

“IHAN KIVAA MUTTA KUNHAN ON EHJÄ PÄDI”
PUPILS’ PERCEPTIONS OF DIGITAL MATERIAL IN ENGLISH LEARNING

Master’s thesis (English as a minor subject)

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Tiivistelmä – Abstract <p>Tutkielman tarkoituksena oli selvittää, mitä mieltä oppilaat ovat digilaitteitten käytöstä englannin opetuksessa ja miten hyödyllisinä he kokevat laitteiden käytön englannin oppimisen kannalta. Mediassa on keskitytty lähinnä digitaalisuuden haittapuolien tarkasteluun. Kuitenkin kansainväliset organisaatiot, kuten EU ja OECD, ovat vaatineet teknologian ottamista osaksi opetusta. Myös uusi opetussuunnitelma edellyttää TVT-taitojen kehittämistä sekä osana laaja-alaisia opintoja, että osana jokaista oppiainetta.</p> <p>Toteutin digijakson englannin oppitunneilla syyslukukaudella 2018. Jakson aikana oppilaat käyttivät kolmea eri sovellusta ja tekivät digitehtäviä. Jakson aikana tehtiin kolme eri projektia pareittain tai ryhmissä. 81 oppilasta luokilta 3-6 täytti digijakson jälkeen kyselylomakkeen, jossa kysyin heidän kokemuksiaan. Vastaukset käsiteltiin sekä kvalitatiivisia että kvantitatiivisia metodeja käyttäen.</p> <p>Tuloksista voidaan todeta, että oppilaat pitivät digijaksosta huomattavan paljon. Suurin osa heistä koki myös oppineensa englantia jakson aikana, tosin koetun oppimisen määrässä oli variaatiota. Kvalitatiivisesta analyysistä selvisi, että oppilaat arvostivat eniten sovellusten ominaisuuksia. Myös se, että tehtävien ja projektien tekeminen oli hauskaa, tuli perusteluissa usein ilmi. Hyödyllisyydestä kysyttäessä oppilaat mainitsivat vastauksissaan usein konkreettisen asian, jonka olivat oppineet tehtäviä tehdessään tai projektien aikana. Tulokset osoittavat, että digitaalisen materiaalin käyttö opetuksessa voi olla oppilaiden mielestä sekä hauskaa että hyödyllistä. Opetuksen kannalta järkevä digilaitteiden käyttö edellyttää opettajalta usein aikaavievää perehtymistä ja suunnittelua.</p>	
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1 INTRODUCTION

Digitisation together with other issues related to ICT are currently a hot topic, particularly in the context of young people and education. A glance at the lively discussion in media reveals various perspectives regarding the downsides of digitalisation, especially after the implementation of the new curriculum in 2016. Parents, teachers and the general public are worried about the future of Finnish children. Digitisation and the use of digital devices has been identified as one major reason for the fact that children nowadays do less physical exercise (Rautio 2019). A popular subject connected to this is the question of screen time, i.e., how much time children and young people spend using devices. The screen time has increased in all age groups of young people and children, and this is perceived to be strongly connected with the fact that only one third of children are physically as active as recommended (Rautio 2019, Kokko and Martin 2019, Blenkove 2017).

Strong opinions arise also when looking at digitalisation from the educational perspective. The results of Finnish pupils in the PISA (Programme for International Students Assessment) test have come down after reaching top results for several years (Ministry of Education and Culture 2015). Digitalisation and other new methods in the new curriculum have been indicated as a cause for the declining results (Malmberg 2018, Rämö 2018). A recent study revealed that the more digital devices were used in the learning process, the worse the results were in all areas of the PISA-test: mathematics, science, reading and problem solving based on cooperation skills (Malmberg 2018). Using a digital device is seen not only as disturbing, but also as a hindrance to concentrating; reading or learning process is easily distracted (Malmberg 2018, Tolkki 2019).

The idea for this thesis started originally from my personal struggle with the new curriculum and its demands. Additional ignition came from the reluctance I perceived among my colleagues and teacher friends, who have observed the downsides of technology both at work and at home. Before starting this thesis, I had participated in several trainings and courses, which sought to provide teachers with ideas for using ICT in their lessons. In my opinion, the majority of ideas failed for two different reasons: either I could not see the value added for pupils' learning process in applications that were presented, or the preparation needed for their proper use was extremely time-consuming. These together with my personal lack of motivation created a hindrance for implementing the course material. I decided to challenge myself by writing my thesis around the theme of digitalisation and the new curriculum. By connecting this theme to

English lessons, I would be compelled to include some reasonable use of ICT in my teaching, and by doing this to try to work out the dilemma that ICT seemed to create in many aspects. It was clear to me that adults are worried about the digitalisation and issues associated with it. I reckoned it was important to explore the topic also from the pupils' perspective. I was keen on finding out how *they* experience the use of digital material and how useful they find it in terms of learning.

There are several reasons why ICT and digitalisation need to be a part of teaching in today's world. Not only do we need to prepare and equip pupils for living and working in this era and in the future, but also there are international and national demands regarding the use of ICT. This is the starting point for the theoretical framework in this thesis. The framework includes also some aspects of Computer Assisted Language Learning (CALL), which is an extremely broad and versatile area of study due to the recent developments in the field. The chapter that follows, focuses on describing the goals, research questions and the methods used in this study. The material for the analysis was collected at the school where I work. Pupils had a digital teaching period, during which they used three applications and other digital material. Pupils participated in three different peer projects and had diverse opportunities for using digital learning material. After this teaching period, they filled in a questionnaire. When analysing pupils' answers, both qualitative and quantitative methods were used. The results are presented in chapter 4, followed by further discussion and conclusions in the last chapter of this thesis.

This brief introduction has shown that the question of how to use digitalisation and devices is not a simple one. Upon writing this thesis, further considerations arose. The introduction is concluded with Aino Saarinen's words, who is currently preparing her dissertation around this theme: The solution is not to remove digitalisation from schools, but to carefully consider how it is carried out (Malmberg 2018). In other words, the goal should not be the use of devices as such. Rather, devices should be used as tools for reaching better learning results (ibid. 2018).

2 THEORETICAL FRAMEWORK

This theory part starts with describing some OECD and EU top-level policies and international strategies that have implications on schools and teaching in Finland. This is followed by introduction of the new curriculum, which connects to the everyday life of both pupils and teachers. It is briefly introduced in terms of ICT and English teaching on the national level. In order to create a research framework for the thesis, the theory part is finished with presenting some central aspects of Computer Assisted Language Learning (CALL) together with the concepts of **digital natives** and **gaming**.

2.1 International policies and national curriculum

In the OECD Innovation Strategy, it is stated that education needs to equip students to acquire and apply new skills throughout their lives; learning is a lifelong process (OECD Innovation Strategy 2010: 9-10). According to OECD, the learning landscape has changed, and new opportunities and challenges are real. They further rightly claim that teachers have problems in digesting new technological developments (OECD Inspired by Technology, 2010).

In their Digital Education Action Plan (<https://ec.europa.eu>), the European commission has incorporated actions to provide for the use of technology and digital competence development in the area of education. This involves for instance generating better use of digital technology for teaching and learning and developing digital competencies and skills.

These documents imply that the use of technology and digital devices should be present in education. Hence it is in fact compulsory for teachers also in Finland to become acquainted with using ICT in teaching. A comforting factor for those struggling with the implementation of ICT might be that it is acknowledged by both organisations that there are challenges in this field.

The daily work at schools is directed not only by the National Curriculum, but also by the local curricula and laws relating to basic education (Finnish National Board of Education 2014).

Considering the subject of this study and the international implications mentioned earlier, one notable reform in the current National Core Curriculum (hereafter NCC) is the implementation of transversal competence goals (NCC 2016: 21-25). Information and Communication Technology competence (ICT) is one of them and it is shortened as T5 in the curriculum (ibid 24). In the following, ICT is discussed on a general level first. After this, the demands for ICT and English for 3rd- 6th graders are addressed, due to the fact that the material for the analysis was collected in this age group.

As indicated, the goals OECD and EU have set with regard to ICT skills, have been taken into consideration when composing the NCC. ICT skills are implemented with ambitious goals: they should be taught both as a part of every school subject and in multidisciplinary learning modules (NCC 2016: 24). In the same context it stated that every pupil should develop ICT skills in a comprehensive manner. Furthermore, ICT is an essential part of both versatile learning environments and variable methods (ibid. 30-31). According to the guidelines of NCC (ibid. 24), competence in ICT is both an object as well as an instrument for learning, and pupils learn and develop their ICT skills in producing their own work.

When observing the NCC from the point of view of what 3-6 graders should learn in the area of T5, it can be stated that NCC emphasises collaborative learning and providing opportunities for pupils to explore and use the tools and working practices, which are most relevant for their personal way of learning and working (NCC 2016: 167). In practice, this means that they learn to use various devices and software in order to understand the logic of their use and operation. Pupils would need to work with audiovisual elements, i.e., image, sound, video, and animation (ibid. 167).

When considering the subject of English as a foreign language (grades 3-6) in the national syllabus, mentions to ICT are very vague and scarce. Basically, it can be summarised that pupils are encouraged to practice their language proficiency confidently also using ICT (NCC 2016: 237-240). On the one hand, this could be seen as giving a vast amount of flexibility and freedom to teachers and for the local curricula. On the other hand, it could be understood as a void instruction, which is not helpful at all for English teachers, who seek guidance in NCC for implementing ICT in their teaching, as required by the NCC.

2.2 Computer Assisted Language Learning (CALL)

Computer Assisted Language Learning (CALL) is a field of study and practice regarding topics around information and communication technologies and language learning and teaching (Jalkanen 2015: 12, Levy 1997: 1). Levy (1997: 71-73) states that CALL, as an interdisciplinary area of study, with related disciplines for instance in applied linguistics and artificial intelligence, can be said to be shaped to a large extent by developments in other disciplines and the development of technology. He further argues that the field of CALL is broad and it is challenging to give it a precise description or definition. Jalkanen (2015: 13) concludes that currently CALL is “the most established acronym for research and practice that deals with technology in the field of language teaching and learning”. Obviously, computers and technology develop continuously and nowadays CALL is understood to refer generally to

technology, including for example different applications and covering also other devices than computers (Levy 1997: 82, Blake 2013: 55).

The history of CALL dates back to the 1960s, when first applications of computer technology were implemented (Davies 2012, Blake 2013: 49, Levy 1997: 7). In the 1970s and 1980s, CALL could be described with the term behaviourist as exercises focused on drilling, memorising, imitation and repetition (Davies 2012, Levy 1997: 7, 14, Blake 2013: 49). From the early 1980s, there was the new communicative approach underlining functions and communicative competence (Davies 2012). A boom in computer-assisted language learning arose in the 1980s, mainly due to the introduction of the microcomputer with software that enabled for instance gap-filling, simulation and vocabulary games (Levy 1997: 22-23). When the World Wide Web was introduced in 1993, it had a powerful impact on CALL (Levy 1997: 31, Davies 2012). The Internet brought several benefits for both learners and teachers based on multimedia technology: for instance, it enabled both asynchronous and synchronous communication (Davies 2012).

