

Tablets implementation in Danish public kindergartens



(<http://i-cdn.phonearena.com/images/articles/224322-thumb/kids-playing-with-tablets.jpg>)

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Abstract

The project is written to present the overview of the qualitative research about digitalisation in kindergartens and parent opinions about it in Roskilde municipality. The digitisation process of public services and educational institutions currently is in the peak and government has prepared the strategy for 2016-2020, when more and more sectors will have the implementation of digital tools. The observation through parents' perspectives about their knowledge of advantages and disadvantages are being investigated in the report. Additionally, the research brings a focus on positive and negative reflections on government decisions to implement tablets in kindergartens, as well as movement by parents against an implementation, which was widely discussed in the media and reasons behind it. Moreover, the qualitative research also presents Danish parents' values and what are the expectations of parents in the daily life at home, as well as kindergartens.

The theoretical framework which involves Public innovation theory and Risk theory correspondingly are discussed in this report. The Public Innovation theory is presented in consideration of how a government is developing the digitalisation plans, together with how Danish government collaborates with citizens and parents of children, who are the main actors in this process. In contrast, the report discusses the Risk theory and how the risks are involving parents, who in some cases ignore the dangers of uncontrolled tablets usage.

The findings present results which involve primary and secondary data, as well as government propositions. The discussion demonstrates the values and advantages of digital devices which children and their parents have the need for. On the contrary, it is discussed that there is a lack of collaboration and awareness in parents perceptions within the digitalisation process, which is demonstrated in the conclusion.

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1. Introduction

All over the World new technologies and digital media development in many sectors are rapidly increasing. According to The Boston Consulting Group e-Intensity index results (BCG, 2016), which shows embraced Internet and technologies usage, Denmark stands in the 4th position out of 85 countries. To begin with, this country distinguished oneself with a rapid and pervasive adoption of mobile phones already in 1990s (Mascheroni & Ólafsson, 2014). Today, Danish government continues to develop and implement economic plans with a magnificence aspiration of digitalisation implementation in public and private sectors. The first one, which was called called *"A simple, effective and coherent public sector - Debate about Common Public Digitalisation strategy 2011-2015"* highlighted IT as a necessary skill to be able to succeed in the labour market and education. Furthermore, the encouragement from Danish government for digitising country even more with the following strategies for 2020 and 2025, expose the strong and consistent position about the the digital growth. The Boston Consulting Group (BCG, 2016:6) argues, that it is a good step towards becoming leading country in the World and emphasize benefits, values for the individuals, corporations and society, such as access to higher life standards, lower prices, businesses productivity which would lead to overall state's efficiency. These plans and strategies are highly influential to the preschool educational programs. On the contrary, the government and citizen collaboration sometimes can may bring new social dilemmas when there is no balance between them. Raising a child in a century where everything is becoming more and more digitalised could make one feel surrounded by possible hazards and risks, however from the other's perspective it is a world of opportunities leading to a new way of child's development. This project will investigate how parents, whose children are 3-6-year-old are perceiving the implementation processes of digital technologies in public kindergartens in Roskilde municipality, Denmark. Furthermore, the focus will be set set on emphasising what kind of negative and positive impacts determine their strong opinions and how do these processes have affected both children and parents lives.

1.1. Problem area

Today's technology is spreading at increasing speed and rapidly changing, meaning that society constantly is in need to deal with digitalisation process. It becomes unavoidable and that leads to adaptation and integration to the society by implementing it in all kind of institutions. Education is not an exception where digital gadgets start to play an important role as the learning tool. Tablets can offer increased opportunities for engagement, entertainment, and now even educational purposes. The children usage of tablets (NPD Group, 2014) increased rapidly compared to the previous years in the various ages from 2 to 12. In addition, the number of governments from the late 1990s develop plans for investments regarding Information and Communication Technologies (ICT) within education area (Pelgrum, 2001:164). The rise of Internet has lead educational institutions to the fast adoption of ICT development and facilities in short periods of time (Ibid.).

Denmark is a great example of how innovations are taking over the education's methods with a goal to make students and teachers more engaged and motivated. The government in collaboration with Kommunernes Landsforening (KL) and the Danish Municipalities developed a digital strategy for the period of 2011-2015 with a goal to implement tablets in kindergartens. This is achieved by encouraging kindergartens to introduce technology that strengthens children's technological skills and prepare them for school from an early age. They argue (Rambøll, 2014:13) that if IT is used with the proper and intentional manner, this could lead to better results, competent young people and raising common prosperity.

However, new digitalisation strategy caused the dispute between two different opinions by government, parents, teachers: for and against digital technologies and their implementation in kindergartens.

“Parents are concerned that digital and mobile media heighten the possibility for risk, and yet all of the social indicators seem to suggest that these media do not create new risks or even increase the number of young people who experience negative consequences.” (Clark, 2013: 6)

Typical recommendations by the education professors from American Academy of Pediatrics (Aap.org, 2016) is, not to start using any of digital devices under 2 years in child's life. For children age 2 through 5, it is recommended that the screen time would be limited to fewer than two hours per day and adult would supervise a child when using the device or watching television. According to DR media researchers, the yearly (2014) report informs that around 90% of children have an access to tablets at home and 30 % of kids between 3 to 6 years own their own tablet. (TV2, 2016). However, the conflicting evidence on the value of technology in children's development is already widely debated and discussed among parents in Denmark on the Internet. Parents indicate the concerns and worries about the increased amount of time children spend with technology and media, since it is now additionally used in institutions. Moreover, heated debates about the necessity of it and why municipalities require IT being part of the curriculum developed into the protest against iPads and other IT in kindergarten through signature gathering, parents' freedom to opt out of IT in day-care centers. The petition has more than 5,500 signed supporters (Nyheder.tv2.dk, 2016). The position they hold implies that children should experience the world through natural sensory explorations, like movement, nature, play, in addition to that social skills development, real-life situations in order to grow into strong and creative adults (Ibid.). Furthermore, argumentation comes with support from researches, data, statistics from all over the world. Various professionals, several health organisations and educators argue how technology usage in early age may have a significant influence on obesity and other health problems, addiction, concentration and social issues. In addition to that, technologies must be used appropriately, only when there is actual outcome of it, otherwise, the usage is considered irrelevant and even disturbing for the child's development (NAEYC, 2012: 3,7). What makes people to question technologies even more, in regard to the well-being of their children, is that top tech industry executives and owners choose to let their children to tech-free classrooms. They claim, that these type of schools and their *“teaching methods are designed to foster a lifelong love of learning and teach students how to concentrate deeply and master human interaction, critical thinking, creativity, and problem-solving skills.”* (GOOD Magazine, 2016). Although, each person has a personal opinion of what is best for his or her children, however, it creates a controversy, that tech-industry leaders offer their products to the masses and promoted as a life improver and encourages to use it as an educational tool, prefer their children to avoid it.

Guided teaching materials, thoughtful supervision and proper use of digital gadgets may create a safer environment for child's development. Therefore, technology and media should not replace activities such as creative play, real-life exploration, physical activity, outdoor experiences, conversation, and social interactions that are important for children's development. Technology and media should be used to support learning, not an isolated activity, and to expand young children's access to new content (NAEYC, 2012). Kindergartens mainly use it for creative playing and encouraging digital creativity through taking pictures, making video clips, recording sounds. With more carefully selected methods, teachers have a possibility to enhance children's cognitive and social abilities.

“Preschoolers have varying levels of ability to control technology and media, but with adult mediation they can demonstrate mastery of simple digital devices and are often seen using the tools as part of their pretend play.” (NAEYC, 2012:6)

However, the issue of our interest is whether the tablet is currently playing the right role in the educational process. In addition to that, if implemented tablets power is not underestimated by pedagogues, parents and government.

This project aims to define more specifically how these issues are being carried out by authorities, perceived by parents, and what determines their dispute between opinions and main concerns in order in order to understand behaviour and quality of people's opinions. We believe,, this project could be perceived useful not only as an academic interest, but it can also create new possibilities for future researches within the field.

1.2. Problem formulation

Research question:

How do parents perceive the implementation of tablets in the public kindergartens in Denmark?

Sub questions:

1. *How does the government decisions affect citizens and create diffusion?*
2. *How are parenting standards presented and what are the reasons to react positively or negatively of their kids usage of tablets?*

2. Methodology

The chapter explains how our methodological approaches are involved in our project research process. In addition, it presents the combination of all methods as well as the primary and secondary data and choices that been made in the process. Also, it describes the limitations and critical aspects that were made in the project and how our research has been concluded.

2.1. Research strategy

This chapter presents the purpose of using qualitative methods and how it is applied in our research.

The research question of this project states that our purpose is to investigate how do parents perceive the digitalization process. Therefore, we have chosen to adopt qualitative research and analyses based on the qualitative data which we received by interviewing target group. Mainly, we focus on the deeper understanding how parent feel and what they believe influences their children's future and health issues. Consequently, qualitative research according to Bryman (2008: 384) very often delivers us the qualitative knowledge, where we as researchers, in the epistemological level, are mainly influenced by interpretivism of the research, as well as the interviews which we conduct. In addition, one more important purpose of this research is to investigate how the specific individuals experience digitalisation process and interpret specific knowledge and behave according to social factors. Through the scale of interpretivism, we investigate the different social actors (Bryman, 2008: 19) and use

ontological considerations in how the differences between social phenomena can have various outcomes in individual's lives.

Furthermore, our research also involves some statistical background mainly from the government side. It is used in order to broadly understand a quantity of municipalities using new technologies, and if that is reflected in the global scale. On the contrary, we do not intend to analyse this data, therefore we rely on the qualitative approach the most. To support this argument, we intend to investigate people's experiences, feelings, values, risks and benefits of the processes instead of focusing on the scale of quantity. As Bryman states (2008: 398) that the tendency of qualitative research is through the open-ended strategy, therefore, we adopt this strategy in order to answer our research question.

2.2. Abductive approach

Theory in our research plays a significant role. Consequently, we use them in abductive approach, which leads us through the research process. The theories and ideas are generated few times in the process, which leads to abductive conclusions, which are based on the best practices of the problem. The main role of abductive research that it is reflected in pragmatic perspective, where human experiences are taken into consideration and later on reflected in practical implementation and explanation in why people behave like this at some specific social situations. As Egholm argues, the abductive reasoning could even have a new way of thinking, which leads to unknown objects and their possibility to be identified (2014:173). We are also interested not to find the complete truth, but more likely to understand or reveal phenomenon.

Through pragmatical scale, we tend to use epistemological thinking of explaining the behaviour in individualities, moreover, we also adapt hermeneutical approach in order to interpret some of those opinions in the best practices.

2.3. Qualitative interview development

The following part of methodology presents the purpose of the qualitative interviewing which was implemented in our project, the reasoning for us was to ask specific questions and how this process could be developed better with current experience.

Qualitative interviewing, according to Kvale and Brinkmann (2015: 33), seeks the knowledge that could be presented in normal language, focuses on interviewees life experience and does not seek for quantification. Through our interviewing, we kept a focus on openness and descriptions of people's meanings and perceptions about the raised issues. The qualitative method usually is very related to the point of view of interviewee and presents rich, deep data (Bryman, 2008: 393), therefore, we use this method to answer the qualitative question, which is investigated in the report. Consequently, our aim is to investigate the perceptions, feelings, experiences through the eyes of parents, which will give our research unique data.

