

**The Use of ICT Devices in Foreign Language Learning in
Early Childhood Education:
Children's Perspective**

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ABSTRACT

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Tieto- ja viestintätekniiikan käyttöä kieltenopetuksessa ollaan tutkittu paljon. Tutkimus on tähän asti keskittynyt peruskouluikäisiin ja vanhempiin lapsiin sekä aikuisten näkemyksiin laitteista. Varhaiskasvatusikäisten lasten näkemyksiä sen sijaan ei olla juuri tutkittu. Tämän tutkimuksen tarkoituksena onkin selvittää lasten näkemyksiä tieto- ja viestintätekniiikasta kieltenopetuksessa.

Tähän tapaustutkimukseen osallistui 14, iältään 5–6-vuotiasta lasta uusimaalaisesta päiväkodista, joka toteuttaa englannin opetusta varhaisen osittaisen kielikylvyn muodossa. Tutkimusaineisto koostuu lasten haastatteluista, piirustuksista, videomateriaalista sekä toissijaisena aineistona lapsiryhmien kasvattajien haastatteluista. Aineisto analysoitiin aineistolähtöisen sisällönanalyysin menetelmin.

Tutkimuksen tulokset osoittavat, että lasten näkemykset tieto- ja viestintätekniiikasta liittyivät heidän aiempiin kokemuksiinsa laitteiden käytöstä, laitteiden omistajuudesta sekä mahdollisuuksista käyttää laitteita. Kieltenoppimisessa hyödynnettiin laitteiden lisäksi muita menetelmiä ja kieltenoppimisen paikkoja. Laitteiden avulla opittiin sanastoa ja tuettiin kieltenoppimisen motivaatiota.

Lapsilla oli pääosin positiivisia näkemyksiä tieto- ja viestintätekniiikasta. Tabletit olivat ylivoimaisesti suosituimmat laitteet. Lasten mielipiteet linkittyivät laitteiden omistajuuteen tai mahdollisuuksiin käyttää laitteita itsenäisesti. Lasten näkemykset laitteiden hyödystä kieltenoppimisessa olivat vaihtelevia ja voidaankin todeta, että laitteiden käytön päätarkoitus oli pelaaminen ja hauskanpito kieltenoppimisen sijaan.

Asiasanat: tieto- ja viestintätekniiikka, varhaiskasvatus, kieltenoppiminen, tapaustutkimus

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1 INTRODUCTION

In Finland, early language learning has received a great deal of attention in recent years, especially around 2018, when the Finnish Government determined that second and foreign language teaching should start in the first grade for all children. Furthermore, education providers are encouraged to start second and foreign language teaching already in early childhood education and preschool (Mård-Miettinen & Mattila 2018). There is, however, still a lack of research on early language teaching, including its benefits, challenges, and methods (Mourão & Lourenço 2015). This present study contributes to this discussion by adding knowledge about early language teaching from children's perspective.

One topic of particular interest at the moment in language teaching, and education in general, is the use of information and communication technology devices (ICTs). The use of ICTs in education have been extensively studied in recent years but previous studies have concentrated on older pupils and students (e.g. Gonzalez-Vera 2016; Lehtonen & Vaarala 2015) and the teachers' perspective (e.g. Masoumi 2015; Nikolopoulou & Gialamas 2015). Studies of early foreign language teaching with ICT devices are scarce, and there are barely any studies that focus on the children's perspective.

The purpose of this qualitative case study is to examine the use of ICT devices in foreign language learning and teaching in early childhood education and care. The focus is on the children's perspective, their views and experiences on ICT devices and on language learning through these devices. The data of this study consist of interviews, drawings, and video recordings. The data were analyzed with qualitative content analysis.

1.1 Language learning and teaching in the early years

In this chapter, some of the main views concerning language learning and teaching in early childhood are discussed. First, I will describe early language

learning in more detail, and second, I will focus on foreign language teaching in early childhood education.

Second and foreign language learning in the early years

The acquisition of language is one of the most important processes taking place in early childhood, and the topic has been studied widely. The focus of research has mostly been on first language acquisition (e.g. Goodluck 2011; Matthews 2014) and, during recent years, on bi- and multilingualism (e.g. Uno, Park, Tyler & Ortega 2016), since increasingly more children all over the world are learning multiple languages from a very early age. This section will concentrate on early language learning from various perspectives: some key terminology is first explained, and then, different factors and characteristics of early language learning, including sensitive learning period are discussed.

When discussing language learning, the relationship between the language and the learner is described using terms such as mother tongue, native language, second language, own language, or additional language, to name just a few. These have all been criticized (see e.g. Hall & Cook 2012; Mourão & Lourenço 2015). The issue with many of the definitions is that they are seen as biased. For example, *first*, *second*, and *third language* might indicate that there is a ranking between languages or speakers of those languages. Furthermore, there could be misleading connotations with *native language* or *mother tongue*. (Hall & Cook 2012, 274.) Hall and Cook (2012, 274) additionally point out that multilingualism has influenced the definition of languages. Languages are no longer viewed as static, separate units but they are rather fluid, adapting and constantly changing. For this reason, it is not always necessary or even reasonable to distinguish between first, second and third languages (Mourão & Lourenço 2015, 2).

It is important to be aware of the issues and values behind each term that is used when speaking of languages, as well as the multilingual nature of language. For the sake of clarity, in this study, the terms first language, second language and foreign language are used as they have remained widely accepted and

recognized in the field of language learning and teaching (Mourão & Lourenço 2015, 2), and to make a distinction between second and foreign language in the Finnish context, as second language usually refers to Swedish or Finnish, and foreign language to other languages that do not have an official status in Finland.

Foreign language learning (FLL) has been studied for years, yet despite numerous theories on the subject (see e.g. Chomsky 1965; Dörnyei 2005; Krashen 1981; Skinner 1957; Vygotsky 1962) it is still not clear how exactly languages are learned. The process of language learning is a complex one, and therefore, it is often examined from different perspectives, focusing on, for example, linguistic, psychological, or sociological aspects (Gass & Mackey 2012, 1). These can include studies on language skills, the effects of different learning settings and teaching methods and individual differences such as motivation, language aptitude and age. While foreign language learning can be studied from multiple different perspectives, the most comprehensive view of the process of FLL can be obtained by examining all factors in combination. (Gass & Mackey 2012, 1; Pinter 2011, 37.) In the following section, however, the focus is on the age factor of FLL, as it would not be reasonable to explore all factors in detail in this study.

It is commonly thought that young children learn languages faster and more efficiently than adults. The *critical period hypothesis*, according to which there is a limited age period to acquire high levels of language proficiency due to changes in brain plasticity, has been widely accepted with first language acquisition (DeKeyser 2012, 442). However, whether there is a critical period for second and foreign language learning is a matter for debate, and research on the subject has produced conflicting results (Pinter 2011, 49.) On the one hand, Pinter (2011, 64) concludes that studies do not support the existence of a critical learning period for second and foreign language learning, but rather, that there are other factors, such as environmental or individual, that affect early language learning. Pyykkö (2017, 21), on the other hand, states that there is a *sensitive learning period*, which ends between the ages of 6–13, during which children learn foreign languages more easily, whereas DeKeyser (2012, 443) uses the term *age effect*, and

argues that there is no critical learning period, but instead, some age related issues that affect foreign language learning.

Regardless of whether there is a critical learning period, sensitive learning period, or age effect for early FLL, it can be argued that, in general, it is worthwhile to start language learning early (Skinnari & Sjöberg 2018, 16). First, Skinnari and Sjöberg (2018, 7) point out that language learning should start from an early age because it takes advantage of characteristics that are typical for children: their curiosity, adaptability, and open-mindedness. Second, DeKeyser (2012, 444) further adds that children do not learn faster than adults, but instead, are more likely to achieve high-level language proficiency. Third, early language learning has the benefit of time. Simply, there is more time to learn the language (Skinnari & Sjöberg 2018, 14). Skinnari and Sjöberg (2018, 14) further add that in addition to the age of the learner, the quality, quantity, and duration of language teaching impact the effectiveness of early language learning, which is why more attention should be paid to provide high-quality early language teaching.

Foreign language learning and teaching in early childhood education and care

According to Mourão and Lourenço (2015, 4), very little research has been conducted on second or foreign language education with children under the age of 6. However, in the past decade or so, there has been a growing interest in formal language education for young children (e.g. Enever 2016; Nikolov 2016). In 2018, the European Commission recommended that all Member States should invest in language learning from an early age, and all citizens should have the opportunity to learn two additional languages besides their first language (European Commission 2018, 1-2, 13). In Finland, more attention has been paid to foreign language learning and teaching in the early years, as one of the Government's key projects between 2017-2020 has aimed at introducing language teaching earlier, during first grade or even in early childhood education. Furthermore, the new National Core Curriculum for Early Childhood Education and Care (2018) and the National Core Curriculum for Pre-primary

Education (2016) emphasize multilingualism and learning of different languages more than the previous ones. Next, I will discuss early foreign language teaching in the Finnish context in more detail.

In Finland, early childhood education (ECE) and pre-primary education are regulated by the National Core Curriculum for Early Childhood Education and Care (2018) and the National Core Curriculum for Pre-primary Education (2016), respectively. Regarding foreign language learning, these documents emphasize language awareness and linguistic diversity as important values in early childhood education. Both curricula highlight that early childhood education and pre-primary education should support children's interest in different languages by offering a multilingual environment, where children can observe and explore languages around them, which then supports the development of children's language awareness and their linguistic and cultural identity. (National Core Curriculum for Early Childhood Education and Care, 2018; National Core Curriculum for Pre-Primary Education, 2016.) Pyykkö (2017, 21) concludes that, in these new curricula, the basis for language learning and teaching is the idea of multilingualism instead of monolingualism. These values and goals, consequently, pose new challenges for teacher education and in-service training of all educators working with children.

In 2018, early FLL was further encouraged in Finland when the Government determined that by 2020, foreign language teaching should start during the first year of school for all pupils (Ministry of Education and Culture 2018). Previously, first foreign language was introduced in the third grade, although several municipalities had already offered language teaching to younger children. One of the main purposes of this key project is, therefore, to ensure that all children start language education at the same time, regardless of their place of residence (Ministry of Education and Culture 2018). Yet, as Skinnari (2018) presents, municipalities do not have equal resources to arrange early language teaching due to, for example, the financial situation and availability of qualified staff.

While the main focus of the Government's key project has been on basic education, some of the assistance granted by the National Agency for Education

has been used to encourage education providers to start introducing different languages in early childhood education and preschool (Mård-Miettinen & Mattila 2018). At this point, little research exists on how the Government's project has been implemented in early childhood education but, for example, Inha (2018) reports some results one year into the project. According to her, the basis of the project in early childhood education has been built on the idea of a sensitive learning period for language learning, and the main goal has been to motivate and encourage children to observe different languages around them. In early childhood education, early language learning has been executed with short, playful language lessons (Inha 2018). While Inha (2018) also reports first, second and third grade pupils, their teachers and parents' views regarding the project, experiences from early childhood education are limited.

