



universität
wien

MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

„Online privacy protection: A qualitative study on
children aged 6 to 8 years in child rights
perspective“

verfasst von / submitted by
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angestrebter akademischer Grad / in partial fulfillment of the requirements for the
degree of
Master of Arts (MA)

Wien, 2021

Studienkennzahl lt. Studienblatt /
Degree programme code as it appears on
the student record sheet:

A 066 848

Studienrichtung lt. Studienblatt /
Degree programme as it appears on
the student record sheet:

Masterstudium Bildungswissenschaft

Betreut von / Supervisor:

Univ.-Prof. Dr. Schoonenboom Judith

Acknowledgements

In the last two years, I have met and worked with many different counselors and experts, who helped me to develop a scientific perspective and method. I owe my deep gratitude to many people for their support, trust and advice. First of all, I would like to express my sincere thanks to Professor Judith Schoonenboom, who undertook my thesis supervision in spite of the challenges it presented. With her experience, she encouraged me to grow and develop my skills and provided me with useful critique, feedback and mentoring. I am grateful to my previous supervisor, Professor Christian Swertz, for his valuable counseling and guidance. Additionally, I wish to thank my family and friends for their endless support. Finally, my deepest gratitude goes to the parents and the children who participated in the interviews. Without the invaluable help of these people, this master thesis could not have been completed.

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Introduction

For most people, the internet is a part of their everyday life, as it is commonly used to search for information, to connect with people through social media, to do online-shopping, etc. Most users are probably aware that while surfing the web, data about them are collected or they disclose data by themselves.

To protect the citizens of the European Union, the General Data Protection Regulation was issued, which was implemented in Austria in 2018 in amendments to the Data Protection Act. Since the implementation, it is a requirement that every Austrian website has to disclose which data are collected and for what purpose, so that internet users have the option to decide for each individual website which cookies to accept or decline. It can be assumed that most adults are more or less familiar with online privacy and how to ensure it. But what about the underage internet users? Are they aware that the internet “doesn't forget” and that it is important to keep their personal information private?

The fact that there is an awareness of this issue is reflected in the existing legislation. The Children's Online Privacy Protection Act came into force in the USA as early as 2000. In Europe, for example, the so-called Berlin Group, the international working group on data protection in telecommunications, deals, among other things, with privacy and data protection, in regards to children.

Safe web surfing is therefore a topic that is particularly important for children and young people. But what about the actual usage behaviour of children and the protection of their privacy on the internet? The present work aims to answer this question with the help of a qualitative study prepared by the author, on the experiences, attitudes and habits of children aged 6 to 8 years old, as media and internet users, as well as their personal experiences with privacy issues.

The present master's thesis is divided into a theoretical and an empirical part. The first part of the thesis presents the theoretical framework and is comprised of four chapters, beginning with this introduction, which provides the reader with an overview of the entire study and its progress and the researcher with a systematic structure to ensure

that the research question is resolved. The second and third Chapters critically appraise theories and concepts that are directly related to the research problem, theoretical and empirical. Three preventative methods are presented, regarding privacy and data protection relating to children's rights and digital devices; the first strategy is critical media literacy, the second is parental mediation and the third is active child media participation. The fourth Chapter documents the conclusions reached through the theoretical research.

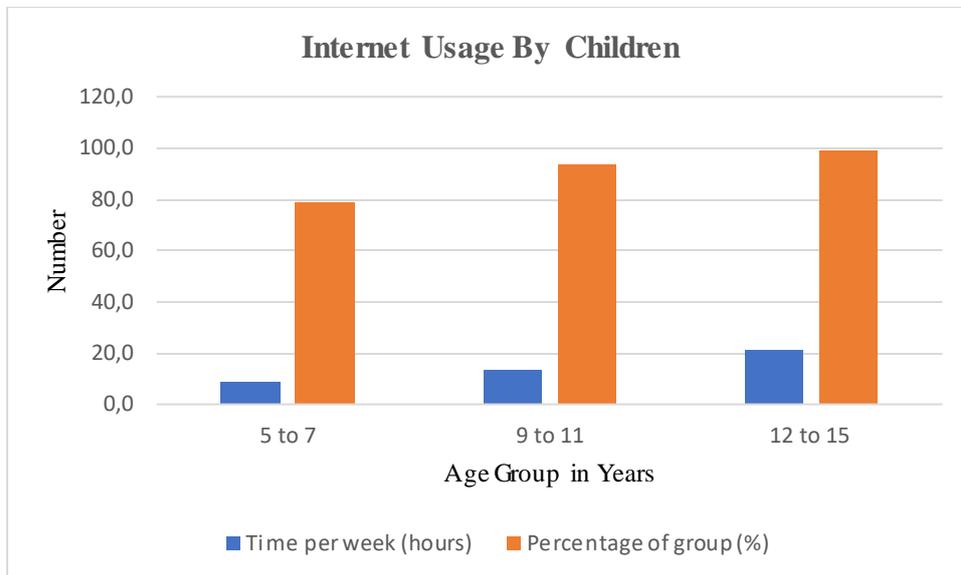
In the empirical research part, in Chapter 5 the research question and the methodology are presented. The data was collected through a qualitative research, specifically through conducting semi-structured interviews, the results of which, were reviewed and analyzed, following the method outlined by Mayring (2014). Based on examples from the interview transcripts, the process of data analysis and the respective individual steps are explained in the same chapter. In the sixth Chapter the results of the study are presented. Before the final conclusions and the overview of the most important results, the seventh Chapter explores how the empirical data relates to the theoretical framework. In the eighth and final Chapter, the author's conclusions are presented and the final research results are summarized and discussed, in regards to the limitations and implications of the research.