As stated earlier, the field of CALL is a broad umbrella, under which one can encounter various themes to do with language learning, teaching and information and communication technology. Very recent studies in the field of CALL include themes such as formal and informal learning (Jagust, Boticki and So 2018), the effect of devices on students' academic performance (Han and Yi 2019), gamification (Davis, Shridharan, Koepke. Singh and Boiko 2018) and computerised practising (Cornelisz and Klaveren 2018). The field is rapidly developing with new phenomena continuously emerging, for instance in the area of social media, different applications (see for instance Cetinkaya and Sütçü 2018), and other informal learning environments.

Technological affordances are an important factor when considering today's learning environments (Jagust et al. 2018: 417). When thinking of the connection between ICT and teaching, it is self-evident that today's learning environments and newly developed digital materials used in teaching are greatly affected by recent developments of ICT.

2.3 Pupils today – digital natives?

Having looked at the international and national implications, we now move on to the learners' perspective; the concepts of digital natives and gaming are discussed, before moving on to the methods used in the study. Prensky (2001:1-2) created the concept of the so-called **digital native**. He describes digital natives as a generation born in the 1980s and 1990s, who have grown up using ICT and Internet in their everyday lives. Prensky claims that this has led to a learning culture different from the previous generations; digital natives like to multitask, have a

shorter attention span, prefer games to “serious work” and most of all speak the language of new technology. Prensky further argues that students today are “native speakers” of the digital language of computers, video games and the Internet. When reading Prensky’s thoughts, the status of a “native speaker” easily leads to presume that any student of this generation knows how to operate any digital device.

According to Kupiainen (2013), Prensky later stated that he meant digital native only as a metaphor. Nevertheless, the term was here to stay. Kupiainen (ibid.) states that the term digital native seems to include expectations of special creativity, skills and wisdom. However, new research has shown that the digital native is a myth and strongly generalising (Kalliopää 2014: 72). Studies also indicate that most young people can be considered passive receivers, and only a small fraction of young people use the Internet and social media as Prensky described (Kupiainen 2013). Kupiainen’s research further revealed that some teachers have taken the digital native myth as a part of school culture, and do not always see the need of teaching certain ICT skills. As shown for instance in the study of Han and Yi (2018: 15, 19), it is important first for students to learn how to operate the device used at school. Only after this can the benefits of having the device be perceived in the academic performance. Teachers may be misled by the fact that most children in Finland get a mobile phone at a relatively young age, and it is easy to presume that they are “fluent” in using it, when they use certain applications like WhatsApp or Snapchat. However, being an active member of social media is probably not an asset, when learning to operate new programmes or applications, or for instance a word processing programme on PC, which is a different story altogether.

Based on these findings, it is crucial to teach ICT skills at schools and not to presume that pupils are any sort of digital natives, or native speakers of the digital language. On the other hand, the mere use of ICT or gaming does not improve the curriculum or learning results, but there are several aspects to be considered when choosing suitable material (Blake 2013: 9, Krokfors, Kangas and Kopisto 2014: 208, Jagust et al. 2018: 419). This fact might be one factor why this area is challenging for many teachers.

2.4 Gaming as a part of learning process

Even if it was stated earlier that the concept of digital natives is a myth, it can nevertheless be articulated that many pupils are used to operating in gaming environments (Vesterinen and Mylläri 2014: 57, Harviainen, Meriläinen and Tossavainen 2013: 69). Hence it makes sense to have gaming as a part of school pedagogy, and to use it also for learning L2 (Blake 2013: 163). It is also possible to use gaming as a part of pedagogy without actually dealing with games

themselves (Vesterinen and Mylläri 2014: 57). By adding characteristics of games, positive experiences of gaming are transferred to other aspects of teaching (ibid. 57). This aspect of gameful learning is present in the new curriculum (NCC 2016: 32), which was reviewed in another section of this thesis.

According to Davis et al. (2017: 492), the popularity and use of game elements in nongame setting, such as education, has increased. They further argue that the logic behind this phenomenon called **gamification** is that learning becomes more engaging, customisable and personally relevant. Gamification at school means that properties and methods used in games, such as entertainment, social aspects, motivating, challenge and rewards when reaching the goals, are included in the learning process (Harviainen 2013: 70, Davis et al. 2017: 493). Blake (2013: 167-168) lists characteristics of games, which include for example enjoyment, pleasure, motivation, interaction, problem-solving, creativity and learning. Pupils find games usually motivating and well-designed games interesting as learning environments (Harviainen et al. 2013: 69, Davis et al. 2017: 493).

When speaking of gaming, terms **playfulness** and **playful learning** are typically mentioned in the same context. These are intertwined and according to Kangas (2014: 74, 79), the starting point in teaching should be the protection and the pedagogical use of playfulness. Playful learning (or **edutainment**) has been used to describe learning, which takes place in different environments using technology (ibid. 83). She further states that playful learning takes place informally, but that also formal learning, based on the curriculum, can be carried out by using playfulness. There is no clear-cut definition for playfulness, but characteristics for playful learning are for example creativity, story-telling, joy in learning, and diverse use of media; elements typical for games are used in learning processes, such as video, sound and picture (Kangas 2014: 73, 85-86). The term playfulness challenges the somewhat simplified concept of what gaming is and describes it better as an attitude and state of mind (Mäyrä (2011) as cited by Harviainen et al. 2013: 70).

Use of technology can have a positive effect on students' academic performance and strengthen their motivation, interest and involvement in the learning process (Jagust et al. 2017: 419). The use of mobile devices can facilitate informal learning outside the formal learning environment (Looi et al. (2006) and Yi, You and Bae (2016) as cited by Han and Yi 2018: 13, Jagust et al. 2017: 418). However, one of the challenges for using technology-based gaming or playfulness at school is finding reasonable ways to connect it to teaching (Vesterinen and Mylläri 2014: 56,

Krokfors et al. 2014: 208). It also requires a fair amount of planning in advance (Harviainen et al 2013: 69). According to Krokfors et al. (2014: 210), games as a part of teaching and education forms a challenge also when thinking of its evaluation, which might not even be sensible to carry out as it might provide the teacher with unreliable results. Further obstacles, to name a few, might be simply the lack of devices and knowledge, institutional hindrances, school subject practices as well as teacher attitudes toward technology (Jagust et al. 2018: 419).

3 METHODS AND GOALS

Methods, goals and material used in the study are presented in this chapter. Research questions and methods are dealt with first. This is followed by descriptions of the teaching period related to this study, including information on the applications and digital material used together with summaries of projects completed. Subsequently, some topics regarding the survey are dealt with, for instance how confidentiality and anonymity were guaranteed.

3.1 Research questions and methods

There are two main research questions in this thesis, both of which focus on pupils' experiences:

1. What do pupils think about using digital devices as a part of English teaching?
2. How useful do pupils find the use of the devices in terms of learning or practising English?

Likert scale is frequently used in closed questions and consists of a statement and respondents indicating which of the given options is closest to their thoughts (Alanen 2011: 150, Dörnyei 2007: 105). The scale I used in the questionnaire will be introduced in chapter 4, when dealing with the results.

The focus is on the two research questions mentioned. In addition, I (teacher/researcher) was interested in finding out whether there are differences between grades (3-6) and genders (boys/girls) when analysing the answers. The latter perspective is interesting, because there are some studies that show notable differences between boys and girls (see for example Hirsto and Tossavainen 2015) as well as others, where significant differences were not found (see for instance Davis et al. 2017: 492, 501).

To find out pupils' opinions, I first had an intensive digital teaching period in the school where I work. All pupils who learn English took part and filled in a questionnaire regarding their thoughts and experiences. As the questionnaire includes both closed and open-ended questions, both quantitative and qualitative methods were used in analysing the data (Dörnyei 2007: 163).

3.2 Description of digital teaching period and material

An intensive digital teaching period was held during October-December 2018. In the course of these months, grades 3-6 frequently used iPads during English lessons to do digital exercises and to complete various peer projects. The more accurate descriptions of the applications, projects and information on how much time was used for each, are described parallel to each application or project in the following chapters.

There were altogether 81 pupils, who took part. The number of pupils arranged by grades and genders, was as follows:

3rd grade: 17 pupils (10 girls, 7 boys)

4th grade: 23 pupils (9 girls, 14 boys)

5th grade: 23 pupils (9 girls, 14 boys)

6th grade: 18 pupils (10 girls, 8 boys)

The analysis itself consists of 79 pupils' responses. Two forms had to be left out, because respondents either left answers blank or were unable to answer some due to having been absent from school.

One of the aims was to practise with material that is not only fun and entertaining, but also contributes to the learning of English. As mentioned in the chapter regarding gamification, it is not always easy to find material that is both entertaining and useful for the actual learning process. The digital material provided by the publishers of the English books was used frequently during the digital period. The three applications the pupils worked with were Quizizz, iMovie and Puppet Pals. These three applications were chosen, as they were both suitable for the projects I had in mind, and I consider them useful, fun and relevant to learning and practising English. An additional criterium was that there is no need for the pupils to create a username or to sign in when using them. Furthermore, my goal was to choose applications that are structured in different ways, hence not too similar with each other, and which also enable differentiating. Obviously, because of having pupils from four different grades, I could not use identical project contents or exercises for all grades. Instead, I planned diverse projects around the topic areas relevant to what they had been practising recently and took into account the right level of difficulty.

Devices used during the classes were always iPads provided by the school. The digital material and applications used as well as the contents of the projects and exercises are explained in more detail in the following chapters.

3.2.1 Digital material provided by the publishers

Grades 3-5 currently use recently published material for learning English. There is a wide range of digital exercises, including games and exercises for training grammar, vocabulary or pronunciation. These are provided on the publisher's webpage (Otava Oppilaanmaailma n.d.). Pupils have their own usernames and passwords to sign in.

6th graders use an older English book series, which also provides exercises on the web (Sanomapro n.d.). There are less exercises and the material is rather outdated and hence visually and in its structure simpler than Otava's material. Grade 6 has one shared "key" to the web pages.

All grades had at least two lessons where they practised English by doing digital exercises. In addition, pupils had several occasions where they could choose to do them. For instance, at the end of the lesson when there was some time left or as an alternative for written exercises in their English books. Furthermore, before each test, my pupils receive written instructions on how to prepare for the test. These include recommendations to practise e.g. by listening to the chapters or doing exercises on these web pages.

3.2.2 Quizizz-application

Quizizz was a new application for everybody. According to Quizizz webpages (Quizizz n.d.), the application "allows you to conduct student-paced formative assessments in a fun and engaging way for students of all ages". The questions appear on the screen of each individual pupil and they choose the right answer at their own pace, unlike in the application more familiar to the pupils (Kahoot!).

Grades 3-5 used Quizizz-application twice. The questions were composed by me and included questions relating to vocabulary, phrases and grammar that had previously been practised in class. Grade 6 had altogether four Quizizz-games during the autumn term, two of which acted as minor tests, checking whether they had learned their homework (irregular verbs past tense).