There are several forms of second and foreign language teaching in Finnish early childhood education, and some forms are presented in the National Core Curriculum for Early Childhood Education and Care (2018): bilingual early childhood education is first divided into *extensive bilingual early childhood education* and *language enriched early childhood education*. Extensive bilingual ECE aims at providing children with language skills to help them function in bilingual and multilingual contexts, and it is further divided into *complete language immersion in official languages* and *language immersion in other languages*. Complete language immersion in official languages can be implemented in either Finnish, Swedish or Sami, and teaching is mostly in the target language. With language immersion in other languages, at least 25% of the activities are in the target language. In language enriched ECE, on the other hand, the target language is used in less than 25% of the teaching. (The National Core Curriculum for Early Childhood Education and Care 2018, 51–52.) Some other forms of second and foreign language teaching are language nests, language showers, content and language integrated learning (CLIL), and multilingual teaching, to name a few (Kangasvieri et al. 2012, 20). The new curricula have clarified the definitions but there might still be variation between the programs offered under the same name (Peltoniemi, Skinnari, Mård-Miettinen & Sjöberg 2018, 16).

Now that the education providers in Finland have been urged to offer more foreign language teaching in the early years, one of the questions that has been considered by researchers, teachers and other professionals in the educational field is what kind of qualifications should be required from teachers who teach foreign languages to young children. For example, Skinnari and Sjöberg (2018, 26) report that education providers are concerned about the fact that teachers in early childhood education do not usually have proper qualifications for teaching new languages. Peltoniemi et al. (2018, 25, 29) further state that there is not enough training on bilingual ECEC neither in teacher education nor as in-service training. While there are no official recommendations, Skinnari (2018), for example, suggests that teachers responsible of early language teaching should have competence in both language pedagogy and the target language. Pyykkö (2017, 22) further recommends that teacher training should pay more attention to language awareness and early language learning in general.

Even though I have described FLL in general in this section, it is worthwhile to note that it is not possible to examine all foreign languages in the same way. Skinnari and Sjöberg (2018, 14) indicate that the context where a foreign language is learned should not be ignored. For example, in Finland, English is the most learned foreign language (Pyykkö 2017, 9), and it can be argued that English has a status of a second language as English is heard, seen and used everywhere, in addition to its higher learning objectives in formal education compared to other foreign languages (Skinnari & Sjöberg 2018, 14). Hall and Cook (2012, 272-274) further point out that it has become increasingly difficult to distinguish English as a second or a foreign language because of its widespread status all over the world, which is why learning and teaching English cannot be seen in the same context as learning and teaching any other foreign language.

1.2 Information and communication technologies in early childhood

The use of information and communication technologies (ICTs) in education, especially with young children, has remained a controversial topic (Antar 2019, 61). Even though many researchers, educators and parents have a positive approach towards ICTs in teaching, some are concerned of the possible negative influence that ICTs might have on children (Arnott 2017, 8). Much of the previous research on ICTs in education, especially during the last few decades, has focused on the advantages and disadvantages of ICTs, whereas recently attention has shifted towards finding the best practices for integrating ICTs in education. (Masoumi 2015, 5). In this chapter, I will first discuss ICTs in education, and in the second part, I will present previous research on children's views on ICTs.

Information and communication technologies in education

Information and communication technologies, ICTs, is a widely used term in educational settings. Today, it is used instead of *information technology, IT*, which refers to computers and the internet. (Bolstad 2004, 1.) The reason for the change in terminology is the fact that technological devices today are used for much more than just gathering information. Nowadays the communicational aspect of these devices is emphasized. (Bolstad 2004, 1.) Buckingham (2015, 22) argues that different devices can no longer be considered simply as machines, but rather as ways of communicating, as well as representing our world and culture. Livingstone (2012, 13) points out that ICTs is an umbrella term, and there is a great deal of variation in the devices that can be included in the definition. According to Bolstad (2004, 1), ICT can mean anything used to collect information, to communicate, or to affect the environment using electronic or digital devices. While gaming and different touch-screen devices have massively gained popularity in early childhood education, more traditional ICTs, such as televisions and radios are still present not only in daycare centers but also in homes (Chaudron, Di Gioia & Gemo 2018, 33).

As mentioned above, the topic of using ICTs in teaching remains controversial, especially with young children. Most concerns with ICTs and young children seem to relate to emotional and behavioral issues (Hoskins Sakamoto 2015, n. pag.) in addition to the development of social skills and physical activity (e.g. Plowman & McPake 2013). These problems are, however, mostly connected to extensive screen time and the lack of adult supervision (e.g. Parkes, Sweeting, Wight & Henderson 2013). Therefore, it appears that the problems associated with ICTs stem not from ICTs themselves but rather from the way in which they are utilized.

In fact, most researchers seem to agree that ICT devices can be useful in education (Nikolopoulou & Gialamas 2016, 409). For example, Hoskins Sakamoto (2015, n. pag.) mentions that ICTs can improve children's learning and communication skills through active play and collaborative learning. Arnott (2017, 17) further adds that ICTs enable children to interact with other people and with new learning environments, which can positively influence their self-efficacy, academic skills, and cognitive, social, and emotional development.

Rather than problems and disadvantages with ICTs as such, Hoskins Sakamoto (2015, n. pag.) argues that major issues with effectively incorporating ICTs in teaching are teacher incompetence and their lack of confidence. Many researchers emphasize the teachers' role in providing effective, high-quality ICT education for young children (e.g. Masoumi 2015, Nikolopoulou & Gialamas 2015). Livingstone (2012, 11) also states that while ICT devices have gained a solid position at schools, teachers are not equipped to use them to support children's learning. This is further corroborated by Kerckaert, Vanderlinde and van Braak (2015, 185), who emphasize that it is crucial for teachers and other early childhood educators to recognize their important role in using ICT devices in teaching. The focus of attention, therefore, should be on providing future teachers with skills to effectively include ICTs in teaching, such as using collaborative and co-learning methods, instead of traditional, teacher-centered approaches (Hoskins Sakamoto 2015, n. pag.).

ICTs are used both at home and in early childhood education more than ever. However, formal educational settings are still behind on the quantity of ICT devices used, when compared to children's homes (Hoskins Sakamoto 2015). Similarly, Palaiodogou (2016, 10) argues for continuity between home and early childhood education: according to her, most young children already use ICTs at home but early childhood education has not yet been able to fully participate in a meaningful, purposeful way in children's digital education.

ICTs can be utilized in education in various ways. Playing educational games to practice literacy and mathematics seems to be the most popular way of using ICTs in early childhood education (Mertala 2016). According to Masoumi (2015, 13-14), ICTs in preschools are mainly used as tools for documentation and as educational objects to enrich teaching. Teachers also see ICTs as entertainment for young children (Masoumi 2015, 14). Bueno-Alastuey and García Laborda (2016, 31) observed that while teachers used various ICTs with young children, most ICTs were used in a limited way, usually for transmitting information. One danger, mentioned by both Masoumi (2015, 14) and Hoskins Sakamoto (2015, n. pag.) is that ICTs can often be used in classrooms passively, which means that they are used as new tools but only to do the same tasks as before. Hoskins Sakamoto (2015, n. pag.), therefore, proposes that more attention should be paid on how ICTs can encourage children's creativity and enrich the learning process.

In Finland, the National Core Curriculum for Early Childhood Education and Care (2018, 26) encourages early childhood education professionals to support children's opportunities to observe and investigate various ICT devices, apps, and games. The main goal of *technology education* is to support curiosity, creativity, and experimenting with different technologies (the National Core Curriculum for Early Childhood Education and Care 2018, 47). The National Core Curriculum for Pre-primary Education (2016, 37) has similar guidelines, but additionally, it highlights the meaning of ICTs in supporting children's literacy.

Livingstone (2012, 11-12), however, points out that despite many teachers, parents and children believing that ICTs enhance learning, there has been very little research on the actual benefits of ICTs. There is a lack of studies that

compare traditional teaching and teaching with ICTs and their learning outcomes. She further adds that most of the conclusions of these studies are rather vague, and they fail to clearly demonstrate that ICTs are beneficial or harmful. It is also challenging to present consistent results because of the wide range of different ICT devices used in education. (Livingstone 2012, 13.) Furthermore, it is often assumed that children are motivated and competent to make the most out of ICTs in educational settings simply because they enjoy using technology (Livingstone 2012, 12).

Children's views on ICTs

As mentioned above, children's views, opinions and experiences on ICT devices have not been studied a great deal. However, Chaudron et al. (2018) and Mertala (2016) have researched children's views on ICTs and their ideas for the use of ICTs, respectively. Chaudron et al. (2018) have focused on children between the ages of 0-8, while Mertala has studied 5-6-year-olds. Next, I will present some of the findings from these studies.

Most popular ICT devices for 6-year-olds, according to Chaudron et al. (2018, 33), are smartphones and tablets, as they are multi-functional and portable, and are easy and fun to use because of touch-screen technology and various apps. Televisions are still the most used ICTs, although the children themselves rarely mention using them. Many families own laptops and computers, but their use is often regulated by adults, and, thus, they are considered less popular than portable devices. (ibid.) The most popular activity for young children is watching videos and program and playing video games (Chaudron et al. 2018, 34).

At home, children use ICTs for four main purposes: relaxation and entertainment, learning, creation, and communication (Chaudron et al. 2018, 33). Family members and friends are often included in activities with ICTs, and they affect the use of the devices (Chaudron et al. 2018, 39, 55). According to Chaudron et al. (2018, 39), children are very well aware of the ownership of ICTs at their home and have clear opinions on their favorite and least favorite devices. Their opinions are based on whether they can access and use the device autonomously,

the selection of apps on the device, and their personal interests. While their views of ICTs are mainly positive, the risks and disadvantages that the children experience mirror their parents' views (Chaudron et al. 2018, 41).

Mertala (2016, 216) concludes that, overall, children have positive views on ICTs. His study focuses on children's ideas on how to use ICTs in preschool, and there are six categories of activities mentioned by the children: gaming, media production, media reception, interaction, learning and playing (Mertala 2016, 215). Similarly to Chaudron et al. (2018), playing games is the most popular activity (Mertala 2016, 216). Moreover, Mertala (2016, 217) states that it seems that children view ICTs mostly as a leisure activity, rather than a learning experience.

1.3 Research questions

The aim of the present study is to gain an understanding of the views and experiences that children have of information and communication technology devices. In addition, the goal of this study is to examine how children perceive foreign language learning using ICT devices.