1.1 Theoretical Background

The internet and digital devices pervade everyday life, to the extent that individuals find it increasingly difficult to retain their privacy. Data is collected from a range of devices with increasing speed, such that privacy laws are failing to protect individual privacy rights even amongst people who never use the internet (Kerry, 2018, p.1). The extensive internet usage by children has been highlighted in a range of studies, for instance Byrne and Burton (2017, p.39) found that children represented one third of all users globally. The degree of usage varies by country, for instance in the United States (US) in 2015, 71% of young people aged between 3 and 18 years were regular users, 86% using it at home and 65% at school (IES, 2018, p.1), whilst an official UK report by Ofcom (2017, p.2) showed that the level of time spent on the internet

weekly and the proportion of children in each age group escalated as they got older, table 1.

Table 1: Trends in Child Internet Use by Age Group



Examining the subject as it pertains to German-speaking countries, as well, helps in gaining a broader perspective.

Since 2010, extensive research has been conducted in German speaking countries on how children use digital devices to play or interact with friends and family (DIVSI, 2014; Feierabend, Plankenhorn & Rathgeb, 2017; Suter et al., 2017; Sinus, 2015; BFMJ, 2016). The research findings also demonstrate variations across different age groups and for diverse reasons, for example 4 to 7 year old Swiss children were exposed to media as an educational or entertainment tool: video games for entertainment; Messenger and WhatsApp to communicate; YouTube to listen to music; digital tools and software for learning (Schoch, Waller, Domdey & Suss, 2018, pp. 13-15). The devices employed most frequently were smartphones and tablets, most often not connected to the internet, and the associated media education strategies adopted by the parents were to monitor the usage of these tools (Schoch et al., 2018, p. 24). However, this research was conducted with a very small sample of 24 families and based on qualitative interviews, restricting its value, owing to the findings not being generalisable to the whole population (Saunders, Lewis and Thornhill, 2015).

The media usage of the Swiss 12 to 19 year group revealed substantial reliance on smartphones because they are multifunctional and ideal for finding information, for communication and for entertainment; younger individuals used the phone predominantly for entertainment whilst teenagers often used it for educational purposes. However, the disadvantages of the smartphone recognised by the participants included the user being constantly contactable, being distracted from other activities, being occupied with a time-wasting pursuit and feeling an unpleasant pressure to use the devices (Heeg et al., 2018). The usefulness of this study is severely limited by the small sample of 30 participants, which is not representative of this age group, as well as by the fact that it is restricted to qualitative methods and by the limited existing media literacy associated with accessibility of digital devices and internet usage. However, the researchers suggested that media education interventions should be adapted to the respective target group on social media and ideally to the individual.

According to the data, Austrian primary school students generally employed primarily Google, YouTube and WhatsApp, in order to communicate, to find images, to search for information and to play games. Thus, the students' media literacy seems to be associated with specific programs and technical abilities. The children reported stopping their use of digital devices when their eyes started hurting or they became bored. The school's main function regarding children's media literacy was to develop their acquisition of knowledge and information by using presentations, and to teach them the skills related to different digital media and the internet; notably it did not explicitly teach the children about privacy issues (Zartler, Kogler & Zuccato, 2018, pp.5-7).

The qualitative study "Oö. Kinder-Medien-Studie" based in Upper Austria gathered data from 503 children aged 3 to 10 years, 300 parents and 200 teachers (Education Group GmbH, 2016). The findings suggested a significant trend: children using the internet at an increasingly younger age, in greater numbers and more concern being raised regarding the protection of their privacy.