3.2.3 Puppet Pals-application and the first peer project

Puppet Pals was a familiar application to grades 4-6, as we had made projects using this application the previous school year. In this application, the player starts by choosing actors and the scene. It is possible to use your own photos or take one of the characters / templates provided by the application. When recording, the readers can zoom and rotate the characters or to flip them around (Polished Play n.d.).

We spent two English lessons for the Puppet Pals -project, which was the first peer project of the digital teaching period. The task varied slightly depending on the grade, nevertheless the idea was the same: Pupils were given a dialogue text, with some parts of the text provided and some missing. First, pupils chose and added suitable words. After this, they practised the dialogue by reading it through several times with their peer. Subsequently, they searched for and chose the

characters and suitable background for their project. The recording and sharing via AirDrop or saving it on pupils' own pages on Pedanet took place during the second lesson.

For grade 3, I composed a text template using phrases and words pupils had been practising during the lessons preceding the Puppet Pals-project. Grade 4 used a shopping situation exercise in their English books (Kalaja, Korpela and Kuja-Kyyny-Pajula 2016: 75). Grades 5-6 used a text in another English book, which was a dialog taking place at a restaurant (Benmergui, Sarisalmi and Peltonen 2012: 146).

3.2.4 iMovie-application and two peer projects

With iMovie, it is possible for instance to make video recordings and add titles, music and sound effects to it. The videos are easy to edit using this application and the range of sound effects provided is wide (iMovie n.d.). Each grade (3-6) did two projects using iMovie. Everyone had practised taking photos and making video-recordings on iPads several times before. Grades 4-6 were already familiar also with using the iMovie-application.

The main aim of the first project on iMovie was to get (re)acquainted with properties of the application, in order to be better prepared for the third and final project. The pupils videoed their homework reading using the iMovie application, and the project was completed during one English lesson. Pupils were also asked to take 4-5 pictures according to the instructions given: selfies (or a group photo) of the readers, pictures of the English book cover and their homework page together with a black picture as the title page. The title was added, homework text recorded, and the video sent to the teacher via AirDrop.

The second project on iMovie was to dub a videoclip. This was the most time-consuming and demanding project and three lessons were used to complete it. The audio had been removed from the videoclip, which was about cats doing grocery shopping.

Dubbing was the only project, which was the same for grades 3-6, because the video clip allowed a great deal of differentiating. The older the pupils were, the more was demanded on the contents of the project. For instance, while it was enough for 3rd graders to record single words in English, the 6th graders were encouraged to have a dialogue with several complete sentences.

First, pupils had to think in pairs and write down in their notebooks what the cats could say on the video. Subsequently, they recorded it and added suitable sound effects to the videoclip. 4-6 graders saved their project on their own pages on Pedanet.

3.3 Questionnaire survey

Questionnaire is the most traditional way of collecting research material and it can be done on paper or in digital form (Valli 2015: 84). Regardless of fact that my theme is digitalisation, I decided that pupils fill in the questionnaire on paper. One major reason for this was that I wanted the answering situation to be as simple as possible for everyone involved. There are still fewer risks with a pen and paper than using a digital device. The idea was to avoid potential technical problems, and to enable everybody to fill in the form simultaneously, yet proceeding question by question. There are immense differences between pupils regarding their ability to use digital devices. As some are still unsure about using them, I wanted to guarantee that nobody needs to be nervous when filling in the questionnaire and everyone can answer the questions as well as it is possible.

In late December 2018, all pupils filled in a questionnaire regarding their thoughts and impressions on the projects and digital exercises. The questionnaires were filled in during English lessons, during which I read each question aloud and made sure everyone understood what they were meant to be doing. According to Valli (2015: 89-90), the benefit of being present is that the researcher can clarify the questions if necessary and notices if a question is left blank, or if someone does not know what they are supposed to be doing. He further states that this way the researcher can control the behaviour of the people answering the questionnaire and on the other hand, they also can ask questions, if necessary. An additional benefit was that I could make sure I get enough answers, i.e. every pupil fills in the form. Fortunately, I was able to have an extra adult in almost all lessons, during which questionnaires were filled in. Together we aimed at making sure that the pupils knew what they were meant to be doing and that everyone filled in the form without leaving answers blank. When giving the instructions, it was emphasised that there are no right or wrong answers. In addition, the importance of the survey and honest answers were stressed.

3.3.1 Confidentiality and anonymity

Questionnaires often begin with background questions, which also function as a kind of warm-up questions (Valli 2015: 86). In this questionnaire, there were only two questions of this type, both of which were crucial thinking of the research questions. At the top corner of the questionnaire sheet, gender and grade of the pupil were asked. There were no personal questions, such as names, and the anonymity of the pupils was herewith guaranteed. Confidentiality, which is crucial according to Alanen (2011: 152), was assured to both pupils and their guardians when they were informed about the questionnaire.

On 13th November 2018, I sent the guardians of 3rd -6th graders a message via Wilma-system to inform them about the digital teaching period, questionnaire and the use of material in my thesis. In addition, I briefly explained what digital exercises and applications we were using in English lessons and reminded them that T5 is one of the emphasis in our local curriculum. I described the contents of the questionnaire and emphasised the purpose of the project being both developing my teaching and collecting research material for my thesis. I assured parents of both anonymity and confidentiality. At the end of the message, I encouraged the parents to contact me, should they have questions or queries regarding the digital teaching period or the questionnaire. The headteacher at our school accepted my plan regarding the questionnaire, informing the parents and using the material in my research.

3.3.2 Structure of the questionnaire

After two starting questions mentioned earlier, the questionnaire consists of four parts, two of which are analysed in this thesis. Parts 1 and 4 were left out of the analysis, because they focus more on the use of digital devices in general, not specifically on teaching in English lessons. The answers regarding parts 1 and 4 are nevertheless important, as they provide valuable information and help me in developing my teaching. Furthermore, it was important for me to see, how pupils have learned the skills described in our local T5. For these reasons, I briefly describe parts 1 and 4, before moving on the results of the analysed parts of the questionnaire. The complete questionnaire is in Appendix 1.

Part 1 consists of seven self-evaluation questions regarding pupils' skills at using iPads in general. The aim was to find out how well they have learned what we have been practising when doing digital exercises and the projects. Some questions were taken directly from the local digital pass, while others were slightly modified. I also added some questions of my own. The scale used in the answers was taken directly from the digital pass.

Part 4 entails three open-ended questions with the purpose of receiving general feedback on the teaching experiment and how pupils felt about using iPads. This was also to serve as an opportunity for pupils to state anything that was not asked in the questionnaire. When filling in part 4, I encouraged pupils to think about the use of iPads in general, not only regarding English lessons.

4. RESULTS OF THE ANALYSIS

The questionnaire included both closed and open-ended questions. In this chapter, answers of part 2 are dealt with first, followed by part 3. Questions in part 2 aimed at finding out answers to the first main research question: What do pupils think about using digital devices as a part of English teaching? Questions in part 3 sought answers to the second main research question: How useful do pupils find the use of the devices in terms of learning of practising English? In addition, the minor research questions, namely the differences between grades and genders, are addressed.

In both parts, the answers to the closed questions are presented in three different ways: (1) summary of everybody's answers, (2) answers divided into groups according to the grades and (3) divided into girls' and boys' answers. Answers to the open-ended questions are addressed last.

A major part of the results are presented in tables. When comparing different grades, tables representing 3rd graders answers are always labelled with an *a*, 4th graders with *b*, 5th graders with *c* and 6th graders with *d*, regardless of the order in which tables are presented. When several different figures are being compared, the most important figures are marked **bold** in order to indicate clearly which figures should be paid attention to.

I use descriptive statistics: In each table, the number of respondents is shown together with the equivalent percentage rounding to one decimal place. The total percentage is always 100%, even if the sum of the figures which are rounded to one decimal place would indicate differently. Statistical tests were not carried out, since the groups to be compared were small and obvious differences could be seen by comparing the percentages.

In conjunction with the three multiple-choice questions, the respondents were asked to explain their reasoning in an open follow-up question. Answers to these questions were classified in 3-4 groups, which were formed based on the findings in the analysed data (Dörnyei 2007: 245). The number of answers to each of these qualitative thematic categories was counted. One answer could have elements belonging to different categories and these were counted separately when doing the quantitative analysis of frequencies in each category.

Before moving on to the actual results, I briefly introduce the main categories used in the answers of the open-ended questions. In every question, the largest group of answers were

associated with the **properties** of the project, exercises or application. When motivating their answers about the usefulness, the second most frequently mentioned topic was the value added for **learning**. In the other two open-ended questions, the **entertainment** or **pleasure** value was the second most frequently mentioned reason. The categories are examined in more detail in connection with each question, as the presentation of results proceeds.

4.1 Part 2, pupils' thoughts about using digital devices

Part 2 included statements regarding pupils' experience in using iPads, applications and digital exercises in English lessons. In other words, the purpose was to find out how pupils felt about using them. Likert scale, which was mentioned in chapter 3, typically includes options like *I strongly agree, disagree, neither agree nor disagree* (Dörnyei 2007, 105). I applied the Likert scale using answering options *lots of fun* (tosi hauskaa) – *usually nice* (yleensä kivaa) – *quite ok* (ihan ok) – *boring/dull* (ikävää/tylsää) in the first six questions. With the purpose of making the options clearer to the pupils, different smileys were used together with the written descriptions. Pupils put a cross under the option that was the closest to their experience.

4.1.1 Overview of responses

Table 1 summarises the results of the first six statements in part 2. Based on the results, one can make a general remark that these particular pupils had a very positive experience on using the applications, iPads and doing peer projects. There are only very few who answered *boring/dull* to any of the questions in this part of the questionnaire. This resonates with everyday perceptions that children and young people are often keen on using digital devices, and usually interested in working together. After presenting the table, I will focus on the figures marked bold.

Table 1. Experiences on using the applications and doing digital exercises, summary

	lots of fun	usually nice	quite ok	boring /dull	in total
Using iPads in English lessons is...	43 (54.4%)	30 (38.0%)	5 (6.3%)	1 (1.3%)	79 (100%)
Using Quizizz-application is...	35 (44.3%)	35 (44.3%)	8 (10.1%)	1 (1.3%)	79 (100%)
Using Puppet Pals-application is...	42 (53.2%)	29 (36.7%)	8 (10.1%)	0 (0%)	79 (100%)
Using iMovie-application is...	53 (67.1%)	20 (25.3%)	6 (7.6%)	0 (0%)	79 (100%)
Doing digital exercises is...	14 (17.7%)	42 (53.2%)	22 (27.9%)	1 (1.3%)	79 (100%)
Doing peer projects on iPads is...	46 (58.2%)	27 (34.2%)	6 (7.6%)	0 (0%)	79 (100%)

The question regarding iMovie application and the general questions on using iPads and doing peer projects received the highest percentages. More than a half of pupils (54.4%) thought that using iPads in English lessons is *lots of fun*. Together with the option *usually nice* (38.0%) the total percentage gets as high as 92.4%. Doing peer projects on iPads gets 58.2% of *lots of fun* and together with the answer *usually nice* (34.2%), the score is 92.4%. The favourite was evidently the iMovie-application. According to 67.1% of the respondents, using it was *lots of fun*. The only exception to these high percentages were the digital exercises, with only 17.7% responding *lots of fun*. *Usually nice* (53.2%) was the most common response regarding these exercises and *quite ok* the second with 27.9%.

