



**DEPARTMENT OF EDUCATION,  
COMMUNICATION &  
LEARNING**

# **MAKING USE OF CHILDREN'S DIGITAL MEDIA CONSUMPTION**

Helping parents to support their children's English as a  
second language learning

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Thesis:	30 higher education credits
Program and/or course:	International Master's Programme in IT & Learning
Level:	Second Cycle
Semester/year:	Autumn term 2019
Supervisor:	Thomas Hillman
Examiner:	Susanne Garvis
Report no:	HT19-2920-001-PDA699

# Abstract

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Keywords: Informal interaction in TL, informal learning, active transfer of knowledge, Zone of Proximal Development, Social Interaction Theory, Interaction in SLA, Child's SLA.

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**Purpose:** The general purpose of this study is to examine how parents can be supported in making use of their child's digital media consumption for second language learning. In particular, a set of requirements are developed for best supporting the integration of children's online activity into language learning activities by promoting a smooth transfer of knowledge through the spontaneous production of the target language.

**Theory:** Social Interaction Theory was chosen as basis for this study, with attention to the Zone of Proximal Development, due to the fact that this study aims to find where a parent's role starts and ends in the process of a child's Second Language Acquisition (SLA).

**Method:** In an overall sense, this study can be described as an ethnographically informed study where interviews with parents were conducted and then sessions in the target language the parents had with their children were observed and recorded. The resulting data was transcribed and thereafter analysis was done on the gathered data. Following analysis of the data, the participating parents gave their own view of how they would prefer to be supported in making best use of their child's digital media consumption.

**Results:** This study shows that parents could be supported in making use of their children's digital media consumption for second language learning by receiving guidance during language learning activities. The results suggest a set of requirements for any system designed to deliver such guidance. This includes a suggestion of a clear simple system with straightforward advice and plain presentation of tips (list to read before sessions and list with bullet points to guide the sessions) they need to implement in their sessions in the Target Language (TL) with their children, with providing short explanation features, and reminders of sessions with schedule and a check-list.

## **Foreword**

Ever gratefully, I would like to thank my supervisor, Thomas Hillman, for his insightful guidance, advice and encouragement. Having such a supervisor has been a blessing; the way he cared about my thesis encouraged me to give the utmost best and answered my questions promptly to lead me in the correct direction, has been all the aid I needed not only to write this amazing thesis but to also learn a lot along the way.

I also would like to thank the primary school that provided the help needed in the initial stage of my data collection.

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# Table of Contents

<b>1. INTRODUCTION:</b> .....	<b>1</b>
<b>2. THEORETICAL BACKGROUND:</b> .....	<b>3</b>
<b>3. LITERATURE REVIEW</b> .....	<b>6</b>
<b>3.1. SOCIAL AND VERBAL INTERACTION AND SLA:</b> .....	<b>7</b>
<b>3.2. LANGUAGE AS A COMPLEX ADAPTIVE SYSTEM:</b> .....	<b>8</b>
<b>3.3. ZONE OF PROXIMAL DEVELOPMENT AND CHILDREN’S INFORMAL SLA:</b> .....	<b>9</b>
<b>3.4. DIGITAL MEDIA APPLICATIONS AND LANGUAGE LEARNING:</b> .....	<b>10</b>
<b>4. METHODOLOGY:</b> .....	<b>11</b>
<b>4.1. STARTING THE SELECTION OF PARTICIPANTS PROCESS</b> .....	<b>11</b>
<b>4.2. THE PARTICIPANTS:</b> .....	<b>12</b>
<b>4.3. ETHICAL CONSIDERATIONS:</b> .....	<b>13</b>
<b>4.4. DATA COLLECTION:</b> .....	<b>14</b>
4.4.1. <i>The Childs’ Activity log:</i> .....	<i>14</i>
4.4.2. <i>Interviews with the parents:</i> .....	<i>15</i>
4.4.3. <i>Parent-child Sessions:</i> .....	<i>16</i>
4.4.4. <i>Timetable for how long the sessions were:</i> .....	<i>19</i>
<b>4.5. DATA ANALYSIS:</b> .....	<b>20</b>
<b>4.6. RELIABILITY AND VALIDITY IN QUALITATIVE RESEARCH:</b> .....	<b>21</b>
<b>5. THE FINDINGS:</b> .....	<b>22</b>
<b>5.1. FIRST SESSION:</b> .....	<b>22</b>
▪ <i>First session with Mother L:</i> .....	<i>22</i>
▪ <i>First session with Mother E:</i> .....	<i>22</i>
5.1.1. <i>Theme 1: Previous knowledge of Informal approach of language learning:</i> .....	<i>23</i>
5.1.2. <i>Theme 2: Deviating from English as the TL:</i> .....	<i>24</i>
5.1.3. <i>Theme 3: Confidence and hesitation:</i> .....	<i>25</i>
<b>5.2. SECOND SESSION :</b> .....	<b>26</b>
5.2.1. <i>Theme 1: The parents acquainting themselves with the digital media their children use.</i> .....	<i>26</i>
5.2.2. <i>Theme 2: (reoccurring) Hesitation:</i> .....	<i>27</i>
5.2.3. <i>Theme 3: (reoccurring) Deviation from the TL:</i> .....	<i>28</i>
<b>5.3. THIRD AND FOURTH SESSIONS:</b> .....	<b>28</b>
5.3.1. <i>Theme 1: Confidence.</i> .....	<i>29</i>
<b>6. REQUIREMENTS FOR DESIGN:</b> .....	<b>31</b>
<b>7. STUDY LIMITATIONS:</b> .....	<b>35</b>
<b>7.1. NON-PROBABILITY SAMPLING METHOD: (CONVENIENCE SAMPLING METHOD)</b> .....	<b>35</b>
<b>7.2. NUMBER OF PARTICIPANTS:</b> .....	<b>35</b>
<b>7.3. TIME LIMITATIONS:</b> .....	<b>35</b>
<b>8. CONCLUSION:</b> .....	<b>36</b>
<b>REFERENCE LIST</b> .....	<b>37</b>
<b>PARTICIPATION IS VOLUNTARY</b> .....	<b>42</b>
<b>CONTACT INFORMATION</b> .....	<b>42</b>
<b>CONSENT TO PARTICIPATE IN THE STUDY</b> .....	<b>42</b>

# 1. Introduction:

Due to the integration of modern technologies into all aspects of everyday life, children of all ages now have access to various online applications allowing them to have contact with content in several languages. This provides parents with an opportunity of which they can take advantage to further better their child's engagement with the second language; in the case of this research the English language.

This study is aimed to help parents direct and support the child's second language learning by taking advantage of the opportunities today's technologies contribute.

In this study the participating children's online activity in the Target Language (TL), English, was first monitored in order to find what to incorporate in the informal sessions, and the parents were prepared beforehand on what to do during the said sessions in an endeavor to find out the exact point where parents need outside help to further guide the child, whether the help was technological (web search, application search etc.) or verbal out-side help from the observer of the sessions.

The foundation of this research first started as a project for a design course, it was initially an idea for an application devoted to parents who have children between the ages (1-6) who are learning a second language. The original thought came after a conversation with a friend who was having trouble being more involved in her children's language learning process, she had no means to monitor what they were learning and how much they were actually acquiring. Hence, the idea of an application which assists parents with what they need to overcome the difficulties of monitoring the learning process of their children through technological means.

This Application was supposed to help parents navigate and monitor their child's language acquisition process, by making sure the child actually incorporates what they have learnt when they used their app for the Target Language. The initial thought was to provide parents with a guideline which includes advice on how to incorporate the Target Language (TL) in their informal language practice sessions with their children, with tips on how long each session should be, alongside examples of the structures and grammar and how to make sure the children have completely acquired the aforementioned structures. It essentially depends on what the child learns on their own, and according to their online activity the application will

notify the parent of what their child has learnt and how they should incorporate the new information into the informal sessions the parents have with their children in the TL.

Since there is no clear way for parents to keep up with what their children are learning and how much they are exactly acquiring, this study attempts to fill this gap and aspires to present these parents with a way that not only helps them monitor the learning process of their children, but also allows them to be highly involved in said process. This study intends to determine how parents can make their child use the TL in their normal daily speech, and what they need to achieve that in order to reach a point of spontaneous production of TL; this study opens the door for future research to create a system that meets the needs of said parents.

