozens of parents, I had to refuse from the idea of video recording as I did not want to be involve the head teacher or other teachers in any conflicts.

The issues of anonymity and confidentiality are crucial if the nature of research touches on a sensitive topic and/or the results or the publication of the study may inflict harm to participants. As it was not the case of this study, none of the participants expressed their wish to remain anonymous. All the questionnaires, drawings and interview recordings contain the names of the participants for the reason that it was necessary for the research. Anonymity was observed in one of the experimental activities. The students gave their assessment to each ICT lesson anonymously. This way they had no pressure from their peers and also had no fear to put a “wrong” mark that might anger their teacher or the researcher.

Confidentiality is determined by Cohen (2013, p. 91) as “not disclosing information from a participant in any way that might identify that individual or that might enable the individual to be traced”. The participants did not raise the question of confidentiality during the experiment. Nevertheless, this study does not contain names of the teachers or students. The name of the school is not mentioned either, only the country and the town where the experiment was conducted. Therefore, the issue of confidentiality was observed.

Conducting research with children has its specific features that must be taken into careful consideration. On the one hand, it should not be very different from research with any other participants. “The study of ethics in relation to research with children involves an underlying knowledge of both general ethics theory and exploration of the general principles of
undertaking research on human participants” (Greig et al, 2007, p. 169). Thus, children must be treated as any other humans - with respect, equality and honesty. On the other hand, children do not have the level of information and knowledge that adults have, therefore they may misunderstand some issues. Fine and Sandstrom, speaking about pre-schoolers, suggest that children should be presented with explanation despite the fact that some of them would not understand it: “Their age should not diminish their rights, although their level of understanding must be taken into account in the explanations that are shared with them”. (1988, p. 11). I believe that this citation can also be applied to primary schoolchildren. Furthermore, children should be made of aware of the right for privacy which is defined by Cohen (2013, p. 91) as “the right not to take part in the research, not to answer questions, not to be interviewed…” . The children who took part in the research were informed about the study, they were explained that their questionnaires and drawings would remain confidential and would not be shown to anyone other than the researcher. They were informed about the voluntary nature of the research.

Another specific feature that, in my opinion, concerns modern Russian children is that almost all of them are told not to talk to strangers. Therefore, there was a risk that the students would not wish to be observed or interviewed by someone who they saw for the first time. That was the reason why I asked the teachers to introduce me and present their own explanation of the research and the experiment before I started explaining it myself. That was also the reason why the interviews with children were conducted after several lessons so that they had time to get used to the presence of a new person.

Finally, integrity of the research is something that any decent scientific work cannot exist without. Falsification, fabrication and plagiarism have been the traditional categories which comprised the issue of misconduct. However, the National Advisory Board on Research Ethics (Tutkimuseettinen neuvottelukunta, TENK) nominated by Ministry of Culture and Education has issued research ethics guidelines called Responsible Conduct of Research and Procedures for Handling Allegations and Misconduct in Finland, according to which “The tradition in Finland has been to maintain a more comprehensive and analytical categorisation; hence misappropriation is separated from plagiarism and is considered to be a distinct category (TENK, 2012, p. 33). This research was able to avoid all the categories of misconduct. It does not contain any false information, it does not add any information which was fabricated, it acknowledges all the sources which are mentioned in this paper, it does not present the ideas or findings of any other people as my own.
5 RESULTS AND DISCUSSION

This chapter presents the results of this study in relation to the research questions, and existing research. Three research questions were formulated before the beginning of the research (see chapter 2) to look into the influence of ICT on primary school children’s interest and intrinsic motivation in a Russian school. A number of activities were held in order to find the answers which were later grouped accordingly. Table 5.1 presents the overview of the activities according to the following research questions:

1. How does ICT influence primary school children’s interest in foreign language learning?
2. To what extent can the use of ICT in foreign language lessons at primary school raise learners’ intrinsic motivation for learning foreign languages?
3. How strongly can ICT lessons affect the students’ attitude to the use of ICT in foreign language lessons?

Table 5.1 Overview of the activities according to research questions.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Question 1</th>
<th>Question 2</th>
<th>Question 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test questionnaire</td>
<td>yes</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Interviews with the teachers</td>
<td></td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Interviews with the students</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal observation</td>
<td>yes</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Students’ assessment of ICT lessons</td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Students’ drawings</td>
<td></td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Post-test questionnaire</td>
<td>yes</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Students’ free comments from the questionnaires</td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Statistical analysis</td>
<td></td>
<td></td>
<td>yes</td>
</tr>
</tbody>
</table>

The number of students in each group is presented in table 5.2.

Table 5.2. The number of students according to class and type of group.
<table>
<thead>
<tr>
<th>Class and type of Number of students</th>
<th>4^1 (1)</th>
<th>4^2 (1)</th>
<th>4^1 (2)</th>
<th>4^2 (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In each class</td>
<td>14</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>In each group</td>
<td><strong>26</strong></td>
<td><strong>24</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The pre-test questionnaire results revealed that in terms of language learning experience and attitudes to English, control and experimental groups showed similar results. The majority of students have been studying foreign languages for 3 years (54.1% and 53.8% respectively) with other students learning English for 4-5 years or even longer (12.5% vs 19.2%). The vast majority of students in both groups found it interesting to study English (83.3% and 91.4%) of which 58.3% in the control group and 53.8% in the experimental group regarded studying English as hard. Also, both groups agreed on the importance of learning foreign languages. On the scale from 1 to 5 (1 – not important at all, 5 – very important), 16 students in each group chose number 5 (66.7% and 61.5%), 6 students in each group marked number 4 (25% and 23.1%). Other students chose number 3. Another similarity was revealed in the students’ own predictions about their level of English at the end of school. Over two thirds of both groups predicted that at the moment of graduation they will be able to speak English quite well. 20% in the control groups and 15% in the experimental groups believed that they will speak English very well when they graduate from school.

The only noticeable difference was seen in the answer to the question – “Do you study English only at school?” 75 per cent of control group members got extra language education outside school (mainly with tutors or language centers) while only 38.5% of students in the experimental groups studied English with someone outside school. Nevertheless, this fact did not affect the other results of the questionnaire.

Overall, most students in both groups showed a high level of intrinsic motivation in learning English and agreed with the importance of studying foreign languages.