4.1.2 Comparisons between grades 3-6

In the following tables (2a, 2b, 2c, 2d), the same statements and answering options that were presented in Table 1, are organised according to the grades (3-6) of the pupils. Table 2c demonstrating 5th graders answers is commented on first, followed by 3rd and 4th graders answers (Tables 2a and 2b). 6th graders answers (Table 2d) are shown last.

Table 2c. Experiences on using the applications and digital exercises 5th grade

	lots of fun	usually nice	quite ok	boring /dull	in total
Using iPads in English lessons is...	17 (73.9%)	5 (21.7%)	0 (0%)	1 (4.4%)	23 (100%)
Using Quizizz-application is...	14 (60.9%)	7 (30.4%)	2 (8.7%)	0 (0%)	23 (100%)
Using Puppet Pals - application is...	18 (78.3%)	4 (17.4%)	1 (4.4%)	0 (0%)	23 (100%)
Using iMovie-application is...	18 (78.3%)	4 (17.4%)	1 (4.4%)	0 (0%)	23 (100%)
Doing digital exercises is...	9 (39.1%)	13 (56.5%)	1 (4.4%)	0 (0%)	23 (100%)
Doing peer projects on iPads is...	16 (69.6%)	6 (26.1%)	1 (4.4%)	0 (0%)	23 (100%)

5th graders seem to have perceived the use of applications and doing digital exercises in the most positive light. 60.9-78.3% of 5th graders answered *lots of fun* to 5 out of 6 statements. The only one below these high percentages were the digital exercises with 39.1% of the 5th graders answering *lots of fun* and 56.5% *usually nice*. On the whole, this particular class is very enthusiastic about using ICT, but have a relatively limited amount of experience. In their first years at school, they did not practically use any devices at all. Reflecting back to the observation that pupils generally like using digital devices, I think at this point the charm or novelty -effect might have played a role and could have had an influence on their answers.

4th graders had the lowest percentages when looking at the answering option *lots of fun*. This is demonstrated in Table 2b. Only about a third, i.e. 30.4%, of 4th graders considered using iPads in English lessons *lots of fun*, which is notably lower than in Tables 2a, 2c and 2d (Tables 2a and 2d to follow). This grade also has the lowest percentage with regard to answering *lots of fun* to the question about doing peer projects (26.1%), whereas 62.5% (6th grade, Table 2d) to 82.4% (3rd grade, Table 2a) of pupils on other grades chose *lots of fun* as their response to this statement. One reason for these lower percentages could be that 4th graders have used iPads frequently since they started school, so most probably it is nothing extraordinary for them. Unlike for example for 3rd graders, who have practically no experience in using iPads at school, apart from English lessons. The same goes for the previously mentioned 5th graders, who are keen on using them, but lack the opportunities.

Table 2b. Experiences on using the applications and digital exercises 4th grade

	lots of fun	usually nice	quite ok	boring /dull	in total
Using iPads in English lessons is...	7 (30.4%)	14 (60.9%)	2 (8.7%)	0 (0%)	23 (100%)
Using Quizizz-application is...	6 (26.1%)	13 (56.5%)	4 (17.4%)	0 (0%)	23 (100%)
Using Puppet Pals - application is...	10 (43.5%)	10 (43.5%)	3 (13.0%)	0 (0%)	23 (100%)
Using iMovie-application is...	17 (73.9%)	6 (26.1%)	0 (0%)	0 (0%)	23 (100%)
Doing digital exercises is...	1 (4.4%)	14 (60.9%)	7 (30.4%)	1 (4.4%)	23 (100%)
Doing peer projects on iPads is...	6 (26.1%)	14 (60.9%)	3 (13.0%)	0 (0%)	23 (100%)

Tables 2a (below) and 2d indicate that 3rd graders and 6th graders particularly liked doing peer projects. Their results are similar to 5th graders in this aspect. Looking at the highest percentages of single answers, in addition to liking peer projects, 70.6% of 3rd graders thought using iPads was *lots of fun*.

Table 2a. Experiences on using the applications and digital exercises 3rd grade

	lots of fun	usually nice	quite ok	boring /dull	in total
Using iPads in English lessons is...	12 (70.6%)	3 (17.7%)	2 (11.8%)	0 (0%)	17 (100%)
Using Quizizz-application is...	10 (58.8%)	5 (29.4%)	2 (11.8%)	0 (0%)	17 (100%)
Using Puppet Pals - application is...	8 (47.1%)	7 (41.2%)	2 (11.8%)	0 (0%)	17 (100%)
Using iMovie-application is...	8 (47.1%)	7 (41.2%)	2 (11.8%)	0 (0%)	17 (100%)
Doing digital exercises is...	1 (5.9%)	7 (41.2%)	9 (52.9%)	0 (0%)	17 (100%)
Doing peer projects on iPads is...	14 (82.4%)	1 (5.9%)	2 (11.8%)	0 (0%)	17 (100%)

6th graders' highest percentages were with statements referring to the use of iMovie and doing peer projects: 62.5% considered them *lots of fun*.

Table 2d. Experiences on using the applications and digital exercises 6th grade

	lots of fun	usually nice	quite ok	boring /dull	in total
Using iPads in English lessons is...	7 (43.8%)	8 (50.0%)	1 (6.3%)	0 (0%)	16 (100%)
Using Quizizz-application is...	5 (31.3%)	10 (62.5%)	0 (0%)	1 (6.3%)	16 (100%)
Using Puppet Pals - application is...	6 (37.5%)	8 (50.0%)	2 (12.5%)	0 (0%)	16 (100%)
Using iMovie-application is...	10 (62.5%)	3 (18.8%)	3 (18.8%)	0 (0%)	16 (100%)
Doing digital exercises is...	3 (18.8%)	8 (50.0%)	5 (31.3%)	0 (0%)	16 (100%)
Doing peer projects on iPads is...	10 (62.5%)	6 (37.5%)	0 (0%)	0 (0%)	16 (100%)

4.1.3 Comparisons between boys and girls

In the following, the answers are organised in girls' (Table 3a) and boys' (Table 3b) answers. It can be stated that there are not many clear differences to be pointed out. Some observations are presented after displaying tables 3a and 3b.

Table 3a. Experiences on using the applications and digital exercises, girls

	lots of fun	usually nice	quite ok	boring /dull	in total
Using iPads in English lessons is...	19 (51.4%)	15 (40.5%)	2 (5.4%)	1 (2.7%)	37 (100%)
Using Quizizz-application is...	13 (35.1%)	17 (46.0%)	7 (18.9%)	0 (0%)	37 (100%)
Using Puppet Pals - application is...	17 (46.0%)	16 (43.2%)	4 (10.8%)	0 (0%)	37 (100%)
Using iMovie-application is...	23 (62.2%)	11 (29.7%)	3 (8.1%)	0 (0%)	37 (100%)
Doing digital exercises is...	6 (16.2%)	20 (54.1%)	11 (29.7%)	0 (0%)	37 (100%)
Doing peer projects on iPads is...	21 (56.8%)	14 (37.8%)	2 (5.4%)	0 (0%)	37 (100%)

Table 3b. Experiences on using the applications and digital exercises, boys

	lots of fun	usually nice	quite ok	boring /dull	in total
Using iPads in English lessons is...	24 (57.1%)	15 (35.7%)	3 (7.1%)	0 (0%)	42 (100%)
Using Quizizz-application is...	22 (52.4%)	18 (42.9%)	1 (2.4%)	1 (2.4%)	42 (100%)
Using Puppet Pals - application is...	25 (59.5%)	13 (31.0%)	4 (9.5%)	0 (0%)	42 (100%)
Using iMovie-application is...	30 (71.4%)	9 (21.4%)	3 (7.1%)	0 (0%)	42 (100%)
Doing digital exercises is...	8 (19.1%)	22 (52.4%)	11 (26.2%)	1 (2.4%)	42 (100%)
Doing peer projects on iPads is...	25 (59.5%)	13 (31.0%)	4 (9.5%)	0 (0%)	42 (100%)

The iMovie application scores the highest percentage for both: 71.4% of boys answered *lots of fun*, the girls' percentage is also high: 62.2%. Comparisons show that for both girls and boys, the most answers to any statement is either *lots of fun* or *usually nice*, with the exception of digital exercises, which gets more *quite ok* (girls 29.7%, boys 26.2%) than *lots of fun* (girls 16.2%, boys 19.1%) -answers.

4.1.4 iMovie – the favourite application

In part 2, there were two multiple choice -questions, each followed by an open-ended question. The multiple choice -questions were *What was the nicest to use?* and *What was the nicest project?* In these questions, pupils needed to motivate their answers.

In Table 4, the answers to the first multiple choice -question *What was the nicest to use?* are presented both according to the grades and in total. The favourite for 4th, 5th and 6th graders was the iMovie application, whereas the 3rd graders liked Quizizz-application the most.

One reason for the success of iMovie could be that it is the most complicated of these applications, and 3rd graders were using it for the first time. Quizizz is very easy to use, and one does not need a lot of practise to be able to use it well. On the other hand, iMovie is the application with the widest range of properties, and the more accustomed you are, the more you get out of the application. Possibly this is the reason, why it was the favourite for grades 4-6.

Table 4. What was the nicest to use? Answers by grades and in total.

	3rd grade	4th grade	5th grade	6th grade	in total
Quizizz	9 (52.9%)	2 (8.7%)	4 (17.4%)	5 (31.3%)	20 (25.3%)
Puppet Pals	2 (11.8%)	5 (21.7%)	2 (8.7%)	2 (12.5%)	11 (13.9%)
iMovie	6 (35.3%)	14 (60.9%)	13 (56.5%)	9 (56.3%)	42 (53.2%)
digital exercises	0 (0%)	2 (8.7%)	4 (17.4%)	0 (0%)	6 (7.6%)
	17 (100%)	23 (100%)	23 (100%)	16 (100%)	79 (100%)

For grades 3 and 6, the digital exercises did not get any mentions at all. Similarly, for 4th graders the digital exercises were the least favourite with only 8.7%. The least favourite for 5th graders was Puppet Pals with the same 8.7%.

The reason for low percentages for 6th graders with regard to the digital exercises might be the fact mentioned earlier: The digital exercises provided by the publisher are rather outdated and not as versatile as the material provided for grades 3-5. On the other hand, 3rd graders' 0% might be at least partly because their digital material is complex, and they have very limited experience with regard to using iPads at school. As a result, many 3rd graders have had problems with signing in and finding suitable exercises in the abundance of the digital material provided. The matter is made more complicated due to the fact that some instructions are in English, and most of the 3rd graders have problems understanding them. This resonates with the study of Cornelisz & van Klaveren (2018: 829) and Han & Yi (2018: 15): Tasks which are perceived too difficult may result in lower level of practise intensity, in some cases even giving up, and that ease of use influences users' attitudes.