This is not a study to prove whether the parents' interaction and involvement in their child's learning process is beneficial or not but based on the assumption that the involvement of the parents is an important aspect for a spontaneous production of the TL in an attempt to connect the formal ways the child learns a second language through online media activity and the informal method of learning through informal Parent-child sessions.

This study tries to answer the following research questions:

- 1- What do parents need to make use of their child's engagement with digital media to support Second Language (SL) learning?
- 2- How can parents integrate their children's experience with digital media in SL learning sessions?
- 3- Where do parents need support in guiding their child's SL learning?

## **2. Theoretical Background:**

The understanding of language learning according to Behaviorism (early 1950s) was viewed as a process of habit formation in a sense that children learn their mother tongue through repetition and mimicking the speech of the adults. For them, children were born with a blank slate in their brain and this slate will be stocked with habits children learn through repetition and mimics of adults' habits and speech. However, as opposed to behaviorism, Chomsky (1950s) argued that children acquire their mother tongue effortlessly and at an amazingly short period of time, with the help of what he called the Language Acquisition Device (L.A.D); a device all normal children are innately endowed with; Chomsky's innateness hypothesis and his theory of general Grammar that states that all human languages have basic principles which are common between all of them, i.e. all languages have verbs and nouns etc.

These theories paved the way for Piaget's Cognitive Development theory (1980s); child's language reflects the development of their logical thinking and reasoning skills. The theory itself deals with the nature of knowledge and how humans acquire it gradually, construct it and then use it. According to Piaget, children have great cognitive abilities which they can manage and develop. To him, cognitive development was a progressive reorganization of mental processes resulting from environmental experience. He suggested that language is conditional to knowledge and understanding acquired through cognitive development. Even though his theory supports sharp stages rather than continuous development, it gave Vygotsky (1980s) his starting point in his theory of Social Interaction and Zone of Proximal Development, which came to further develop Piaget's theory that children learn individually. Vygotsky noticed that children learn language quite naturally and spontaneously, but they would not advance very far in their development on their own. His theory proposes that language exists for the purpose of communication and can only be learnt through interaction with adults or older children. The theory stresses the importance of environment and culture in which language is being learnt during early childhood development, because this social interaction provides the child with the first means of making sense of their own behavior and how they think of the surrounding world. From there Vygotsky developed his theory on Zone of Proximal Development (ZPD) which refers to the difference between what a child can achieve on their own and the tasks they cannot

complete without the help of an adult. He suggested that caregivers and educators can encourage children to advance their individual learning through tasks within their ZPD.

Tomasello (2003) presented his theory, Functional Theory of Grammar, or (usage-based theory) which takes into account the way language is actually used in a communicative context and that in the beginning, children build up their language through very concrete constructions built around individual words or frames on the basis of speech they hear and use.

According to Tomasello, children learn their language from their language experience, and language structure emerges from language use. This theory takes constructions guided from meaning pairings to be the basic unit of assumption that children learn construction by first mastering specific cases before going on to generalize and use the constructions productively with other lexical items. It also emphasizes the cognitive representations as patterns repeated for communicative reasons to become automated and conventionalized.

The theory of ZPD introduced the term Scaffolding, which refers to the help received by the learner from a caregiver or a teacher or even a more competent peer to permit the learner to work with in the ZPD.

At this stage, theories of language learning are focusing more on social interaction resulting in the Social Interaction Theory (SIT). This theory became an explanation of language development highlighting the role of the interaction between the developing learner and the linguistically knowledgeable adult. Since this research tries to establish a connection of formal educational methods used to support the linguistic development of the Second Language (SL) of a child with the informal methods which might be used by the parents to encourage a smooth transfer of knowledge of what they learn on their own from applications or formal settings i.e. classroom.

The theories this research will focus on are the ZPD - because finding out the requirements parents need to be involved in their child's learning process demands figuring out the line between what the child can learn on their own and where the parent needs to intervene to offer help for the child where needed.



The other theory is the SIT, because the core of this research is based on how the interaction between parents and children in the TL helps the child to learn better and more spontaneously, for interaction serves several functions which can lead to L2 development. For instance, it provides learners with both a source of input as well as opportunities to produce L2 output, it also prompts learners to notice the gaps in their knowledge and to receive feedback on their production (Phakiti et. al. 2018).

This section provides the reader with a brief historical evolution of language learning theories leading up to the theory appropriate for this study.

### 3. Literature Review

This literature review will be concerned with discussing the influence of interaction on the process of learning in general, and language learning in specific, and determining the borders of the Zone of Proximal Development (ZPD) when it comes to children's Second Language Acquisition (SLA) in informal settings, and the concept of a language as a complex adaptive system.

Finding appropriate articles in the field of language acquisition and learning is a challenging task to say the least, due to the massive number of articles concerned with the topic. However, when it comes to the subject of informal acquisition of language, the number decreases drastically.

The narrower the subject became the more difficult it was to find suitable material for the for solutions. The initial search started in the database of the library of Gothenburg University using key terms: "interaction in TL", "active transfer of knowledge", "Zone of Proximal Development", "Social Interaction Theory", and "Interaction in Second Language Acquisition (SLA)." The query returned thousands of publications; the results were refined using "date of publication" filters but the number was still too high. To decrease the number, the word "Informal" the main search and the results were finally narrowed down to a logical number. Therefore, a systematic literature review was conducted to provide context for this study. The main purpose was to identify the key themes as well as possible suggestions was added to the main search and the results were finally narrowed down to a logical number. This research attempts to connect the formal ways of learning a language – child's usage of a language-learning application – with the informal method of acquisition – the Parent-Child sessions. In a study done in Norway, (2012) by Erstrad, on the digital youth beyond the formal and the informal; Erstrad emphasizes on the idea that schooling and media are the most time-consuming aspects of the youth's daily life, and in a broader scope than the previous research, their study tries to find the inter-connections between the media and schooling, in an attempt to understand the path young people are learning moving from one setting (formal) to another (informal) as experienced by the youth.

### **3.1.Social and Verbal Interaction and SLA:**

In the beginning of the research I stated that this study is not to prove or discuss whether the parents' involvement and interaction in their child's language learning process is beneficial or not, but is rather based on the assumption that the involvement of the parent in informal ways is an important aspect in ensuring a spontaneous production of TL (Aldrige, et. Al., 1995). In a study done in North Wales in a bilingual community, the results show that parents play a decisive role in fostering and monitoring language development in their children, and a crucial role in the decision of raising the child bilingual or monolingual. Also, the more information the parents had about their child's language development the more the child benefited in their development. Furthermore, apart from the part parents play in the linguistic development, the parental behavior affects the child's speech output, according to Poulain, et. al. (2018) in a study conducted on the developmental change of mother-child interaction in Germany, the results suggested that mothers adapt to the advancing behavior of their child concluding that their input was a compelling factor in the child's speech production, and that children benefit from the approximately richer input provided by book-reading.

In a related context, Knauer, et. al. (2019) conducted a study which objective was testing several variants of a cost-effective intervention to increase the cognitive stimulation by parents and improve emergent literacy skills in children through a dialogic reading-training program which used culturally and linguistically appropriate books for a low-literacy population. This study concluded that a parent-child book-sharing program will ensure a positive effect on the caregivers' reading interaction with their children. These studies show that the caregiver, or parent, benefited linguistically from these interactions just as the child has.

According to Al-wossabi, (2016), an interactive environment can be arranged only if the learners are allowed to take part in understanding, analyzing, and shaping their learning developmental process. They should be encouraged to express their needs so they can discover the gaps in their interlanguage; whether these gaps are linguistic, grammatical or sociocultural. Thus, interactive environments are crucial for developing oral skills in the TL.