2.3.1. Interviewees

The interviewing for this research has been accomplished by five different participants, who were both male and female in a different age range from 25 to 42. The purpose of choosing this type of group of people occurred because of practical issues. The gathering of people was very time-consuming and did not bring results we expected in the beginning. In addition, our participants did not want to be named in any documentation, so therefore, we do not have their names and specific places where they kids attend kindergartens, they agreed to be presented as Roskilde municipality residents. The interviewer in the qualitative research usually is much closer than through the other type of research and that gives us more understanding of the behaviour and makes it easier to interpret.

2.3.2. Conduction of the interview

We developed the interview questions based on the structure according to Alan Bryman and his writings on Social research methods (2008: 371). Firstly, the interview was developed from the point of the research question, how it would lead us to answer and understand raised research question. The interviewees were asked questions in relation to our theoretical approaches and the interest field. The other step was to gather people which were from the relevant field and municipality. Though, the process collection of the interviewees was one of the hardest tasks, because people were not willing to share the opinions about personal things, therefore, we ensured that their names, kindergarten names will not be mentioned in the presented data. The interviewees were asked many different qualitative questions such as:

- 1. What are your priorities for buying things for your child?*
- 2. What is your position in the implementation of digital technologies in kindergartens (for or against)?*
- 3. If you kid owns a tablet, do you have any specific rules regarding tablets usage at home, i.e.: limited time, using tablets only with supervision, parental control apps and etc.*
- 4. How do you think things have changed when children were introduced to digital technologies in kindergarten?*
- 5. What kind of human values in this digital age should be created in kindergartens?*
- 6. What are the advantages and disadvantages for using tablets from young age and based on what knowledge do you think so?*
- 7. What could influence/change your opinion regarding children tablet using?*

These questions were developed in consideration to our theories of Risks and Public Innovation, which are explained in theory chapter below in depth.

We call interviewees as Interviewee number 1, number 2 and etc. The other step in our interviewing process was to talk with people and transcribe their experiences and responses on our raised open questions. In addition, later in the process interpretation was the most significant for our analytical chapters. One more step, which is important to be mentioned is to conceptualise our theoretical issues and combine them with an interpretation of data, which is used in the main paper. The last point of this qualitative interviewing was to write up the

conclusions, which has to be done in a credible way and that audience is convinced with the results (Bryman, 2008: 372).

2.3.3. Transcriptions

Transcription of the qualitative interview is usually considered as the biggest disadvantage. It very often takes a lot of time to transcribe the recordings and later on transformed to the other level (Brinkmann and Kvale, 2015: 205). In qualitative research, the role of the researcher is very significant, therefore, through transcription the researcher can present and interpret in the position they have put himself in to. In our case, the transcribing process was implemented through the recordings of the interviews, luckily, we conducted interviews in English and that lead us to faster process because we did not involve translation from Danish language, which was time-consuming in other parts of the research, where information was given in only in Danish. In addition, not all interviewees wanted to be recorded, therefore, one interview was based on notes but not the real time recording.

2.3.4. Coding

The coding technique is used in many qualitative forms of researches, as well as ours. In order to understand and interpret interviews we had used the coding method, which seemed the most relevant in our case because of the theory that we have in mind before we collect the interviews and sorting relevant ideas to the codes which we find important according to each sub-question. *"The central idea of coding is to move from raw text to research concerns in small steps, each step building on the previous one."* (Auerbach and Silverstein 2003:35).

Moreover, this method helps us to be open, according to Bryman (2008: 552) it is essential and important to understand that there could be coded in more than one code and way. To add, we are also aware that coding method, as any other qualitative method, can have disadvantages and this one has a problematic case of losing the real context and forgetting how it was said, what were the other feelings behind the words. Therefore, we try to keep the focus on what each person has been saying, as well as repeating recordings, that reflects through the sensitiveness.

At first, it is crucial to pick the most suitable coding method, it is important to understand what does the research question seeks to understand and then determine the coding method (Saldaña 2009:60). This means that different coding methods produce a different kind of data, thus suitable coding will produce data that will help us answer our research question. Saldaña suggests (2009:61), due to our research question, to focus more on the knowing and understanding several methods that may fit our research which are: *“Descriptive, Process, Initial, Versus, Evaluation, Dramaturgial, Domain and Taxonomic, Causation, an Pattern coding plus Theming the data”*. However, there are also the cases based on a theoretical framework or conceptual framework that may determine the coding method (Saldaña 2009:61). Though in our case, we are more focused on our actual research goal, therefore we analysed all the recommended coding methods and determined that the most suitable is the Process Coding. The main point of this type of coding is the capture the action of the data with gerunds (Charmaz 2002 cited in Saldaña 2009:96). It is suitable due to the fact, that process coding is not only a method to capture one's action but also their conceptual actions that may express how they actually feel, which is our goal (Saldaña 2009:96). Process Coding is also used together with other coding techniques, however, it can stand alone when smaller projects are conducted (Saldaña 2009:96). This technique tackles also the *“psychological concepts such as prejudice, identity, memory, [and] trust”* (Willig 2008:164 cited in Saldaña 2009:96), which the interview questions also ask about and it can contribute to our research.

Short sample of our coding tables :

Statement	Central argument	Interpretation
<i>“First rule, it would be not to use it or try to use for very limited amount of time. There is time limits. I try to lead, supervise with applications, offer what she could see, learn or play. I try to make it more educational than entertaining.”</i>	Rules, limitations, control, Educational Application, Authorities need	Creating mediation strategies, being closed-minded about digital technologies and not letting them in the home environment, following recommendations of authorities.

<p><i>“No particular risks at mind, trusts the kindergarten that they know what they are doing.”</i></p>	<p>Authorities need + Risk</p>	<p>Depending on the authorities, external expertise. No risks out of tablets implemented in kindergarten.</p>
<p><i>”I think it is generally very important to focus on cognitive and social skills, and if you tend to give up and lean up to the easier alternative, it is not necessarily the best way.”</i></p>	<p>Cognitive and social skills vs digital devices</p>	<p>Improving cognitive and social skills are more important than digital technologies.</p>

Table 1, 2016

(NOTE: Rest of the coding table is in Appendix)

2.3. Philosophy of science

This section will review philosophical aspects related to our chosen topic that is based on Pragmatism and Hermeneutics ideas. We will consider these approaches within the structure and the theories we apply. In order to answer our research question, we are not looking for an absolute right or wrong, basically, we seek to understand parents perspectives and how do they deal with problems of implementation of tablets. The big part of the data we use is from primary qualitative sources, thus, in order to understand the phenomena we will have to interpret our findings and analysis.

Both pragmatism and hermeneutics have similarities and are connected in highlighting qualitative point and looking for meaning rather than explanation. They are also both concerned with humankind, their actions and experiences (Egholm 2014:89,168). However, these approaches have differences. Hermeneutics are concerned mostly how the interpretation is conducted with the guidance of investigators prejudices whilst pragmatism is more focused on how the previous actions have influenced current situations (Egholm 2014:89,169). Though, both of the approaches main focus are human beings (Ibid.). We will go through these points and expose them more accurately in the sections below.

2.3.1. Pragmatism

Pragmatism as a philosophical approach was established in a beginning of 20th century, by American philosophers William James, George Herbert Mead and Charles Sanders Peirce (Egholm, 2014: 168). The approach emphasises the focus on practices and actions and it has greatly influenced the thinking of the individual, society and communities (Ibid.). Our research process coincides with the idea of pragmatism that we are not trying to find the truth, rather we are trying to understand the phenomena between individuals, institutions and statements (Ibid.: 170), more precisely how the problem arises and creates different opinions that stimulate relevant actions. We pay most attention to qualitative position, with the premise that reality is established on people' various perspectives, their behaviour, and solutions they present. As an example, we can imagine that one of our interviewed parents is very satisfied with the innovation by the government that implemented tablets in his daughter's kindergarten. He sees it as a part of the natural digital evolution of advanced societies. Even more, to support this position he decides to buy his child personal tablet, in order to encourage the kid to develop the IT skills at home. In doing so, based on his personal opinion, he takes pragmatic steps, which potentially affects the child's future development and the way she spends her time. While one might think so and support the policy, other can have completely opposite opinion about the same thing. Parents may object to the new implementation, because they believe that tablets pose a number of threats to their children, so to stop tablets usage in kindergarten, they can take appropriate action, such as to agitate the other parents, to collect signatures on a petition that the new policy would be suspended. This could make an impact not only their children's future but also other directly with them unrelated people. However, it brings us to limitations of pragmatism. As Engholm (Ibid.: 169) emphasises, the individuals have space for the interpretation, but only to some extent. Since the phenomena happening in the present time, it creates the limits for action. For instance, if we take into consideration examples mentioned before, parents face the limits, because they can not directly stop the usage of tablets in kindergarten and the petition idea seems rather radical and very difficult to achieve due to the current overview and relatively low percentage of parents signed (Skrivunder.net, 2016).

From the analytical point of view, abduction method is most suitable for us and it is an essential part of pragmatism (Ibid.: 173). Engholm stresses how abduction connects aspects of deductive and inductive methods, although with the less strict structure than the inductive. The main purpose of abduction method is to start with a standpoint, try to understand the case and gain new knowledge. This is reflected in our research process. Abduction method is explained in more details in methodology chapter above.

2.3.2. Hermeneutics

Hermeneutics approach, as previously discussed pragmatism, does not seek to find explanations of the phenomenon, but rather seeks to understand, more precisely, how actors feel about the phenomena. We aim to understand that by interviewing parents. Engholm (Ibid.:88) highlights the fact that, unlike positivism approach which explanation is the most important aspirational in hermeneutics we interpret. Interpretation is the leading aspect of the approach. Interpreting languages, texts, opinions, and signs we are looking for the hidden meaning of which we can get an important understanding of the phenomenon (Ibid.: 89). Hermeneutics is not value-free based, we start the research with our subjective opinions and prejudices. Just as in our project group, before we started the research, we had our own preconceived ideas and different opinions regarding tablets use in kindergarten, and how parents, who had their own preconceptions, react. Focus on qualitative data is strongly emphasised in the approach, as well as in our research. When planning the interview structure, we took into account some of the principles of hermeneutics. We stimulated parents to interpret, by creating questions that are open, so parents answering would have a lot of space for an interpretation and would be able consistently to express their thoughts. Parents sometimes wanted to hear our as researchers opinions, they asked the origin of our interest in the subject, what knowledge do we have, so we also had to remain reflective and be able to adapt to dynamic situations. Not only in the process of the interviews but through entire research we had to interpret our way to the conclusion based on our understanding, using quantitative and mostly qualitative data that was collected.

To sum up, pragmatism approach guided us through research design, mainly in the methodological part of the project and led to use the abductive method, which is explained in detail above. Hermeneutics was used mostly in the analysis part, analysing our primary data of the interviews, also some secondary data. Each parent perceives the reality in a different way including ourselves researchers. We interpreted their answers based on the answers we have conducted.