In terms of ICT, most students have a positive attitude to using computers or tablets. Only 20% of students of both control and experimental groups gave answer “1” or “2” to the question “Do you like using computer/tablet in general?” (on the scale from 1 to 5 where 1 means “I
don’t like it at all” and 5 means “I like it very much”). Answer “5” was selected by 54.2% of control group members versus 35% in the experimental groups. Over 75% of students in both groups use computers several times a week or every day.

However, these figures oppose the data about the use of ICT for studying English. The majority of students never use computers or tablets while doing their homework (58.3% and 77%) or use them less than once a month (16.7% and 8%). Only two members of the control groups (8.3%) and one student in the experimental groups (3.8%) claimed to use computers for English homework before every lesson. Moreover, later interviews with students confirmed that “using computer for doing English homework” mainly meant using an online translator or checking homework in electronic diary.

Around 55% of control group members and 70% of the students of experimental groups had never studied English by using ICT before the experiment.

The above-mentioned data showed that most students in both groups liked using computers, but they had not had previous experience in using computers for studying English.

The three sections in this chapter give information about each research question respectively.

5.1 The influence of ICT on primary school children’s interest in foreign language learning

5.1.1 Interviews with the children

Many children had answered in the pre-test questionnaire that using a computer or a tablet in English lessons for studying English was either not a very good idea or a terrible idea. The main explanations for such a choice were health issues “It’s bad for your eyes” (Student A), misuse of computers “Some children will play games instead of studying” (Student B), “Children will look up the answers for the test” (Student C).

After the experiment most of them changed their opinion. “If we use it only for studying purpose, it’s alright” (Student D). “Now I see that no one’s trying to cheat, so it’s a good idea” (Student E). “Now I think it’s a great idea” (Student F). One student did not change his opinion: “It is very interesting, on the other hand, it’s bad for your eyes” (Student A).

Those who had answered the same question as “It would be interesting to try” agreed that their expectations were met. One student said that she had seen more than she had expected.
Most children described the experiment as “interesting”. This word was used by 14 different students. Other words that described the experiment were “educating” (3 students) and “entertaining” (2 students), “great” and “wonderful” (1 student). In several interviews, the children didn’t use the adjectives themselves, but they gave affirmative answers to the additional questions like “So, was it interesting for you?” or “So, you liked it?”

Almost all the children preferred the activities in the computer classroom. As regards their favourite activity, most mentioned Kahoot and Quizlet, but all other activities were mentioned at least once.

Almost all the children could not name the activity that they did not like. “I liked everything” was the most popular answer. Some children mentioned difficulties they experienced while working with computers (shifting the language) and lack of time - “I didn’t have enough time because I couldn’t type fast” (Student G).

Answering the question about the length and frequency of ICT activities, most students agreed that the optimal way of using ICT is a part of each lesson. Another suggestion was to alternate one ICT lesson with two regular lessons.

5.1.2 Comparison of Pre-test and Post-test questionnaire answers

The experimental groups answered several questions regarding the experiment. In the pre-test almost all the students said that their current English lessons were interesting. Nevertheless, in the post-test most students expressed their preference for the lessons with ICT. 23 out of 26 students (88.4%) answered that the experimental lessons were much more interesting than their regular lessons. 2 children found the lessons with ICT “a bit more interesting” and 1 student regarded them “as interesting” as their regular English lessons.

The experimental groups gave a positive assessment to the ICT elements during the experiment (M = 4.86)

92.3% of the students liked all the ICT tasks. 2 (7.7%) students answered that they liked almost all the tasks.

The most popular tasks were Kahoot (7 children) and Quizlet (5 children). 9 children could not select the most interesting task for them and wrote that they liked everything.
5.2 The effect on primary school students’ intrinsic motivation for learning foreign languages

5.2.1 Personal observation

My observation showed that the signs of interest in the lesson prevailed during all the period of the experiment. Distractions were very rare. None of the students was looking around or just sitting without knowing what to do. I did not notice anyone yawning or lying on the desk. Conversely, the children listened to the teacher carefully, all the instructions were understood, no one asked for extra explanation. The children wrote down the information diligently. As for answering the questions, it depended mostly on the level of the students. The children who knew the answers to all the questions raised their hands all the time willing to answer. Those who knew less were also very attentive waiting for the question they could answer, and when they heard such a question, they raised their hands eagerly.

As regards work with ICT, the children seemed very interested. Some children were less familiar with computers than others, they looked cautious when they were supposed to do something new for them (e.g. shifting the language for typing a word), but none of them were distressed or shy, they raised their hands when they required help. There were no students who refused to do a task or who used a computer for some other purpose.

Another observation is connected with the students’ assessment which took place at the end of each lesson. The scale of assessment was from one to five, but different children in both groups asked questions: “Can I put a 10 instead of 5?” or even “Can I put 100?” Even though the assessment was anonymous, a lot of students preferred to announce their decision to everyone in order to express their satisfaction with the lesson. Many children said “thank you” after the lessons.

Overall, the situation in both experimental groups was very similar. A lot of students were active throughout the whole lesson, trying to answer the teachers’ questions eagerly. Some students were less active during regular activities, but more active during ICT activities. There were no students who were more active during the regular tasks than during the ICT activities. During the lessons the students did not show any signs of boredom or distress. They were interested during the whole period. However, it was visible that ICT activities brought their interest to a higher level. They were eager to give the right answer to each teachers’ question and were eager to use computers themselves. In my opinion, many students were equally
interested in the use of new technologies and in achieving the positive result (e.g. winning the
game of Kahoot or Baamboozle).

5.2.2 Children’s drawings

The pre-test drawings proved the information from the questionnaires and the teacher
interviews that ICT were not used in their English lessons. None of the 50 respondents depicted
any form of ICT in their drawing. As for using ICT at home, 1 student in the control groups
and 6 students from the experimental groups drew home computers or tablets. During the
interviews some of them mentioned that “it just stands there, I don’t use it for homework”.
Others used their devices to check homework in the electronic diary or check translations of
different words.

The descriptions of the pictures during the interviews were very similar. All the students used
a conventional set of items that they used in their English lessons. Nevertheless, the drawings
turned out to be very helpful during the interviews, as the children felt more confident while
holding their own picture.

The post-test drawings appeared to be a lot more informative. The children were asked to draw
how they would like to study English. The main code was the presence of any electronic device
in the picture. In the control groups over a third of the students (37.5%) depicted an ICT device
in their picture. A computer was the most popular device (5 pictures), followed by a laptop (2
pictures), a smartphone, a tablet and a TV (1 each). This figure was much lower than the result
of the experimental groups where 22 out of 26 students (84.6%) depicted an ICT element in
their drawing. The most frequently drawn device was a computer (half of all pictures). The
students also drew a projector screen (6 times), a laptop (3 times) and a TV (once). Many
pictures showed the activities that had been used in the lessons.