While the use of ICTs has been studied extensively in education, research has so far concentrated on students' and teachers' attitudes towards ICTs (e.g. Lehtonen & Vaarala 2015; Masoumi 2015; Nikolopoulou & Gialamas 2015), in addition to the advantages and disadvantages of technology devices (e.g. Hoskins Sakamoto 2015; Kerckaert, Vanderlinde & van Braak 2015). Similarly, studies in the early childhood education setting have focused on the benefits and dangers of the use of ICTs with young children (e.g. Berson & Berson 2010). However, the perspective of these studies has mainly been limited to teacher's views or on children's learning observed by the researcher. Only few studies have focused on children's experiences and opinions on ICTs and studies concerning foreign language learning described by children themselves are rare.

The research questions were first formed based on the goals of this study. They were modified after data collection, as children's experiences with ICTs

were strongly present in the interviews. The research questions of the present study are therefore the following:

1. What kinds of views and experiences do children have on the use of ICT devices?
2. How do children view and experience foreign language learning using ICT devices?

2 METHODOLOGY

In this chapter, I will describe the research methods of this study. First, I will introduce the participants and the research setting. Second, the research approach, as well as the methods of data collection and data analysis are explained. Finally, I will consider the ethical issues of this study.

2.1 Participants and research setting

The participants of this study were 14 five- and six-year-old children, of whom six were 5-year-olds and eight were 6-year-olds. Five- and six-year-olds were chosen for this study as they are likely to have more experience on the use of ICT devices and foreign language learning than younger children might have. Six of the participants were girls and eight were boys. The data of this study consist of interviews, drawings and video material that were collected at a daycare center in the Uusimaa region. In order to enhance the validity of the interviews, a pilot interview was conducted, and the interview questions were revised accordingly. As the pilot interview was successful, data from this interview has also been used in the analysis. The data were collected from September to November in 2017.

The daycare center was first contacted as regards this study because it offers foreign language teaching in the Uusimaa region. As previously explained, foreign languages are not typically taught in early childhood education unless the daycare center is specifically language oriented. Hence, it was natural to contact a daycare center that has a foreign language program. In addition, even though foreign language teaching for children in early childhood education is considered more and more important, foreign language programs are still few and far between, which narrows down the options considerably.

The daycare center that participated in this study executes foreign language teaching, in this case English, as early partial immersion. In this daycare center, this means that English is taught mainly in small groups, through play, music, books, rhymes, and stories, and during every-day interactions between the

children and the personnel. The children can use both Finnish and English, and according to the preschool teacher, they usually choose to play in Finnish. Some of the personnel only speak English, and some both English and Finnish. The teaching in preschool is in English, except for a Finnish book called *Seikkailujen eskari* that is sometimes used in teaching.

2.2 Research approach and data collection

As the aim of this study was to gain an understanding of children's views and experiences and the main interests of qualitative research are people's experiences and perspectives on different phenomena (Flick 2018, 4), a qualitative research approach was chosen. In broad terms, qualitative research attempts to explain and understand the phenomenon in question as comprehensively as possible, from the point of view of a person or group of people (Flick 2018, 4). The qualitative research approach has been criticized for not being objective and generalizable, but Eskola and Suoranta (2008, 61) point out that the purpose of qualitative research is transferability, not generalization. Some of the most common ways of data collection in qualitative research are, for example, interviews, observation, and visual and written data (Flick 2018, 4).

This study is also a case study. A case study approach can be applied in numerous research fields with different starting points and objectives, and due to these varied ways of applications, a case study is often classified as a research strategy or approach rather than a research method or methodology (Eriksson & Koistinen 2014, 4). Case study research has also been defined in numerous ways. For instance, according to Woodside (2010, 1), a case study aims to describe, understand, predict, and/or control the individual. Here, the individual can refer to a person, process, group, organization, or culture, to name a few. Eriksson and Koistinen (2014, 4), on the other hand, suggest that in a case study, one or more cases are examined, and the most important aim is to define, analyze and resolve these cases. Woodside (2010, 6) further emphasizes aiming at a deep understanding of the individual in question, while Eriksson and Koistinen (2014,

4, 6) highlight the importance of defining the case and the context of the study. As they point out, a case study is usually contextual, meaning that the case is studied in a certain context (Eriksson & Koistinen 2014, 4). In this study, the phenomenon in focus is children's perspectives and views on ICT devices and foreign language learning in the context of one daycare center but also foreign language teaching and early childhood education in Finland.

As mentioned above, the data of this study consist of interviews, drawings, and video material. By combining different methods of data collection the aim was to gain a better understanding of the context of this study. According to Woodside (2010, 6-7), combining several methods can also help deepen the understanding of the subject. Triangulation, which refers to this process of combining different methods, can be used to improve the quality of the data. However, as Eriksson and Koistinen (2014, 46) point out, triangulation does not equal a successful case study; using triangulation should be justifiable and provide a demonstrable benefit. Triangulation in qualitative research often includes observations, interviews, and diverse visual or written data (Woodside 2010, 6). This was the case in this study, as well. The first part of the data collection process, drawing, was executed by the pre-school teacher at the daycare center in September. I interviewed the children and the staff a week after, and the staff videotaped children's activities during October and November. Next, I will describe the data collection process in more detail.

The first phase of data collection were the drawings. There are 10 drawings altogether, as nine of the 14 children who participated in the interviews drew pictures, and one child wanted to draw another picture during the interview. The staff at the daycare center were asked to instruct the children to draw a picture of the ICT devices that they like to use the most to learn English, or other foreign languages, or simply to draw some of the ICT devices they like (see Appendix 1). They could also draw devices that they do not enjoy using but all children chose to draw devices that they like. The drawing was executed during free play, and the most suitable moments for drawing were chosen by the staff. There were 2 to

5 children present at a time. According to the pre-school teacher, drawing was an easy task for the children, and most of them were finished within 5 minutes.

Drawing can be a helpful way of collecting data when studying a subject that might be difficult to express verbally. For some children, drawing can be more familiar, and therefore easier, when expressing their thoughts and opinions than, for instance, participating in an interview. According to Aarnos (2010, 178), drawings can work well with interviews as these two methods can support each other and therefore might deepen the understanding of the subject. MacDougall and Darbyshire (2018, 9) argue, however, that drawings should be used carefully in research because it is not realistic to assume that drawings reveal something of children's thoughts, especially if children themselves do not have the possibility to explain their drawings. In this study, the main purpose of the drawings was to introduce the children to the topic of this study and help make participating in the interviews easier and more comfortable.

The second and the main phase of data collection occurred the following week, when the participants were interviewed in pairs or alone. 12 children were interviewed in pairs, while two of them were interviewed alone. The pairs and single person interviews were chosen by the pre-school teacher. The interviews lasted from 9 minutes to 23 minutes, the 9-minute interview being a single person interview. The pair interviews lasted about 15 minutes on average. Most children seemed to participate readily in the interviews and enjoy being asked about their opinions. One child chose not to participate in the interview. A couple of times some of the children wanted to leave, but they chose to stay if their pair wanted to stay, and then again, some children wanted to leave if their pair wanted to leave. Two interviews were ended on the children's initiative.

Children were first asked to tell about the drawings. Next, they were asked about their thoughts towards the use of ICTs in a focused interview. A focused interview gives participants a chance to describe their views in their own words, which, for example, a structured interview does not allow. In focused interviews, certain themes and subjects are discussed in each interview but not necessarily in the same form or order (Ruusuvuori & Tiittula 2005, n. pag.). In this study, the

children were asked about their favorite and least favorite ICT devices, the use of these devices in language learning and teaching. I had planned the interview questions beforehand, but I also adjusted them during each interview based on the current situation (see Appendix 2). The purpose of the interviews was to understand the children's thoughts, experiences, and opinions on the use of ICTs.

Interviewing is a useful method for data collection when the goal is to understand other people's views, thoughts, and opinions (Raittila, Vuorisalo & Rutanen 2017, n. pag.). Interviews can be either single person, pair, or group interviews, and in this study, mostly pair interviews were used. Pair interviews can be suitable for studying views and attitudes, as there are several advantages. They may offer possibilities to gain profound insight on the topic as there can be multiple views present (Pietilä 2017, n. pag.). In addition, the participants can also receive support from each other (MacDougall & Darbyshire 2018, 7), which happened in the interviews conducted for this study: when one of the children said something, the other one remembered an important point on the subject. There are, however, possible disadvantages with pair interviews. For example, pair and group interviews can make it more difficult for some participants to express their honest opinions, and the other person's views can have an effect on their answers (Pietilä 2017, n. pag.). In this study, some of the children were clearly affected by the other child present and gave the exact same answers throughout the whole interview. Moreover, some children were encouraged, for example, to play with the audio recorder by their pair. On the other hand, some children seemed to feel more comfortable with the situation with a friend.

There are some important aspects to consider when interviewing children. Irwin and Johnson (2005) mention the importance of building rapport, structuring the interview appropriately, and considering the setting of the interview. Building rapport before the interview can help the children feel more comfortable with the situation, and, consequently, might increase the quality of the data (Aarnos 2010, 173, 175; Irwin & Johnson 2005, 824). Before the interviews for this study, I spent a little time with the children while they were having breakfast and playing to help the children feel less nervous about the interview.

We also discussed some unrelated subjects before the interviews, such as their program for the day, their favorite food, and their friends and families. Moreover, we tested the recorder together, made funny sounds and listened back to the recording. All these things seemed to make the children more comfortable with me and the situation.

It is often expected that all participants are willing and able to tell about the subject at length even after simple open-ended questions. While this can be true for some adults, interviews with children might not proceed similarly. Irwin and Johnson (2005, 824–825) point out that children's linguistic needs should be considered when interviewing them. This means that closed questions and off-topic discussions might be needed for the child to become more relaxed with the situation and lessen the emphasis on verbal abilities. Some children might prefer answering closed questions (Raittila et al. 2017, n. pag.). During the interviews (see Appendix 2), I asked quite many closed questions, as I noticed that some children seemed to feel that it was difficult to answer open-ended questions, especially at the beginning of the interviews. Towards the end of the interviews, almost all children seemed more relaxed, and answered open-ended questions, as well. Thus, closed questions were justifiable, as they helped the children get acquainted with the topic and the situation.

The setting of the interview can also affect the situation (Irwin & Johnson 2005, 826). For instance, in this study, the children were interviewed at the daycare center in a room in middle of the house. There were, at some points, loud noises that disrupted the interview slightly, and there was constant background noise, which did not make the room as peaceful as possible. Moreover, as Raittila et al. (2017, n. pag.) point out, a daycare center is a place where the children are expected to follow the rules of adults, which makes it important for researchers to consider their role. On the other hand, a safe, familiar space can make the situation less stressful (Irwin & Johnson 2005, 826). Different objects and furniture can also, sometimes unexpectedly, affect the interview (Raittila et al. 2017, n. pag.). In this study, the interview room was used as a drawing space, and

some of the children wanted to add to their drawing or draw more pictures during the interview.