When comparing girls' and boys' answers with regard to what they felt was the nicest to use, figures in table 5 clearly indicate that iMovie was the favourite for both. 59.5% of boys thought it was the nicest to use. The percentage for girls is 46.0%. Both digital exercises (10.8%) as well as Quizzes (29.7%) received higher scores among girls than boys. Boys' percentages were 4.8% and 21.4% respectively.

Table 5. What was the nicest to use? Categories: boys and girls

	girls	boys	in total
Quizizz	11 (29.7%)	9 (21.4%)	20 (25.3%)
Puppet Pals	5 (13.5%)	6 (14.3%)	11 (13.9%)
iMovie	17 (46.0%)	25 (59.5%)	42 (53.2%)
digital exercises	4 (10.8%)	2 (4.8%)	6 (7.6%)
	37 (100%)	42 (100%)	79 (100%)

4.1.5 Pupils' reasoning why this was the nicest to use

Material from open-ended questions can be analysed both qualitatively and quantitatively and unexpected topics can emerge when using open-ended questions (Alanen 2011: 151, Dörnyei 2007:107). The goal of the qualitative analysis was to help further understand how pupils experience the use of applications and other digital material in English teaching. One typical characteristics of qualitative research is diversity (Dörnyei 2007: 242), which was the case also in my material regarding the answers to open-ended questions.

Answers regarding the nicest application/digital exercise and the nicest project were both divided into four different groups, which can be seen in Tables 6 and 7 together with the number of mentions and percentages in each group.

To protect the anonymity of the respondents, the examples in presenting the results do not include the information on respondents' grade nor their gender. In conjunction with the examples, square brackets [] mean that this part of the answer was counted in another category than the one that is being examined. () mean brackets that the respondents themselves have used in their answers. * means a grammatical or spelling mistake or unclarity in the respondents' answer and it is followed by the correct form or clarification and (()) mean comments that I have added to the English translation in order to clarify the meaning.

The categories of **how pupils motivated** their answers to the question *Why was this the nicest to use?* are presented in Table 6. Answers were placed in four groups. After presenting the table, which summarises the number of mentions together with the corresponding percentages, the groups are explained in more detail including examples from the respondents' answers. We proceed from the largest to the smallest category.

Table 6. Answers to “Why was this the nicest to use?”

Why was this the nicest to use?	mentions	in %
easy to use/being good at it	13	14.3
It was fun. funny (incl.the result/application)	27	29.7
Helps to learn/practise English	6	6.6
properties/affordances (how you work with it/what you do with it)	45	49.5

91

Almost half (49.5%) of the reasoning had to do with the **properties/affordances** of the application/exercises. This category includes answers where respondents mentioned something one can do with the application/exercise, or how it operates. Making movies, sound effects, recording your own voice and editing were mentioned several times in conjunction with the iMovie application.

1. Oli hauskaa muokata videoita ja lisätä ääniä (kissadubbaus).

It was nice to edit the videos and add sounds (cat dubbing).

2. [Koska kissa dubbaus oli kivaa tehdä]. Ja iMovie on muutenkin kiva sovellus, koska sillä voi tehdä elokuvia.

[Because it was nice to make the cat dubbing]. And iMovie is also in other ways a nice application, because you can make movies with it.

The characters and the customising or moving of the characters were mentioned several times, when Puppet Pals was chosen as the nicest to use. One respondent mentioned that it was nice to be able choose an avatar, which is typical for games and increases the sense of play (Blake 2013: 163).

3. Koska saa valita hauskan taustan ja henkilön/avatarin.

Because you can choose a funny background and a figure/avatar.

4. Puppet Pals on ollut mukavin koska siinä voi suurentaa hahmoja ja pienentää.

Puppet Pals has been the nicest because you can make figures bigger and smaller.

The most frequently mentioned properties of the Quizizz applications were the guessing, answering questions and similarity to Kahoot!-application, which was familiar to all respondents.

5. Arvuuttelu on hauskaa.

Guessing is fun.

6. *Kahoot on lempparini mutta Quizizz on aika paljon saman tyyppinen joten siksi Quizizz.*

Kahoot is my favourite, but Quizizz is quite similar, so therefore Quizizz.

The element of competition, which according to Davis et al (2017: 498) is one of the elements gamers enjoy, was a source of motivation for one pupil:

7. *On kiva koittaa olla ensimmäinen.*

It's nice to try to be the first.

The fact that not everybody likes recording their own voice, came up in two answers.

8. *Kun ei tarvitse äänittää puhetta.*

When you don't need to record speaking.

The properties pupils liked about the digital exercises were that there were games, a lot of variation and the value for learning.

9. *Koska siinä on hyviä pelejä.*

Because it has some good games.

10. *Koska pystyy harjoitella kunnolla.*

Because you can practise properly.

11. *Koska tehtävissä oli paljon vaihtoehtoja.*

Because there were a lot of different options in the exercises.

Approximately one third (29.7%) motivated their answer with the **entertainment or pleasure value**. This is an element which was mentioned in chapter 2 with regard to gamification and the use of game elements in a non-game setting. Fun emerged as a major theme in the responses and is important, when thinking of motivation and how learning is experienced. A playful state of mind can function as the source for joy and thus improve learning (Kangas as cited by Harju and Multisilta 2014: 154). Likewise, Blake states that fun gives us enjoyment and pleasure. He cites Prensky in saying that fun is the first characteristics of games (Blake 2013, 167). According to Harju and Multisilta (2014: 154), the core and catalysator of playfulness is the “funness” and pleasure.

Most of the answers in this category were statements that something was fun, nice or funny. Dubbing the cat video was mentioned several times. Similarly, group work and iMovie-application as such received a few mentions.

12. *Koska sai käyttää mielikuvitusta ja tehdä hauskan videon.
Because one could use imagination and make a fun video.*

13. *Koska oli kiva pari ja oli muutenkin tosi kivaa.
Because I had a nice peer to work with and also otherwise I had lots of fun.*

13 respondents (14.3%) motivated their answer either with the application/exercise being **easy to use** or them **being good at it**. According to Han and Yi (2018: 15), enjoyment is connected with perceived ease of use regarding digital devices, and they even claim that when students are good at using digital devices, it results in higher learning outcomes.

14. *[Koska voi editoida.] Oon siinä hyvä.
[Because you can edit.] I'm good at it.*

15. *Se oli kivoin, koska osaan käyttää sitä tosi hyvin.
It was the nicest, because I can use it really well.*

All applications/exercises got mentions with regard to being easy and hence the nicest to use.

16. *Puppet Palsia on kiva käyttää, koska se on helppoa [ja kivaa].
Puppet Pals is nice to use, because it is easy [and fun].*

17. *Helpoimmat tehtävät.
The easiest exercises.*

18. *Valitsin iMovien, koska olen käyttänyt sitä eniten ja sitä on tosi helppo käyttää.
I chose iMovie, because I have used it the most and it is really easy to use.*

There were only 6.6%, i.e. 6 mentions motivated with the usefulness for learning or practicing English. Half of them were to do with Quizizz, two with iMovie and one with the digital exercises. Puppet Pals -application did not get any mentions.

19. *Oppii uusia sanoja oppii jos vastaa väärin.
You learn new words you learn if you answer wrong.*

20. *Koska opin digitehtävien avulla hyvin.
Because I learn well by doing digital exercises.*

The low percentage in this category could indicate that when pupils think about how nice or pleasant something is, the entertainment value or the properties, which in several answers were connected to it being fun, are more significant than the perception of learning something. In the

school context, the leaning outcome is obviously a significant factor and goal. If pupils feel something is fun or interesting, this hopefully also has an effect on the learning results. At least when thinking of this study, pupils generally felt they had learned during the digital teaching period, although on the surface the most significant thing for them might have been the fact that they enjoyed using the applications and iPads, or doing project work.

4.1.6 Dubbing – the nicest project

When asked about the nicest project, the favourite was distinctly the dubbing of the cat video. This was the case for every grade as well as for both boys and girls. The numbers and percentages according to grades and in total are demonstrated in Table 7.

Table 7. What was the nicest project? Classified by grades and in total.

	3rd	4th	5 th	6th	in total
Puppet Pals	5 (29.4%)	1 (4.3%)	0 (0%)	0 (0%)	6 (7.6%)
iMovie: homework reading	0 (0%)	0 (0%)	1 (4.3%)	1 (6.3%)	2 (2.5%)
iMovie: dubbing the cat video	12 (70.6%)	22 (95.7%)	22 (95.7%)	15 (93.8%)	71 (89.9%)
	17 (100%)	23 (100%)	23 (100%)	16 (100%)	79 (100%)

The percentages for the favourite project vary from the 3rd graders' 70.6% to 4th and 5th graders 95.7%. In grades 4, 5 and 6, the other projects got 0 or 1 mentions. The only grade with some other project receiving more than one mention is the 3rd grade, where Puppet Pals was mentioned 5 times, making up 29.4% of the 3rd graders' responses. A possible reason for the relatively high percentage with 3rd graders could be that they were the only group, who used Puppet Pals for the first time. It is very simple to use compared to iMovie, and you can learn it very quickly, even if you are not very familiar with operating an iPad. My experience has been that pupils generally like Puppet Pals, but they get bored with it rather quickly, because it is fairly limited in its properties and functions.

Homework reading using iMovie was the least favourite with only 2,5% answers in total. This is not surprising, because the project was only a slight variation of what pupils have often done before, i.e. videoing homework reading with their peer. In addition, because the main purpose of this project was to prepare pupils for the more demanding iMovie project (dubbing), this project focused on the very basic functions of the application, and actually offered nothing special

compared to other projects. Dubbing and Puppet Pals project were much more versatile and enabled more use of creativity.

In Table 8, the numbers show that there were no significant differences between boys and girls regarding the answers to what the nicest project was. Dubbing was the favourite for both very clearly with 86.5% among girls and 92.9% among boys.

Table 8. What was the nicest project? Categories: boys / girls

	girls	Boys	in total
Puppet Pals	3 (8.1%)	3 (7.1%)	6 (7.6%)
iMovie: homework reading	2 (5.4%)	0 (0%)	2 (2.5%)
iMovie: dubbing the cat video	32 (86.5%)	39 (92.9%)	71 (89.9%)
	37 (100%)	42 (100%)	79 (100%)

None of the boys mentioned homework reading as their favourite, the only two mentions came from the girls. In their reasoning it could be seen that they did not particularly like doing the projects, and the shortest project was the “least unpleasant” for both respondents.

21. Koska se oli lyhyt projekti ja kuka vaan käy pariksi.

Because it was a short project and anyone can be your peer.