Moreover, recent approaches of SLA are social in their basis foundations, with cultural and cognitive aspects embodied within these approaches, assuming that learners are initially provided a vast exposure to language. In most cases, though oral interaction and learning resolves form a variety of emotional and thoughtful systems that emerge from social

experiences; interaction plays a beneficial role in EFL (English as a Foreign Language) context where practicing the TL beyond classroom context is possible, Ahmadian, et. al. (2017). In this study, the caregiver, the teacher, provided the young EFL learners with opportunities to collaborate with each other in a community-like environment so that learners who have different ZPD for the same TL can benefit all the same, and more advanced learners can provide assistance for those who do not. In a similar research done on accompaniment of adults while the children used a word-learning application, the presence of the adult not only encouraged the child to stay longer on the app but also helped with a relatively noticeable spontaneous production of the Second Language (L2); while children are learning a second language, it is always an advantage to take the time to learn together, providing evidence that concentrated drills can have the outcome of positive changes in communication behaviors, Walter-Laager, et. al. (2017).

Similarly, in a research done by Jabur, (2016), it was found that learners' interaction in informal settings, i.e. outside of classrooms, encourages them to arrange, explore, integrate, and share knowledge, ideas, concepts and experiences, this encouragement assists in the development of L2 skills and abilities acquired not only by experience but also through formal and informal communication.

Learning the language in an informal setting includes learners' interaction with native or non-native speakers in the target language; according to Krashan (1982), language acquisition can happen in formal and informal language learning settings only if language learners are directly involved in intensive exposure to a comprehensible TL input. Accordingly, social interaction can contribute to SLA; Bahrani, et. al. (2014).

To sum up, the importance of interaction, both social and verbal, in Second Language learning, determines how crucial it is for parents to interact with their children in the TL to guide and support them in the process of learning.

### **3.2. Language as a complex adaptive system:**

An adaptive system, as defined by Barra et al. (1999): “adaptivity (is) the ability to be aware of a user's behavior and to take into account his or her level of knowledge in order to be able to provide the user with the right kind of instructional material”. Namely, in order to give the learner the correct pedagogical data, the instructor must keep in mind and be aware

that learners have different levels of abilities and experiences, and for the learning process to go smoothly, the instructor must be able to identify these differences.

In a different research, the study of SLA shows a well-supplied demonstration on the complexity of salience, the adequacy of recasts relies upon the striking nature of the linguistic structure and the learner-level/target gap. Ellis, (2016).

Furthermore, instructions can have a strong influence on the language development processes, and from a Complex Dynamic System view, so that learners do not just transfer or reproduce their language, they rather actively transform it; in this system, language is not considered to be static, but rather a dynamic system that is constantly changing and always developing. Larsen-Freeman, (2018).

In conclusion, considering language as an adaptive system while preparing for an informal session with a child in the TL, one must keep in mind that children develop the language at different rates and speed.

### **3.3. Zone of Proximal development and children's informal SLA:**

The Zone of Proximal Development (ZPD), as a theory proposed by Vygotsky, refers to the difference between what the child can do on their own and the tasks they need the help of an adult to achieve. In a study done by Rassaei (2017) to explore the effects of dynamic and non-dynamic corrective feedback on second language development mediating the learner's ZPD, they proposed two questions, inquiring whether the learners, who got corrective feedback which targets the learners' ZPD advocating second language development, exceeded the learners who received the non-dynamic corrective feedback which is the corrective feedback that is not fitted for the learners' ZPD. The results of the study prove that the learners who received the feedback that was mediating their ZPD outperformed the ones who did not. The study also suggests that, even though the students who got the non-dynamic feedback may reach the right answers or correct response, this feedback may not be constructive to all learners because it does not discern between the different abilities of different learners and will not meet their needs.

Continuing in the same direction, Ghahari, et.al (2019). In a detailed report explored the growth and improvement of Dynamic Assistance (DA) into SLA within the borders of ZPD, stating that even though it is an "infant" field but it provides the instructor with types of

mediation that help the learner of L2 to become self-regulated, and emphasizes on the importance of engagements between learners who vary in levels of language awareness and control. As for when it comes to DA expansion to all types of education, they left the door open for psychologists to contribute to SLA pedagogy, and for all levels of education they insisted on the idea that teacher education should be a continuing process achieved by leadership, instructions and communication.

#### **3.4. Digital media applications and language learning:**

In a study that chose the application Duolingo as a bilingual platform for learning a second language, Ahmed (2016), hypothesizes that said application advocates simultaneous bilingual acquisition for beginners, in this case study one young participant (12 years old student), used the application for learning English and Spanish simultaneously, the results according to Ahmed (2016), the application can be used for bilingual acquisition but it has its own limitations like the application though helpful it does not substitute a caregiver, i.e. teacher; but it provides the learner with the attraction to remain engaged by providing games method.

In another study that is closely related to the previously mentioned case study, Ye (2014), studied the validity, reliability and concordance of Duolingo in English tests, and linking said tests to the TOFEL iBT scores for non-native English learners, in this study Ye discusses the notion that even though the application is helpful in the acquisition of a second language it does not need as much effort to pass the test as other tests i.e. TOFEL needs.

This section has attempted to provide a brief summary of the literature relating to the theories chosen to support this study (ZPD, Social interaction and second language learning, language as a complex adaptive system and the usage of digital media application in language learning) and the effect these theories have on learning in general and language learning in specific.

## 4. Methodology:

This section is divided into five sub-sections providing a description of the process on how this study came to be, from the beginning of the process of selecting the participants, to the method with which the data was collected and analyzed, and an insight into the ethical considerations of this study, alongside a description of the games played by the parents with their children during the parent-child sessions .

Overall, this study can be described as a Qualitative study, where interviews with the parents were recorded, sessions of the parents with their children in the TL were also recorded, transcribed and thereafter the collected data were analyzed thematically (see analysis of the data).

### 4.1. Starting the selection of participants process:

To ensure the saturation of the qualitative data , the participants needed to meet certain criterias such as being bi-lingual or multi-lingual, with one or more children of ages between 5 and 7 (according to Chomsky's innateness hypothesis the language acquisition device is activated until the age of approximately 8 , Chomsky 1950s), and attempting or already teaching their children a second language.

Because Gothenburg has a large educational research community, national and international students wanting to research in the pedagogical field, this led to schools being bombarded with researchers making it difficult to coordinate with a school to find suitable participants for this study, in such cases small or medium towns are more open to help in research; for this reason the study took place in a medium sized town in Sweden . The first step was at a primary school, where I met with the principal, who sent post to the parents of the first and second-grade students inviting them to a meeting at the school, and the parents who wanted to volunteer came, then, I had individual structured interviews with every parent that attended the meeting to carefully select the participants. The interviews were in the form of verbal Q&A, and questions were regarding:

- Educational background
- Linguistic background
- Number of children they had, and ages of said children.
- Number of languages do the children speak.
- Future plans to teach their children English.

- Are they Okay with the idea of a stranger visiting their house to observe their children using the TL?
- Do they have time in their schedule to have these sessions?

Because the participants were chosen based on their willingness to participate, their availability and the above-mentioned structured interviews, it was a non-probability sampling method, convenience sampling method specifically.

At the end of this stage only two families fit the requirements of this study, due to either the parents' inability to speak English or the unavailability of time slots in their schedule for said sessions.

#### 4.2. The Participants:

Based on the previously mentioned interviews, two families only were able to participate due to either the parent not willing to teach their children other languages than being taught in schools, or inconvenience in the time schedule of the parent or even in several instances where the parent does not speak the target language, in this case English. Both parents signed a legal consent document which clarifies that they agreed to have their children in the study, observed and recorded (see appendix 1), and the children's assent was acquired. (ethical considerations)

- A single mother from Syria, background in IT and security, used to help Arab students in their schools (translation if needed), she speaks Arabic as her mother tongue, English as a second language, and Swedish, she participated in a similar study that focused on Arabic as the TL for the children (Appendix 3).
  - 1- A six-year old girl, speaks Swedish as her mother tongue, learning Arabic in special courses provided by the municipality she lives in, and English.
  - 2- A seven-year old girl, speaks Swedish as her mother tongue, learning Arabic in special courses provided by the municipality she lives in, and English.
- A Single mother from Burma, background in social science, used to work as a teacher; she speaks Burmese as a mother tongue, Swedish and English, no previous experience in informal methods of learning languages.
  - 1- A six-year old boy who speaks Swedish as a mother-tongue, and his mother is trying to teach him English.
  - 2- A four-year old girl who speaks who Swedish as a mother-tongue, her mother wants to teach her English.