After interviewing the children, I interviewed two of the groups' teachers, as well. The interviews lasted for about 5 minutes each, and the objective was to gather information on the context for this study: what kinds of ICT devices are used in the groups, and when and how they are used. These interviews were focused interviews, and one of them was in Finnish and the other one in English. These data were used as secondary data.

The third phase of data collection were the video recordings. These video recordings were carried out by the staff at the daycare center and there was altogether 17 recordings and a total of about 12 minutes of video material. Many of the clips have been recorded during the same activity, for example, while playing with a tablet or looking at photos on a smart phone. Before the recording, I instructed the staff on how and what kinds of situations to record (see Appendix 4). The purpose of the video recordings was to provide information on how ICT devices were used at the daycare center. An important issue to note here is that the video material might have been very different, if the children would have been asked to video tape the use of ICT devices. Thus, the fact that the video recordings are collected by the staff only provides material of the situations and ICT devices that adults have decided to film.

2.3 Methods of analysis

The interviews were first transcribed and then analyzed using qualitative content analysis. Content analysis can refer both to a method of analysis or to a broader theoretical approach, which then can be used to carry out other forms of analysis (Tuomi & Sarajärvi 2018, n. pag.). In this study, I have used content analysis as a method of analysis, and next, I will describe this process.

Content analysis is a way of collecting the most relevant and interesting findings from data and arranging these findings systematically into a compact form (Schreier 2013, 2). In simplified terms, data are first reduced, then

segmented, and divided into categories and lastly arranged into a logical entity (Tuomi & Sarajärvi 2018, n. pag.). Tuomi and Sarajärvi (2018, n. pag.) further point out that, with content analysis, data are only arranged into a more defined form, and this alone is not enough to fully describe the results. Therefore, gathering conclusions after content analysis is always a required step in the process. Additionally, Schreier (2013, 2) underlines the systematic nature of qualitative content analysis: it always requires certain stages and a careful examination of all relevant material. I have chosen to apply this method of analysis, as the purpose of this study is to describe children's views and experiences on ICT devices and language learning, and describing the meaning of data is the main goal of qualitative content analysis (Schreier 2013, 2).

Tuomi and Sarajärvi (2018, n. pag.) present three different methods of content analysis. One of them is a method called *data-driven content analysis*, which is used in this study. There, the basis of analysis is on the data itself, and on the children's views without a certain concept or theoretical framework in mind (Tuomi & Sarajärvi 2018, n. pag.). In data-driven content analysis, a theoretical framework does not guide the analysis process, but instead, the aim is to create a comprehensive theory based on the findings from the data. Schreier (2013, 3-4), however, argues that, usually, content analysis incorporates both data-driven and *concept-driven* approaches, while data-driven approach should always be used to ensure that the results reflect the data. Tuomi and Sarajärvi (2018, n. pag.) further point out that even though data-driven content analysis is not based on a certain theory, research can never be executed fully without any theoretical background. Thus, while I have mainly applied data-driven content analysis in this study, I am also aware that, for example, theories of foreign language learning and the use of ICT devices in education have undoubtedly had an influence on the analysis.

According to Miles and Huberman (1994), data-driven content analysis consists of three stages: 1) reducing the data, 2) clustering the data and 3) abstracting it (Tuomi & Sarajärvi 2018, n. pag.). Reducing the data, which is one of the main features of content analysis (Shreier 2013, 15) means that all data that

are irrelevant for the study is filtered out, and clustering the data is a process where the relevant data are categorized. The last step, abstracting the data, means that the categories are then formed into theoretical concepts. (Tuomi & Sarajärvi 2018, n. pag.) In this study, I have proceeded according to these three stages. First, I reduced the transcribed interviews to the extent that was relevant by going through the data multiple times with the research questions in mind, and by forming simplified expressions. I separated the expressions that were related to the children's general opinions and views of ICT devices and those that were related to ICTs and language learning. These were later formed as the two main themes: *children's views and experiences regarding ICT devices*, and *children's views and experiences regarding language learning using ICT devices*.

Next, the analysis process differed slightly between the two research questions. With the first research question, regarding children's views on ICT devices, I used data-driven content analysis (Tuomi & Sarajärvi 2018, n. pag.). I started clustering the data by searching for similarities and differences in the simplified expressions and, then, formed subcategories by combining similar expressions. This process is also called *successive summarizing* (Schreier 2013, 9). With the second research question, concerning children's views on learning with ICTs, I started combining similar expressions, but also formed subcategories with the help of a set of questions: according to the children, how, why, where, when and with whom do they learn languages? An example of the process of reducing and clustering the data is presented in table 1, on the next page.

After forming the subcategories, I continued the clustering process with the data for both research questions by combining similar subcategories into main categories. The final step of the analysis was to further combine the main categories into themes. It is important to point out, however, that the analysis process was not always as straight-forward as presented here. I went back and forth between these three steps and tested the categories to see if they could be combined, separated or moved somewhere else. Eventually, the analysis led to two themes, both with three main categories and seven subcategories. A table presenting all these can be found in the Appendix 5.

TABLE 1. Example of the process of reducing and clustering the data in this study.

Original expression	Simplified expression	Subcategory
<p>Interviewer: What would you say helps you learn English the best? And you can think of anything, it doesn't have to be a device. Tatu: Well, a game you only play in English.</p>	<p>Playing a game in English helps with learning English</p>	<p>ICT devices in language learning</p>
<p>Interviewer: Why did you decide to draw them (a television and an iPad)? Matias: Because I learn from them. Interviewer: Do you learn English from them? Matias: Yeah and a little bit of Swedish.</p>	<p>ICT devices help with learning English and Swedish</p>	
<p>Lea: Listening to music is fun because then you can also dance to English. And you can say an English song while you dance.</p>	<p>Learning English through dancing and singing</p>	<p>Other methods of language learning</p>
<p>Interviewer: Are there any other devices that you would like to use here at the daycare to learn English? Matias: No! Eetu: No, nothing! Matias: We know enough English already. Eetu: Yeah. Interviewer: Yeah? Matias: Yeah, my dad is from Australia and he has taught me so much English that I'm already one of the best here.</p>	<p>Learning English with a parent</p>	

While the main focus is on the children's interviews, I have incorporated the drawings, video recordings, as well as the teachers' interviews in the process of analysis. As mentioned before, MacDougall and Darbyshire (2018, 9) point out that it is important that children have the possibility to explain their drawings themselves, rather than just relying on the researcher's interpretations. For this reason, the children's drawings were used to help the children get acquainted with the topic of the study, and to make it easier to participate in the interviews.

I have included some of the children's drawings in the results but the focus there is on the children's own account of their drawings.

The video recordings and teachers' interviews were used to build the context of this study. First, I transcribed both the video recordings and interviews, and next, I searched for examples of the ICT devices that are used with children and how these devices are used. I will present this contextual description at the beginning of chapter 3.

2.4 Ethical considerations

It is always important to examine the ethical questions entailed in research, and this is especially important when children are involved in the study. Some of the most discussed ethical issues in research with children are informed voluntary consent, participation, and power relations (Farrell 2005, 8). Next, I will discuss these topics.

When children are involved in research, it is important to consider whether children truly have given informed voluntary consent to participate. Kuula (2006, 148) states that it is not always straight-forward to determine when a child can decide for themselves whether they participate in the study, and when a parent's permission is needed. The most common practice, however, is to first ask permission from the parent, and the child makes the final decision (Kuula 2006, 148). For this study, permissions from the day-care center, staff and parents were asked first. All children had the freedom to choose whether they wanted to participate in the study, and they were asked permissions before the drawings, video recordings and interviews. The children also had the right to change their minds about participation at any time.

Then again, Hyvärinen (2017, n. pag.) points out that it is not easy to ensure that children fully understand the meaning and consequences of their participation. For example, in this study, it is difficult to evaluate whether the children understood what it meant to be videotaped, especially when they were recorded by a familiar person. For this reason, it is very important to carefully

listen to both verbal and non-verbal messages during research so that children can decide on their participation and end it if they want to (Raittila et al. 2017, n. pag.). As mentioned previously, some of the children asked to end the interview. In these situations, I usually asked if they felt they could answer one more question, but I also told them that they are free to go if they wish to, and two interviews were ended on the children's initiative.

Researchers have a major role in qualitative interviews (Flick 2018, 4). Raittila et al. (2017, n. pag.) state that when interviewing children in daycare settings the role of the researcher should be carefully considered because children are accustomed to following the rules and instructions of adults. It is, therefore, important that researchers explain their role, and the confidentiality of the interview to the children (Raittila et al. 2017, n. pag.). For this reason, I explained the purpose of this study to the children and told them that their anonymity would be protected throughout the research process. Furthermore, I informed them that I am interested in their views and experiences, and do not expect any specific answers. My role was to guide the interview with questions and comments and to support conversations between the children. As MacDougall and Darbyshire (2018, 7) point out, group interviews with children should be focused but also allow room for unexpected turns. Therefore, my aim was to create a positive, open atmosphere, where there was space to discuss unrelated topics. I showed interest in the children's views, even when the topic was not necessarily related to the study and encouraged the children when they wanted to add something to their drawings.

Ensuring that the anonymity of all participants involved in research is important. This can be done by changing or removing all names and other details that might help in recognizing the participants (Kuula 2006, 214; Ruusuvuori & Tiittula 2005, n. pag.). In this study, the anonymity of the children is protected by replacing all the names with pseudonyms. Names of people or places mentioned by the children in the interviews have been changed or removed. Regarding the location of the daycare center, only the region has been given. The collected data were stored carefully and destroyed after finishing the study.

3 RESULTS

In this chapter, I will present the results of this study, i.e. the children's views and experiences regarding ICT devices and their views on foreign language learning using ICT devices. The chapter consists of two parts, of which the first one concentrates on the first research question, while the second part focuses on the second research question. I have translated all examples from the interviews from Finnish into English.

First, however, I will describe the context of this study based on the video recordings and the interviews with the teachers. Most of the video clips are of the children playing games with a tablet, either with a teacher or with a pair. These games focus on learning new vocabulary in English, for example, animals, but also on numbers, letters, and sounds. Similar games were also played on a computer. Additionally, a few of the clips show a group of children watching television in English. In different video clips, the children are watching a music video and dancing, practicing yoga according to the instructions on the video, or watching a movie. Final clips are of one child and a teacher who are looking at photos on a smart phone. The teacher mainly speaks in English, while the child does not speak at all. The photos are of the group's activities, and it seems that the teacher is helping the children learn vocabulary for these different activities.