2.4. Data collection

2.4.1. Primary data

Collaboration and data from Government

One more significant data, which we have gathered was the data from Roskilde municipality. We have chosen the social media platform (Facebook) because it is innovative and faster way of communicating, as well as the proof that municipality adopts new technologies not only in the education institutions but uses it widely for the simple services such as chat, which became very popular recently. The idea to raise some questions for them came from lack of information available on the Internet and the main focus was to understand their position in digital technologies implementation processes in the kindergartens in Roskilde. The questions were such as:

1. *Can we get a permission to see the curriculum which describes about implementation of tablets usage in young age?*
2. *Who decides about the use of tablets in kindergartens? (Do parents have a vote in this process before or municipality, is there any notice for parents?)*
3. *If it is the municipality decision completely to implement tablets, based on what data/research did they decide to use tablets?*
4. *What is the feedback from the parents? Could we possibly get some information on it?*
5. *Who creates the teachers plan in consideration to tablets usage in the public kindergartens? Is it the Government, Municipality or the Teachers themselves?*

The government workers did answer our questions fully, so the following chapter titled - Analysis will incorporate them seeking in-depth outcome. Moreover, this collaboration with Roskilde municipality helped us to relate to our topic more accurate and to evaluate on our choice of theoretical framework, test suitability for the further research process.

2.4.2. Secondary data

Firstly, we present that this chapter is important in order to implement adequate research. As Hart offers:

“the selection of available documents...on the topic... written from a particular standpoint to fulfill certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed.” (Hart 1998 cited in Booth 2012: 2)

This citation summarises clearly what it is, however, why is literature review important is it identifies the quality of the documents that have been used (Booth 2012:3). This may help to assert the validity of our research. We will only include authors and their work in this section, which we used and find essential for our project.

Books

Using the book *“The Danish Way of Parenting”* by Jessica Alexander and Iben Sandahl, 2014, we define the linkage between our research field and theoretical perspective. This book involves the explanation about Danish people, they standards of raising their kids and the general objective view from an outsider which currently tries to understand the phenomena about raising children in Denmark and how to take the best of it. The writer is a foreigner, currently living in Denmark with Danish husband and the Danish psychologist, who illuminates the sociological aspects of parenting. This book is important to us to analyse and understand different perspectives behind Danish parenting.

Lastly, we have also used Lynn Schofield Clark's book *“The parent app”* from 2013 book is very beneficial for our research. It helps us to understand Western culture, as well as outcomes in Denmark. The books focus on different economic classes, through which the main differences appear in consideration to our research field. It also provides us interviews with mothers and fathers, how they decisions depend on their level of income. The book also provides us with different topics related to digital age and unpredicted consequences in the future and benefits between using and avoid digital technologies in early childhood.

Articles

To support and help to answer our research question, following articles were found relevant. They helped us to get a better overview on what is innovations implementation process, its role and different perspectives of various sides.

Net Children Go Mobile: Risks and opportunities. by Giovanna Mascheroni & Kjartan Ólafsson

The project “Net Children Go Mobile” (2014) is conducted by two main authors. Giovanna Mascheroni, PhD, lecturer in Sociology of Communication and Culture in the Department of Sociology, Università Cattolica, Milano. Her investigation field focusses on the social shaping of the internet and mobile media, online risks and opportunities for children (Net Children Go Mobile, 2016). Kjartan Ólafsson is a lecturer at the University of Akureyri, Iceland where he teaches research methods and quantitative data analysis. His main contribution in the report was designing methodologies (Ibid.) This report provided us with the insights of investigation of quantitative and qualitative data regarding our research topic. Most importantly, it includes Denmark as a participating country among other 7 European countries in the research. The comparisons and examples reveal crucial information on the bigger scale of how children access and use technologies, the risks and harm. It was used in the analysis for presenting the role of digital devices in Danish environment, putting into the perspective of the progress of digitalisation.

Official documents from government

Official documents from governmental websites were used in order to see the whole concept from several perspectives and determine official goals and intentions. However, these sources required us to be more critical towards the data and we tried to detect the intentions behind their strategies. Documents were analysed and was taken into account in the analysis chapter about the government.

Consolidation Act on Day-Care, After-School and Club Facilities, etc. for Children and Young People (2016)

This article or act was provided by the municipality, which we have used mainly in the governmental analysis. According to this website, where it can be originally found (retsinformation.dk), it is a public portal, which contains all laws and regulations. This document has offered us a key understanding of relationship and goals of public facilities and municipalities.

A Stronger And More Secure Digital Denmark - Digital Strategy 2016-2020 (2016)

The Danish government, Local Government and Danish regions have devised a plan for the digital implementation during the year of 2016 until 2020. This document is to help Denmark improve and integrate the public sector of Denmark. It is to set few goals for Denmark to achieve in the year 2020. This document has been used mainly in the analysis of the government, for the full understanding of the digital implementation of the public sector.

2.5. Delimitation and self-criticism

Considering our project limitations, there are some that need to be highlighted. First of all, our research field is about Denmark. The language barrier is an important issue since the first language is Danish, not English. The interviews we have conducted were conducted only in English and participants were informed beforehand. However, English is not their first language and that may cause some uncertainties such as: not understanding the question completely, not feeling comfortable, not knowing how to express themselves correctly. As Lichtman (2014:69) also mentions these issues or limitations when it comes to the qualitative

research of participants. Lichtman (2014:70) notices issues with participants with limited English which are: the understanding of informed consent and validity of their response. Our participants were volunteers that have read the information consent and had the opportunity to ask questions if there was something they have not understood or wanted to know. We assume that if they had no confidence in their English skills, they would not participate in the first place.

The number of participants is relatively low. Without a doubt, in the research as this, the more responders and opinions, the more credible our analysis and conclusions get. Due to the reasons mentioned above and below, we managed to get 5 parents to interview, luckily they had different backgrounds, age groups and occupations, so it brought the diversity in opinions and broader perspectives and we think that it is sufficient in order to gain a basic understanding of the phenomena.

The other limitation we faced was the environment where we have conducted the interview. The interviews were conducted directly in the kindergarten. Meaning that the environment that we have interviewed them might have been disruptive and might have influenced their answers in some way. The noise might have caused disturbance for their concentration and not being able to provide us completely focused and profound answers. There is also a possibility that questions were not understood correctly, although, they have been noticed beforehand that they can ask anytime if the parents did not understand something completely. On the other hand, this limitation might be seen as an advantage, because we think that children presence while answering our questions, could encourage parents to be more sincere. Moreover, many relevant sources, for instance, some officials state's documents, strategies and plans, were accessible only in Danish. Our limitation is that none of us are fluent in Danish and that makes us limited when it comes to understanding them and the validity of us interpreting the data. Most of the English sources does not touch the specifically Denmark, therefore, use of data provided in Danish was essential.

In this project, we have decided to limit ourselves only to only one municipality. This limits us to a number of participants that are available for us to interview and since we all live in different areas it also is more time and energy consumption if we take into consideration travelling and preparation. However, in a way, we consider it being a strength since it allows us to be very specific about our research subjects.

We have also recently started having the philosophy of social science course, where we have been introduced to various different philosophical and theoretical approaches that we are not familiar with yet. We believe it is important to look at this project from the philosophical standpoint, however, our lack of deeper understanding within the field, can prevent us from expressing ourselves as well as we would like to. There have been also workshops which have given us better insights on theory application, methodological strategies and analyses. Again, to some of us, these things are new and therefore some parts might be lacking extensive usage.

There were certainly many challenges. Firstly, figuring out, what we really want to investigate and then coming up with the most suitable theory. After finding out theories that relatively reflected on our research topic, it was difficult to try and apply these theories within. Then it came to the data collection, where we had to receive a permission from the kindergarten to proceed with the interviews. They required information consent for the parents, so we had to create samples and then the kindergarten handed them out to the parents. This was also an experience, the whole communication between kindergarten and us, first kindergarten we approached actually rejected us and pointed us towards the kindergartens where they use tablets on the daily basis. Conducting the interviews was the new experience to some of the group member and we have learned that direct communication with the subjects has proven to be exciting and challenging.

Managing group dynamics and also the time management of four people with different backgrounds, interests and obligations are always challenging when it comes to project work. But in the end, we managed to work very well.

What is more, is that this project topic is very recent, and there are not that many official results to use.

There was also a time constriction, without it the depth and amount of data would have been much more. This has also caused some pressure since we all have obligations to perform, that have also had an impact on our research. We think that with more time the overall project quality would have been better.

There are things that could have been done differently such as the perspective we take on this project topic. We could have looked for some other fitting theories or methods in answering the research questions. Or the different use of secondary sources, that were found and included to strengthen our research project.

3. Theory

3.1. The Risk Theory by Ulrich Beck

Firstly, we have used the book written by Ulrich Beck named “*Risk society: Towards a new modernity*” in 1992. Ulrich Beck was a sociologist born in Stolp, Germany (Kaldor and Selchow, 2015). He started to study at the University of Munich sociology, psychology, political science and philosophy, where he became the professor (Kaldor and Selchow, 2015). The book we are using specifically has sold over 60,000 copies in 5 years and is considered to be one of the most influential social researches in 20th century (Beck 1992:1). In his book, he criticises the rising modernity. The rising modernity creates new risks for the society that are unknown for the regular consumers. His main focus is the modern technology such as the atom energy containing many risks that may cause harm. He does not mention in his book the topic we are investigating, however, we adapted his take to emphasise the awareness of risks of modernity. We have also chosen him due to the amount that this work has been used in various different studies and researches. This book has been used widely that gives it more credibility.

Ulrich Beck (1992:19) implies that the inventions and the implementations of new technologies, contain several risks and hazards.

“...we are concerned with drastic and threatening interventions in human living conditions. These appear in connection with definite stages in the development of productive forces, of market integration, and of the relationships of property and power.” (Ulrich Beck, 1992, 19)

The book references that in the past new inventions have had an impact in relation to the poverty, hunger, etc., however, he highlights that today it threatens our “natural foundations of life” (Ibid.). There was also a group of people that was strictly against the evolution of technology and they were called *Luddites* (Ibid.). This way of thoughts has caused people to consider the safety of a simple commodity: tea, pasta, wine, etc (Ibid.).

Beck (Ibid.: 54) calls some things becoming a “Trojan horse” at first being completely worth, useful, etc. but later becoming troublesome, causing damage. This means that the innovative technology might be prosperous or advantageous, however, later in the process there might be some difficulties. Beck (1992:52) mentions the risks of the chemical industry, for instance, the atom, which comes with significant production of the power but on the other hand, it may cause a lot of harm if not taken into consideration properly. This is also the reason why this theory is extremely important. In the example provided by Beck, the use of atom has its advantages, however, it comes with its risks which are that it is unstable and therefore dangerous. In our case, there are several advantages that offer the implementation of new technology (tablets) but it comes with certain risks and disadvantages and therefore increases a conflict between parents.