Overall, the drawings reflected children’s interest in the lessons. The examples of the students’
drawings are presented in appendix 6.

5.2.3 Interviews with the teachers

In terms of the lessons content and homework, both teachers answered that their lesson include
conventional elements such as reading texts, doing grammar and vocabulary exercises and
writing vocabulary dictations or tests.
The teachers’ answers regarding ICT are presented above in the part of class description.

As for the activities that were suggested for the experiment, neither of the teachers were familiar with them.

Nevertheless, both teachers felt very positive about the use of ICT in the classroom. They believed that it would motivate both children and teachers. The main problem, in their view, was the lack of equipment.

The second interview with the teacher of the experimental group was held in the middle of the experiment. The questions concerned the course of the experiment, the teacher’s observations and impressions.

The teacher was generally positive about the structure of the lessons, she admitted that everything was going according to the plan. She also noted the right balance of ICT and non-ICT activities.

As for her observations of the students, she noticed two main moments. First was that the children were as active during the ICT activities as during regular tasks. She said that the most active children were those who were most active during regular lessons. At the same time, she mentioned that there were no students who became less active. The second thing that the teacher mentioned was that the students showed much more enthusiasm before the lesson when they heard that the lesson would be experimental again. She also noticed that the children were less happy when they learnt that the lesson would be held in a regular classroom, not in a computer room: “I noticed it today when we were going to the classroom with class 2 and they got upset when they realized that the lesson is not going to be in the computer room. And then they were happy when they came here and saw you here with the projector and everything. So, yes, it's clearly seen” (Teacher 1).

She also noticed that it was not very convenient to mix activities in the computer classroom as it took a lot of time to move from regular desks to computers and back. “The children are not used to working with computers, it’s hard to organize them and it takes a lot of time” (Teacher 1).

But generally, the teacher was satisfied with the course of the experiment and noticed the children’s active participation.
In her third interview, which was held after the last experimental lesson, the teacher of the experimental groups expressed her satisfaction with the way the ICT lessons had been conducted. She reiterated that the children were happy and motivated during the lessons. She could not say if the children had performed better during the experimental period (“The test will show” (Teacher 1)).

At the same time, the teacher had mixed feelings about the further use of ICT in her lessons – “Yes, I admit that these activities are really interesting for children. But preparing them, especially for the computer class, it takes so much time. And then, when children have to spend some time in front of computers and then come back to their desks for regular activities, it takes so much time that it makes computer tasks less efficient” (Teacher 1). She added that she would like to try to use some ICT tasks (in her own classroom) in her further lessons.

5.2.4 Assessment of the lessons by children

The students of experimental groups gave their assessment after each lesson (see tables 5.3 and 5.4). Despite the instructions which stated that the mark should be from 1 to 5 (1 – totally dissatisfied, 5 – completely satisfied), many students interpreted it in their own way by adding pluses to the grade (“5+++”) or changing it to “10”. In the tables below all such marks were counted as “5”.

Table 5.3 Grades given by students of class 4

<table>
<thead>
<tr>
<th>Date/Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
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</tr>
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<td></td>
<td></td>
<td></td>
<td>1</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>13.10</td>
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<td>9</td>
<td>13</td>
</tr>
<tr>
<td>18.10</td>
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<td>13</td>
</tr>
<tr>
<td>20.10</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td></td>
<td>9</td>
<td></td>
<td>60</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 5.4 Grades given by students of class 4

<table>
<thead>
<tr>
<th>Date/Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.10</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
As we can see from the grades, the vast majority of students were totally satisfied with the ICT elements in the lessons.

In class 4\(^1\) almost 85.7% of grades were “fives” with only 9 “fours” which amounted to 12.8% of all grades. 5 out of 9 “fours” were received in the lesson with the smallest involvement of ICT. Another factor that can explain it is that one of the ICT tasks involved singing a song which can be treated differently. The only “1” was received in the last lesson which included a team game. One of the students might have got too upset with the loss of their team. Nevertheless, it does not affect the general picture.

Class 4\(^2\) was even more enthusiastic about the ICT lessons. 42 out of 44 grades (95.5%) were “fives” with only 2 “fours” (4.5%) and the absence of other marks. It clearly shows the general satisfaction with the ICT tasks.

5.2.5 Students’ free comments from the questionnaires

In both pre-test and post-test questionnaires the participants had an opportunity to provide free comments concerning English language in general, their English lessons and the use of computers in English. It was optional, and even though I reminded students to write their comments, if someone did not write anything, I did not try to persuade this person to do so. Thus, the participants of the experimental groups provided 17 comments in the pre-test questionnaire and 20 comments in the post-test.

In their pre-test comments the children showed positive attitude to English language and their regular lessons:

“I really like English lessons. It is very interesting and educating” (Student 1, Pre-test questionnaire, October 3, 2017)

“English is taught very well in our school, and it is very good for me” (Student 2, Pre-test questionnaire, October 3, 2017)
As regards the use of computers in English lessons, the students had mixed feelings in the pre-test, which is generally reflected in their questionnaires. Some students welcomed the idea of using computers in the lessons, while others called it “a terrible idea”.

Most post-test comments concerned the experimental lessons and the use of computers in the lessons in general. All the comments were positive to different extent. For example:

“These several lessons were very interesting. These were the best English lessons” (Student 3, Post-test questionnaire, October 20, 2017)

“Computer classroom and regular classroom can be alternated” (Student 4, Post-test questionnaire, October 20, 2017)

“I want to use computers and play games in English lessons. I liked new lessons, I started to love English language” (Student 5, Post-test questionnaire, October 20, 2017)

We can also compare some comments that were given by the same students in the pre-test and the post-test. It was interesting to notice the change in their attitude.

**Student 1. Pre-Test:** “I really like English language, I’ve been studying it since I was two. It is interesting and educating. Computers in English lessons is a terrible idea. It’s better to think with your own brain” (Student 1, Pre-test questionnaire, October 3, 2017).

**Student 1. Post-test:** “I really like English language, I want to keep using computers in the lessons further” (Student 1, Post-test questionnaire, October 20, 2017).