\*For the anonymity of the children (see Ethical Consideration section), the children are named by letters:

- 7 years old girl: F
- 6 years old girl: S
- 6 years old boy: A
- 4 years old girl: R

\*Mothers also requested to be anonymous (see Ethical Consideration section), so we are also using letters:

- Syrian mother: L
- Burmese mother: E

#### **4.3.Ethical Considerations:**

During the last decade, a lot has changed in regard to what establishes a good research ethics especially when it comes to children, and a fundamental question is whether special consideration should be paid to the when children are included in research, Harcourt, et. al (2014). But when it comes to Sweden, the construction of the regulation is, as quoted below, built around two key concepts “(a) Act on Ethical Review of Research Involving Humans (SFS 2003:460; hereinafter the Ethical Review Act or the Act) and the ethical review boards that have been established to review research covered by the Act; and (b) the individual researcher’s professional ethics”. However, since it is a study concerning the parents, and the children are present but are not the center of the observation or analysis, the parents signed a legal consent forum from the University of Gothenburg (see appendix 1) which specifies that they received a verbal explanation of the content of the study, how the study would take course, how the participation of their children would be, and finally that the children would be recorded in sessions with their parents (explained later on). In this case of study, both of the mothers refused pictures to be taken (only audio recordings) and they requested anonymity for both themselves the children. Accordingly, as explained before, all the participants (children and adults) were given letters to differentiate.

While children may be legally incapable of giving informed consent, they nevertheless may possess the ability to assent to or dissent from participation. Out of respect for children as developing persons; all four participating children were asked if they were willing to take part in the study, if they approve to have the sessions in the TL, and if they are okay with an observer recording them during the sessions.

#### 4.4.Data Collection:

As mentioned before this is overall a qualitative study and the data was collected in a form of two sets of audio recording, each set consisted of four. This method was decided in regard to both the theoretical perspective chosen and the anonymity requested. The process of collecting the data was in four steps for each session; *first step*: go through the history log of the children's online activity that is connected to learning the language (websites, mobile applications, etc.) ; *Second step*: a session with the parent alone to discuss what their child's activity was about, how to integrate it in an informal session in the TL, and which key words or phrases they should focus on, advice on how to apply certain tenses (in the case where grammar structures were focused on) and how to handle the session. *Third*, the Parent-child sessions where they either discuss random and general subjects in the TL or play a game; games included memory cards games (with penalty of losing one card for every word spoken in any language apart from the TL), word games (the parent gives a letter in the TL and each child would give three or more words, points were given for correct words, and a point taken as a penalty for every word not in the TL) or online games (provided by a website for the British consulate see reference list or excerpts in Findings ). During the Parent-child sessions, I "should have been" an observer, but every time the parent felt stuck or ran out of subjects to talk about they asked me to intervene, not to mention several instances where the parent would deviate from the TL (in all cases English) to either the mother tongue or Swedish, here I had to remind the parents to go back to speaking in the TL. The *final step* was a short interview with the parent (not recorded but notes were taken) to discuss where they felt they needed the help and how difficult they thought the best way to provide them with the help for future references.

The reason behind the second set sessions (parent-child sessions), was an attempt to define where the parent needed the help when it comes to the usage of the TL or integrating the TL in their daily life.

##### 4.4.1. The Childs' Activity log:

Kids nowadays have access to a large number of technological devices, and for this study, tablets, mobile phones and laptops were looked through in regard to language learning activities e.g. applications for learning English, YouTube videos...etc. which took a long period of time but a necessary step to find out the children exact actions and current linguistic competence in the TL.

In this step, all of the children's electronic devices (mobile phones, tablets, laptops) were looked through to find out what type of technology they employed to learn, and at which stage they were (their current competence according to the applications history log). This step was done before every interview with the parents in order to know what information to provide the parent, and how the Parent-child session would take form, whether a game or a conversation or utilizing a website (the British consulate: learning for children) (see references). Then a search through the web to get the most appropriate tips on how to teach the structures for children, and the parents were prepared accordingly.

Looking through the activity was initially just looking through the applications they used, taking notes of current status and monitoring the progress in general, meaning what they have learnt, at which level of the TL were, how often they were using these applications, and before each session, observing if there was any new progress in said applications, then doing a search on the web on how to incorporate the progress in the parent-child session.

#### 4.4.2. Interviews with the parents:

Based on the search through the child's online activity, the parents' sessions with their children were designed, the purpose of these sessions was to inform the parent of what they were going to do with their children and how they were going to deliver information and guide/navigate the parent-child sessions.

For example, if the child's latest or current activity was grammatical, the session with the parent would be in regard to which structure their child has learnt, and advice on how to integrate that specific structure into the session with the child.

If the child's activity was in vocabulary, the parent was introduced to the games they can play with the child and the rules of the penalty (when speaking in a different language than the TL) or reward for following the rules of the games; whether in the form of candy and sweets or points and cards.

The aim here was to help the parent gain perspective on what their children are learning and how they can smoothly implement such information in the informal sessions.

#### 4.4.3. Parent-child Sessions:

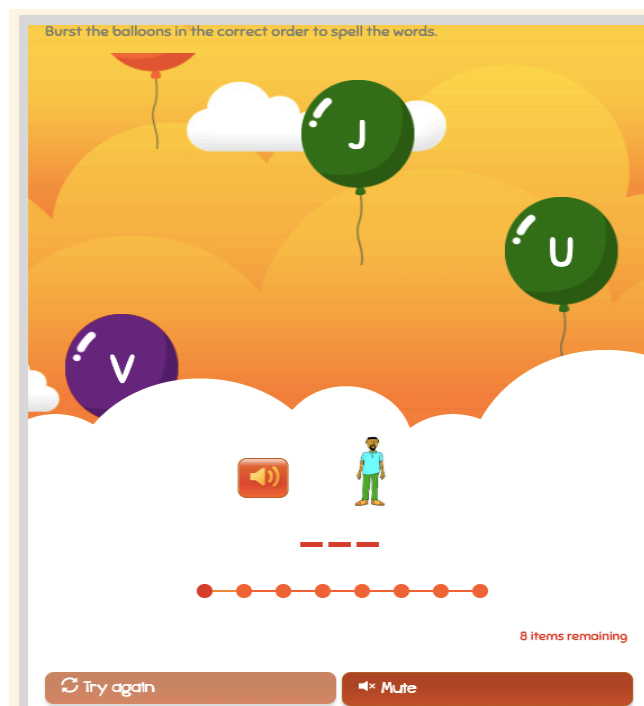
During these sessions neither the parent nor the children were allowed to speak in any language but the TL, to limit the usage of languages other than English a system of points was introduced, a penalty of losing a point for deviating from the TL, this penalty was applied on both the parents and the children.

The objective of these sessions was to find out the point where the parent needed help, how they needed the help and how advices might be delivered to them.

##### - Games played at the sessions:

Games were played, subjects were discussed, but there were occasions where the children were not interested in talking so outside help was provided in the form of a website where children can play various helpful grammar games.

One of the games played was on the British council website for teaching children English (see references list); the focus of this game is spelling and vocabulary, where there is a man who says a word and the child should click on several flying balloons containing letters in the right order to spell the word the man is saying. (Figure 1)



*Figure 1 Spelling*

Another game on the website was played; the focus in it is on the syntactic structure of tenses in English , the child has to click on bubbles containing words in the correct order to make a full sentence, with a timer ticking on the side, (Figure 2 , 3).