22. Mä en oikee tykkää mistään äänitys jutuista nii laitoin sen mikä oli jotenki kivoin.

I don't actually like any recording-things so I chose the one that was somehow the nicest.

We finish this section with looking into how pupils motivated their answers to the question “*Why was this the nicest project?*”. Answers have been divided into four groups, two of which are similar to the categories used when analysing the first open-ended question in part 2. All except one answer could be placed into these groups. The one not belonging to any of these groups, is example 22, which was already presented.

In some cases, the placement into a group proved somewhat problematic. The most frequently mentioned adjective in the answers was along the lines of *kiva* or *hauska* (*nice* or *fun*). In order to have more than one huge group including mentions with some element of fun, the line between groups **properties/affordances** and **entertainment/pleasure** was drawn as follows: If the comment was solely about laughter, fun or something funny, it was placed into the latter

category. Quite a few answers included a mention of something concrete, which the respondents thought was fun or funny. These were for example what was done in the project, or what the application/exercise enabled them to do. These comments were placed in the properties-category, even if the fun-factor was mentioned in conjunction with the properties.

Out of 79 respondents' answers, there were altogether 99 different mentions. These have been placed into different groups in Table 9. As mentioned previously, if pupils mentioned more than one element in their answers, each element was counted separately.

Table 9. Why was this the nicest project? Number of answers in categories.

Why was this the nicest project?	Mentions	in %
feeling: fun. funny. laughter	40	40.4
properties/affordances/sth you did in the project	44	44.4
peer/group mentioned	11	11.1
cats as such mentioned	3	3.0
not part of any	1	1.0
	99	

The respondents appreciated the **properties/affordances** of the application the most. The most frequent reasoning for the nicest project had to do with what the application enabled the pupils to do or a concrete example of something they did in the project. These kinds of reasons were indicated 44 times, making up 44.4% of all mentions.

*23. Koska siinä on kaikenlaisia juttuja esim. suurentaa, pienentää ja pyörittää.
Because there are all sorts of things ((you can do)), for example make bigger, smaller and turn around.*

*24. Koska sai äänittää kissana omaa ääntä.
Because you could record your own voice as a cat.*

*25. Koska siihen voi laittaa hauskoja ääni tehosteita.
Because you can put funny sound effects to it.*

Creativity and drama, which are also mentioned in the NCC (2016: 31) and are a part of playfulness (Kangas 2014: 75), came up among responses:

*26. Siinä sai esittää tavallaan.
In a way you could act in it.*

27. *Sai käyttää ääniefektejä ja mielikuvituksen käyttö oli vapaa.
You could use sound effects and were free to use imagination.*

The second largest group contains answers where a **positive feeling** was mentioned, usually about the project being funny, or that doing the project was a lot of fun. Similarly, comments dealing with laughter were counted into this group. As mentioned in the NCC (2016: 24), joy in doing things together influences the learning motivation, and is an essential part of the learning process. This category received 40 mentions, which equals 40,4% of the total amount.

28. *Koska oli hauskaa kun keksittiin hassuja juttuja ja sanoja kissoille.
Because it was fun when we thought of funny things and words for the cats.*

29. *Koska se oli hauska video ja sai puhua kaikkea hauskaa.
Because it was a funny video and you could speak all sorts of funny things.*

It is worth noting that one respondent mentioned that it was possible to laugh at one's own mistakes:

30. *Koska siinä sai nauraa omille mokille.
Because you could laugh at your own mistakes.*

Kangas states that in playful action, the fear of failure does not inhibit the action, but failure can lead to trying again and provide the learner with joy in learning, even when failing at first (Kangas 2014: 86). It is very important to allow failure also in learning contexts, and I was very pleased to see that the pupil felt it was ok to make mistakes, and even laugh about them.

Social interaction, which is enabled when **working with a peer or in a group**, is according to Davis et al. (2017: 493) essential to all phases of interest development. My presumption was that who pupils work with would have a significant impact on how they evaluate the project. I also expected **cats** as such to be mentioned quite often, because children tend to like animals and they commented on the video and the cuteness of the cats, when we were watching the videoclip for the first time. However, the numbers in both of these categories are low.

Peer- or group work was mentioned 11 times (11.1%).

31. *Sen takia valitsin imovien koska minulla oli hauskaa kavereiden kanssa.
I chose imovie because I had fun with friends.*

32. *Oli kiva tehdä ku sai hyvän parin.
It ((the project)) was nice to make because I got a good peer ((to work with)).*

The forming of groups/peer might have had influence on the fact that almost everybody thought that dubbing was the nicest project, even if this was not necessarily mentioned in respondents' reasoning. My goal as a teacher is also to teach the pupils to be able to work with anyone. For this reason, I normally do not allow them to choose who they work with. In the first two projects, I purposefully mixed boys and girls, friends and non-friends to work together. For the last project, which was the dubbing, I aimed at forming groups/peers I knew would work well together and like working with each other. This can be seen in the results regarding the peer/group work category: 10 out of 11 comments were in conjunction with the dubbing project.

Cat as such received only 3 mentions (3.0%), for instance:

*34. Koska kissat for life / kissat on kivoja
Because cats for life/cats are nice.*

4.2 Part 3, usefulness for learning

In part 3, the aspect was how **useful in terms of learning or practising English** the digital exercises and applications were in pupils' opinion. Hence the aim was to find answer to the second main research question. Similarly to part 2, this part started with five statements. The scale was *I learned a lot more English* (Opin tosi paljon lisää englantia) – *I learned some more English* (opin jonkin verran lisää englantia) – *I learned only a little more English* (opin vain vähän lisää englantia) - *I didn't learn more English* (en oppinut lisää englantia). These four answering options included appropriate smileys and pupils put a cross below the option that was the closest to their experience and opinion.

These were followed by a multiple choice -question “*In your opinion which one was the most useful in terms of learning English?*” together with the question “*Why?*”.

4.2.1 Overview of responses

Table 10 summarises all answers to statements in Part 3. On a general level, it can be stated that the percentages of what answering option was chosen, vary more than in the summary of Part 2 (Table 1), which demonstrated how pupils felt about using the iPads and applications.

Table 10. Summary of statements in part 3

	I learned a lot more English	I learned some more English	I learned only a little more English	I didn't learn more English	in total
When we have used iPads in English lessons...	7 (8.9%)	55 (69.6%)	14 (17.7%)	3 (3.8%)	79 (100%)
When doing Quizizz-exercises...	17 (21.5%)	40 (50.6%)	17 (21.5%)	5 (6.3%)	79 (100%)
When doing the Puppet Pals-peer project...	6 (7.6%)	43 (54.4%)	23 (29.1%)	7 (8.9%)	79 (100%)
When doing iMovie-peer projects...	16 (20.3%)	42 (53.2%)	15 (19.0%)	6 (7.6%)	79 (100%)
When doing digital exercises...	24 (30.4%)	39 (49.4%)	12 (15.2%)	4 (5.1%)	79 (100%)

When looking at the responses, the most frequent answer was *I learnt some more English* with percentages varying from 49.4% (digital exercises) to 69.6% (using iPads in English lessons). In addition, the option *I learned only a little more English* received rather high percentages especially with regard to the Puppet Pals project (29.1%) and the Quizzes exercises (21.5%). On the other hand, Quizizz got an equal amount of respondents answering *I learned a lot more English*. When further looking at the option *I learnt a lot more English*, one can see that the digital exercises obtained the highest percentage with 30.4%. The percentage of answers *I didn't learn more English* varies from 3.8% (using iPads in English lessons) to 8.9% (Puppet Pals project).

4.2.2 Comparisons between grades 3-6

In Tables 11a-d, the answers to first six statements are compared between grades. It can be noted that 3rd and 6th graders had the least answers in *I didn't learn more English* -category with none or only one respondent choosing this alternative. In the following, the answers of 3rd graders are presented first. After their results, I will move on to looking at 5th graders answers (Table 11c). 4th and 6th graders' answers (Tables 11 b and 11d) are added last.

Table 11a. 3rd graders answers in part 3

	I learned a lot more English	I learned some more English	I learned only a little more English	I didn't learn more English	in total
When we have used iPads in English lessons...	3 (17.7%)	11 (64.7%)	3 (17.7%)	0 (0%)	17 (100%)
When doing Quizizz-exercises...	6 (35.3%)	7 (41.2%)	4 (23.5%)	0 (0%)	17 (100%)
When doing the Puppet Pals-peer project...	2 (11.8%)	11 (64.7%)	3 (17.7%)	1 (5.9%)	17 (100%)
When doing iMovie-peer projects...	5 (29.4%)	6 (35.3%)	5 (29.4%)	1 (5.9%)	17 (100%)
When doing digital exercises...	8 (47.1%)	6 (35.3%)	3 (17.7%)	0 (0%)	17 (100%)

3rd graders seem to have learned the most in their opinion. Their percentages are the highest when looking at *I learned a lot more English* -column with regard to every statement, varying from 11.8% (Puppet Pals) to 35.3% (Quizizz), as table 11a demonstrates.

The highest percentages among 5th graders' are with regard to the answer *I learned some more English*, with the exception of digital exercises. This is demonstrated in Table 11c. Further comparisons show an interesting phenomenon: 5th graders, who had the most positive experience in using the applications and digital exercises (see Table 2c), have more answers in *I didn't learn any English* -category than other pupils. 1-4 respondents on the 5th grade chose this alternative, depending on the statement. This indicates that 5th graders very much enjoyed the digital teaching period, but their experience of the added value to the actual learning process was lower than that of other respondents.

Table 11c. 5th graders answers in part 3

	I learned a lot more English	I learned some more English	I learned only a little more English	I didn't learn more English	in total
When we have used iPads in English lessons...	1 (4.4%)	14 (60.9%)	5 (21.7%)	3 (13.0%)	23 (100%)
When doing Quizizz-exercises...	3 (13.0%)	11 (47.8%)	7 (30.4%)	2 (8.7%)	23 (100%)
When doing the Puppet Pals-peer project...	2 (8.7%)	10 (43.5%)	7 (30.4%)	4 (17.4%)	23 (100%)
When doing iMovie-peer projects...	4 (17.4%)	9 (39.1%)	7 (30.4%)	3 (13.0%)	23 (100%)
When doing digital exercises...	9 (39.1%)	8 (34.8%)	5 (21.7%)	1 (4.4%)	23 (100%)

As can be observed in Tables 11b and 11d, the most typical answer for 4th and 6th graders was *I learned some more English*, regardless of the statement. For 4th graders the percentages with the answer *I learned some more English* vary from 52.2% (Quizizz) to 78.3% (use of iPads), for 6th graders from 50.0% (Puppet Pals) to 75.0% (iMovie and the use of iPads).