**Student 2. Pre-test:** “I like my English teacher and the way she conducts lessons. Studying English is difficult but interesting. The idea about computers is bad”. (Student 2, Pre-test questionnaire, October 3, 2017)

**Student 2. Post-test:** “English lessons have become more interesting”. (Student 2, Post-test questionnaire, October 20, 2017)

**Student 3. Pre-test:** “I like studying English. I’m doing an extra English course. As for telephones, etc. I find it really terrible. I think you should study English without telephones” (Student 3, Pre-test questionnaire, October 3, 2017).

**Student 3. Post-test:** “I wouldn’t change anything, it was fun! These lessons were interesting and fun, and besides, with the help of games we studied something new” (Student 3, Post-test questionnaire, October 20, 2017).
None of the students changed their positive pre-test opinion to the negative in the post-test.

5.3 The change in the attitude towards the use of ICT in foreign language lessons

5.3.1 Comparison of pre-test and post-test questionnaire answers.

The pre-test results revealed that many students were not excited by the idea of using ICT in English lessons for learning. The chart (see figure 5.1) shows the students’ answers to the question relating the use of ICT in the lessons.

![Figure 5.1](image_url)

Figure 5.1. Pre-test results for control and experimental groups. Students’ attitudes to the use of computers in English lessons.

While the control groups were mainly interested in the idea (56.6% of those who thought that “it would be interesting to try” or that “it is a great idea”), the students of the experimental groups were not so keen, with over 60% regarding ICT as “not a very good idea” or “a terrible idea”. Some students used the option of their own answer which was provided in the question.
Some free answers included phrases such as: “It’s unfair”, “It’s for the lazy”, “It can’t be done” and “more harm than good”. Statistically they were all equalized to “It is a terrible idea”.

The question about the frequency of using ICT in English lessons also showed students’ doubts about its necessity. Around 41% of control group members and almost 60% of the children in the experimental groups believed that ICT should be used in the English less than once a month or never. Approximately 40% of the control groups and 30% of the experimental groups wanted to see ICT in every lesson for at least several minutes. The chart (see Figure 5.2) shows the results of this question in every group.

Figure 5.2. Pre-test results for control and experimental groups. Students’ views on the frequency of the use of computers in English lessons.

Therefore, the researcher faced unexpected challenges to find out the grounds of such opinions and attitudes and to try to change them.

The post-test questionnaires showed a significant effect of the treatment on the experimental group. At the same time, the results of the control groups were also affected (to a smaller degree) even though they had not received any treatment (see figure 5.3).
As it was stated from the pre-test, almost two thirds (17 students out of 26) of the experimental group members did not regard using ICT in English lessons as a good idea. Figure 5.3 shows the changes in the students’ attitudes to this issue. Only 3 students (11.5%) still felt that using computers is a bad idea while the vast majority were in favour of ICT elements in the lesson, with 50% of them thinking that it is a great idea.

According to the post-test results, 18 students changed their opinions about the ICT for the better, 8 children did not change their answer.

![Figure 5.3. Comparison of pre-test and post-test results for the experimental groups concerning their attitude to the use of computers in English lessons.](image)

Similarly, most children had a more positive attitude to the frequency of using ICT in English lessons compared the pre-test results (see Figure 5.4). 15 children out of 26 had believed that computers or tablets should be used less than once a month or never. After the post-test this figure fell considerably to 3.8% (1 student). The post-test also showed that a half of all the students wanted to see computers or tablets in their English lessons regularly so that it took a part of each lesson. Another 23% were so happy with ICT that they wanted to use them all the time instead of their usual English lessons.
Altogether, 18 students changed their opinion for the higher frequency of using tablets or computers in English lessons, while 8 children did not change their answer.

![Figure 5.4. Comparison of pre-test and post-test results for the experimental groups concerning frequency of the use of computers in English lessons.](image)

Interestingly, the experiment affected the views of the control group as well (see figure 5.5). 11 students out of 24 (45.8%) changed their opinion about the use of ICT in English lesson for more positive. At the same time 4 other children (16.7%) had had a more positive opinion in the pre-test compared to the post-test. Other students gave the same answer in both tests. This has led to the rise of positive figures. No one in the control groups kept thinking that using computers or tablets in English lessons was a terrible idea. The proportion of those who believed that it was a great idea increased from 29.1% to 47.8%.
Figure 5.5. Comparison of pre-test and post-test results for the control groups concerning their attitude to the use of computers in English lessons.

The result concerning frequency of using computers or tablets in English lesson had similar changes (see Figure 5.6). The proportion of the students who were against using ICT in the lesson fell from 41.7% to 13%. Altogether, 11 students changed their answer in favour of a more frequent use of computers in English lessons, and 2 students gave answers with the opposite trend.
Figure 5.6. Comparison of pre-test and post-test results for the control groups concerning frequency of the use of computers in English lessons.

5.3.2 Statistical analysis

Statistical analysis was carried out for 2 questions. For the convenience of the study the question “Using computers in the lessons…” will be referred as Question 1. The question “Computers/tablets should be used in English lessons…” will be referred as Question 2. The histograms as well as Shapiro-Wilk tests for both questions in both pre-test and post-test failed to assume normality (p = .000 in all tested data). Therefore, non-parametric tests were used.

Question 1.

A Wilcoxon Signed Rank Test revealed a statistically significant change in the attitude to using computers / tablets in the lessons for studying English in the experimental group, $z = -3.89$, $p < .01$, with a large effect size ($r = -.54$). The median score (Mdn = 2) increased after the experiment (Mdn = 4).

Despite the fact that the control group did not have any experimental lessons, a Wilcoxon Signed-Rank Test discovered a slight change in the attitude towards using computers / tablets in the lessons for studying English, $z = -2.30$, $p = .02$, with a medium effect size ($r = -.33$). The median score in the pre-test and post-test remained the same (Mdn =3).
As both groups changed their attitude towards using ICT to more positive, but in varying degrees, a Mann-Whitney test showed that the difference in the attitude to the use of ICT in English lessons of students in the experimental group and in the control group was significant in the pre-test, U = 198.5, p = .02, r = -.32. In the post-test, however, the difference was not significant, U = 260, p = .4, r = -.12, while the mean ranks of the experimental group (MR = 21.13 in the pre-test) overtook those for the control group (MR = 30.23 in the pre-test) in the post-test, MR = 26.5 for the experimental group and MR = 23.3 for the control group.

Question 2.