The two teachers stated in the interviews that they mostly use cameras, radios, and smart phones with the children. They also use tablets, computers, and a television. They explained that these ICTs are used to introduce the children to new language structures and vocabulary, but also as a part of everyday activities and not so much with language learning. For example, smart phones are mainly used when the children come to the daycare center in the morning, and they log themselves in. Cameras and video cameras are both used to document different activities, and children use these ICTs themselves. Both teachers expressed that they would like to make more use of tablets, Youtube and games to support language learning.

3.1 Children's views and experiences regarding ICT devices

In the following section, I will present the children's views on and experiences with ICT devices. The views and experiences are divided into three categories: experiences using ICT devices, ownership of ICT devices, and possibilities of using ICT devices. These main categories and their subcategories are illustrated in Figure 1.

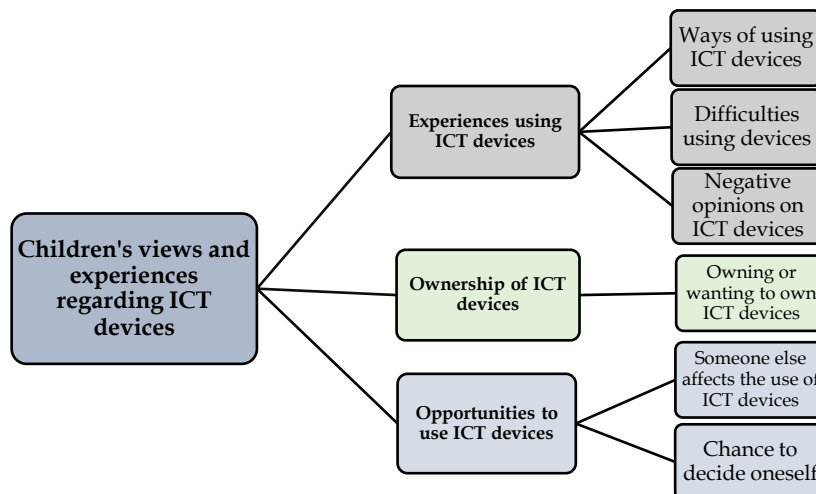


FIGURE 1. Children's views and experiences regarding ICT devices.

The children had various experiences using ICT devices, which included different *ways of using the devices*. Playing was evidently the most popular way of using ICTs, and there were many examples where the children mentioned playing as their favorite way of using ICT devices. In Example 1, Alvar explains that his view on tablets.

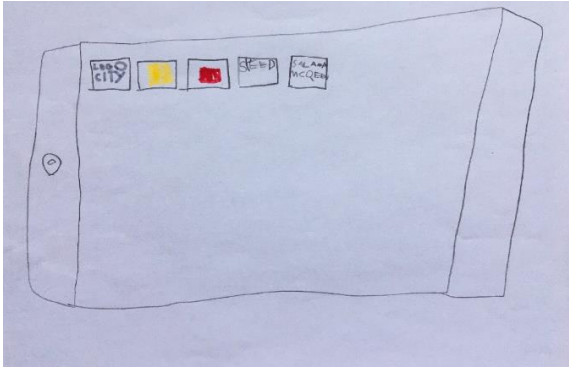
Example 1.

Interviewer: Why do you like using it (a tablet)?

Alvar: Well because it has good games in it.

As Example 1 shows, Alvar likes using a tablet because there are good games in it. For him, like many other children who participated in the interviews, games and playing were the main reason to use ICTs. Overall, tablets were especially popular amongst the children, and they were mentioned as favorite ICT devices by seven of the 14 children, and seven of the ten drawings also portrayed a tablet. For example, Picture 1 portrays Luka's drawing of a tablet and some of his

favorite applications. In Example 2, Luka tells about his drawing and explains that he chose to draw a tablet because it is his favorite device and he likes to play with it.



Picture 1. Luka's drawing of a tablet.

Example 2.

Luka: This is Lego City and this is Yle Areena and this is Youtube and this is Twitter. And this is a snake game.

Interviewer: Why did you decide to draw a tablet?

Luka: Because I play with it almost all the time. iPad is my favorite.

Watching videos was also brought up multiple times, as in Example 3.

Example 3.

Interviewer: Do you think it is fun to use different devices?

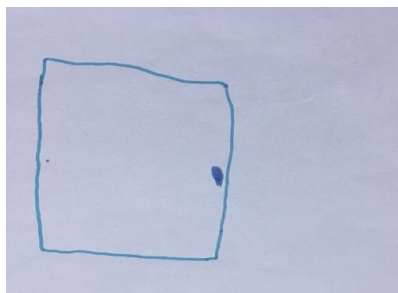
Oiva: Yes.

Interviewer: Why do you think that is?

Oiva: Because you can watch videos.

Example 3 suggests that Oiva thinks different ICTs are fun because he can use them to watch videos.

During the interviews, the children mostly told about the ways they enjoyed using the devices, and all children drew pictures of devices they like to use, such as in Picture 2 where Tatu has drawn his favorite device, a tablet. Tatu explains his drawing in Example 4. Other enjoyable ways of using ICTs that the children mentioned were taking photos, watching kids' programs and tapping a keyboard or a tablet screen, which all were mentioned once or twice.



Picture 2. Tatu's drawing of a tablet.

Example 4.

Interviewer: What have you drawn here?

Tatu: A tablet.

Interviewer: Okay, a tablet. Why did you decide to draw a tablet?

Tatu: Because. Well. I don't know.

Interviewer: Is it maybe your favorite device or?

Tatu: Yes.

Whether the children had used the device before seemed to be significant and influenced their opinion. In Example 4, Tatu explains that he does not like video cameras.

Example 4.

Interviewer: And are there some devices that you don't like? Or are they all fun to use?

Tatu: All are fun except for video cameras.

Interviewer: Why don't you like video cameras?

Tatu: I just don't.

Interviewer: Have you ever used a video camera?

Tatu: No.

As Tatu explains, he does not know why he does not like video cameras, but later states that he has never used them. Some children also felt that they did not like the way that the devices are used, like in Example 5, where Veijo states that he does not enjoy using cameras because there is nothing else one can do with them except to take photos.

Example 5.

Interviewer: Why do you think you don't like cameras?

Veijo: Because you just take photos with them.

In addition to the different ways of using the devices, the children also had experienced *difficulties using ICT devices*, and these difficulties affected their views on ICTs. For example, some children felt that some ICTs were difficult to use, which then caused negative feelings towards the devices. This can be seen in Examples 6 and 7.

Example 6.

Interviewer: Why don't you like radios?

Tatu: Because sometimes it makes noises, it plays music that I don't like.

Interviewer: I see. Do you think you'd be able to change the music, then?

Tatu: I can't because I don't know how to use the radio.

Example 7.

Interviewer: Mila, do you find it fun to use these devices to learn English?

Mila: Well, now I have to say no.

Interviewer: No? Why not?

Mila: Really, because when I was in Lahti I didn't get the... the first time I played the frog game I didn't get the donut into the frog's mouth.

While many difficulties were connected to the usability of the ICTs, as in the two previous examples, other difficulties that the children had experienced related to the language used in programs, games, or music. Some children explained that

they choose to use the devices in Finnish because they felt that otherwise they would not know how to use the device, or that they would not understand games or videos, like in Example 8.

Example 8.

Interviewer: And if you could choose, would you rather watch videos in English or in Finnish?

Mila: In Finnish.

Iida: In Finnish, or otherwise we wouldn't understand English.

As the previous examples illustrate, many children had experienced some difficulties with ICT devices, in a way that the devices were too hard to use. On the other hand, for some children, such as for Riia in Example 9, ICTs presented a different kind of problem.

Example 9.

Interviewer: You have used a tablet only once? Was it fun?

Riia: Umm no.

Interviewer: Okay, why not?

Riia: Because it was way too easy.

For Riia, ICTs were too easy to use, and thus, not very fun. The children had formed diverse views based on previous experiences with ICTs, as previous examples also illustrate, and some of them had *negative opinions on ICT devices*. Many children said that they do not like radios: they felt that they could not change the music that was playing or that it made annoying sounds, like in Example 6 and also in the next Example 10.

Example 10.

Interviewer: Are there any devices that you don't like that much?

Oiva: Well, for example music.

Interviewer: Music? Do you mean this radio or something else?

Oiva: Yeah, I don't like it at all.

Interviewer: Why not?

Oiva: Because it makes an annoying sound.

Overall, radios were the least preferred devices among the children. Televisions were also mentioned, but only once. Tatu describes: *"I don't like televisions because the programs are a little bit weird and boring"* (Example 11), which makes him dislike televisions altogether.

For some children, ownership of ICT devices played a significant role in how they viewed the devices. Either *owning or wanting to own ICT devices* was important to them, like in Example 12.

Example 12.

Interviewer: Are there any devices that you don't like?

Mila: I don't like video cameras.

Interviewer: Why not?

Iida: I don't like smart phones.

Interviewer: Smart phones, I see. Mila, why don't you like video cameras?

Mila: Because I don't have one.

Interviewer: Yeah, I see. And how about you, Iida, why don't you like smart phones?

Iida: Well because I don't have a smart phone, I only have a tablet.

Both Mila and Iida explain that they do not like video cameras or smart phones because they do not own them. On the other hand, some children mentioned devices as their favorite even though they did not own them, like Tatu, who says that his favorite devices are "*Tablets, computers, smart phones. Even though I don't have my own smart phone*" (Example 13). In the example, Tatu lists his favorite devices and feels that it is important to acknowledge that he does not own one of them. Overall, many children talked about ICT devices that they do not currently own but that they hope to own someday. Usually the children had seen someone use these devices, and wanted to own a similar one, such as in Example 14.

Example 14.

Alvar: When I get my own smart phone I can, like, I can play a bit and I hope I'll get the same smart phone that my friend's mother has.

Moreover, some of the drawings portrayed ICTs that the children wanted to own in the future. In Picture 3, Mila has drawn a smart phone which she hopes to get when she grows up, as she explains in Example 15.



Picture 3. Mila's drawing on a smart phone.

Example 15.

Interviewer: Mila, maybe you could start, what have you drawn here?

Mila: This is the smart phone I will get when I grow up.

In addition to the various experiences on ICTs and ownership of the devices, the children's opportunities to use ICT devices also influenced their views. Many children expressed that *someone else affects the use of ICT devices*, and, for the most part, these were adults. Parents and daycare educators were brought up multiple times, as Example 16 illustrates.

Example 16.

Interviewer: How much or how often do you practice English with these devices?

Tatu: We have used them once and today our teacher promised that we can use them today and then I don't know when after that.

Tatu explains that their teacher is the one who decides on the use of ICTs in the daycare center. At home, parents set boundaries for the use of ICT devices, as in Example 17, where Alvar talks about how he cannot use his mother's tablet.

Example 17.

Interviewer: What about at home, do you use any other devices to learn English?

Alvar: No, I don't. Because I'm not allowed to. I can't. Because mom's tablet is full and there are no games in it, and you can't download anything because it's full.