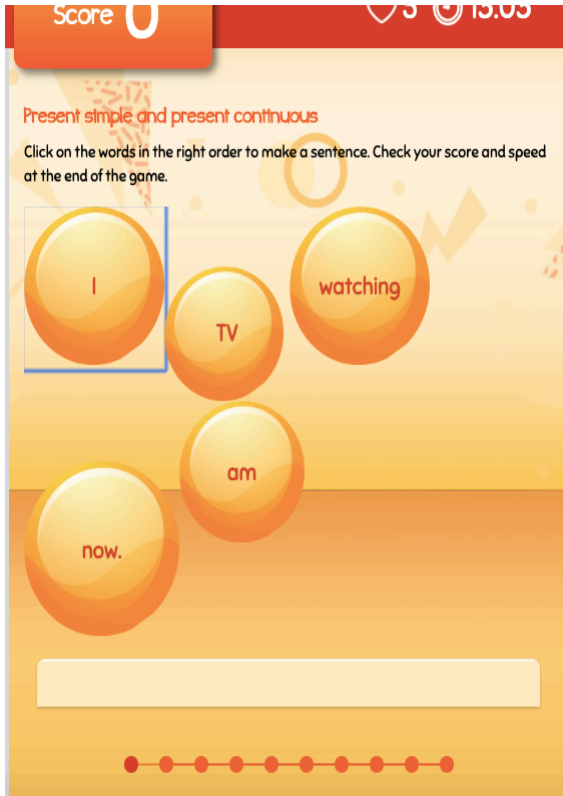


Figure 2

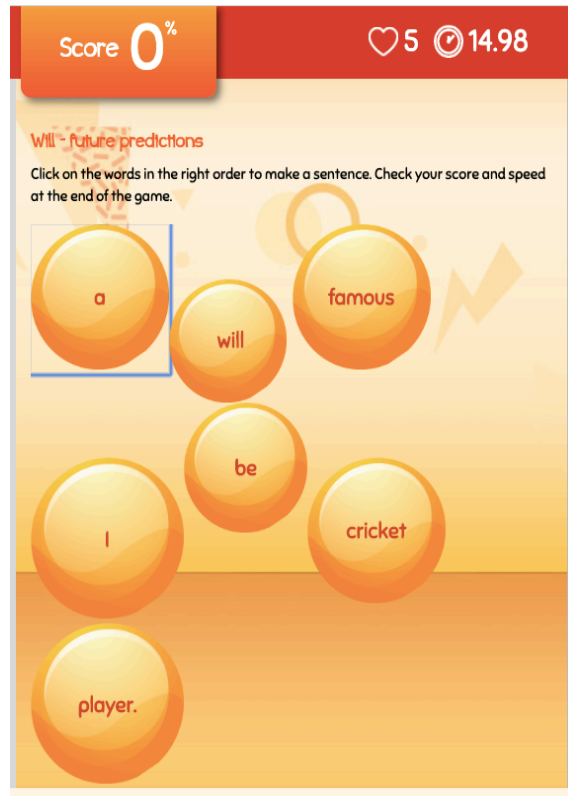


Figure 3

(Figure 5), shows another game that focuses on the grammatical structures, but here the kids have to drag and drop words in the correct order to their correct position in squares to complete sentences.

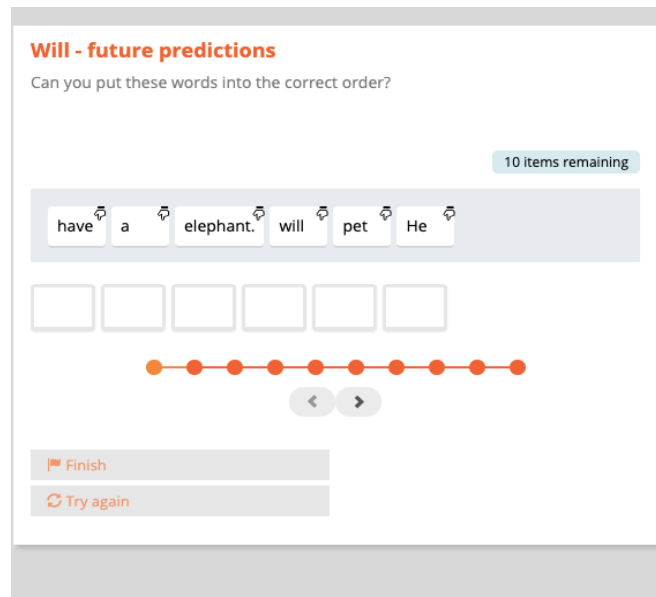


Figure 5

When focusing on vocabulary, several games were selected:

A. The letters game (as called by one of the children):

The parent gives a letter in the TL and the children must give several objects' that their name starts with the said letter.

B. The memory cards:

This game is played with in a game, the outside game, is the regular memory cards game, set on face-down cards and the players take turn in flipping the cards, each two similar cards are kept with the player who flipped them; the inside-game is a subject that was either discussed by the parent with the child focusing on a certain grammatical structure, or focusing on certain words the parent wanted to focus on i.e. school objects, home objects, etc.

The penalty during this game was in the form of giving up one of the cards the player has won..

The previously mentioned website provided a game where the child is given 9 to 12 randomized words with the same number of pictures and the child dragged and dropped the word suitable for its picture. (Figure 6)

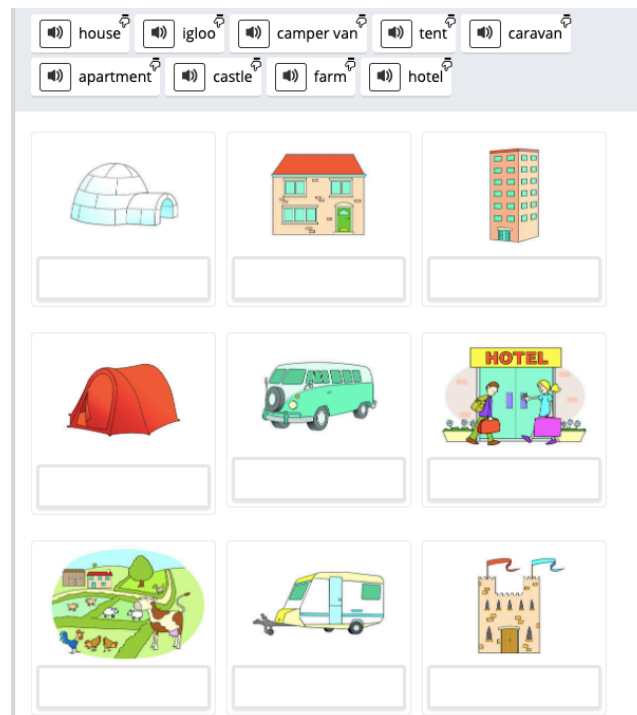


Figure 6

4.4.4. Timetable for how long the sessions were:

Because the sessions were based on schedule of the mothers, they vary in length, Table 1 and Table 2, provide a timetable that clarifies How long each solo interview with each mother was and the time every parent-child session took, where table 1 clarifies the length of the sessions and interviews of the L family, and Table 2 the E family.

These timetables are according to the length of the audio recording taken at each of the aforementioned steps.

<b>Session number</b>	<b>Interview with the mother</b>	<b>Parent-child session</b>
<i>The First Session</i>	20 minutes	40 minutes
<i>The Second Session</i>	15 minutes	45 minutes
<i>The Third Session</i>	15 minutes	One hour
<i>The Fourth Session</i>	15 minutes	35 minutes

*Table 1*

<b>Session number</b>	<b>Interview with the mother</b>	<b>Parent-child session</b>
<i>The First Session</i>	25 minutes	35 minutes
<i>The Second Session</i>	20 minutes	Almost 45 minutes
<i>The Third Session</i>	15 minutes	40 minutes
<i>The Fourth Session</i>	15 minutes	45 minutes

*Table 2*

#### 4.5.Data Analysis:

The data was collected in a form two sets of audio recordings, each set consisted of only four audio recordings due to the time restrictions in the participating mothers' schedules, these recordings varied in length from ten minutes to a maximum of one hour.

First, the recordings of the sessions and interviews were transcribed according to the previously mentioned ethical considerations where all the participants were given pseudonyms, hesitation was marked with words such as "*ahm*", the deviation from the TL, whether from the parent or the child was translated to English and marked as translated in brackets, from the recordings the patterns of conversations were listed and then coded, the next step was carefully defining the underlying and overall themes are defined as units derived from patterns found in the recordings, subsequently, each theme was analyzed explained and described, from this analysis the results presented at the end of this study were deduced with respect to the parents own point of view, Aronson (1995)

As a method to summarize and address the gathered data in this study through interviews, the thematic analysis was employed due to its flexibility and straightforwardness. This method was selected to interpret and analyze the data through description and interpretation of the interviews recorded, Braun et. al (2016).