A Wilcoxon Signed-Rank Test revealed a statistically significant change in the opinion about the frequency of using computers / tablets in the lessons for studying English in the experimental group, z = -3.87, p < .01 with a large effect size (r = -.54). The median score (Mdn = 1) increased dramatically after the experiment (Mdn = 4).

Similar to the previous question, the control group’s opinion did not remain unchanged, a less significant change was also discovered, z = - 3.09, p = .02, with a medium effect size (r = -.46). The median score (Mdn = 3) changed slightly in the post-test (Mdn = 4).

As regards the comparison of the two groups in this question, a Mann-Whitney test also indicated the change in the mean ranks. Experimental group had lower mean ranks compared to the control group in the pre-test, MR = 23.92 and MR = 27.21 respectively. In the post-test the mean rank of the experimental group (MR = 26.42) was slightly higher than the one of the control group (MR = 23.39). However, it was not sufficient to consider this change significant either in the pre-test, U = 271, p = .39, r = -.12, or post-test, U = 262, p = .43, r = -.11.
Overall results and discussion

The analysis of the collected data provided sufficient information for further conclusions and discussion. As the tools for collecting data overlapped, and different methods were aimed at finding the answers to the same questions, it might have had two possible implications: either the results would contradict to one another, which would make it very hard to draw conclusions, or the results would complement one another, and therefore, would make conclusions solid and well-grounded. Fortunately, the research had the latter variant – all the results had similar nature and provided clear answers to the research questions.

The post-test questionnaire showed that in both experimental groups the attitude to the use of ICT elements in English elements shifted from mostly negative to mostly positive. The vast majority of the participants of both experimental groups found the English lessons with ICT much more interesting than their regular English classes. None of the participants expressed dissatisfaction with the course and the content of the lessons. These conclusions were also proved by the students’ interviews, the interviews with the teacher of the experimental groups, personal observation and the results of students’ assessment after each lesson.

Most students of both experimental groups stated in their questionnaires that ICT elements should be used more often in the lessons. The most popular answer was that such activities should take several minutes in every lesson. These answers were also supported with the children’s interviews and their post-test drawings, where many participants depicted ICT tools as a part of their perfect classroom for an English lesson.

A “luck” for the researcher was the fact that the pre-test results revealed that more students of control groups had had positive attitude to ICT before the beginning of the experiment. Thus, before the ICT lessons began, the students of experimental groups were less positive about the use of ICT, whereas after the end of the experiment the results were opposite. This emphasized the impact of the experiment, it proved how strongly ICT elements in the lessons affected the students’ interest. If the situation before the beginning of the experiment had been opposite, it would have been significantly harder to see the impact of the lessons with ICT elements.

Interestingly, the post-test results of the control groups also showed increase in positive attitude and desire to use ICT elements in English lessons, even though this increase was less significant. It can be explained by the fact that during the experiment the students of both control and experimental groups spent a lot of time together in other lessons and breaks, where
the experimental group students were likely to share their positive experience about the lessons, which inevitably sparked the interest of some students in the control groups. Despite the fact that they had not experienced ICT lessons in person, they got some idea of how interesting such lessons should be, and after comparing them to their regular English lessons, they wanted to try ICT themselves.

To sum up, the answers to the research questions of this thesis will be the following:

1. How does ICT influence primary school children’s interest in foreign language learning?

The introduction of ICT elements in the lessons of English can lead to a significant rise in primary school students’ interest. Post-test questionnaires and post-test drawings revealed that they found ICT lessons much more interesting than their regular English lessons and that they wanted to keep using ICT elements in their further lessons. Personal observations proved that – during the lessons with ICT activities all the students were focused on the activity, they did not show signs of boredom, distress or distraction.

2. To what extent can the use of ICT in foreign language lessons at primary school raise learners’ intrinsic motivation for learning foreign languages?

Adding ICT elements can greatly affect most primary school children’s intrinsic motivation in foreign language learning. The children become more active, they look forward to further lessons, they smile more, and they are eager to give some positive feedback after the lessons. It could be observed that most students enjoyed the studying process.

In my opinion, several factors contributed to such a research result:

1. **New activities.**

   The activities that were suggested for the experimental lessons were all new for all the students. New does not always mean good, but in this case novelty effect worked very well. The activities were different from the routine tasks that the participants performed regularly in their traditional English lessons.

2. **ICT tasks.**

   From the pre-test questionnaires it was seen that many children are interested in computers and regularly play video games. Mostly, video games are connected with joy and fun. Thus, when they students saw ICT activities in the lessons, they recalled this positive effect of video games. It also explains why most students preferred having
lessons in the computer classroom. Most of them put it simply in their questionnaires: “Lessons in the computer classroom were more interesting because there were computers”.

3. Games.
Almost all children like games. The fact that most suggested activities were in the form of a game affected children’s interest.

4. The level of difficulty of the selected ICT activities.
The suggested ICT tasks that the participants had to do were not very easy, but at the same time they were manageable even for those whose level of English was not high enough. Some activities, like Quizlet tasks, suggested that each student can work at their own pace. I am convinced that if the tasks had been very difficult to carry out, the students’ interest in them would have been lost after the first lesson.

5. Careful selection of tasks.
The idea was to present as many different tasks as possible. At the same time, it was important to choose something that the students would find interesting. According to the results, this part was done successfully.

6. Collaboration with the school.
The support of the head teacher and the teacher of the experimental group was very important. Owing to the head teacher, the experiment was held as it had been planned. All the facilities were available for that. The English teacher of both experimental groups allowed me to use her lessons for the experiment, helped in planning the activities and encouraged students to participate.

The above-mentioned factors suggest that ICT alone cannot lead to the increase of interest in foreign language learning. It is crucial to plan ICT activities as carefully as traditional lessons. It is essential for the teacher to demonstrate his/her own interest in the activities. ICT activities add to these factors and facilitate teachers’ attempts to make lessons more interesting.

Naturally three weeks is a short period to confirm that the children developed an individual interest in learning foreign languages. But as Hidi (2006, p. 117) mentioned, individual interest cannot emerge without first being experienced as a situational interest. This experiment showed the students that learning foreign languages could be even more interesting than they had imagined. If at least several students from the experimental group turn this situational interest into a well-developed individual interest, it will be the main success of this experiment.
3. To what extent can the use of ICT in English lessons affect the students’ attitude towards applying ICT tools in English lessons?