Alvar states that he is not able to learn English with his mother's tablet because his mother decides on what kind of content can be downloaded. Other family members were also mentioned a few times. Usually these were older siblings, like in Example 18.

Example 18.

Interviewer: And at home, do you use any other devices to learn English?

Iida: I don't have any other devices except I watch when my sister uses the iPad, she doesn't let me use it, and I don't like computers either because my sister never lets me use her computer.

Iida is not allowed to use her sister's computer, which affects Iida's opinion on computers. Even when adults or other people did not decide on the use of ICTs, some children's answers reflected adults' views on devices. In Example 19, when asked what devices she does not like, Lea explains that her dad does not like smart phones, even though Lea herself likes them. Also, in Example 20, Riia states that her dad watches something in English that she finds boring, even though she was asked whether she uses any ICT to learn English.

Example 19.

Interviewer: And are there any devices you don't like?

Lea: Well, my dad doesn't like that one. *points to a smart phone*

Interviewer: A smart phone? And you? Do you like it?

Lea: Yes.

Example 20.

Interviewer: Do you use any other devices to learn English, at home or at daycare?

Riia: At home.... There's something my dad watches but I'm not interested in it.

Interviewer: What does your dad do?

Riia: He watches something in English and it's boring.

Even though other people had an impact on children's opportunities to use ICTs, as previous examples show, for some children, ICT devices presented a *chance to decide themselves*, like for Riia in Example 21. She mentioned tablets as her favorite because they allow her to make independent decisions.

Example 21.

Interviewer: Why are tablets your favorite?

Riia: Because it lets you choose.

In conclusion, the children's views on ICT devices were affected by their previous experiences, the ownership of the devices and their opportunities to use them. Playing, watching videos, and using tablets were the most popular ways of using ICTs, and whether the children had used the device before affected their views. Moreover, difficulties with the use of ICTs influenced their opinions. While the children mainly enjoyed using different ICTs, they expressed negative opinions towards some devices, mostly radios. Owning an ICT or wanting to own one was important to them. On the one hand, parents, teachers, and siblings affected their opportunities to use the devices, but on the other hand, some ICTs presented an opportunity to make decisions oneself.

3.2 Children's views on ICT devices and foreign language learning

In this section, I will describe how the children view foreign language learning using ICT devices. Children's perceptions are divided into three main categories, which are *methods and places of language learning*, *areas of language learning* and *motivation for language learning*. The first main category, methods and places of

language learning, is further divided into three sub-categories: *ICT devices in language learning*, *other methods of language learning*, and *places of language learning*. The second main category, areas of language learning, consists of two sub-categories: *learning new vocabulary* and *revising vocabulary*. Lastly, the third main category, motivation for language learning, is divided into two sub-categories, which are *expressing oneself through language* and *parent's feedback*.

In the interviews, the children discussed different methods and places of language learning. First, I will present how the children use *ICT devices in language learning*. As stated in the previous section, one of the most popular ways of using the devices was playing. The children also mentioned playing several times when talking about learning with ICT devices, as in Examples 22 and 23.

Example 22.

Interviewer: What would you say helps you learn English the best? And you can think of anything, it doesn't have to be a device.

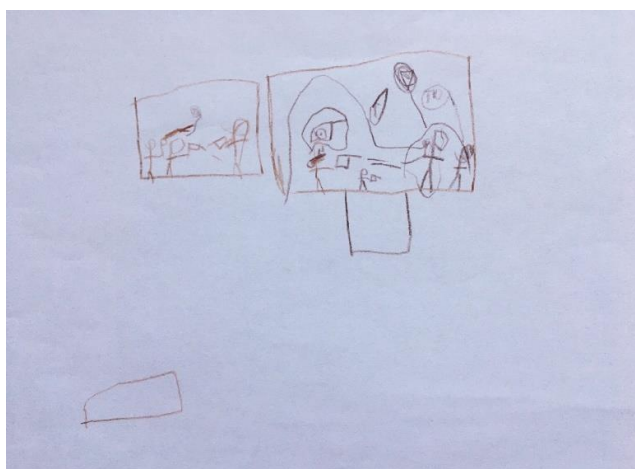
Tatu: Well, a game you only play in English.

Example 23.

Interviewer: So, you don't use them (devices) to learn English that much?

Eetu: Well no, not much at all except for a dinosaur game I have.

Many children felt that they have learned some English with the help of different ICTs, particularly games, as in previous examples. Other languages were also mentioned in the interviews, like in Example 24. Oiva tells that he has drawn a picture (see Picture 4) of a television and an iPad because he has learned English and Swedish from them.



Picture 4. Oiva's drawing of an iPad.

Example 24.

Interviewer: Why did you decide to draw them (a television and an iPad)?

Oiva: Because I learn from them.

Interviewer: Do you learn English from them?

Oiva: Yeah and a little bit of Swedish.

Sometimes learning was not only dependent on the children's desire to use the devices, or adult's permission. In Example 25, Sonja and Milo talk about learning English with ICT devices. Milo then mentions that he does learn with ICTs, but only if they work properly.

Example 25.

Interviewer: Do you learn a lot of English using those devices?

Sonja: Yeah.

Interviewer: And you, Milo?

Milo: Yeah. If they work.

Moreover, sometimes learning English with ICTs was impossible as the devices did not provide games or programs in the target language, as in Example 26.

Example 26.

Interviewer: And do you think that tablets help you learn English?

Luka: Well, no.

Interviewer: Why not?

Luka: Because there are only some Finnish games on it.

Luka explains that he thinks tablets do not help him learn English, simply because there are only Finnish games on the tablet. It might be possible that he does not want to play games in English or that he cannot or is not allowed to download more games, as was also discussed in the previous section. While tablets and games were mentioned most frequently as ICTs that help with foreign language learning, radios were also talked about a few times. Lea tells in Example 27 that she thinks listening to a certain song on the radio when the group needs to clean up their toys helps her learn English.

Example 27.

Interviewer: Oh yeah, we did talk about it already that you think that it (a radio) helps you learn English?

Lea: Yeah, a little bit, when we have "tidy up" we listen to a certain song.

Although many children talked about different ways they think ICT devices are helpful when learning English, some children did not feel that ICTs were useful at all, like Eetu in Example 28.

Example 28.

Interviewer: How about you, Eetu, do the devices help you learn English?

Eetu: Not much. Or not at all.

For Eetu, ICTs were maybe used for other purposes, not so much for learning English. Similarly, even though a number of children felt that ICT devices did not help them with FLL, many of them still thought that ICTs were fun to use, like Riia in Example 29. Playing was mentioned in multiple interviews as an enjoyable way of using ICTs even when learning was not important.

Example 29.

Interviewer: Do you think that you can learn from it (a game)?

Riia: Umm. No. It's still fun because you can play it.

While some children thought that ICT devices helped them learn English, *other methods of language learning* were also mentioned in the interviews. Music was brought up most frequently as a helpful way of learning languages. For instance, Henni explains that "*I learn a little bit of Spanish from music, too, from Spanish music*" (Example 30). Lea also states that "*Listening to music is fun because then you can also dance to English. And you can say an English song while you dance*" (Example 31).

In some interviews, FLL was seen as a more of a social event rather than something that is learned through ICT devices, such as in Example 32, where Matias says that his dad has taught him English.

Example 32.

Interviewer: Are there any other devices that you would like to use here at the daycare to learn English?

Matias: No!

Eetu: No, nothing!

Matias: We know enough English already.

Eetu: Yeah.

Interviewer: Yeah?

Matias: Yeah, my dad is from Australia and he has taught me so much English that I'm already one of the best here.

In the interviews, the children mentioned different *places for learning languages*. Mostly they learned English at the daycare center and at home, like Matias and Eetu in Example 33. Alvar, in Example 34, also explained that he thinks that the best way to learn English is to attend the English Club, which is held once a week after daycare.

Example 33.

Interviewer: What do you think is the best way to learn English?

Matias: At the daycare.

Eetu: At the daycare.

Matias: Or at home.

Example 34.

Interviewer: How do you think you learn English the best? You can say something else, too, it doesn't have to be a device.

Alvar: At the English Club.

ICT devices can be used almost anywhere, which can make FLL assessable in various places. In Example 35, Matias describes how he can learn languages everywhere with a tablet.

Example 35.

Interviewer: Has it (the tablet) helped you learn the language (English)?

Matias: Yes.

Interviewer: Do you learn with it at home or here at daycare?

Matias: Everywhere! Every Earth and France and Austria and and

There were two areas of language learning that were mentioned in the interviews. These two areas are closely related as they both involve vocabulary. *Learning new vocabulary* was noticeably the most common area of language learning for the children, as most of them felt that they learned new words while using ICTs. In Examples 36 and 37, Alvar, Lea and Henni explain the kind of vocabulary they have learned, specifically with games and English music.

Example 36.

Interviewer: Do you think you learn English when you play?

Alvar: Yes. I have learned from a fish game. Like all... All, umm, things living in water.

Interviewer: Those kinds of words?

Alvar: Yeah, everything that lives in water.

Example 37.

Interviewer: What do you think is the best way to learn English?

Lea: Well, especially from English music.

Interviewer: You learn well from music?

Lea: Yeah.

Henni: When it says like "scup" and a carrot in English, "scarrot".

While most children had learned new vocabulary with ICTs, one child thought that the devices helped her with *revising vocabulary*. In Example 38, Riia tells that she learns a little bit of English from Youtube, but only words she already knows.

Example 38.

Interviewer: And Riia, do you learn English from Youtube?

Riia: No... or a little.

Interviewer: A little bit? What kinds of things?

Riia: Umm English.

Interviewer: Do you learn new words?

Riia: Umm no. I only learn words that I already know.

For some children, using ICT devices supported their motivation for FLL. In Example 39, Tatu explains that he likes ICTs because they help him learn English and can then express himself verbally. For him, *expressing himself through language* seems to be important, and ICTs help him achieve that goal.

Example 39.

Interviewer: Do you like using them (devices)?

Tatu: Yes, I do.

Interviewer: Okay, why do you think you like them?

Tatu: Well, then I learn so much that there is nothing I can't say.

As discussed in the previous section, the use of ICTs was sometimes affected by adults. Example 40 demonstrates that sometimes motivation for FLL was also affected by *parent's feedback*: Lea explains that she thinks it would be fun to learn English by playing different games because her and her friend's mothers are excited when the children learn English.

Example 40.

Interviewer: Do you think it would be fun to learn by playing those games?

Lea: Yeah.

Interviewer: Why do you think so?

Lea: Because our mothers become excited when we know a little bit of English.

In conclusion, some ICTs, especially games and radios, were helpful with FLL but, mostly, ICTs were used because they are fun. Other methods of FLL were also described, and music was seen as an especially efficient method for learning. According to the children, language was learned at home, at the English Club and everywhere, and ICTs helped with learning vocabulary. Furthermore, devices motivated FLL, as they help the children express themselves, and receive positive feedback from their parents.