Table 11b. 4th graders answers in part 3

	I learned a lot more English	I learned some more English	I learned only a little more English	I didn't learn more English	in total
When we have used iPads in English lessons...	2 (8.7%)	18 (78.3%)	3 (13.0%)	0 (0%)	23 (100%)
When doing Quizizz-exercises...	6 (26.1%)	12 (52.2%)	2 (8.7%)	3 (13.0%)	23 (100%)
When doing the Puppet Pals-peer project...	1 (4.4%)	14 (60.9%)	7 (30.4%)	1 (4.4%)	23 (100%)
When doing iMovie-peer projects...	6 (26.1%)	15 (65.2%)	1 (4.4%)	1 (4.4%)	23 (100%)
When doing digital exercises...	5 (21.7%)	15 (65.2%)	1 (4.4%)	2 (8.7%)	23 (100%)

Table 11d. 6th graders answers in part 3

	I learned a lot more English	I learned some more English	I learned only a little more English	I didn't learn more English	in total
When we have used iPads in English lessons...	1 (6.3%)	12 (75.0%)	3 (18.8%)	0 (0%)	16 (100%)
When doing Quizizz-exercises...	2 (12.5%)	10 (62.5%)	4 (25.0%)	0 (0%)	16 (100%)
When doing the Puppet Pals-peer project...	1 (6.3%)	8 (50.0%)	6 (37.5%)	1 (6.3%)	16 (100%)
When doing iMovie-peer projects...	1 (6.3%)	12 (75.0%)	2 (12.5%)	1 (6.3%)	16 (100%)
When doing digital exercises...	2 (12.5%)	10 (62.5%)	4 (25.0%)	0 (0%)	16 (100%)

4.2.3 Comparisons between boys and girls

In the following, answers are organised according to girls' answers (Table 12 a) and boys' answers (Table 12 b). *I learned some more English* has the highest percentages in both tables.

Table 12a. Girls' answers in part 3

	I learned a lot more English	I learned some more English	I learned only a little more English	I didn't learn more English	in total
When we have used iPads in English lessons...	5 (13.5%)	24 (64.9%)	5 (13.5%)	3 (8.1%)	37 (100%)
When doing Quizizz-exercises...	9 (24.3%)	17 (46.0%)	9 (24.3%)	2 (5.4%)	37 (100%)
When doing the Puppet Pals-peer project...	1 (2.7%)	25 (67.6%)	5 (13.5%)	6 (16.2%)	37 (100%)
When doing iMovie-peer projects...	8 (21.6%)	17 (46.0%)	7 (18.9%)	5 (13.5%)	37 (100%)
When doing digital exercises...	11 (29.7%)	18 (48.7%)	6 (16.2%)	2 (5.4%)	37 (100%)

Girls' scores are between 46.0% (Quizizz and iMovie) and 67.6% (Puppet Pals), boys' highest scores being 42.9% (Puppet Pals) and 73.8% (use of iPads). It is interesting to perceive that apparently girls find Puppet Pals much more useful for learning than boys. Another notable difference is that there is much more variation in girls' answers. The only ones scoring over half of the answers are *when using iPads in English lessons* and *when doing the Puppet Pals –peer project*, where *I learned some more English* scored 64.9% and 67.6% respectively.

The other significant difference is that *I didn't learn more English* got altogether 18 mentions from girls, with percentages varying from 5.4% to 16.2% depending on the statement, whereas boys had only 6 mentions in this category with percentages from 0% to 7.1%.

Table 12b. Boys' answers in part 3

	I learned a lot more English	I learned some more English	I learned only a little more English	I didn't learn more English	in total
When we have used iPads in English lessons...	2 (4.8%)	31 (73.8%)	9 (21.4%)	0 (0%)	42 (100%)
When doing Quizizz-exercises...	8 (19.1%)	23 (54.8%)	8 (19.1%)	3 (7.1%)	42 (100%)
When doing the Puppet Pals-peer project...	5 (11.9%)	18 (42.9%)	18 (42.9%)	1 (2.4%)	42 (100%)
When doing iMovie-peer projects...	8 (19.1%)	25 (59.5%)	8 (19.1%)	1 (2.4%)	42 (100%)
When doing digital exercises...	13 (31.0%)	21 (50.0%)	7 (16.7%)	1 (2.4%)	42 (100%)

When summarising the percentages of the *I learned a lot more English* and *I learned some more English* -columns, the digital exercises score the highest percentage with 81% of the boys choosing either *I learned a lot more English* (31%) or *I learned some more English* (50%). Girls also found the digital exercises the most useful with 48.7% learning *some more English* and 29.7% *a lot more English*, together comprising 78.4%, a number close to the boys' equivalent.

I was expecting to get much more *I didn't learn more English* -responses, especially as there are several individuals, whose English skills are on an extremely high level considering their age. For some this is because of their background, and for others because of their interests and hobbies. For the purpose of protecting the anonymity of the respondents, these reasons are not further enlightened.

4.2.4 Digital exercises – the most useful

In the next section of part 3, the pupils were asked to indicate, which one was the most useful in terms of learning or practising English. As in part 2, they were asked to motivate their answer.

In grades 4, 5 and 6, the digital exercises were clearly seen as the most useful ones with percentages varying between 50.0 and 69.6. Among 3rd graders, the digital exercises and Quizzes

got an equal number of answers (41.2%). Table 13 shows the results organised according to grades and the total number of answers.

Table 13. Most useful for learning English, grades and in total

	3rd grade	4th grade	5th grade	6th grade	in total
Quizizz	7 (41.2%)	8 (34.8%)	5 (21.7%)	3 (18.8%)	23 (29.1%)
Puppet Pals	1 (5.9%)	0 (0%)	1 (4.3%)	2 (12.5%)	4 (5.1%)
iMovie	2 (11.8%)	3 (13.0%)	1 (4.3%)	3 (18.8%)	9 (11.4%)
digital exercises	7 (41.2%)	12 (52.2%)	16 (69.6%)	8 (50.0%)	43 (54.4%)
	17 (100%)	23 (100%)	23 (100%)	16 (100%)	79 (100%)

When comparing boys' and girls' answers regarding usefulness of the applications and digital exercises in Table 14, one can note that there are no significant differences. For both groups, the most useful were clearly the digital exercises with 50.0% or more choosing this alternative. The second was Quizizz, with approximately one third of the respondents finding this option the best in this respect.

Table 14. Most useful in for learning English, boys/girls

	girls	Boys	in total
Quizizz	10 (27.0%)	13 (31.0%)	23 (29.1%)
Puppet Pals	1 (2.7%)	3 (7.1%)	4 (5.1%)
iMovie	4 (10.8%)	5 (11.9%)	9 (11.4%)
digital exercises	22 (59.5%)	21 (50.0%)	43 (54.4%)
	37 (100%)	42 (100%)	79 (100%)

From the perspective of education and the use of different methods and materials, the key issue is how useful something is when thinking of learning (Cornelisz and van Klaveren 2018: 829). For this reason, the answers to the question what the respondents found the most useful and how they motivate this is a crucial one and hence enlightened with several examples in the following.

In this study, the reasons the respondents gave for finding something useful, were categorised into three groups. As Table 15 indicates, the largest category had to do with the properties of the application or exercise. Over half of the mentions, i.e. 58.0% in total, belong to this group. The second biggest category with 30 remarks (37.0%), includes replies where the respondents named a particular element or a detail of what they had learned. A feeling of fun or funny was mentioned in 3 reasonings (3.7%). There was only one answer, which could not be placed in any of these groups, as the respondent motivated their answer by simply stating that they were able to use the application (“*Osasin käyttää sitä*”).

Table 15. Answers to “Why was this the most useful?”

Why was this the most useful?	mentions	in %
feeling (fun, funny)	3	3,7
learning/naming things learned	30	37.0
properties, what can be done with the application	47	58.0
not part of any	1	1,2
	81	

Most of the useful properties were mentioned in conjunction with the digital exercises (29 mentions). Quizizz was the second frequent one. As mentioned above, this category includes answers, where something that was done, something that the application/exercises enabled doing or a certain structure of the application/exercise was mentioned.

34. *Koska siinä oli paljon tietoa.*

Because it had ((there was)) a lot of information.

35. *Koska piti miettiä hyviä ja hauskoja sanoja englanniksi.*

Because you had to think of good and funny words in English.

36. *Koska kun teen digitehtäviä kirjoitan sanoja.*

Because when I do digital exercises I write words.

Several answers regarding the usefulness were connected with the goals set at school.

Respondents mentioned for example a test, English book or English lessons in their answers:

37. *Koska siinä kyseltiin melkein samalla tavalla kuin sana kokeessa.*

Because there were questions in almost the same way as in the word tests.

38. *Koska digissä on samat asiat mitä käymme tunnilla.*

Because in digi((tal exercises)) there are the same things we go through during the lessons.

39. *Koska se on melkein kun enkun kirja mutta pädillä.
Because it's almost like the English book but on the iPad.*

In the study of Cornelisz and van Klaveren (2018: 828), it is stated that immediate feedback is one possible factor for improving learning results. Pupils found it useful and seemed to benefit from getting instant feedback on their answers, when using Quizizz or doing the digital exercises, as can be seen in the following examples:

40. *Koska jos valitsi väärin näki mikä oli oikea *. *vastaus
Because if you chose wrong you saw what's right. ((the right answer))*

41. *Koska siinä tulee onko oikein vai väärin.
Because there it comes ((you see)) whether it is right or wrong.*

Other responses mentioned games, the fact that there were various kind of exercises and that it was possible to practise by using the phone, instead of the English book:

42. *Koska siinä on pelejä joiden avulla voi harjoitella lisää enkkua.
Because there are games with which one can practise more English.*

43. *Koska digitehtäviä *silla sivulla on paljon ja tehtävät ovat *erillaisia.
* sillä, *erilaisia
Because there are a lot of digital exercises on that page and the exercises are different.*

Some respondents had understood the purpose of the digital exercises:

44. *Digitehtävissä on oppimistehtäviä.
There are learning exercises in digital exercises.*

45. *Koska niissä on eniten englantia ja sivuston on tarkoitus opettaa.
Because they have most English ((more English than others)) and the purpose of the pages is to teach.*

Cornelisz and van Klaveren's (2018: 829) study showed that the right level of difficulty and challenge is an essential element for keeping up the motivation; the exercises should not be too easy nor too challenging. Davis et al. (2017: 493) also state that in well-designed games the goals have the right amount of challenge to keep players engaged, but not to frustrate or overwhelm them. The following answers regarding why the digital exercises were the most useful, resonate these thoughts:

46. *Siellä kysytään hieman vaikeita asioita.
There you get asked things that are a bit difficult.*

47. *Koska digitehtävät ovat joskus haastavia.
Because digital exercises are sometimes challenging.*

The entertainment value or feeling, which was the crucial element when asked about why something was nice, came up in a few answers also when asked about the usefulness:

48. *Niitä on hauska tehdä, joten niitä tulee tehtyä suht paljon. [Siinä on myös monipuolisesti eri tehtäviä].
It is fun to do them, so I do them quite a lot. [There are also versatile and different kinds of exercises]*

Next, we move the perspective from the properties to the second largest category with 30 comments (37,0%). In this group, the respondents named a specific matter or topic they had learned about. Several thought they had learned new words and sentences:

49. *Quizizz, koska Opin muistamaan sanat ja lauseet.
Quizizz, because I learned to remember words and sentences.*

50. *Koska siinä oppii paljon esim miten *tila ruokaa. * tilata
Because you learn a lot in it for example how to order food.*

Some felt they had improved their pronunciation, while others motivated the usefulness by comparing it to other applications/exercises available. In addition, some had had a good learning experience because of having peer support.