The students’ attitude towards the use of ICT in English lessons became more positive. The students had had slightly different perceptions of the ICT use, but after they had experienced it themselves, their attitude changed significantly. The students got clear understanding that computers should not be treated as enemies that can be used for cheating or that may deteriorate their eyesight, but as allies that can make their education both fun and efficient.

The number of qualitative and quantitative methods ensured high internal validity to the research. It is much harder to speculate on the issue of external validity, but I believe that the presence of the factors which are mentioned in this chapter will contribute to successful use of ICT in other contexts.


6 CONCLUSION

6.1 Summary of results

The results of the research provided sufficient evidence to answer the research questions and prove the common opinion that ICT, when it is properly used, can lead to higher students’ intrinsic motivation and interest, in particular. It showed that in the modern world a teacher has limitless opportunities for designing their lessons, it is no longer sensible to confine the lesson within four walls and make students follow the same routine techniques that were used centuries ago. Modern children are aware of technology and the Internet, they find it exciting, therefore, when these exciting things appear in the lessons, most children naturally feel more interested in the subject.

6.2 Implications of the results

Despite the fact that the main focus of the experiment was on ICT elements, it is important to take other factors into account.

Firstly, there is a curriculum which has to be observed. ICT elements should not be seen as “something for fun”, it should be regarded as a more efficient tool that helps teacher achieve their goals more efficiently. ICT should not be used for the sake of ICT, because it is fun and makes students happy or because it is fashionable and “we must keep up with the latest trends”. When you have to dig a hole, it is better to use an excavator than a spade, not because “it is fun to push the buttons”, but because it is more efficient.

Secondly, even the most interesting tasks can become boring if you do it repeatedly. This statement may seem controversial, for example, I personally observed the enthusiasm of Finnish children playing Kahoot in the 6th grade, even though they had played it dozens of times before. As an opposite example, I used to use one iPad application for revising vocabulary with my students, and I noticed that at the end of the year they perceived it as something routine, as another task that they had to do. To sum up these examples, I would like to say that a teacher should never stop searching for various activities for their lessons. These activities can be of a different kind, but ICT resources nowadays seem limitless and are likely to multiply in the future, therefore, it is important for the teacher to try using new and new resources and see what suits the needs of their class better. For this reason, I decided to collect
the most popular resources in 2018 that can be used for different purposes in the classroom. As not every teacher is ready to search for such information him/herself, I believe that this collection might be useful for many foreign language teachers (as well as for teachers of other subjects).

6.3. Possible research topics.

The present research has led me to several areas of research that can and should be investigated in the future.

My main priority for further research is the attitude of foreign language teachers in Russia to ICT and the reasons why they use or do not use ICT in their lessons. After my visit to a Russian school I got the impression that most teachers are not aware of the opportunities to enhance their methods of teaching and make lessons more interesting for children. If I manage to encourage a lot of Russian teachers to use ICT efficiently, it may have positive implications for them and their students.

Another idea is to research how careful planning of lessons with ICT contributes to successful and efficient learning. Therefore, the focus can be shifted from the topic of motivation to the topic of efficiency.
References


The National Advisory Board on Research Ethics (Tutkimuseettinen neuvottelukunta, TENK). (2009). *Ethical principles of research in the humanities and social and behavioural sciences and proposals for ethical review*. TENK


Pre-test for both control and experimental groups

Studying English

* Compulsory

*1. Name and Surname ________________________________

*2. Date _______________________

How long have you been studying English (at school or kindergarten)?* Tick only one circle.

☐ 1 year  
☐ 2-3 years  
☐ 4-5 years  
☐ more than 5 years

3. Do you study English only at school?* Tick only one circle.

☐ Yes, at school only  
☐ No

4. If you answered no to the previous question, where and who do you study English with?
________________________________________________________________________

5. Studying English is…* Tick only one circle.

☐ Easy and interesting  
☐ Hard but interesting  
☐ Easy but boring  
☐ Hard and boring  
☐ Other: ___________________________

6. How do you assess your English teacher? (1 – very bad; 2 – bad; 3 – OK; 4 – good; 5 – excellent)* Tick only one circle.

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Very bad           Excellent
APPENDIX 1: Pre-test questionnaire

7. It is very important to know English in the modern world. To what extent do you agree with this statement?* Tick only one circle.

1 2 3 4 5

○ ○ ○ ○ ○

I completely disagree I completely agree

8. Choose the most suitable ending of the sentence for you: "When I graduate from school,….”* Tick only one circle.

○ I will speak excellent English
○ I will speak English quite well
○ I will speak English a little
○ I won’t speak English at all

How often do you do these activities in your English lessons?

(1 – never; 2 – once a month or less often; 3 – several times a month; 4 – often, but not in every lesson; 5 – in every lesson)* Tick only one circle.

9. How often do you do grammar exercises? * Tick only one circle.

1 2 3 4 5

○ ○ ○ ○ ○

10. How often do you read texts? * Tick only one circle.

1 2 3 4 5

○ ○ ○ ○ ○

11. How often do you listen to dialogues or stories? * Tick only one circle.

1 2 3 4 5

○ ○ ○ ○ ○

12. How often do you write tests? * Tick only one circle.

1 2 3 4 5

○ ○ ○ ○ ○

13. How often do you write vocabulary dictations? * Tick only one circle.

1 2 3 4 5

○ ○ ○ ○ ○
APPENDIX 1: Pre-test questionnaire

14. How often do you make dialogues? * Tick only one circle.
   1 2 3 4 5
   ○ ○ ○ ○ ○

15. How often do you watch videos? * Tick only one circle.
   1 2 3 4 5
   ○ ○ ○ ○ ○

16. How often do you play games? * Tick only one circle.
   1 2 3 4 5
   ○ ○ ○ ○ ○

17. How often do you play games on a computer? * Tick only one circle.
   1 2 3 4 5
   ○ ○ ○ ○ ○

18. How often do you use computers, tablets, smartphones for studying? * Tick only one circle.
   1 2 3 4 5
   ○ ○ ○ ○ ○

**How often do you do these activities while doing your English homework?**

(1 – never; 2 – once a month or less often; 3 – several times a month; 4 – often, but not in every lesson; 5 – in every lesson)* Tick only one circle.