The themes found, explained and detailed in the findings section were the main focus of this study, even though other themes relating to the children's linguistic development, they were condensed in other themes relating to the mothers' improvement, because research concentrated on the parents needs and requirements.



#### 4.6. Reliability and validity in qualitative research:

Taking into consideration that this was a qualitative study with a small sample of participants, it is important to be careful not to generalize the results. The purpose of this study was aimed to finding out the point where parents need help in their guidance of their child's second language learning, and an attempt to connect the formal way the child learns the TL with an informal way in the form of session with their parent.

Ensuring reliability in a qualitative research is challenging, especially if the sample of participants is considerably small, but in order to make this study more valid certain measures were taken into consideration, such as trying to decrease the respondents bias by getting the participants, in this case the mothers, to be as honest and open as possible in their answers and comments, also researcher bias was contemplated in a sense that the previous knowledge of the observer plus the personal assumptions were minimized, and lastly, the reactivity of the observer, which means the influence the presence of the observer had on the sessions and the possibility of said presence might have changed the results of the research. Robson (2002)

## 5. The Findings:

The aim of the analysis of the gathered data was to answer the following research questions:

- 1- What do parents need to make use of their child's engagement with digital media to support Second Language (SL) learning?
- 2- How can parents integrate their children's experience with digital media in SL learning sessions?
- 3- Where do parents need support in guiding their child's SL learning?

This section provides a description and thematic analysis of the data gathered throughout this study in form of stages, each stage is a session and every session consist of three steps; the child's digital media activity in learning the TL, the interview with the mother alone, and the parent-child session. For every stage, the hemes found were presented with clarification and excerpts from the transcriptions to support said themes.

Throughout the later stages, themes seemed to repeat themselves, with some minor changes, all is detailed and presented with excerpts to support them.

Transcription and themes analysis were done for each family's session respectively.

### 5.1. First session:

#### ▪ First session with Mother L:

As mentioned above, *L*, has previous experience in both teaching and informal methods of learning languages, but unfortunately, the study she had already participated in did not focus on making use of the digital media activity of the children due to difficulties in finding online applications to teach Arabic for children but rather on the informal ways she could use to get her daughters to speak Arabic more fluently; during this interview with *L*, the content of *F and S* online English language learning activity indicated that the girls were learning new vocabulary related to school tools and the daily routine, so *L* was advised to focus on getting the girls to talk more about their daily habits and their activity in school with emphasis on the *Subject pronoun* this way the girls would get to practice vocabulary about the school elements and the present simple structure.

#### ▪ First session with Mother E:

As opposed to *L*, *E* has no previous experience in either using technology in children's language learning process, or in the informal ways of acquiring languages.

So, the purpose of the interview with her was to introduce her to both the ways she can how her children are using digital media to learn English and the informal approach in language acquisition.

Unfortunately, A and R's digital media activity in language learning was close to non-existing, so the alternative was for the mother to decide the areas of focus in the first parent-child session. From her perspective, the focus was to be on vocabulary, so, she played games with her children, spelling games (see *Figure 1*) or word games (see *figure 6*).

#### 5.1.1. Theme 1: *Previous knowledge of Informal approach of language learning:*

One mother had previous experience in the informal approach the other mother did not, but throughout the parent-child session the previous experience did not play a big role in controlling the sessions or in guiding them.

Both mothers had a hard time maintaining control over the course of the first session and both of them needed an outside help which was provided in a form of nod for encouragement or a sound of "ahem" as a sign to change track of conversation, or in some instances a full sentence.

Excerpt 1 (Mother L):

*L: Can one of you tell me what you do every day?*

*S: (laughing) We wake up, eat go to school and play.*

*L: (In Arabic: What else?)*

*F: Mom lost a point. (to I in Swedish: can you keep points)*

*(Interviewer) I: Well you just lost a point .*

*L: (In Arabic: Let's continue our conversation!)*

*I: (Uhm)*

*L: Let's continue.*

Excerpt 2 (Mother E):

*E: children, we will play a game today on the laptop, and we can only speak in English.*

*A: (in Swedish: Do we have to?)*

*E:(in Swedish: yes we do, we are helping her, referring to me, in her work and we can play a game).*

*I: Can we please focus on English?, children we will play it like this, every time you say a word in Swedish you will lose a point and at the end the winner will get candy.*

*R: (in Swedish: I don't feel like speaking English).*

*I: R, do you know how to speak English? ( she nods her head), well, if you don't feel like speaking, watch you brother play the game and if you like it you can play. (she nods again).*

*A: (in Swedish: who will count the points?).*

In both excerpts both mothers had the same information on how to guide the session beforehand, yet both of them needed help in maintaining the control they needed to keep the flow of the session as informal as possible and as smooth as possible.

#### 5.1.2. Theme 2: Deviating from English as the TL:

This theme reoccurred throughout all the sessions but with changes according to the times the mothers strayed from the TL. All the participants, mothers and children deviated from the TL, in this case English; as a way to attempt to avoid such divergence, the penalty and reward system was applied, as in losing a point for every time another language was spoken, penalty, or candy for the person who strayed less, reward.

Surprisingly both mothers lost more points than both of their children combined.

Excerpt 3: (Mother L)

*L: (In Arabic: What else?)*

*L: (In Arabic: Let's continue our conversation!)*

*L: (in Arabic: it's not correct to say that) {then in English} your friends ARE.*

Excerpt 4: (Mother E)

*E:(in Swedish: yes we do, we are helping her, referring to me, in her work and we can play a game).*

*E: (in Swedish: if you speak English you can play).*

L, deviated to Arabic and sometimes Swedish, way more times than the children did, and by the end of the session the children were correcting their mother and pointing out to her mistakes. When asked about the hardest thing in these sessions; L's answer was quick, "continuing to speak in English"

Excerpt 5:

*F: Mom lost a point*

Excerpt 6:

*A: (laughing) Mom and R lose points*

### 5.1.3. Theme 3: Confidence and hesitation:

Also a reoccurring theme, with respect to how the confidence of the mothers evolved during each stage. This theme is discussed from the perspective of TL usage, how confident the mothers were when speaking the TL and despite the fact that both mothers were fluent speakers of English, they looked for help and reassurance for every instance they had to correct an error done by the child.

L, had previous experience with such sessions, but yet confidence wise, her stress was evident in the solo interview and the parent-child session,

Excerpt 7:

*“L: Are there key words to focus on?”*

*L: Anything else I should pay attention to?*

*L: (looking at me) would you help me?”*

Regardless of the fact that E speaks English, her stress prevented her from noticing mistakes done by the children.

Excerpt 8:

*A: haha, it funny.*

*E: you like it?*

*I: E, can you correct his mistake?*

*E: oh yes! A, we say it IS funny.*

*I: E! look at what A is doing and try to correct him, please!*

During the session it was evident that that the mother was freaking out, E explained that she felt “everything was out of control”, she felt the constant need to look advice or help from me, even though she knew how to correct her child’s mistake, and how to motivate the other child to participate, she still sought out-side help.

## 5.2. Second session :

- Second session with mother L:

This week was dedicated to vocabulary for the children since no progress was found in any of the applications they used to learn the language, for that purpose two games were played at each parent-child session.

As a start for the session, a set of memory cards game was needed, the children and their mother played with the memory cards while having a conversation in the TL, the subject of the conversation itself was not important, but the penalty in this game made the children more focused on the TL, giving up one if the already won cards for every time another language was used.

- Second session with mother E:

Before this session, the children's online activity indicated that they were practicing countable and uncountable nouns; so the mother was introduced to a game on the previously mentioned website, then she got acquainted with the games the children would play, with tips on how she should explain the difference. This grammatical feature is not easy, especially for a young child who is recently learning the language, but with the guidance of the mother, the child acquired the simplest way to determine if a noun is countable or not.

### 5.2.1. Theme 1: The parents acquainting themselves with the digital media their children use.

At this stage both mothers are putting more effort into knowing how their children are using the digital media to learn English and providing their children with the motivation to use it more often. During the second session the mothers disclosed that they encouraged their children to use the technology more and they are using the TL in their daily speech with the children.