Ulrick Beck (Ibid.) also suggests that due to the education and well-informed society in developed countries but also fear, people try to prevent anything that might harm their comfortable lives. The problem according to Beck (Ibid.) of these emerging risks have to be tackled either by “(...) *policy of counter-interpretation*’ or a *fundamental rethinking and re-programming of the prevailing paradigm of modernization*”. This is Beck's suggestion of dealing with this issue of dissatisfaction.

In order to implement something new, people will decrease the risk of anything that might cause harm. Parents might have heard negative things about tablets implemented in kindergartens and that causes them to act in order to protect their child from unwanted outcome.

“The growing awareness of risks must be reconstructed as a struggle among rationality claims, some competing and some overlapping.” (Beck 1992: 59)

There is the concept of uncertainty, which specifically represents the knowledge that is not completed (Burgess, Alemanno, Zinn 2016:40). There are certainly many different explanations depending on the perspective taken, however, this description suits ours. Kasperson (2008:338 cited in Burgess, Alemanno, Zinn 2016:40) also distinguishes risks and uncertainty, by describing risks being something that we approximately understand and know the outcome, whereas uncertainty describes its probability and outcome is hard to predict.

Parents might not have enough capacity to evaluate all the risks coming with the innovation - they are uncertain. The amount of danger that the technology poses towards people are presented by other external factors, meaning that it is not determined by the affected ones but by other experts who should have the capacity to evaluate and present the dangers (Beck 1992:53). Basically parents have no professional expertise in this field, therefore they are unable to identify them, instead, experts do that. Due to this “(...) *the affected parties are becoming incompetent in matters of their own affliction*” (Ibid.). They lose in some way their sovereignty where Beck (Ibid.) argues, that it may cause harm or opposite. Beck (Ibid.:57) notes that is the sciences job to examine and present the risk to the affected ones and those have to embrace it due to their incompetence. They are labelled as being “*irrational and that they deviate*” if they do not follow the formula (Ibid.: 57). Luhmann (1988:98 cited in Burgess, Alemanno, Zinn 2016:49) explains that there is also a relationship between the risk and trust. Trust is when a person has doubts, however, he presumes with positive expectations (Ibid.).

Beck (Ibid.:59) explains that the origin of the critique or the outcome of risk realization is inability of technological science to identify present and future outcome from the society. He blames the institutions and their methodology to implement modern technologies, that fails to tackle the society’s reaction on the new technology for it. They fail to predict the reaction of the society on the modern technology.

3.2. Public innovation theory

Our chosen “*Public Innovation through Collaboration and Design*” book by Christopher Ansell and Jacob Torfing, 2014, which is used with a purpose to define and understand the complexity of innovation theory within our research field. This book addresses the shortcomings of innovation in the public sector and main obstacles of it’s design and implementation. Education is one of the fields authors examines in this book and where most difficult problems are embedded. Christopher Ansell is a professor in Political Science at the University of California and has an extensive interest in public administration, a government with a focus on collaborative public and private sectors on overcoming public risks and problems in Western countries. Jacob Torfing is a professor in Politics and Institutions at

Roskilde University, and his research interests are changing forms of government, obstacles and drivers of collaborative innovation in the public sector, societal reproduction. This book is essential for our research because it helps to understand how public innovation works in western democracies, provides with examples of innovation strategy development, and insights of collaboration effectiveness between government and people.

This project takes into consideration the study of policy innovation within the kindergarten system in Roskilde municipality in Denmark. We apply this theory in order to understand on what basis tablets were introduced in Roskilde kindergartens. In addition, who were decision-makers, what steps they had to take for implementing it, with whom they collaborated in doing changes, what potential they see in innovation in the public sector and what difficulties they have faced.

3.2.1. Public innovation through Collaboration and Design

The Public Innovation theory sets the focus on the digital transformation that usually occurs in public sector and causes many challenges in entire society. As the Ansel and Torfing emphasises:

“In short, the public sector is striving to enhance innovation by improving its capacity for leadership, learning, experimentation, implementation and risk management.” (Ansel and Torfing 2014: 1)

Great interest in public innovation is a relatively recent phenomenon in order to help to move, update, and activate current rigid, outdated public sector. However, there is always a real threat that innovation will not be successful or even will not come to the implementation phase because it is turned just to some fancy talk by decision-makers used as a tool to attract people's interest without real action taken into consideration (ibid.: 2).

In our case, we are identifying, that in recent years there were many changes in Denmark, especially, through digitalisation process. In fact, Denmark government in 2011 established The Agency of Digitalisation, which aims to accelerate the digitisation process while

allocating huge funds for this purpose. In order to achieve the plan drawn up by 2020 of public digitisation expansion, the Danish government appointed DKK 12 billion from the state budget. The agency claims *"The vision is for central government, municipalities and regions to create a more digital Danish public sector that improves efficiency, frees up resources and modernises service delivery"* (Digst.dk, 2016). Politicians promote innovation, as it can become a solution for current problems, to shake up the outdated standards, to stimulate more efficient problem solving. The public sector has a growing demand for innovative policies, different forms of organisations and services (Ibid.: 1). Even though there are many risks, they happen due to chaotic and unstable processes of innovation, which are caused by many gaps and interactions in the developments and processes (Ibid.: 4). There are several reasons for the public innovation, one of them is to boost the productivity for the economical purposes. With the help of innovation, the same result can be achieved more efficiently with the same or less funding (Ibid.:2). Our case example could be how tablets can fit textbooks, tv, board games all together in one appliance (Huber, 2012: 12), it is not only convenient but also economically efficient. The second reason is an innovation of public health, renovation of neighbourhoods and to increase people to pursue higher education (Ibid.:2). The next reason is that the citizens become more demanding and therefore require more comfort and welfare (Ibid.:2). People want a more targeted, upgraded, enhanced public services that are consistent with the private sector. In order to achieve the that, innovative solutions are required for better and effective ways to produce. And the last reason, the irregular problems which no one can foretell, however, that is why innovation might give us answers for these problems that have not occurred yet (Ibid.:2).

As Sørensen and Agger argue (Ibid.: 204) successful public innovation can be reached by active participation and collaboration both of governance structures and relevant stakeholders, such as citizens. Politicians often tend to forget, that public innovations success is being measured by society, so citizens opinion have to be taken into consideration in every major step from initial idea to its formulation and implementing until it is diffused. Citizens wishing for the government to respond to their wishes must also remember that they have to be active citizens and responsibly participate in the public affairs. As Albertslund (Ibid.: 192) example (policy involvement where 6 politicians 6 citizens worked together in a formed ad hoc committee, to come up with new policies) shows, how both sides, politicians and citizens

to their own surprise can work hand by hand, achieving great results only if they willing to forget their prejudices.

Through the lenses of this theory, we will interpret the tablets implementation that occurred in the public kindergartens of Roskilde municipality. Based on the data we received from communication with Roskilde municipality, we will review if there has been collaboration and if so, to what extent.

3.3. Theory revision

In this part we will firstly explain why these theories have been chosen for this project and why they are the most suitable ones. Lastly, we will explain why different theories have not been chosen.

The reason why the Risk theory has been chosen, is due to its essence. Its main premise is to capture the consequences of modernity and of how the new technologies contain risks. Ulrich Beck is more aiming towards the hazardous modern technology, however the idea of risk in modern society is being kept. It helped us with our analysis and it gave us an insight in some sections about risk perception of the parents. What is more, our research question is oriented on the opinions of the parents about the new technologies implementation and that is exactly why it is important. How normal people without expertise perceive the new modern technology. This leads us to the Public Innovation theory, which we have used as our second theory. It has provided us with different strategies of public innovation and its essentials to achieve it. The Public Innovation theory mainly served us as an explanatory theory in pursuit of its process identification as well as the recommendation for a successful public innovation. This mainly helped us when it came to the analysis of the governmental documents and its interpretation.

Regarding the question of different theories, it all started with our considerations in the beginning of the research process. One of the theories that has been considered was the Value theory, in order to show the values that are the most important for the parents. However, Risk theory on itself talks about values from the security perspective. It was therefore decided, that Risk theory would be chosen from sociological perspective. Furthermore, we needed to

choose suitable theory that would capture correctly the governmental presence in this topic. The Public Innovation theory captures the innovation in public sectors, which also includes the public kindergartens. We have not found any different theories that were for us worth taking into consideration, because we were looking at the perspective of parents and their collaboration with government or the education institution. Public Innovation theory was the main concerning governmental progress of public innovation. Therefore, we cannot draw a comparison of more theories that could have been used.

4. Analysis

This chapter is created in order to present and reflect on our research process which includes theoretical framework, qualitative interviewing and its interpretations, as well as other secondary data, which we collected through entire research progression. It is essential to notice this process of the analysis implementation. Firstly, we analyse the first subchapter of our research which describes the role that government demonstrates in digitalisation process.

Secondly, we bring a focus to the interpretation of qualitative interviews, which we collected ourselves and continually organising the concepts, central arguments and interpretations in following sub-chapter. Additionally, entire data which involves the answers to interviews and the other empirical data will be analysed in both chapters, as well as focus on theory and relation to it through analytical lenses.

4.1. How does the government decisions affect citizens and create diffusion?

The purpose of this chapter is to show how does the government and its institutions present the digital technologies and their importance in 21st century. In addition, it is also analysed how the government institutions communicate with citizens and what are the possible positive and negative outcomes of it, moreover, the parent opinions about agreeing on municipalities decisions are discussed.

We have sent few specific questions to the Roskilde municipality in order to figure out the actual role of government and the decision makers when it came to the topic of tablet implementation in public kindergartens. In this chapter, we analyse their answers and relevant documents released by the official institutions of Denmark. We also take a look on the link that we have been forwarded by the government, which is the “*Consolidation Act on Day-Care, After-School and Club Facilities, etc. for Children and Young People*”. We have not analysed the whole act but mainly set a focus on the concerning daycares, therefore section I. and II. is analysed.

4.1.1. Digital implementation in municipalities

The chapter analyses how does the digital implementation in public services is presented. First of all, our collaboration with the Roskilde municipality has been very important in answering our research question. Through our questionnaire sent to them, we received the most important document which was selected by the municipality workers called “*An Act to consolidate the Act on Day-Care, After-School and Club Facilities, etc. for Children and Young People, cf. Consolidation Act No. 1127 of 20 October 2014, as amended by section 1 of Act No. 1523 of 27 December 2014.*” This document gives us broader understanding on how daycares and kindergartens work in Roskilde municipality, what are the main reasons and values for children and their development. In addition, it is also demonstrated, what are the actors in this process. We have asked the municipality, “*If it is the municipality, based on what data/research did they decide to implement tablets*”, we have been answered with a link pointing us towards §7. However, we have not identified any specific information about the implementation of tablets in this §. The only valid point in this was, that part of the day care facilities objective is to help children get integrated into the danish society (Ministry for Children, Education and Gender Equality 2016). One more document, which has been taken into consideration “*A Stronger and more Secure Digital Denmark: The Digital strategy 2016-2020, May 2016*”. We will use this document to present the current integration of digitalisation in Denmark and also highlight their strategies and goals.