51. *Koska esim. dubbauksessa opin uusia sanoja, ja opin ääntämää sanoja paremmin.
Because for example in dubbing I learned new words and learned to pronounce words better.*

52. *Oppii paremmin lausumaan englantia kun äänittäessä puhui.
You learn to pronounce English better when you speak while you record.*

53. *Opin eniten englantia tässä sovelluksessa.
I learned most English in this application.*

54. *En itse tiennyt kaikkia sanoja kissaduppauksessa, mutta kaveri kertoi, että mitä se tarkoittaa!!!*

I didn't know all the words in the cat dubbing, but my friend told me what that means!!!

5 DISCUSSION AND CONCLUSIONS

This thesis began with presenting some aspects of digitalisation, many of which have been under discussion recently. The international and national demands for the use of ICT were presented together with some background information on the field of Computer Assisted Language Learning. The concepts of digital natives and gamification were lifted up, as these were essential upon considering digitalisation and ICT from the pupils' perspective. The methods and goals were presented before looking at the results. In this final chapter, some conclusions are drawn, and the theme of this study further discussed.

The aim of this study was to find out and understand how pupils, who participated in the digital teaching period, feel about using digital devices and how useful they find it; the goal was not to be able to generalise this for all pupils in Finland. The answers in the questionnaires displayed pupils' experiences and also answered my research questions. With regard to the first main research question about what pupils think about using digital devices as a part of English teaching, it can be stated that this group of pupils very much enjoyed it. There were some minor differences between grades and genders, but I would say these were not significant. In addition, the groups were too small to be able to draw drastic conclusions. One aspect to consider with regard to some perceived differences is the charm of novelty -effect, which might have played a role for some. It would have been interesting to see how results would have been with groups who had approximately the same amount of experience in using digital devices. For future studies, this could be an aspect to take into consideration. Even though we cannot generalise these results, they do give valuable information for me as a teacher and hopefully also for other teachers and teacher trainees.

It was interesting and surprising to find out how much the applications and digital exercises that were used in this study included elements of gaming, playfulness and edutainment. When examining the pupils' answers, it became evident that these elements were crucial when considering what aspects they liked about the teaching period. Entertainment/pleasure and various properties were mentioned in pupils' answers, and these were highly appreciated values, especially when pupils elaborated on why they found certain application or exercise nice. It is worth noticing that there were only very few whose reasoning was connected with the application having helped them to learn or practise English. I believe there is no need to be grim, however, because the gaming elements and edutainment help pupils find the task at hand motivating and fun. This in turn, affects their motivation, among other things. In other words, if

pupils like some aspects of teaching, find it challenging, interesting or important, they are likely to be motivated and this in turn affects the learning process and hopefully learning results, too (Cornelisz and van Klaveren 2018: 829, 840).

When considering the second main research question, i.e., how useful the pupils found the use of the devices in terms of learning or practising English, it can be concluded that most pupils felt they had learnt English during the teaching period. There was broad variation though, the most frequent answer being *I learned some more English*. It is worth stressing that this is the pupils' subjective opinion, no tests were carried out to confirm whether and to what extent learning had taken place.

I believe that at least most of the pupils answered honestly and to the best of their knowledge and understanding. It has to be admitted that the results could have been slightly different had the questionnaires been filled in on a different day or in a different context. Especially with younger pupils, the answers may be affected for instance by their mood or their desire to meet expectations. Even if it was emphasised that there are no right or wrong answers, there might have been some who would have wanted to answer according to what they thought was expected of them. Furthermore, it is possible that some might have given excessively positive answers with regard to learning outcomes, because of liking the digital teaching period and hoping this kind of experiments to take place again in the future. However, this is mere speculation.

Before pondering on my personal journey during this project and aspects for future research, I will further elaborate on the gaming aspect. The Quizziz-application had exercises that were in kind of a game-format and the digital material provided by the publishers had some games in its repertoire. These were the ones with the most explicit gaming elements. It was surprising to notice, as the thesis proceeded, that the applications and peer projects I had chosen for the digital teaching period, actually also had several gaming elements in them. Pupils frequently mentioned these elements when motivating their answer in the open-ended questions. It seems that using applications can be the sort of teaching material that is in line with the demands of the curriculum in terms of for example gaming, use of creativity and drama, social aspects, joy in learning and the use of videos and sound, provided that the teacher has considered carefully how the application is used. It was good to notice that by using these properties and methods typical for games, the positive aspects of gamification and edutainment were implemented without the use of actual games themselves. I must confess that I had not thought of these elements when

choosing the applications for the study. Rather, this happened “by accident”, on the side of pondering on sensible use of applications with regard to learning English.

Thinking of my personal journey, this thesis was very beneficial for my development as a teacher. It was fruitful not only to gain more understanding when reading background material for the theoretical framework, but it was also encouraging to understand that the implementation of ICT is a very complex issue, and that I am not alone in my struggles. It was also encouraging to realise how much pupils actually like dealing with gadgets and applications. From the teacher’s perspective, it was even more delightful to realise they experienced it was beneficial for their learning of English. It was a surprise, how well pupils were able to elaborate and motivate their answers. It was amazing to see the way many of them at their young age had solid reasoning and understanding of what is beneficial for their learning process.

When thinking of future research, I believe the NCC provides researchers with material in overabundance, not only in terms of ICT. At the time of the writing of this thesis, the NCC has not yet been implemented on all levels of basic education, yet, in its early days it has already been condemned in the media (see for instance Malberg 2018, Rämö 2018). It would be interesting among other things to study how NCC affects the methods chosen by teachers and the pupils’ learning results, once time has passed and these can be identified.

Having seen and experienced the complications of the implementation of ICT, it would be crucial to develop materials that lower the threshold for reasonable use of digital devices. There is a need for up-to-date material and other hands-on information, which helps teachers find their way forward in this area. Surely, the Internet is full of ideas, but it is challenging, to say the least, to find the ones that suit individual groups and teachers the best. As stated previously, the goal should not be the use devices as such. Rather, they must be used in a reasonable way in order to reach better learning results. This is a huge challenge for most teachers and there should be support for them.

To conclude this chapter, I think it is fair to say that digitalisation brings about a dilemma. As discussed above, there are many understandable reasons for being sceptical towards digitisation. Games for the games’ sake do not give any additional value, apart from maybe entertainment. Teachers are further challenged by the constant development and change in this field. We need to prepare pupils for the future, but it is not a simple task to decide what the best way of doing this is. However, there is no choice: We must use ICT in our teaching. My solution has been to try to become friends with it: I did not invite it to visit, nor am I happy about everything it brings

along, but with time I have accepted that it is part of our lives now and have been able to see some benefits of having it around. I might not enjoy it that much, but at least young people around me do. That is what counts in the end. For one thing is certain: The future is theirs.

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Englannin digijaksoson kyselylomake

luokka: _____
olen tyttö _____ poika _____

Osa 1: Yleiset iPadin käyttötaidot.

Ympyröi mielestäsi sopivin vaihtoehto ajattellessi omia taitojasi iPadin käytössä

1= ihan outo juttu

2= tarvitsen lisäharjoitusta

3= osaan

4= osaan hyvin

5= osaan opastaa muitakin

* Osaan käyttää iPadiä.	1	2	3	4	5
* Osaan avata ja sulkea sovelluksen (Puppet Pals, iMovie, Quizizz).	1	2	3	4	5
* Osaan liittyä Quizizz-peliin, kun saan pelin koodin.	1	2	3	4	5
* Osaan äänittää omaa puhettani Puppet Pals tai iMovie-sovelluksella.	1	2	3	4	5
* Osaan tehdä iMovieella videon, johon laitetaan kuvia ja ääntä.	1	2	3	4	5
* Osaan tehdä Puppet Palsilla videon, johon laitetaan kuvaa (henkilöhahmot, tausta) ja ääntä (puhetta).	1	2	3	4	5
* Osaan jakaa tekemäni videon airdropilla opettajalle.	1	2	3	4	5
* Osaan tallentaa iPadille netistä löytämiäni kuvia.	1	2	3	4	5

Osa 2: Kokemukset sovellusten käytöstä ja digitehtävistä englannin tunneilla:

Laita rasti taulukkoon sopivimman hymiön alapuolelle ajatellen omia kokemuksiasi. Hymiot tarkoittavat:

- tosi hauskaa
 yleensä kivaa
 ihan ok
 ikävää/tylsää
 en ollut koulussa

	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* iPadien käyttö englannin tunneilla on ...					<input type="radio"/> Vain poissaolijat
* Quizizz-sovelluksen käyttö on...					
* Puppet Pals -sovelluksen käyttö on...					
* iMovie-sovelluksen käyttö on...					
* digitehtävien tekeminen (Otava oppilaamaailma tai sanomapro) on...					
* Paritöiden tekeminen iPadilla on...					

* Mitä oli mukavin käyttää? Valitse yksi seuraavista (rasti pallukkaan):

- Quizizz
 Puppet Pals
 iMovie
 digitehtävät/nettitehtävät
 Perustelee: Miksi juuri tämä oli mukavin: _____

* Mikä oli mukavin projekti? Valitse yksi seuraavista (rasti pallukkaan):

- Puppet Pals
 iMovie: pareittain läksykappaleen lukeminen
 iMovie: kissavideodubbaus
 Perustelee: Miksi juuri tämä projekti oli mukavin: _____

Osa 3: Miltä mieltä olet? Miten hyödyllisiä tehtävät olivat englannin oppimisen tai harjoittelun kannalta?

Laita rasti sopivimman hymiön kohdalle taulukossa. Hymiöt tarkoittavat:

-
- opin tosi paljon lisää englantia
 opin jonkin verran lisää englantia
 opin vain vähän lisää englantia
 en oppinut lisää englantia

	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Kun olemme käyttäneet iPadeja tunnella...				
* Quizizz-tehtävissä...				
* Puppet Pals-parityössä...				
* iMovie-parityössä...				
* Oppikirjaan liittyvissä digitehtävissä (nettisivulla)...				

* Mikä mielestäsi oli hyödyllisin englannin oppimisen tai harjoittelun kannalta (laita rasti pallukkaan)?

- Quizizz
 Puppet Pals
 iMovie
 digitehtävät/nettitehtävät
- Perustelee: Miksi juuri tämä oli hyödyllisin: _____

Osa 4: avoimia kysymyksiä:

* Kerro omin sanoin, miltä eri sovellusten (Quizizz, iMovie, Puppet Pals) käyttö englannin tunneilla on tuntunut.

* Mikä on mielestäsi mukavaa iPadien käytössä oppitunneilla?

* Mikä on mielestäsi hankalaa iPadien käytössä oppitunneilla?