Excerpt 9:

*L: this week I noticed the girls playing on an application and they were reading new words and vocabulary!*

*I: we can get them to speak more today, while playing games.*

Excerpt 10:

*E: A's teacher at school told me that he is paying more attention in English. I think he is starting to like the language.*

*I: has he been using English more often at home?*

*E: I think so, I saw him playing on his phone a game that was in English.*

### 5.2.2. Theme 2: (reoccurring) Hesitation:

During this session, E and L , showed more confidence in themselves than the first time, and more focused on the usage of TL, except for the instances where they felt explaining in the mother tongue of the child would make it easier for them to understand.

Detecting the child's ZPD was not as challenging for the mothers as they feared but figuring out the correct way to handle the situation was, they both were still worried of how they should practice alone with their children.

Excerpt 11: (playing a game on countable and uncountable)

*E: what is the word?*

*A: bread.*

*E: where do you think it should be?*

*A: (in Swedish: I think it is not here , referring to the uncountable).*

*E: think darling do you say a bread?*

*A: (In Swedish: we say bread).*

*E: and?? (A dragged the word to its correct category)*

Excerpt 12:

*L: (to me) how should I get her to do it right without telling her the answer?*

*I: well try to get her to focus on the main verb and then try to get her to form a sentence on her own, and then according to her sentence she can click on the bubbles.*

*L: F can you tell me what you are doing?*

Excerpt 13:

*L: is there any word you don't understand?*

*F: no!*

*L: ok! Pick a word and say it out loud!*

*F: I, and there is am, I know they are first.*

*L: ( looking around for support) what can come after that?*

*F: I know it is not TV, it is Watching.*

*L: that is good. Now can you do it all correctly?*

### 5.2.3. Theme 3: (reoccurring) Deviation from the TL:

The penalty aspect was applied until the end of the last session but the theme of deviation from the TL reoccurred in order to clarify that the instances of divergence were becoming less present.

Excerpt 14: (in a 30 minutes session deviation occurred once by the mother and once by each child)

*S: Mom can we go to the market today?*

*L: Sure, what do you want to buy?*

*F: We can buy things to make a cake!*

*L: do you mean Bake a cake?*

*F: ( in Swedish: sure) (shocked)oh No, I spoke in Swedish!*

*S: give mommy one card, I will win today; so, mom.. cake?*

*L: (In Arabic: Absolutely!)*

*S: (to me) Mom spoke Arabic! Take a card from her.*

Excerpt 15: (even though the deviation in this instance was to explain for A, A counted it as a point)

*A: mom, cheese is on big piece, I can put it in this one. (refers to the countable nouns).*

*E: are you sure? Think darling ( in Swedish: do you say one cheese or just cheese?)*

*A: (laughs on how his mother lost a point explaining to him) put it in this one. ( points to the uncountable nouns).*

### 5.3.Third and fourth sessions:

By the third session the children and the parents have gotten accustomed to the process of the sessions, the penalty and reward and they were preparing better for the sessions.

During the fourth session, the mothers were able to find out on their own what their children have learnt, and how to find tips and advice on the internet on how to acquaint their children with certain structures, and how to guide the sessions on their own without outside help.



### 5.3.1. Theme 1: Confidence.

Excerpt 16: (Fourth session with L)

*I: So, you need to find out what the girls have learnt recently!*

*L: I know that at school their teacher is teaching them the past simple, and on this application on their phone they were playing a game that is kind of related to vocabulary.*

*I: good, then do you know what to do today?*

*L: we can have a conversation; I feel that they like the concept of the game more than they like the practice of the language.*

*I: what will you discuss in the conversation?*

*L: what they did this week at school? How was their last weekend?*

Excerpt 16 shows L's evolved confidence in her ability to find out what to do during the sessions and how to guide the children when it comes to structures in the TL.

While L gained confidence in her ability to integrate her children's online activity in a controlled informal session, E, was still skeptical and hesitant.

Excerpt 17:

*E: I don't think I can plan the session on my own.*

*I: look, all you have to do is find out what is A's latest activity, and search on the internet on how to teach what he learnt, get as much as you need information, and that's about it.*

To sum up, this section attempted to answer the research questions proposed by analyzing the data collected, defining themes connected to the mothers and describing their relation to the study and finally providing transcriptions to support said themes.

Even though there were themes that were connected to the children and their clear progress in using TL such themes were not discussed in details but rather condensed within other themes, for the focus of this study was the parent and not the child's progress.

This study attempted to find out the areas the parents need help when they are guiding their children's second language learning process in an informal way, in the sense that the child does not feel like they are in a classroom, through sessions where they had simple

conversations in the TL, playing games in the TL, and all was based on their interaction with media, these sessions were designed on the online learning activity history log.

From a technological point of view, the best way to avoid the stress the mothers had, and the long process of searching through the child's learning online activity, is to have an application the children use to learn the language and this application would be connected to the parents' technological device and notifies them about every progress the child does on their own.

According to both mothers, if there was a system they can use before and during the sessions that would make it easier for them to prepare and handle the sessions, such system should be clear, easy, straightforward, with simple tips, or maybe a check list, and a schedule or a reminder to set the said sessions.

## 6. Requirements for Design:

The literature used to support this study was chosen on the basis of its connection to the subject of this study in general and the theory behind the work in specific. This study discusses the usage of informal sessions in the TL based on formal systems the children used to learn the language, hence, the literature had to be based on the connection of the formal with the informal. The theory that was most appropriate for this study is supported by the remaining parts of the literature that focused on the social interaction theory in SLA and the ZPD.

The purpose of this study was aimed to finding out the point where parents need help in their guidance of their child's second language learning, and an attempt to connect the formal was the child learns the TL with an informal way in the form of session with their parent. but, observation over two months in this study, and three months in closely related study (see appendix 3) The method chosen for this study allowed to explore how the informal interaction benefited both the child and the parent in a sense that the parent had to use the TL more often than they usually do.

Results are similar and promising in both studies. According to notes from both of the mothers participating in this study, and the mother from the previous study, the children show signs of being more confident in using the TL, they use the TL more often and in regards to their competence, they are making less errors when it comes to certain structures (*verb to be, articles, singulars and plural, etc.*).

Initial observations suggest that, parents need detailed explanation and description on how to integrate TL structures into the sessions they have with their children; aside from that they need a form of a guideline to help them navigate their sessions, and they need a fast way to know their child's progress; technologically, at the current time, their only way is to go through every application, and then searching the web for proper tips.

*Excerpt 18:*

*“Interviewer (I): According to F and S’s online activity they are learning new vocabulary related to the school tools and daily routine!”*

*Participant (L): Yeah? (in Arabic: I feel that we should focus on grammar rather than just words).*

*I: well, if you have a conversation with them about their routine in school, or the daily routine in general, and emphasize on the Subject pronoun and the verb to be*

*that would mean they practiced some of the new vocabulary and the simple tense structure.*

*L: Are there key words to focus on?*

*I: yes, your children speak mostly in Swedish, it has one verb to be, English has three, try to focus on that.”*

From general observation, the children were first interested in the concept of counting points and trying to win, so they tried hard to focus on the TL.

*Excerpt 19:*

*“F: Mom lost a point.”*

*“A: (in Swedish: who will count the points?).”*

During the second session, E, showed more confidence in herself than the first session, and more focused on the usage of TL, except for the instances where she felt explaining in the mother tongue of the child would make it easier for him to understand. Detecting the child’s ZPD was not as challenging for the mother as she feared but figuring out the correct way to handle the situation was:

*Excerpt 20:*

*“E: what is the word?*

*A: bread.*

*E: where do you think it should be?*

*A: (in Swedish: I think it is not here , referring to the uncountable).*

*E: think darling do you say a bread?*

*A: (In Swedish: we say bread).*

*E: and?? (A dragged the word to its correct category)”*

In comparison between the first session L had with her children, and the third one that was observed, the improvement of her ability to correcting certain structures was evident, and her deviation to different languages got to the minimum. It is likely, that if a specific technological

help was provided with simple instructions, these sessions would be easier on the parent to plan and guide.