Denmark has taken a change into infrastructure these past 15 years. Denmark has started during this time to implement digital systems. We will describe it briefly, in order to

understand why do the children actually have to get accustomed to the digitisation in general. In 2001, the first initiative has started when citizens could finally send e-mails to the authorities and that the authorities could communicate back digitally (A Stronger And More Secure Digital Denmark, 2016:13). In 2004 the government has established Nemkonto, which serves for citizens for payments and e-invoicing, secured government email systems have been created, and official webpages such as Virk.dk; serves as a web portal for businesses and Sundhed.dk; access to the health data (Ibid.). Later in 2007, the establishment of NemID, which is online management system and Digital Post to serve as a mailbox for messages from authorities(Ibid.). And lastly in 2011 mandatory self-service and Digital Post(Ibid.).

Whilst there are several reasons for this digital implementation which will be explained in the next chapter, there has to be a way for people to get integrated. Public employees firstly, need to get accustomed and taught how to work with the digital technologies (Ibid.. 29). These public employees not only that are in contact with people but also frontline workers of the welfare system are to “support and guide” them not only with the web portals but also when dealing with authorities digitally(Ibid.).

Regarding the digitalisation in education, the government's plan is to examine the results of the teaching using Information and Communications technology at the end of 2018 (Ibid.:31). Depending on the results, steps are to be taken, however, it is expected that in the year 2020 all written primary and lower-secondary school exams will all be in digital form. (Ibid.: 31). Meaning that government wants to make the future generation of Denmark become more accustomed to the use of digital technologies as the use of them has been increased.The document by Ministry of Education (A Stronger And More Secure Digital Denmark, 2016) has demonstrated the main purposes for implementation and what are the plans for future. They claim:

“In a digital world, IT and digital tools and learning materials should be a natural part of didactic practices and teaching for children and young people. New digital tools and learning materials must challenge the digital generation at day-care facilities, schools and other educational institutions, and support good didactic.” (A Stronger And More Secure Digital Denmark, 2016: 29)

The document states that the digital tools are considered natural part of didactics and therefore, new tools are developed and already started being implemented in many daycares over the Denmark in 2016.

Some initiatives are still being launched now. Others will be defined or adjusted up until 2020 in response to the opportunities and challenges ahead. Therefore, this strategy will fully equip citizens (also children), businesses, and public sector employees businesses for the digital Denmark of the future.

4.1.2. Decision making

In this part, we will analyse based on the answers provided by municipality, who is entitled to make a decision, when it comes to the subject of all types of daycare facilities. We will look it with the perspective of the Public innovation theory by Agger and Sørensen.

We contacted Roskilde Municipality and several questions were raised (Appendix, 2016) in order to understand their position and get practical information from their perspective. Questions were focused to get information about who is in charge of decision making, do they have official documents which show for what reasons tablets are implemented in the region, what are the results of it, how parents react to that and others. Roskilde municipality answered questions, however, the answers were straight-forward but not as descriptive as it was expected. They have tried to present the tablets implementation process in a subjective way, without consideration of possible risks. For instance, the question *“What is the feedback from the parents? Could we possibly get some information on it?”* was answered only from their own perspective without supporting their answer with any statistics or other data which they did not inform us came from. They argue:

“Parents are positive, when they get knowledge of how we use digital media in day care (institutions). Our goal is to teach children to produce instead of being consumers of digital media's.” (Roskilde Municipality, Appendix, 2016)

Nonetheless, we used the information they provided and benefit from it. One of the questions: “*Who decides about the use of tablets in kindergartens? (Do parents decide or municipality, is there any notice for parents?)*”. The answer was that it is the municipality - local politics are the ones to decide about the use of tablets in kindergartens. With that being said, we have moved on to the link (to “*Consolidation Act on Day-Care, After-School and Club Facilities, etc. for Children and Young People*”) provided by the municipality to either verify it or find more information.

Then we have found out that according to the §3 it is the municipality that creates the framework and the goals for the kindergarten and then they make sure that each kindergarten has fulfilled these requirements (Ministry for Children, Education and Gender Equality 2016). However, in the paragraph §9, it is important to note that the ones who are creating the curriculum for these children are the heads of these facilities (Ibid.). This curriculum has to be evaluated at least, every second year to see the results or the outcome if it fulfills the already established objectives setted by the municipality (Ibid.). It is also stated that, this curriculum has to involve parents committee in its development (Ibid.). Afterwards according to paragraph §10, municipality council has at least two years to evaluate this curriculum, and based on the evaluation of previous curriculum decide on further actions (Ibid.). Based on the information provided we conclude that head of kindergartens are the ones developing the curriculum with the help of parent committee. Then the results from the curriculum are reported to the municipality council. The municipality council determine further steps based on these reports, furthermore, these steps may include the implementation of different strategies as well as methods.

4.1.2.1. Reflection to the Public innovation theory

According to Agger and Sørensen (Ansel and Torfing 2014: 190), the successful public innovation process requires efficient collaboration between all relevant actors, which in our case are municipality council consisting of local politicians, kindergarten leaders - teachers and headmaster and parents committee. In this context, parents are being treated as partners in the process, partially deciding how their children spend time, learn in the kindergarten. Thus, we can assume that they are also partly contributed to the tablets introducing in the kindergartens. However, based on the sources found in the press and our collected interviews,

it is clear that not all parents are satisfied with this policy innovation. We can presume that there are several possible reasons that cause parents dissatisfaction:

1. Lack of parents involvement in tablets implementation in kindergarten process. Agger and Sørensen argues that innovation in the public sector nowadays is a very important topic in the Western political agenda, but it suffers because of the too little attention is paid to collaboration (Ibid.:188). Focusing at the current situation at Roskilde municipality, even though parents partially contribute in creating the curriculum, it may lack of the greater involvement in the policy developing. As Agger and Sørensen emphasise as a risk to successful policy innovation, citizens' opinions, in this case, parents, sometimes can be not considered. Because it may differ from the politicians and their political parties promoted values (Ibid.:189). In addition, as one of the reasons may be noted that the direct cooperation between parents and politicians, parents are partially included just in one stage of the implementation. The authors of the theory, as an example of collaborative policy innovation, highlights the potential of the policy committee, where involving number citizens in a work with the same number of local politicians in a type of direct competitive democracy (Ibid.:205). In addition to that, Agger and Sørensen clarify, that involvement of relevant actors, in our case would be the representative of the parents, in the direct democracy with local politicians in form of committee, where everybody equally can include perspectives and knowledge, working on innovation implementation, from the initiation phase to the diffusion, could lead to well-thought, widely accepted implementation of the innovation (Ibid.). The absence of such a committee in Roskilde, can be seen as a possible reason why parents may feel that they are not taken into account. However, the authors mention that even to bring together this type of collaborative committees, there is no guarantee that policy innovation will be successful. It can interfere with many barriers, such as the above-mentioned political bias, inability to find a common compromise, poorly structured structure of the committee or simply not getting approved from decision makers (Ibid.:204).
2. Taking into consideration that Denmark is a democratic country, and municipalities follow the democratic principles, meaning that innovation policies together with other changes are implemented based on the consent of the majority. A municipality has to

take into consideration the majority of kindergartens decision, even if the parents' committee in one or several kindergartens did not support innovation implementation.

4.1.3. Goals and reasons why kindergartens in Roskilde municipality are being digitised

Danish government authorise Roskilde municipality goals (Digitaliseringsstyrelsen, 2016). The provided reasons by government are located in a digital strategy 2016-2020 called "A Stronger and More Secure Digital Denmark" (Digitaliseringsstyrelsen, 2016). They argue, that children's IT skills development begins at preschool age and evolves throughout further education - school, and throughout the rest of their life. (Ibid., 2016:46) In addition, digital skills will contribute beneficially and prepare when they will be adapting to a competing and digital society, reality they are going to be living in (Ibid., 2016:57). Regarding these aspects, Roskilde Municipality aims to implement digitalisation process and innovation in day care institutions. The official web page of Roskilde Municipality presents a project "IT for children in daycare" (Roskilde Kommune, 2016) which is being implemented in this district with a concentration on children's age 0-6-years-old IT skills development and strengthening. This leads to the increased focus on investigating how digital technologies could work in educational practices with the aim to increase children's curiosity, creative expression, and overall development with IT. Furthermore, the project has a focus on teachers, aiming that an educator's role would become more effective and explorative on how teacher could do more (Ibid.). They state several reasons on how can digital media engage in the educational institution level. It is important to present political objectives and visions kindergartens reach in order to determine digital devices importance.

Objective regarding playing, exploring, and activities are linked to creative playing and learning improvement. They are all focused on children's development and better opportunities creation to express themselves in young age. For example, Ministry for Children, Education and Gender Equality (EMU, *It i dagtilbud*, 2016) shows, that tablets can be equipped with several activities and carry them only in one device. For example, playing games, watching videos, experimenting with digital camera and sound recorder are considered as passive or semi-passive activities. This type of activities focuses on improving

language skills development. Teacher's role is to introduce tablet as a learning tool, for example, using an application like Book Creator. This application allows improving language skills by creating works on it (EMU, Lav fortællinger i børnehøjde med iPad, 2016). This allows children improve their reading skills, listening, and using the language while working with the application.

The following activities, such as kindergarten activity such as going on a tour in the forest and taking the tablet with them is considered as an active way of interacting with the tablet. The Ministry for Children, Education and Gender Equality webpage argues that tablet could be beneficial for teachers when children are exploring nature outside and learning about the environment.

It creates the opportunity for immersion in both children and adults when nature and technology complement each other. It's fun and gives opportunity to examine more things and answer more questions. An investigative question (asked by children) leads easily to new questions and thus to new learning for children and adults. (EMU, Tablet og iPad på pakkedliste, 2016)

This also complements the objective towards the shift of space, environment and materials (Roskilde.dk, 2015). Roskilde municipality aims that space, environment and materials must be changeable, so that children's well-being and learning would always be inspired and supported.

In addition to that, the objective to create a bridge between home environment and kindergarten is reached by having digital devices (Ibid.). The reason is that children would have an easier environmental shift and would feel good and safe in day care institutions. Tablet is a solution for that, from the perspective that it is a device which dominates at home as a gaming or learning tool as well as in kindergarten it would play the same role (Roskilde Kommune, 2016).

To conclude, the overall objective and reason to include digital devices into kindergarten activities are to prepare children for the school, ensure safe and comfortable environment and develop competent IT skills. This way to maintain children's curiosity by enabling teachers to answer all their questions, and by creating an exciting play and learning environment.

4.1.4. Pressure from society

Our project aim is to understand the perceptions of parents how does the implementation of digital technologies affect their opinions, therefore, this chapter focuses on one more significant point which is the pressure of society and if it affects parents and their children usage of tablets. It was important to see if usage of tablets in kindergarten has a relation to the parent's choices on buying a tablet at home.

Interviewees 1,2 and 4 claims they don't feel any pressure at all, when the respondent doubts after short introduction:

“I didn’t feel any pressure, maybe a little bit from my husband and in general from environment. He thinks that digital technologies could make our child smarter, however I don’t agree. I think that she gets addictive, she disconnects from this world when she is on the tablet, doesn’t hear me and I don’t like it (...)?”. (Interviewee 3, 2016)

It shows that even if an individual personally disagrees with his child’s usage of tablets, the pressure from close family members can influence their decision. Nevertheless, we did not find a relation in government influence for parents to buy a tablet for home usage.