   1 2 3 4 5
   ○ ○ ○ ○ ○

20. How often do you read texts? * Tick only one circle.
   1 2 3 4 5
   ○ ○ ○ ○ ○

21. How often do you prepare for tests and vocabulary dictations? * Tick only one circle.
   1 2 3 4 5
   ○ ○ ○ ○ ○
APPENDIX 1: Pre-test questionnaire

22. How often do you learn texts or dialogues? * Tick only one circle.

1  2  3  4  5
○ ○ ○ ○ ○

23. How often do you do English tasks on the Internet? * Tick only one circle.

1  2  3  4  5
○ ○ ○ ○ ○

24. How often do you use a computer to do your English homework? * Tick only one circle.

1  2  3  4  5
○ ○ ○ ○ ○

Computer and English language

25. Do you like using a computer or a tablet in general? * Tick only one circle.

1  2  3  4  5
○ ○ ○ ○ ○

I don’t like it at all                                I really like it

26. How often do you use a computer or a tablet at home? * Tick only one circle.

○ Every day
○ Almost every day
○ Several times a week
○ Once a week
○ Less than once a week
○ Never

27. Do you like playing computer games? * Tick only one circle.

1  2  3  4  5
○ ○ ○ ○ ○

I don’t like it at all                                I really like it

28. I usually play computer games on… * You can tick more than one circle.

○ a smartphone
○ a tablet
○ a computer
○ I don’t play computer games
APPENDIX 1: Pre-test questionnaire

29. Have you ever studied English by using a computer/a tablet/a smartphone? * Tick only one circle.

○ yes
○ no

30. Using computers/tablets in English lessons for studying English.... * Tick only one circle.

○ a great idea
○ would be interesting to try
○ is not a very good idea
○ is a terrible idea
○ other: __________________________

31. Computers/tablets should be used in English lessons for studying.... * Tick only one circle.

○ Every lesson and all lesson
○ Several minutes in every lesson
○ Once a week
○ Once a month
○ Less than once a month or never
○ Other: ______________________________

If you want to comment on the topics of computers and studying English, write it here, please.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
APPENDIX 2: Post-test questionnaire. Experimental group.

**Post-test questionnaire. Experimental group**

* Compulsory

1. Name and Surname*

2. Date*

English lessons with the use of computer

3. How do you assess lessons with the use of computers? * Tick only one circle.

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Very bad                      Excellent

4. Which lessons did you like more: in a usual classroom or a computer classroom? Why?*

_________________________________________________________________________

5. The last few English lessons were...* Tick only one circle.

○ ...much more interesting than usual English lessons

○ ...slightly more interesting than usual English lessons

○ ...as interesting as usual English lessons

○ ...slightly more boring than usual English lessons

○ ...much more boring than usual English lessons

○ Other ______________________________________________________

6. What proportion of computer-related tasks were interesting for you?* Tick only one circle.

○ All the tasks

○ Almost all the tasks except _____________________

○ Most tasks

○ Several tasks

○ All the tasks were boring

○ Other: _________________________________________________
APPENDIX 2: Post-test questionnaire. Experimental group.

7. Did computer-related tasks help you remember what you studied?* Tick only one circle.

- Yes, I remembered more than I usually do
- Yes, I remembered as much as I usually do
- Yes, I definitely remembered something
- No, I was interested in using a computer, but I didn’t remember anything
- Other: ______________________________________________________

**Computer and English language**

8. Do you like using a computer or a tablet in general? * Tick only one circle.

1 2 3 4 5

- I don’t like it at all
- I really like it

9. How often do you use a computer or a tablet at home? * Tick only one circle.

- Every day
- Almost every day
- Several times a week
- Once a week
- Less than once a week
- Never

10. Have you ever studied English by using a computer/a tablet/a smartphone? What?* Tick only one circle.

- yes _________________________________
- no

11. Using computers/tablets in English lessons for studying English.... * Tick only one circle.

- a great idea
- would be interesting to try
- is not a very good idea
- is a terrible idea
- other: _______________________________
APPENDIX 2: Post-test questionnaire. Experimental group.

12. Tick all the conditions under which using computer in English lessons would be a great idea:* Tick all the suitable answers.

- Every student should have their own tablet / computer
- Computer tasks should be relevant to the students’ level (not too easy or too hard)
- Tasks should be clear for students (easy to understand what to do)
- A teacher should control the process of doing the tasks
- There should be enough time to complete the tasks
- Anyway it is a bad idea
- Other: ___________________________

13. Computers/tablets should be used in English lessons for studying.... * Tick only one circle.

- Every lesson and all lesson
- Several minutes in every lesson
- Once a week
- Once a month
- Less than once a month or never
- Other: ___________________________

If you want to comment on the topics of computers and studying English, write it here, please.

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
APPENDIX 3: Post-test questionnaire. Control group.

Post-test questionnaire. Control group

* - Compulsory

1. Name and Surname*

2. Date*

**Computer and English language**

3. Do you like using a computer or a tablet in general? * Tick only one circle.

   1                2                3                4                5

     ○ ○ ○ ○ ○

   I don’t like it at all  I really like it

4. How often do you use a computer or a tablet at home?* Tick only one circle.

○ Every day
○ Almost every day
○ Several times a week
○ Once a week
○ Less than once a week
○ Never

5. Do you like playing computer games? * Tick only one circle.

   1                2                3                4                5

     ○ ○ ○ ○ ○

   I don’t like it at all  I really like it

6. I usually play computer games on…* You can tick more than one circle.

○ a smartphone
○ a tablet
○ a computer
○ I don’t play computer games

7. Have you ever studied English by using a computer/a tablet/a smartphone? * Tick only one circle.

○ yes
○ no
APPENDIX 3: Post-test questionnaire. Control group.

8. Using computers/tablets in English lessons for studying English.... * Tick only one circle.
   ○ a great idea
   ○ would be interesting to try
   ○ is not a very good idea
   ○ is a terrible idea
   ○ other: __________________________

9. Computers/tablets should be used in English lessons for studying.... * Tick only one circle.
   ○ Every lesson and all lesson
   ○ Several minutes in every lesson
   ○ Once a week
   ○ Once a month
   ○ Less than once a month or never
   ○ Other: __________________________

10. If you want to comment on the topics of computers and studying English, write it here, please.
    __________________________________________________________________________
    __________________________________________________________________________
    __________________________________________________________________________
    __________________________________________________________________________
    __________________________________________________________________________
    __________________________________________________________________________

APPENDIX 4: Questions for the interviews with teachers

Interviews with the teachers

1. Can you tell me a few words about the class? What is their general level of English?

2. Are there any students that should be paid attention to?

3. What activities do you usually do during the lessons?

4. Do you do any online exercises?

5. Do you use computers or any other ICT equipment in the lessons?

6. What task do the students like doing most?

7. How do children react to new tasks?

8. What is your personal attitude to ICT?

9. What ICT activities do you do in the lessons?

10. Would you like to use ICT more often and for what reason?

Interview 2

1. What is your impression about ICT?

2. What is the difference between what you had expected from ICT lessons and what you saw?

3. Do the ICT elements that we are using correspond with the level of the students?

4. Have you noticed any differences in the students’ behavior or attitude? Is anyone more active or less active than usual?