*Excerpt 21:*

*“L: S, F, how was your visit to your friend’s yesterday?”*

*F: I had fun, we played with her barbie’s dream house, it is big, then we eat fruits.*

*L: you ATE fruit?*

*S: we ATE apples and then we played in the garden outside. We catch a butterfly in the net.*

*L: you caught a butterfly!*

*F: why Caught not caught?*

*L: ( confused) ah... that is the right way to use the word catch with something happened in the past.”*

During this last session, with both mothers, it was apparent the areas where they needed help in preparing for the sessions and in handling the sessions. Both women agreed that it was quite difficult to go through the online learning activity of their children, and they both needed a set of steps they can read and follow during their sessions with their children.

*Excerpt 22: (on preparing for the sessions)*

*“L: I know that at school their teacher is teaching them the past simple, and on this application on their phone they were playing a game that is kind of related to vocabulary.”*

*“L: we can have a conversation; I feel that they like the concept of the game more than they like the practice of the language.”*

*Excerpt 23: (on areas of difficulties)*

*“E: So, A, can you do it on your own?”*

*A: yes,*

*E: ok, show me.*

(A) takes his time to solve them, by the time he was done, the mother did not intervene much, so, I had to;

*I: A? what did you do at school this week?*

*A: (eagerly) we play football today!*

*I: oh that's nice, what else?*

*A: I like video games, (he gets up to show me the games).*

*E: A! do you speak English at school?*

*A: yes!"*

One of the mothers disclosed that she needs a way of guidance during these sessions; if she wanted to continue on this course on her own she needs a way to know what to do. As a suitable and temporary solution, she was pointed to several websites on how to teach children and was told to try and get advice and guidelines from said websites.

According to the parents' opinion, making the children practice the TL in this way made them practice their own in two ways; the first, so they would know how to teach their children and second, so they won't teach their children something wrong. Both of the mothers agreed on the idea that a system in the form of an application or something, they can use would provide a great deal of help, a system that would be simple, clear, and straight to the point; such system would provide them with tips and advice in plain presentation they can read before the parent-child session and a check list of key words to use during said sessions, and last but not least a schedule or a reminder for the sessions.

Even though the children showed clear progress in using TL this progress, as important as it is, is not the focus of this study; This study attempted to find out the areas the parents need help when they are guiding their children's second language learning process in an informal way, in the sense that the child does not feel like they are in a classroom, through sessions where they had simple conversations in the TL, playing games in the TL, and all was based on their interaction with media, these sessions were designed on the online learning activity history log.

## 7. Study Limitations:

### 7.1. Non-probability sampling method: (Convenience sampling method)

This sampling method is considered to be the easiest and most common method for selecting participants; even though it has advantages such as less expensive and there is no need for a list of all the population elements, however, it does not come without limitations, the first is the difficulty in controlling bias and variability and the second is the inability to generalize the results outside the sample, Acharya et. al. (2013)

### 7.2. Number of participants:

The small sample of participants, was a critical limitation in this thesis, but after the previously mentioned structured interviews at the selection process, the parents who did not speak English, the Target language in this study, were excluded, then the parents who did not have time slots in their schedule were also excluded, all those factors led to a small sample of participants that consisted of two families.

### 7.3. Time limitations:

Even though the families were gracious in their help, the time this study took was limited due to narrow schedules the two single mothers had, all the sessions were done over the weekends to avoid added stress and complicating their daily routine; This also led to a small number of sessions and subsequently, audio recordings.

## 8. Conclusion:

With the advancement of technology and digital media used by kids in their daily lives in general and for educational purposes in specific, some parents are struggling to keep up with their children's learning process, this study was aimed to help parents integrate the digital media usage in language learning in informal sessions to support a steady transfer of knowledge of what the children learn on their own and where they need help in their learning process.

Despite the limitations mentioned, this qualitative study shows that parents could be supported in making use of their children's digital media consumption for second language learning by receiving guidance during language learning activities. The results suggest a set of requirements for any system designed to deliver such guidance. This includes a suggestion of a clear simple system with straightforward advice and plain presentation of tips (list to read before sessions and list with bullet points to guide the sessions) they need to implement in their sessions in the Target Language (TL) with their children, with providing short explanation features, and reminders of sessions with schedule and a check-list.

Bringing it to a close, this study opens the door for future research to provide the parents with the system that meets their need without the presence of the outside observer.



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## Appendix 1: Verbal Q&A (participants selection process):

The questions asked during the structured interviews done for selecting the participants for this study

1. How old are you?
2. What educational degrees do you have?
3. What do you do for a living?
4. What languages do you speak?
5. How many children do you have?
6. How old are your children?
7. How many languages do they speak?
8. Are you ok with the idea of me visiting your home? Collecting data from your children's devices?
9. Do you have the time for scheduled sessions to have with your children in the TL?
10. Are you ok with the idea of me observing and recording your sessions?

## Appendix 2 The legal consent form signed by the participating mothers



UNIVERSITY OF GOTHENBURG  
FACULTY OF EDUCATION

### Making use of children's digital media consumption

Helping parents to support their children's English as a second language learning

#### **Information to study participants**

We would like to ask you to participate in a research study. This document contains information about the study and what your participation would involve.

#### **What is the study and why do you want me to participate?**

The research project is conducted by Farah Khaddour, a master's student researcher from the University of Gothenburg, under the supervision of Dr. Thomas Hillman. The purpose of the project is to understand what parents need from a system to help them guide their child's second language learning process. Your participation is important because the recorded interviews with you and the recorded sessions you will have with your child will be the cornerstone of this study.

#### **How will the study be conducted?**

Through a series of eight sessions of about 20 minutes each, beginning in March, a researcher will conduct a study in your home where they take notes about your language learning activities. The study will audio record language learning sessions and interviews with parents/guardians and their children.

#### **What will happen with my personal data?**

All data collected as part of the study will be handled in accordance with the General Data Protection Regulation (EU 2016/679). Recordings will be stored in such a way that no unauthorized persons can gain access to them. All participants who are part of the recordings and notes will be anonymous in the reports from the study with all names changed to fictitious ones in the texts to be published.

In accordance with the General Data Protection Regulation, you have the right to request access to the data collected about you in the study and to request its deletion. If you would like to access your data, contact the researchers listed below. The data protection officer at the University of Gothenburg responsible for the handling of personal data, Kristina Ullgren (kristina.ullgren@adm.gu.se), can also be contacted if you have concerns about the way your data is handled. If you are dissatisfied with the way that your personal data is handled, you also have the right to report your concerns to the Swedish Data Protection Authority, which is the relevant regulatory agency.

#### **How can I get information about the results of the study?**

You are not required to engage with the results of the study, but any reports resulting from the study will be made available to participants. You are also welcomed to contact the researchers listed below to discuss the study results.

## Participation is voluntary

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. If you would like to withdraw from the study, contact the researchers listed below.

## Contact information

Farah Khaddour

Dr. Thomas Hillman

PHONE

076 618 2205

EMAIL

thomas.hillman@gu.se

## Consent to participate in the study

I have received oral and/or written information about the study and have had the opportunity to ask questions. I can keep the written information.

I consent to participate in the study, Adaptive system for informal education for child's SLA. The requirements parents need to ensure their child is learning the second language efficiently.

I consent to collection and handling of my personal data as described in the information to study participants.

Place and date: \_\_\_\_\_

Children's name(s):

\_\_\_\_\_

Parent/guardian  
signature: \_\_\_\_\_

Parent/guardian  
signature: \_\_\_\_\_

## Appendix 3 Previous study (A Portfolio for an Application for Parents).

This study was done in order to build a portfolio for a design course, the idea was building an application which parents can use to know how to be involved in their children's language acquisition process. This application is connected to the applications the children use to learn the TL; then gives the parent a notification on their smart phone containing information about what the child learnt, and it provides the parent with tips and advice on what the child has learnt and how they should practice with their children.

For this study, almost the same steps were taken, except for the contents interview with the parent before the parent-child sessions, only because the TL was Arabic, which was the parent's mother tongue, so specific guidance and detailed description to how they should guide the sessions was not really needed.

At the beginning of this study the children participating were not confident in saying a full sentence in the TL, but after almost three months, a parent-child session once a week; the children showed evident progress in the TL, to the extent of having full conversations in Arabic.

Because these results are visible, and are related to the aim of this study, the project and its results were mentioned; but, one must keep in mind that both studies were done on small samples of participants, so, one must be careful not to generalize results.