4 DISCUSSION

In this chapter, I will reflect on the results of this study. First, I will summarize the results and discuss the conclusions of this study in relation to previous studies. Second, I will evaluate the research process of this study, and, last, I will make some recommendations for further research.

The purpose of this study was to gain an understanding of children's views and experiences regarding ICT devices and their views and experiences on foreign language learning with ICTs. In conclusion, the results showed that the children had various views on ICTs and their views were shaped by their previous experiences with ICTs, the ownership of the devices, and their opportunities to use them. Their views and experiences on FLL using ICTs were characterized by different methods and places of language learning, areas of language learning, and motivation.

Overall, the children had positive views and experiences with ICTs, similarly to Mertala's (2016) study. The children described different ways of using ICTs "fun" and "nice", and all children wanted to draw ICTs that they like, which might imply that the children associate positive qualities with the devices, thus making it easy and straight-forward to choose to draw their favorite device. As Chaudron et al. (2018) also concluded, the children in this study seemed to have clear views on which ICTs they like and do not like.

Unsurprisingly, playing games was the most popular way of using ICTs, and tablets the most popular ICT device. These two appeared in all interviews, either together or separately. Most of the video clips also showed the children playing educational games focused on literacy and mathematics, which according to Mertala (2016), are the most common ways of using ICTs in education. Watching videos and taking photos were mentioned a few times, as well, and computers and smartphones were other popular devices. One finding of specific interest is that a number of children said that tapping the screen or keyboard was something they liked, suggesting that interacting with the device using one's fingers is a pleasant activity in itself. These findings are consistent

with Mertala (2016) and Chaudron et al. (2018), who also found that games, tablets, and touch-screen devices in general, were the most liked ICTs.

The children expressed some negative opinions towards ICTs, which were related to, for instance, difficulties using the devices: they were either too hard or too easy to use, thus providing too much or too little challenge. Moreover, the children did not necessarily like the way the device is “supposed” to be used or had never used the device, which made them dislike it. Radios were the least liked ICTs. The children stated that radios make annoying sounds and that the children cannot change the music themselves. It seems that radios, and ICTs in general, were not liked if the children could not use them independently. Instead, they were mainly used by adults, as was also evident from the teachers’ interviews. Chaudron et al. (2018) reported as well, that children have more positive views on ICTs that they can use autonomously. One child even mentioned that she likes using a tablet because “it lets you choose”.

Opportunities to use ICTs independently were controlled by parents, kindergarten educators, and siblings. They set boundaries for using ICTs by determining which apps to download on a tablet and when to use a device, indicating that on a general level, the children’s use of ICTs is being supervised. Therefore, it appears that at least the most typical concerns associated with ICTs are being addressed (Parkes, Sweeting, Wight & Henderson 2013). In contrast to Chaudron et al. (2018) where ICTs regulated by adults were less popular, the children in this study still liked these devices, and they hoped to use them more.

Chaudron et al. (2018) noted that children are very well aware of the ownership of ICTs, and this was evident in this study as well. Ownership of the devices seemed to be very important for the children, and it affected their views on the device. For example, some children did not like ICTs that they did not own or described how they wanted to own a certain ICT device in the future. Moreover, they always explained if the device they were referring to belonged to someone else, for example, their friends or family members.

The children’s views on foreign language learning with ICTs were mixed. A number of children thought that ICTs were helpful, especially playing games

with a tablet or listening to radio, which interestingly were also the most and the least liked devices. Others, however, did not find that ICTs supported learning. The main reason for this seemed to be that the devices did not have proper apps or the right language. Other methods of FLL were also mentioned, and especially music was found beneficial. It is interesting that the children did not link music with the devices that are used for listening, but rather talked about music separately. The device in itself was not seen as important. Games, on the other hand, were almost always talked about in relation to the device that they were played with. Perhaps devices are perceived differently in these situations because playing a game is usually more active than listening to music, especially if the children cannot change the music themselves. According to the teachers and the videos, music was mainly listened on a radio or a television.

Other important findings on children's views on FLL were related to places of language learning, motivation, and areas of language learning. Places for language learning were mostly concrete, familiar places and usually not connected to ICTs. The children's motivation to use ICTs in language learning involved both external and internal factors, as one child liked using ICTs for FLL because they received positive feedback from their parents and one learned language for communicational purposes. These findings support Livingstone (2012), who stated that it should not be assumed that children are motivated to use ICTs simply because they like them. Learning new vocabulary with ICTs was very common. This is not surprising because ICTs in the daycare center were primarily used to introduce new vocabulary, as explained by the teachers. Furthermore, vocabulary is very commonly the subject of educational games (Mertala 2016), and this presumably makes it easier to notice the learning process. No other areas of language learning, such as language structures or pronunciation came up in the interviews.

One point of interest was that other people were rarely mentioned. In Chaudron et al. (2018) study, children reported that family and friends were often involved in the use of ICTs. The communicational aspect of ICTs is also highlighted by Arnott (2017). In this study, other people were only present when

the children talked about how parents, teachers, and siblings control the use of ICTs. One child, however, did say that he has learned English with his father. Educators at the daycare center came up only occasionally, and other children from the daycare center not even once. What is noteworthy here is that all video clips showed the children using ICTs together with someone, either an educator or other children. Maybe the children did not perceive using ICTs as a shared activity. The topic of the interviews could also have steered the children's thoughts: the topic being ICTs, the children possibly did not come to think of other ways of learning languages. Moreover, the children in the videos were constantly communicating with each other. These situations seem to contradict worries about possible harmful effects of ICTs on children's social skills (e.g. Plowman & McPake 2013).

As described above, tablets were the most common devices present in the interviews and drawings. Compared to the ICTs that were discussed seldom, this provides some interesting observations on the children's perceptions on ICTs. For example, a television was rarely brought up, even though it was one of the most used devices in the daycare center, which corresponds to the findings by Chaudron et al. (2018). Furthermore, cameras, radios and smartphones were commonly used with the children, according to the teachers. The interviews and drawings seemed to be centered around touch-screen devices and computers. In general, it appeared that the children's perceptions of ICTs related to devices that they can actively use themselves, usually for gaming, in comparison to devices that are used more passively. The children's perceptions of ICTs mirror the world we live in, where touch-screen devices and computers dominate our technological environment (Buckingham 2015).

In conclusion, it seems that while many children thought that ICT devices were helpful in FLL, the main reason for the children to use the devices was entertainment, and gaming in particular, similarly to Mertala's (2016) study where children viewed ICTs mostly as a leisure activity. In his study, children wanted to use ICTs most for gaming, media production and media reception, and learning was not the main focus for children, which appears to be the case here,

as well. The teachers also reported that ICTs were mainly used as part of everyday activities instead of just language learning. Moreover, it is possible that the children did not come to think of all language learning around them and did not necessarily perceive using ICTs as part of learning languages. This can be due to the fact that these children were learning English, and because English is strongly present all around them, it might be difficult to distinguish the learning situations (Skinnari & Sjöberg 2018). As Gass and Mackey (2012) pointed out, the process of FLL is a complex one. Therefore, ICTs can be one piece in the puzzle but there are other, individual factors that affect foreign language learning.

Next, I will evaluate the research process and its weaknesses and strengths. *Reliability* and *validity*, which are commonly used terms in quantitative research, cannot necessarily be applied in qualitative research. Eskola and Suoranta (2008, 211–212), as well as Tauriainen (2000, 113) suggest that, instead, terms such as *credibility*, *transferability*, *dependability*, and *confirmability* can be used when evaluating qualitative research. *Credibility* means that the research results correspond with the views of the participants (Eskola & Suoranta 2008, 211). In this study, I have aimed to describe the analysis and conclusions as accurately and transparently as possible, and the process of analysis was long, with all categories thoroughly reflected on from multiple viewpoints. Furthermore, my perception is, similarly to Aro (2006, 64), that it can be trusted that children's answers reflect their views. Because the data of this study have been gathered two years ago, it would not be practical to contact the participants and confirm whether the results are still, to this day, consistent with their views then. First, this process would be challenging, and, second, it is not reasonable to assume that our views and opinions would remain static over time; instead, they are quite dynamic in nature. Thus, the participants' views presented in this study reflect their views at a certain time and place.

Transferability refers to generalization to the degree that is possible in qualitative research (Eskola & Suoranta 2008, 211). Contextuality and adaptive nature of the reality is a fundamental belief in qualitative research, which means that research can only describe the reality of a certain time, place, and group of

people. Therefore, in that sense, generalizations are impossible to achieve in qualitative research. However, transferability can be examined through evaluating the quality and quantity of acquired information. (Tauriainen 2000, 115.) I have aimed to describe the processes of data gathering and analysis as thoroughly as possible in order to convey the context of the study, and, consequently, to help the reader evaluate the transferability of this study. Because this is a case study, the results are not likely to be transferable to different settings. This study does, however, support previous studies on the subject, which adds to its transferability.

Dependability requires that the researcher has taken into consideration different factors that affect the research process, such as the researcher's presuppositions, research environment, and the relationship between the researcher and the participants (Eskola & Suoranta 2008, 212; Tauriainen 2000, 116). In this study, I have aimed at conducting and describing the research process in detail, and next, I will reflect on some of the factors that might have affected the process.

One of the challenges in the present study was that I was not personally present when some of the data were gathered. Drawing and videotaping were executed by the staff, and thus, I am not able to evaluate the influence of possible situational factors. For example, while I did give instructions for drawing and for videotaping children's activities, being present might have given valuable information on the situation, background activities, and children's reactions. As Raittila et al. (2017, n. pag.) suggest, observing or videotaping a drawing situation might deepen the understanding of the subject, as it may give interesting information on the participants' thoughts while they draw. Moreover, I was not able to choose which activities were videotaped. I have, however, received enough information on the drawing and videotaping situations to be able to describe the research process.

Additionally, with some of the interviews, the quantity of data was quite small and there were many closed answers. The reason for this might be that I was not always successful in finding the right types of questions to ask.

Furthermore, a couple of the pair interviews might have worked better as single person interviews, as some children were clearly distracted by their pair. Moreover, it is possible that the children were nervous because I was unknown to them. The unfamiliarity of the situation and the interviewer can be stressful and affect the quality and quantity of the data (Aarnos 2010). Spending more time with the children before the interviews might have helped with nervousness. Additionally, it is possible that the children had not discussed language learning at length before, consequently making it difficult to answer questions related to language learning. Language as a topic is quite abstract, and it is not always easy for adults either to recognize and discuss all the different factors related to language learning.