On the contrary, the 5 interviewee even felt a common need for the tablet by stating: *“I did not feel any pressure. It was more like I thought to myself, why I still don’t have it!?”*

This interviewee related consequently to the Risk theory and the claim by Ulrich Beck (1992: 53), that people become mass orientated and have lack of their own interpretations about the mass media products, they usually give up thinking and concentrate on consuming.

4.1.5. Parents movement against tablet implementation in kindergartens

The interest to investigate this research has come from the negative movement against kindergarten digitalisation. The petition against implementations in kindergarten, which

reaches over 5000 people signed for is being represented in the most popular news portals within Denmark. The website <http://www.skrivunder.net/> under (Foraldres_frihed_til_at_kunne_fravalge_it_i_daginstitutionerne), which is used to sign under with a goal of 40,000 signatures and that would mean that iPad's could be taken out from daycares and kindergartens. According to this petition site, the main reasoning for parents to claim that iPads should be taken from the daycares is the doctor's recommendations for more activities in young age, mass media addiction and the need of knowing the natural environment, as outside kindergartens. The debates about this issues is in a high peak, many of parents comment and share their opinions why it is not suitable for children to spend time in front of tablets in comparison to other physical activities. In addition, some parents claim, that it should not be municipality's choice to decide it is a choice of kindergartens (Facebook.com, 2016).

Furthermore, some of our research respondents that were interviewed have also claimed, if municipality have asked their opinion they would not vote for implementation of tablets in the kindergarten. One of our interviewees, was especially unsatisfied that she is a part of the government system and has no influence in saying no to tablets in her child's daycare. She states:

“I can't even imagine, what can change my opinion [that kindergarten would have asked and she would say yes to implementation of tablets]. They should use it for the right reasons and kids have to stay kids as long as they can. Kindergarten is not the right time and place for the digital technologies, they will have plenty of time to do it in preschool for example. This stage is for communicating, learning how to meet new people and bond with them.”
(Interviewee 2, 2016)

Moreover, some of the parents which we talked to claimed, that tablet usage is the stage of testing, therefore, they do not know which side they suppose to support. Interviewee 1: *“I would not say yes until certain age. I would give time; I think we are now testing it.”*

There were also the type of parents, who were lacking the knowledge and claimed if someone would have presented some important negative results of digital technologies in young age,

they would change their opinion and would vote for the petition and try to change it. One of the parents claims: *“Probably some research that would state clear facts. I mean it depends on in what way this information would be presented to me.”*

In brief, as we see from the interviews and petition, the parents in Denmark does not have a significant choice to decide and collaborate about their children's usage of new digital technologies in kindergartens and children become a part of the system which is governed by higher instances. Although, many parents try to do something about it using media and democracy rights.

4.1.6. Conclusion of the first analysis chapter

This chapter demonstrated that government plays a significant role in the new processes such as the implementation of kindergartens, services and etc. Although, the interviews and theoretical perspective have shown that there is a lot of space for better development and especially, better collaboration between parents and teachers and government. In contrast, this chapter also presents the group of parents disagreements with municipality decision about tablets implementation in kindergartens and their reasonings mostly involving natural health development for kids aspects and that they are the most important in the early childhood.

4.2. How are parenting standards presented and what are the reasons to react positively or negatively of their kids usage of tablets?

This chapter is created to reflect on the qualitative data, which was gained through our interviewing of parents who have children attending daycare in Roskilde municipality in target age of 3-6. This chapter is composed to analyse the relation to standards of parenting, values, risks, securities and theoretical framework of Risks. Furthermore, the positive and negative outcomes, as well as control aspects, which parents reflect on, will also be demonstrated below.

4.2.1. Values

4.2.1.1. Collaboration between children and parents

This part analyses how do Danish parents are expressing their standards of raising children. Firstly, through the perceptions of the book “The Danish Way of Parenting” the writers demonstrate that Danish kids and parents are among the happiest in entire World and it has a relation in how these two groups are collaborating together and how each of the group gives space to another to grow. Alexander and Sandahl emphasise the concept of playing for uncontrolled time even that *“they are left to their own devices”* (2014:25). It offers to create a better atmosphere and a feeling of freedom. On the contrary, some of our respondents have expressed the matter of limitation for playing with digital devices through the collaboration. Therefore, it seems that collaboration in some way is limited and parents vary from each other. The response by one of the interviewees brought us to the reflection that restrictions and control of kid and their entertainments through digital devices is limited. The reasoning behind it is that the mother feels it is not beneficial to use a tablet for the child for an uncontrolled time. Nonetheless, she expresses that there is a collaboration between parents and children and in both sources we can identify that collaboration is a very strong and unique way of raising kids in Denmark. She argues:

“For instance, in the beginning if I was telling her that she can play for 5 min, (...) sometimes she is complaining that she wants to play longer, but we have to deal with that by compromising with her time by time.” Interviewee 2, (2016)

The other respondent (Interviewee 5) has also presented the example of how the child is involved in the decision making process:

“We walk home from kindergarten together, and sometimes stop at the playground on our way, especially in summer. When we get home, he (kid) decides what he wants to do.” Interviewee 5, (2016)

Through his response, we could claim that Danish parents consider children as individuals which they must communicate to and it is a standard for them that kids would be involved in these processes. In addition, the responses about decision-making merges with the concepts of the Risk theory on how individuals, who live too comfortable life and those well-educated individuals, are against to change because it is easier to consume the mass media products (Beck 1992:52). Consequently, the decision making is shared in order to lower the risks of comfortable life and keep it at the same level, as well as allowing children to be decision makers in digital technology usage.

As it was elaborated above, in Denmark children are raised with values and appreciation for giving space and freedom for children choices and self-development. The tablet usage is not an exception for keeping this kind of attitude. Our interview participants provided us with information that they do not use any parent applications for controlling their children's Internet browsing or selecting games at this early age. Furthermore, interviewees claimed that their attitude towards tablets usage is neutral or positive, and only the minority of participants have expressed worries to the content their children are exposed or direct negative outcome for their children (Interviews, 2016).

4.2.1.2. Outside activities in kindergartens play a significant role in Danish parenting standards

The following important aspect of values of parenting in Denmark is to involve kids in outside activities instead of digital devices. Even though, there is a growing development of digital technologies in Denmark, the media investigates and presents the Danish pedagogy benefits in relation to outside kindergartens in the global scale. As the professor argues there is a long way of development of Danish kindergarten and their main role is in entertaining kids and stimulation of their intellectual skills:

“In Denmark, however, the building of kindergartens for children had already been initiated during the nineteenth century, partly in the form of asylums providing care for poor and orphaned children, partly as progressive educational institutions offering free play and intellectual stimulation to children from the better classes “. (Olwig, 2011: 123)

Websites (News, 2016), present Danish outside kindergartens as a huge surprise to, for instance, Australian media quoting that Danes have around 10% of kindergartens based outdoors in country scale. Nevertheless, we have conducted responses of parents, whose kids did not place their kids in outside kindergartens, they were few kilometres from Roskilde midtown.

Even though, the responses were considering digital devices, almost every parent expressed their sympathy for outside activities and concluded, that it is the very important aspect for their kids to be in kindergarten. For instance, 1st interviewee considers that outside activities are the part of the institutions and sees it as an option between outdoor activities or tablets usage. The interviewee states: *“I would rather let him to use these devices at home, I would like him to be more outside, when he is in institution.”* As well as the other interviewees, see the changes in free time activities and that there is no space for all of it at one time, so there have to be priorities choices. In addition, parents mention, fear of outside activities will be exchanged by digital devices is significant. Perceptions of digital technologies has made them more observant how kids are raised now and how they were raised before. Interviewee 3 states: *“Compared to my all days, they don’t go outside as much, they don’t play football outside, I don’t hear kids outside playing at all as it was normal before”*. Additionally, the other interviewee also states in the very beginning of the interview, even without being asked about it that it is essential to develop cognitive and social skills and sees that digital devices exchange this type of development. The respondent believes that digital tools are easier choices and kids do not need that much of supervision it is just like other form of occupation, where teacher is exchanged to the digital device. He says:

“I think it is generally very important to focus on cognitive and social skills, and if you tend to give up and lean up to the easier alternative, it is not necessarily the best way.” Interviewee 1, (2016)

Even though, Alexander and Sandahl (2014: 27) highlights that one of the most important focus in raising Danish kids is not only matter of education or only achievements in sports, it through learning the resilience. The happiness is achieved through it and we could visualise that it makes them healthier individuals.

4.2.1.3. Developing values in kindergartens

In this chapter we analyse the interview responses on “*What kind of human values in this digital age should be created in kindergartens?*” and the perceptions of what values are proposed through the different questions to the parents in consideration to entire interview.

According to the interviewees, the different values that involve the interactions with others were presented. Firstly, the responses have been concerning the issues mentioned above in this chapter, such as collaboration within society, risks and freedom. One of the interviewee concludes these points:

“It should teach kids that the world is big, and there is nothing you can’t do or achieve. However, it should also teach that there are some limitations, for own safety matters. Of course, some fundamental values like respecting others and other virtues of mankind should be taught as well.” Interviewee 5, (2016)

Later the same respondent in the very end of the interview expresses more values, which are important to him when raising his child. He summarises them: “*I would say, focus on collaborative experiences, friendship, trust, engagement, motivation and fun.*” As we see, he expressed a need to summarise his reflection on these values. Nonetheless, they do not include digital development skills or related, which the use of tablets would propose. The other interviewee also expresses the similar values as the mentioned above which involves socialising and creativity. The previously mentioned values play a significant role in most of the interviewee’s reflections, therefore, we could claim it is very important for parents. For example:

“More freedom and less restrictions, let them be children. Being and creating together, being part of the group in creative process and letting to be individuals as well. How to be a good person, not to react too fast, not to explode, to listen what others are saying and to require the same.” Interviewee 2, (2016)

Even though this interviewee expresses the most negative attitude on the usage of tablets, this interviewee also shows that control of the kids is also very significant in parenting. The

expressions such as “not to react too fast, not to explode” allows us to see that children cannot be controlled by parents, in this case. Additionally, the other respondent elaborates more on these values:

“Socialising, being and playing together, learning from each other. (...) I want them to be more active, at home we do not have enough place that my child could run freely without any danger, and kindergartens environment is adjusted for doing it, plus all the playgrounds and facilities they have. It is extremely important for their physical development.” Interviewee 3, (2016)

It shows that person has not only moral values, such as respecting each other, but also takes into consideration the basic needs such as health. These values, which are connected through Risk Theory aspects according to Ulrich Beck, is seen that risks urge from the values.

4.2.2. Ways of kids using tablets at home

In the following section, it is going to be identified how preschoolers use tablets at home. Interpreted data from the interviews and the relevant secondary data will be used to highlight main aspects of what kind of rules are established and habits formed in the environment of a home. It is essential to present parents’ role and responsibilities which are significant in digital media mediation process.