5. Is there anything that you would like to change or add in the use of ICT during the lessons?

Interview 3

1. What do you think of the experiment? How do you assess its planning, carrying out and the outcome?

2. Have you noticed increase in interest and motivation in learning English among children?

3. Would you like to keep using ICT in your lessons after the experiment?
APPENDIX 5: Questions for the interviews with students

1. Can you tell me your names?
2. Can you describe your drawing?
3. Do you use any ICT devices for your English homework?
4. Questions about the students’ answers in the pre-test questionnaire
   (E.g.: You answered that you play games in English lessons – What kind of games?
   OR You answered that you sometimes use ICT to do your English homework – can
   you explain a bit more)
5. We’ve had a few lessons with ICT in a regular class and in a computer class. Which
   lessons did you like more?
6. What activities or exercises did you like most?
7. Was there a task that you did not like, or the task which was less interesting than
   others?
8. In your questionnaires there was a question about using computers in English lessons
   for studying English. Can you explain why you gave such an answer?
9. Has your opinion changed after the lessons that we have had?
10. Is it more interesting to study English with ICT than in regular lessons?
APPENDIX 6: Examples of students’ drawings

Student 1. Experimental group. Pre-test drawing.

Post-test drawing
APPENDIX 6: Examples of students’ drawings

Student 2. Experimental group. Pre-test drawing

Post-test drawing
APPENDIX 6: Examples of students’ drawings

Student 3. Experimental group. Pre-test drawing.

Post-test drawing.
APPENDIX 6: Examples of students’ drawings

Student 4. Control group. Pre-test drawing.

Post-test drawing.
APPENDIX 6: Examples of students’ drawings

Student 5. Control group. Pre-test drawing.

Post-test drawing.
APPENDIX 7: The list of ICT resources

The list of ICT resources that can be used for English lessons.

All the sites and apps mentioned here are legally free or have free versions.

Tests

1. Google forms

   It is the easiest way to create simple online tests, especially if you have a google account. The tests can be done in a classroom or sent as a link. The tests can be automatically checked.


   It can be used for creating online tests. The tests can be taken in a classroom or sent as a link for homework. They can also be converted into pdf or word files and printed if necessary. The online version has the feature of automatic check.

3. Easy test maker http://www.easymaker.com/

   The free version is rather limited, but it is still possible to create a simple test online.

4. Wordsmith https://www.wordsmyth.net/

   A site where you can make a quick vocabulary test which can be printed and used in the classroom. You do not need to look for definitions or write example sentences. It will be done for you.

Vocabulary activities


   An excellent site where you can create different activities like quizzes, word search, alphabet games, crosswords, jumbled words, matching games and others.

2. Sugarcane https://www.sugarcane.com
APPENDIX 7: The list of ICT resources

Another excellent site for creating online games. The advantage is that you can use the same data set for different varieties of games.

3. Free rice http://freerice.com
A nice site for learning vocabulary by finding synonyms to random words. The game has several levels and becomes more difficult as you progress.

4. Beanbeanbean https://beanbeanbean.com
A game with similar features to Free rice.

5. Learning Apps https://learningapps.org/
A large selection of games and activities that can be created by teachers in order to revise vocabulary or any other information. It is a wonderful opportunity for Russian teachers of other subjects to create their games as Russian can be selected as the instruction language. It also applies to teachers from Spain, Germany, Italy and France.

A large collection of templates for games that can be used to check vocabulary or grammar.

An Asteroid-like game which lets you create quizzes without registration. The word-lists for games can be imported from Quizlet or Excel.

8. Learning chocolate http://www.learningchocolate.com
Another site with vocabulary divided by topics and several activities to memorise them.

Vocabulary divided by topics. You can do tasks online or print out a worksheet with exercises.

10. Spelling city https://www.spellingcity.com
A collection of practice activities that can be used for learning vocabulary.
APPENDIX 7: The list of ICT resources

Flashcards

1. Cram https://www.cram.com

Creating flashcards without signing up.

2. Study stack https://www.studystack.com/

An easy tool to create flashcards which can also be learnt by doing various activities.

5. Studystack https://www.studystack.com/

Three more alternative resources form creating flashcards

Quizzes

1. Quizbean www.quizbean.com

   Another testmaker. The best feature is that you do not need to register or log in in order to create a test. Another nice feature is that the students know if their answer is correct immediately after they answer each question. The overall score is also given after each answer.


   You can create quizzes for homework or for group games in the lesson. You can import Quizlet sets instead of creating a new test. The feature of group progress looks truly amazing.

3. Philologus https://www.philologus.co.uk

   This site allows you to create quizzes in the format of popular TV game-shows.


   The famous “Jeopardy” format will let you create quizzes, which will be most suitable for revision before big tests.

5. Quizizz https://quizizz.com
APPENDIX 7: The list of ICT resources

An excellent tool for creating online quizzes. It also has a system of ranking, which is an additional useful feature.

6. Quiznetic https://quiznetic.com/
   A game similar to Kahoot which lets you create online quiz games

Grammar

1. English grammar https://www.english-grammar.at
   A very large collection of grammar exercises of different levels. There are also pdf-worksheets, which can be printed and handed out.

2. Using English https://www.usingenglish.com
   Hundreds of online quizzes on grammar and other useful things.

3. Agenda Web https://agendaweb.org/

   Two more sites with a collection of grammar exercises.

Other

   An amazing collection of news stories which are presented in the form of complete lessons with a lot of activities.

2. Phrase it https://phraseit.net/
   A fun site which lets you add speech bubbles to photos and images.

3. The teacher’s corner https://www.theteacherscorner.net
   A site for creating “missing word” worksheets as well as a number of ready-made lessons and puzzles.

4. Random word generator https://randomwordgenerator.com
   A generator of random words, numbers, sentences and many other things, which can be used for various activities.