Confirmability refers to the degree that the study in question supports previous research on the subject (Eskola & Suoranta 2008, 212). While the results of this study did not produce new information, they do support previous studies on children's views of ICTs. The results were very similar to both Mertala (2016) and Chaudron et al. (2018), and while there are no studies that would have focused on children's views of ICTs in early language learning, it may be assumed that children's views on ICTs in general might reflect their views of ICTs with language learning as well.

As education providers have started to invest in early language teaching, future research should concentrate, not only on efficient teaching methods and teachers and parents' perceptions, but also on children's views on early language learning. While there are numerous other learning and teaching methods, the use of ICTs is an important part that should not be ignored, as children do enjoy using the devices and can use them for learning. There is a need for the use of ICT devices in language learning and teaching in a meaningful, purposeful way. Better yet, future research on children's views and how their views can be utilized in teaching could be carried out with the help of children themselves. The few studies on the subject have so far been executed with the researcher entering the field and collecting data, but future studies should include children in all parts of the research process.

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APPENDICES

Appendix 1. Instructions for the staff on the drawings

Ohjeistus lasten piirustuksille:

Luotan teidän ammattitaitoonne ohjeistaa lapsia piirtämään siten, että teidän ryhmänne lapset ymmärtävät tehtävänannon. Voitte antaa esimerkiksi seuraavanlaisia ohjeita:

- Piirrä kuva laitteista, joita mieluiten käytät apuna englannin (tai muiden vieraiden kielten) oppimisessa. Voit myös piirtää, millaisia laitteita et tykkää käyttää.
- Mitä opit, kun käytät juuri tätä/näitä laitteita?
- Miten opit englantia (vierasta kieltä) parhaiten? Entä miten et opi kovin hyvin?

Voitte halutessanne keskustella lasten kanssa ensin siitä, mitä tieto- ja viestintätekniiikan välineet ovat. Tärkeintä on, että lapsen piirustus liittyy juuri hänen mielipiteeseensä TVT-laitteiden käytöstä vieraiden kielten opetuksessa. Olisi hyvä, jos kaikille ryhmän lapsille annettaisiin sama ohjeistus, mutta voitte käyttää lapsille myös yksilöllisiä ohjeita harkintanne mukaan. Toivon, että kirjaisitte ylös, millaisia ohjeita olette käyttäneet.

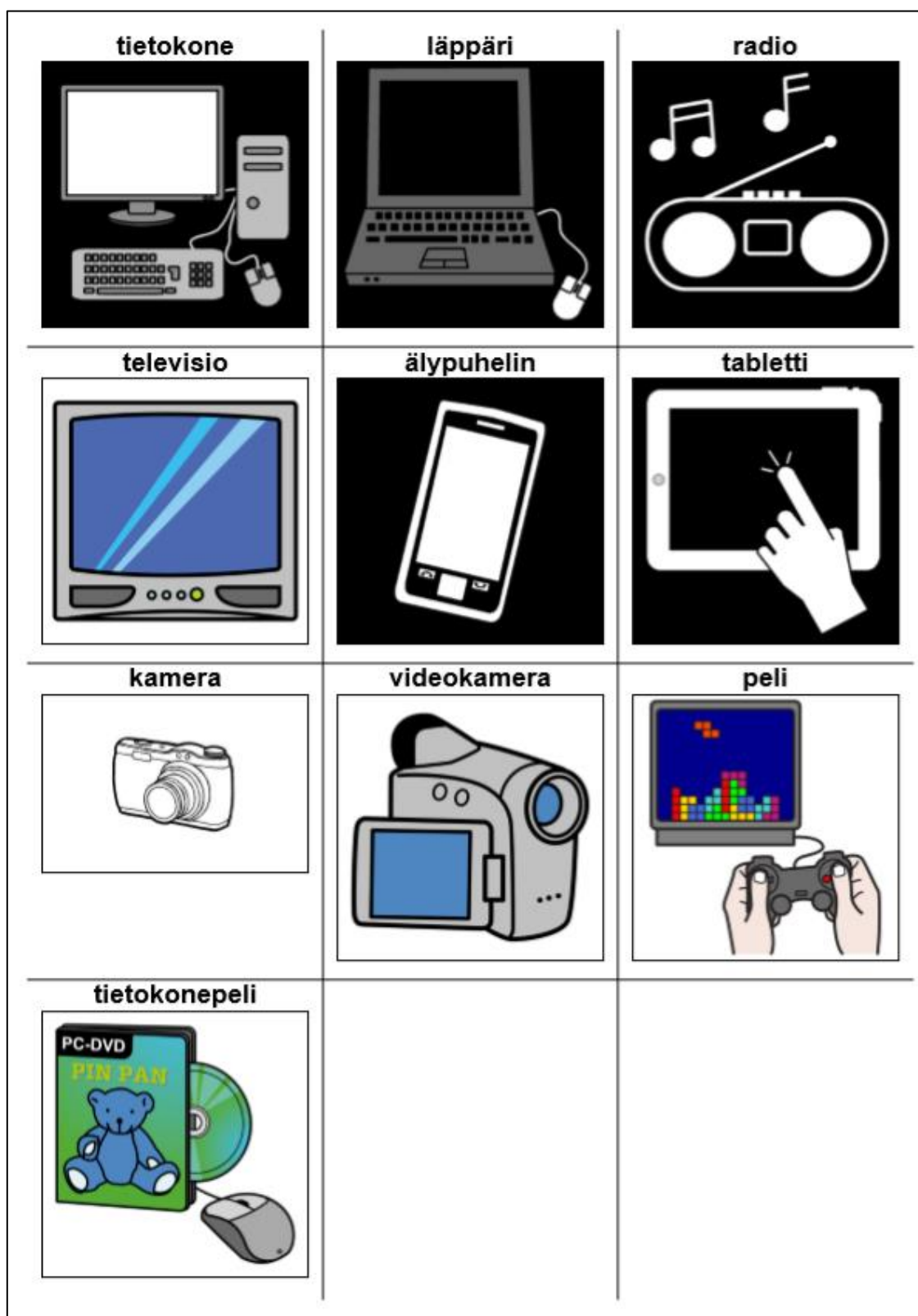
Appendix 2. Interview questions

Haastattelurunko:

Olen valmiiksi tulostanut kuvia erilaisista tieto- ja viestintätekniiikan laitteista. Näitä voin käyttää apuna haastattelussa, jos lapsille on hankalaa miettiä, millaisia TVT-laitteita on olemassa.

- Aloitan itseni ja tutkimuksen lyhyellä esittelyllä ja kerron, että olen kiinnostunut juuri näiden lasten mielipiteestä. Esittelen nauhoituslaitteen ja testataan sitä yhdessä. Kerron, että kukaan muu ei saa kuulla nauhoituksia eikä niitä käytetä muuhun, kuin tähän tutkimukseen. Kerron, että lapsi saa itse päättää tutkimukseen osallistumisestaan ja keskeyttää tutkimuksen missä vaiheessa tahansa. Kysytään lapsilta lupa tutkimukseen osallistumiseen.
- Keskustellaan aluksi lasten tekemistä piirustuksista.
 - o Mitä piirustuksessa on?
 - o Oliko piirtämistehtävä helppo/vaikea? Miksi?
 - o Löydätkö parin piirustuksesta välineitä, joita sinäkin käytät? Millaisia? Miten käyttäisit niitä? Entä oliko jokin parin piirustuksessa yllättävää? Miksi?
- Mitkä ovat suosikkilaitteitasi? Miksi? Mihin käytät niitä?
- Entä mistä laitteista et pidä? Miksi?
- Millaisia laitteita käytätte englannin oppimiseen päiväkodissa? Entä kotona? Mitkä näistä ovat suosikkejasi/mistä näistä et pidä? Miksi?
- Millaisia muita laitteita haluaisit käyttää englannin oppimisessa päiväkodissa tai koulussa?
- Onko sinusta kiva käyttää laitteita englannin oppimisessa? Miksi/miksi ei?
- Auttavatko laitteet sinua oppimaan englantia? Miksi/miksi ei?
- Miten parhaiten opit englantia? Miten et niin hyvin?
- Millaisia pelejä käytät kotona/päiväkodissa englannin harjoitteluun?
- Mitkä niissä on kivoja hahmoja? Mikä niissä on kivointa?
- Mitä olet oppinut näistä peleistä?
- Miten paljon/usein harjoittelet englantia näiden laitteiden ja pelien kanssa kotona? Entä päiväkodissa?
- Pelaatko mieluiten yksin vai kaverin kanssa? Miksi?
- Onko sinusta kivaa oppia englantia näiden pelien avulla? Miksi? Miksi ei?
- Onko sinulla vielä jotain, mitä haluaisit kertoa näistä laitteista tai englannin oppimisesta?
- Kiitos haastatteluun osallistumisesta!

Appendix 3. Pictures of different ICT devices

Kuvat: <https://papunet.net/>

Appendix 4. Instructions for the staff on videotaping children's activities

Ohjeistus päiväkodin kasvattajille lasten toiminnan videoinnista:

Videoi tilanteita ja toimintaa, joissa lapset käyttävät tieto- ja viestintätekniiikan välineitä (esimerkiksi televisio, tabletit, tietokoneet, radiot, kamerat, puhelimet, Internet, älytaulut...) vieraiden kielten oppimisen yhteydessä. Tärkeintä videoinnissa on, että videolta saa selvän toiminnasta ja että lasten (ja aikuisten) ääni kuuluu selkeästi. Videokameran voi jättää pyörimään toiminnan taustalle, jolloin teidän ei tarvitse kuvata toimintaa aktiivisesti. Jos haluatte, voitte esimerkiksi toiminnan päättymisen jälkeen kysyä lapsilta, millaista oli käyttää juuri näitä TVT-välineitä tällä kertaa ja auttoiko se heitä oppimaan kieltä. Voitte myös halutessanne tehdä muistiinpanoja tilanteesta.

Teidän ei tarvitse miettiä, onko tilanne videoimisen arvoinen: pienikin hetki voi olla tutkimukseni kannalta arvokas, joten uskaltakaa videoida ehtimisenne mukaan lyhyetkin tilanteet.

Appendix 5. Results: subcategories, main categories, and themes

What kinds of views and experiences do children have on the use of ICT devices?

Subcategories	Main categories	Theme
Ways of using ICT devices	Experiences using ICT devices	Children's views and experiences regarding ICT devices
Difficulties using devices and programs		
Negative opinions on ICT devices		
Owning or wanting to own ICT devices	Ownership of ICT devices	
Someone else affects the use of ICT devices	Opportunities to use ICT devices	
Chance to decide oneself		

How do children view and experience foreign language learning using ICT devices?

Subcategories	Main categories	Theme
ICT devices in language learning	Methods and places of language learning	Children's views and experiences regarding foreign language learning using ICT devices
Other methods of language learning		
Places of language learning		
Learning new vocabulary	Areas of language learning	
Revising vocabulary	Motivation for language learning	
Expressing oneself through language		
Parent's feedback		