Regarding tablets usage at home, there are several important aspects which stand out. The level of media’s usage at home equals to the environment child is being raised. The style of parenting, personal beliefs and values which are analysed above are taken into account then distinguishing how children use tablets at home. From the report “Net Children Go Mobile” (Mascheroni and Ólafsson, 2014) it is observed that home remains the main context of media and internet use. Nonetheless, conducted interviews have confirmed, that interviewees’ children have tried digital technologies for a first time, like tablet or smartphone, at a very young age, at home. Furthermore, it was distinguished the way children were introduced to it. The process of developing a habit of using tablet was developed through two types of activities, firstly it was through educational applications, and then it ended up being used

mostly for playing and other entertainment purposes. The participants' children are preschool age and it is distinguished that their kids are already experienced when it comes to technology. In addition to that, Danish children have access to the digital devices at the youngest age compared to other European countries (Ibid.).

The first stimulus that initiated parent to introduce tablets to their children, were educating games. As most of the interviewees argue, that was an activity which led to visible outcomes and results, kids learned numbers, animal sounds, and language more efficiently and faster. For example, one of our interviewee claims, that the Danish Broadcasting Corporation's children channel's app called "*Ramasjang - it is very convenient app, concentrated on learning the language, numbers and different letters through tv, music and games.*" (Interviewee 2, 2016) The next aspect, is that tablets can be practical when using it as a parenting tool. For instance, one of our interviewees argue:

"When he (interviewees' son) goes to the toilet, we usually give it (tablet) to him, (...), we are aware that he gets to use it also in kindergarten so he can only use it on toilet at home." Interviewee 4, (2016)

In addition to that, most of the parents expressed their observation, that their children use tablets mostly for watching cartoons, videos on Youtube platform. They also claim, that it is "*(...) very rare I (Interviewee) set him to watch something specific.*" (Interviewee 1, 2016) However, parents mediation of child's media usage is the important aspect, which will be discussed in the later chapter "*Parents as mediators*".

Gaming - is another popular home activity among preschoolers. All of the interviewees claims, that their children use a tablet a lot for gaming. Since the Internet provide a huge variety of games, the interviews determined that among 3-6-year-olds, most popular games are action (car driving games), adventure (based on collecting items), and puzzle (Interviews, 2016). In addition to that, it was observed that at this age, kids tend to change games after a short time playing it, which shows that children go through many different games in a short time.

This chapter concludes that, tablet is used at home for different purposes. However, mainly it is used for watching videos on Youtube, cartoons, and gaming. Tablet less likely appeals as educative tool, however it is a matter of opinions since gaming also has educational value.

4.2.3. Parents' level of using media

It was discovered from the interviews how much parents use digital technologies themselves. All of the participants claimed that they use tablets or other digital devices regularly for social media, communication purposes, browsing, banking, reading and playing. Two of them use it for work and studying (Interviews, 2016). The study *“Parenting in the Age of Digital Technology”* (2014) shows that media-centric parents tend to create the environment at home more digitally focused. In addition, they tend to use digital devices such as tablets and mobile phones as a parenting tool. Thus, parents' digital technologies usage is influencing the way they raise their children and the environment creates for them.

4.2.4. Risks and security

Regarding the interviews that we conducted, it was identified that some parents have similar concerns about the digitalisation process in the kindergarten. This part of the analysis will, therefore, present the risks that parents see and the security issues that are interpreted from their answers while taking into consideration Ulrich Beck's Risk theory. It is important to note that not all of them had the same opinion about the possible risks, however, there were points, which have been matching.

One of the possible risks that participants pay attention to, is the risk of unwanted content or some other external factors influence. Most of the participants mentioned, that their child spends most of the time on YouTube, which creates a possibility to be exposed to unwanted content very easily,

*“You usually stay around when he is on Youtube and clicks around, because I have some strange subscriptions that I would not like him to accidentally see, (...)
” Interviewee 5, (2016)*

This is due to the fact that for instance while watching YouTube, it is most of the time set to autoplay and the algorithm generates videos based on the subscription, popularity and history of viewed videos.

However, there were some other external risks that came through parents mind. When it came to games or internet connection, one of the participants was worried about their child being tracked down by kidnappers. *“(…) that kidnappers have a great chance to find my child through wifi and games where location is set to public.” (Interviewee 3, 2016)* Generally, four out of five participants were to some extent concerned with either unwanted content or other external factors that may influence or interfere with their child.

Another mentioned risk was the possibility of their child becoming addicted. They have said that by using tablets more often, they are becoming more addicted. *“I think, they became more addicted to tv and tablets, screens in general.” (Interviewee 3, 2016)*. One of the participants described this whole digitalisation influence by saying that *“She is getting zombied…” (Interviewee 2, 2016)*. Basically, they express the opinion that their children would not become *“(…) addicted to this form of playtime, watching games and playing, (…)” (Interviewee 1, 2016)*. They want their time to be spent more productively and not contra-productively.

In addition to that, parents expressed serious concern that children lose the sense of time while using tablets. *“He is just not able to estimate the amount of time spent using a tablet and believes that it lasted shorter than it really was” (Interviewee 3, 2016)*

Next concern that was mentioned by participants was that they want their children to be healthy, and they think that they may neglect or become uninterested in physical activity.

“Nowadays, kids spend a lot time just by sitting with tablets, by computers etc. and their health is decreasing.” (Interviewee 3, 2016) They want them to not only spend time on the tablets, they want them to socialize and not to become lazy. *“I see the risk that in young age he might become very lazy. It is much easier to sit inside with an Ipad than to go outside and play football or physical social interaction.”(Interviewee 5, 2016)*. They are afraid that their child is going to invest more time into tablet or other computer device than to (what they presume to be) essential activities for proper growth.

Two of the parents mentioned, that these tablets might have an impact on the way and amount of socializing. They think that they will *“(…) socialize less with her parents and surroundings, (…)” (Interviewee 3, 2016)* when they start using tablets at young age. What is more, some parents reported that their child is too concentrated on the tablet, that they are less aware of their surroundings. That she *“(…) doesn't hear anything around her, doesn't react, focused so much that nothing else exist. She needs to stop the game to respond a simple*

question.” (Interviewee 2, 2016). Parents seem to have also noticed that the child is becoming more passive and less aware of its surrounding.

One more risk that was noted based on our interview, when one participant was worried about her child's creativity. Participant worries “*That she might lose her ability to imagine things, or become incapable of doing things herself, (...)*” (Interviewee 2, 2016). This seems like participants assumption, due to no evidence from the interviewee, however, this point will be discussed further in the project.

Moreover, this chapter is not only about the risk that they perceive, but also how parents strive for security.

When participants were asked what would have changed their standpoints on the subject, some of them answered that they would need competent people to prove it. This ties together with the subject presented by Ulrich Beck. His point was, that people basically do not have the knowledge to identify the risks on a scientific level (Beck 1992:53). However, not all of the participants had the same idea. This means that some of the parents look for the security, from the professionals that have the knowledge to guide them. They are looking for the security that they can offer by showing possible outcomes of product, situation, etc. They are depended on the external knowledge from the producers or experts. There are also the ones that really did not mention anything about their dependability on research results and have decided to do what they believe is right. One of the participants said: “*I can't even imagine, what can change my opinion.*” (Interviewee 2, 2016), and continued explaining the role of the kindergarten and what needs to be taught there. These people did not really looked for other researches that would explain the situation constructively that would show the short term and long term effects. According to Beck (1992:53-54), it depends on the assumptions, methods and controversies of other researches of the affected ones who they believe. In their case they either did not mention it or simply do not believe the experts and make decision on their own experience or assumption. Mainly because in contemporary society, we want to negate all the risks possible for maximum security, so that nothing bad would happen (Beck, 1992:52).

4.2.5. Parents as mediators

There is a long tradition of researching parental mediation strategies, since they are the people who have the most control over their children's accessibility to media. The biggest

concern people had few decades ago was television, then PCs, gaming consoles, smartphones and now tablets. Statistics have shown, in Denmark, 61% of households own tablets and 90% of children younger than 7 years old has an access to it in 2016 (Statistics Denmark; TV2, 2016). Since there is a high percentage of children's accessibility to tablets at home, parental mediation is a significant aspect. Mainly, because it is a diverse of methods through which parents manage and regulate their children's activities and experience on the media. This section aims to discuss different types of mediators and show how different types of mediation strategies influence the opinions parents own regarding their kids usage of tablets. Moreover, we analyse how parents set rules in order to limit their time in front of the screen. The majority of Danish population is considered to be a middle-class (Olwig, 2011: 126), which most likely could be claimed that many of them could afford it affordable. The interviews which were conducted shows that all our respondents own a tablet. Nonetheless, the mediation among them is diverse and it could be seen through different mediation strategies. In all conducted interviews was confirmed that there are set rules to some extent regarding tablet use and time limitations. One of the respondents claims that there are "*Some basic rules, like he cannot use it during the dinner.*" (Interviewee 5, 2016). However, one of the participants claimed being very open-minded towards technologies and argued that they are unavoidable, which makes her passive mediator.

"As for the advantages there are several: one of them is to learn how to control it and it's a way how to grow. To get use to this technology cause society just moves forward." Interviewee 4, (2016)

The majority claimed that usually, the continent children are exposed to they are not choosing for them, but always stays around, by listening. This makes them partly-coviewing/active mediator, because of at all times being aware what child is doing on the tablet. Only one interviewee claimed encouraging child to use selected applications or platforms. For example, educational content was very highly valued and prioritised. To support this argument, the parent has expressed the example of educational application and the usage of it instead of other applications, which child likes:

“(...) She has some games on it. (...) Now she is playing games with cars - driving cars game. In addition, she has Ramasjang - Danish app, where it is very concentrated on learning the language, numbers and different letters through tv, music and games”. Interviewee 2, (2016)

All of the participants noted that the younger children are the minor role they play in the mediation process. The older child gets the more mediation would be implemented and more explanation, rules would become relevant.

This chapter also emphasises the different mediation strategies and how they are directly connected with the attitudes parents hold regarding digital technologies. The more restrictive strategy they support means that the more aware of potential risks they are, and wider knowledge about them they have. On the contrary, open-minded parents tend to be more relaxed about the mediation process and they see it as an important part of their children’s development while being less educated about technologies. The book “Parent App” (Clark, 2014:160) argues in favourably to it and supports the fact that knowledge is a factor which leads to one type or another type of opinion.

4.2.6. Time control

One more factor which leads to the different rules is the limited time of using tablets. It is advised by Pediatric practitioners (Aap.org., 2016) to use tablets in the limited amount of time for children under 6 years, therefore, parents also adapt authorities advice and complete it at home. For instance, Interviewee 3 also communicates about it:

“First rule, it would be not to use it or try to use for very limited amount of time. There is time limits. I try to lead, supervise with applications, offer what she could see, learn or play. I try to make it more educational than entertaining.”
Interviewee 3, (2016)

This interviewee has shown that the limits are important in the usage of digital devices. Continuously, the other participant, who was responding to the same question has presented that he sets limits for usage for making his kid to go to the toilet.

“When he goes to the toilet we usually give it to him (...) I usually listen to what he is watching and if there is something he is not suppose to watch, I will just change it.” Interviewee 4, (2016)

It can be interpreted as bribing the kid in order him to do what parents want. Therefore, we can claim tablets become wanted gadgets which children cannot stop using and gets addicted, therefore parents have to set limits on, sometimes depending on time, other times depending on specific actions, as teaching them to go to the toilet.

Nonetheless, other parent demonstrates that his child is not that interested in the usage of tablet, therefore, he does not feel a need for limitation. He claims:

“There is no time limit, because if has not been an issue yet. He uses Ipad for a half hour and then he gets bored of it. If it would become an issue, I would limit usage time to 1 hour per day.” Interviewee 5, (2016)

According to all respondents, everyone had slightly different perspective on how digital devices has to be limited in time scale, nevertheless, it seemed that parents have not experienced many negative issues and were not seeing it through Risk theory, which was also described above in the chapter.

4.2.7. Positive outcomes of tablets according to parents

In this section, we seek to provide our understanding of what current good aspects parents seeing in their kids using tablets. For this particular aspect, we had the direct question, which was formulated as *“Did you notice any outcome of your child using the tablet at home? If so, was it positive/negative, please elaborate on that”*. This question is certainly one of the most important and the findings out of it will have a major influence in shaping our understanding and answering the research question.

We will base it on our collected interview answers and draw on interpretation, in order to provide the analysis. Firstly, we identify the common trends that we have seen after sorting the interview results. Then, under each of them, we will present more specific explanation, which may cause parents gladness and even their promotion regarding children tablet use.

There are plentiful good aspects of tablet use, and almost none disadvantages. This view was supported by the majority, more precisely 3 out of 5 parents. This group of people were quite positive about the use of tablets, had many positive aspects to say about it and provided us with the personal opinion of the rather detailed list with characteristics of the improvements their children had shown.

1. Learning skills. One of the parents claimed:

“I see, is learning curve and his verbal expressions, they are substantially better, he understands languages, patterns much better or in other way than before.”
Interview 1, (2016)

He and other tablets in favour parents, identified it as a great tool which will undoubtedly help children learning purposes. They emphasised that children become more improved at reading, broaden their vocabulary.

2. Development of language skills. It is attributed to learning advantages and all of the parents relatively agreed on this. Children learn languages while using the tablets, for instance: by listening and seeing while playing games, using applications, or even watching youtube videos. As one of the parents argued, this is not a direct language learning, it is more a subconscious process. It applies both to native and foreign languages.
3. Convenience. Parents noticed that the tablets are a very convenient tool for accommodating many functions into a single object. One of them emphasised, *“It creates an amazing opportunity for children to learn, play, see things just with one tool”* (Interviewee 5). Parents shared, that in the budget-friendly sense, it is also a relatively good choice, because it can substitute tv, computer, game consoles, mobile

phone in one device. They also mentioned that the tablets are very easy to carry around because of their convenient size and lightweight. However, they expressed the concern that children do not always treat them with caution and often unintentionally may damage the item. Furthermore, it is difficult for parents to control the time and content of children's using the tablets when it is so easy for kids to have it close all the time.

4. Digital mentality. As one of the parents (Interviewee 3) elaborated on this, in the virtual world and the Internet there are different communication, mutual understanding, conduct set of rules compared to the ones we are used to in real life. For some elder people is difficult to adapt to those rules. Therefore, in her view, it is a good thing that from a young age, children are habituated to it, and can quickly adapt. Parent see it as a must for children because the world is becoming more virtual and everyday life becomes inseparable from the Internet and technology, it is an inevitable part of the evolution.
5. Improved coordination and intuition, due to the touch-screen technology, where everything is controlled right on the screen by touching, swiping and scrolling. Children have to learn to control their hand movements well. As one of the parents commented *“she is learning to control her “sensors”, fingers, reaction, ability to follow several objects on the screen, Specially now, when she is playing driving games.”* (Interviewee 2). Using the tablet itself requires a good coordination and intuition, moreover, games and apps that require these particular skills helps to further practise these attributes.
6. Communication tool in case of emergency. *“Since smartphones are such a personal thing and we have all the time with us, she knows in case of emergency what to do, how to unlock our phones and call somebody, same with the tablet”* shared one parent. (Interviewee 2). The defendant explained that feeling safe when knowing that a child has the opportunity at any time to call them, or could be in contact with the relevant services in case of accidents.

4.2.8. Comparing opinion on when to introduce tablets

In this section, we present parents thoughts regarding our structured question "Which age do you think is appropriate for the children to use a tablet and explain why?". Answers were not unanimous, parents had different opinions on when is the right time for children to start using the tablets.

Two parent believes that the good time for children to begin to use tablets is from 1,5 to 2 years old, when a child starts to touch the screen and understand that the reaction occurs "He already started pressing buttons during this age and later he figured out what does each button do." (Interviewee 4). While the rest of the respondents were not as specific, they did not mention the exact age. In fact, these parents did not feel able to personally evaluate when is the best time for children to start using tablets, to quote Interviewee 1 (2016) "*If I am suppose to determine what is the best age I would look for physicians that have studied it for year instead of my own knowledge*".

4.2.9. Conclusion of the second analysis chapter

This chapter has presented the main values that parents have discussed are very significant in that has to be learnt in kindergarten, they involved respect, freedom, ability to learn and socialise. Moreover, most of the parents have expressed that these values do not include learning new cognitive skills on the tablets or other devices. One more very important aspect in the reflections of parents awareness of tablets, that none of the parents has demonstrated the awareness of security risks. On the contrary, parents have presented us their knowledge in positive and negative outcomes of general usage of tablets, both in kindergarten and at home, when they are supervised by parents, who believe, should be the ones taking decisions about digital devices for their kids.

4.3. Discussion of the analysis process

However, the conclusions we have made are limited, because we have interviewed only five parents. They represent only their own feelings about the new processes of digitalisation, in our case, thus, it is impossible to measure, how entire society feels and what is the percentage of parents who would allow their kids be taught by new government policies. In addition, the research aim was to understand and analyse the perceptions of the individuals at the development status because the process is far from being completed. Therefore, we could claim that we received five different people different perceptions that were interpreted based on the data which we have collected, was also limited by this time because the topic is still in the development stage and there is a limited amount of scientifically proven facts based on the long-term evaluation that could make our research more valid.

5. Conclusion

The following part presents the conclusion of the research question: *How do parents perceive the implementation of tablets in the public kindergartens in Denmark?*

Danish government develops strategies every five years to validate the rapid growth of digital implementation in Denmark. Due to this, digitalisation becomes unavoidable in educational institutions as well. We have focused on the fact that kindergartens are equipped with digital devices, more specifically tablets, and in a result of this, it changes the overall curriculum and the way children's various skills are being taught and occupied during daycare hours. This topic has brought us to two different perspectives which parents express. The outcomes of it affect children, parents and teachers are perceived positively and negatively for different reasons.

Consequently, our research has determined various factors which influence parents' opinions. Firstly, they express the most important values are considered to be essential due to their affection in the way children are raised in different families in Denmark. Parents, whose children are 3-6-year-old, already treat them as individuals by giving them space for their self-development, freedom and take into account their opinion. Another important factor is the collaboration between children and parents. In regard to kindergartens, parents expect that

institution can provide an environment, where their children could be active for most of the time or in other words promote healthy child's growth, develop social skills, learn languages. In addition, through parents perspective, kindergartens should focus on teaching fundamental values and morals such as respect, integrity, honesty, love, what does it mean to be a good person. Furthermore, even though digitalisation is rapidly growing, bigger than usual attention is appointed to outside activities in Danish parenting standards. There is a growing number of outside kindergarten which is discussed in other countries, as well. The interviews show that parents fear that current values and activities will be exchanged with new technologies. Various statistics show that the majority of Danish children use tablets or other digital devices intensively at home. The result of tablets implementation in daycare institutions is that the overall time a child spend on the device is prolonged. Because of these aspects, parents begin to sense possible risks. On the contrary, other researchers discussed in analysis chapter argues that parents are not able to see the most crucial risks digital technologies brings in their children's lives. It is important to highlight that this is the place where the dispute of the opinions begins. Having a knowledge and awareness of opportunities and consequences of tablets, influence parents' decision-making which directly affect how much children use it. Thus, decision-making is based on their personal beliefs (values) or trust of the expertise of the government, or the other researches from outside.

However, the knowledge they have and what kind of information it consist of reflects on the parenting style, meaning adopted values, rules, created the home environment and parent's role. Thus, parenting style is a factor which influences the perception of digitalisation. It determines how likely parents will positively or negatively react on digital technologies in general. From the analysis, it is seen that the more risks parents see in digitalisation, the more rules, time limits are implemented towards children usage of the devices. Along with stronger mediation and perception of tablet's role in a young age. What is more, parents perceive this digital device differently, because they also see a positive outcome as well. They are aware, that if tablets are used appropriately, it helps to learn easier and makes the process of it easier. Development of language skills, convenience, and prepares for the digital age children are growing into.

All in all, parents have different opinions because of the described factors and it is important to highlight that each individual has a personal way of looking at it. And it is absolutely legitimate to have a freedom to raise their children according to their personal beliefs.

Government's point of view was analysed to show that this freedom is limited and that the decision is mainly implemented without any decent collaboration with the parents side. In addition, it causes a dispute between parents, teachers and government. The Danish government argue that kindergartens digitalisation is a natural step in order to move forward in the age of digital technologies. It is the way how children could be prepared for competent digital society. In addition, they aim that by using tablets in early age would increase children's curiosity, improve creative expression and most importantly lead to the durable IT skills establishment. Nonetheless, parents state that technological knowledge could be gained without enhanced focus to have it in public educational institutions. Instead, the focus would be more on social skills, language skills and movement coordination development of the children. Lack of collaboration can affect the way parents react towards the implementation and dissatisfaction rises to some extent. The prepared document by government with a collaboration of local politics ("*Consolidation Act*") present the framework kindergartens in Roskilde municipality may follow. There is no ability to choose remained for the side who disapproves with the tablet implementation and this leads to the more radical action taking motives, which is the movement against by starting a petition. The petition runs against digital implementation with the arguments such as: the increased screen time exceeds doctors and researches recommendations, tablets are not adjusted well enough to use it as educational tool in kindergartens, the current role of a tablet is still not clear enough, and poor reasoning and no evidence that established IT skills in young age ensure it's adaption in adulthood. These arguments validate parents and other supporters position against tablets implementation in all kindergartens. Furthermore, the current result is that the implementation of tablets in kindergartens caused huge attention to this topic and obvious dispute between opinions. In the result of this, the Petition is a consequence of the poor collaboration between government and society, and a sign of limited democracy.

In the case, like ours, where the field of research is still in process it is hard to determine whether the innovation is successful or not. The way to do it is to compare whether the results correspond to the initial objectives of policy implementation. In our case, we can say that it is too early to assess whether the implementation of tablets in Roskilde public kindergartens are successful and efficient because the process is very recent and some time has to pass to see the actual results.

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