The exposure to risk of children aged 9 to 16 years whilst using the internet was investigated in 25 European countries by Livingstone, Haddon, Görzig, and Ólafsson (2011) using a stratified sample of 25,142 participants, who responded to a questionnaire survey related to harmful content, for instance pornography and sexual messages, and misuse of private information. The study revealed that 30% of them had communicated with a person that they had not met in a face-to-face context and 9% had experienced misuse of their personal data. Participants used the internet most at home or school, 87% and 68% respectively, 26% had public profiles so that anyone could access them and, whilst younger children had weaker skills and less confidence using the internet, more than half of the 11 to 16 year old group knew how to alter privacy settings, block messages and find safety advices. These findings have been very informative for the present thesis, as they are the results of thorough research, using a representative sample, stratified by age groups, and differentiating the characteristics by age. According to the research findings, children in age groups less than 11 years may be most at risk, but a considerable proportion of those older than 11 remain without sufficient protection against invasion of privacy and at risk of personal harm. Several policy implications are highlighted by Livingstone et al. (2011), for instance the need to raise awareness amongst parents, of the multiple risks, the need for digital skills training and greater management of the risks to children by the internet industry.

A range of studies conducted in Europe, specifically focus on privacy and internet security, for instance a National report by Konitzer, Jeker and Waller (2017) in Switzerland found that children younger than 8 years old had very poor understanding of the risks of their online behaviour and choices. Children were often given digital devices to keep them occupied whilst adults carried out other tasks, implying that lack of supervision could increase the risk potential (Konitzer, Jeker & Waller, 2017). Although the risks to these younger children could be mitigated by a protection strategy of prohibiting internet usage by children under 8 years of age, this would be contrary to the Convention on Children's Rights, Article 17, which concerns their access to the media to access data from national and international sources particularly those related to social and moral well-being, physical and mental health (CRC, 1989).

The Convention also emphasises children's rights to freedom of expression and information gathering and information sharing, Article 13, and in Article 17 states:

“Encourage the development of appropriate guidelines for the protection of the child from information and material injurious to his or her well-being.”
(CRC, 1989, p. 5)

Some parents frequently failed to supervise the use of digital devices and the internet and others were unsure whether their children had the skills to critically appraise the media and internet use (Zartler, Kogler & Zuccato, 2018). The DIVSI (2014) research found that children begin to have a critical conception regarding media and internet from age 12 onwards. Despite parents monitoring media content and kids using computers at school for learning and reading games, it is not evident how children are developing medial literacy. Whilst the internet could have a positive impact on child development, provided that reasonable protection is in place (Croll 2015), many recent studies suggest that media literacy should be taught in school at the early years of primary education (Sinus, 2015; Education Group GmbH, 2016; Feierabend, Plankenhorn & Rathgeb, 2017; Suter et al., 2017; Zartler, Kogler & Zuccato, 2018).

1.2 Research Problem and Importance

Therefore, the broader concept of this thesis is to identify effective methods of ensuring that young children are able to use the internet and related digital devices in a manner that minimises risk of personal harm and invasion of their privacy. The existing research has demonstrated that children are interested in digital media from a very young age but do not always learn how to use digital devices and the internet safely from their parents and guardians, possibly because many parents do not necessarily consider the importance of privacy protection. Although schools may teach young people about how to develop critical appraisal skills on the internet to protect their privacy, it is often too late as they have been exposed to the dangers from infancy. Children are encouraged to use the online space, but they must also be guided about how to manage their privacy and data protection issues. In cases where parents

guide and direct their children regarding online privacy protection, little is understood about the methodology or its effectiveness. Whilst there is a number of studies about online privacy protection in Austria, very few studies focus on children younger than 9 years old, a fact which reveals a gap in the existing knowledge, which this research will aim to reduce.

1.3 Study Objectives and Research Questions

The overall objective of this research is to establish the current experiences and perceptions of young children in Vienna regarding internet usage and protection of personal data. Therefore, the research questions of this thesis are the following:

RQ1: What are the experiences and perceptions of children in Vienna in the age group 6 to 8 years about media and internet usage?

RQ2: What knowledge and opinions does this group of children have regarding sharing personal data on the internet and methods of protecting it?

RQ3: Which mediation strategies do parents apply regarding their children's media and internet usage as well as online personal data protection?

1.4 Outline Methodology

This research adopts a subjective stance because the diverse opinions and experiences of the participants are vital for answering the research question. Therefore, the research design is exploratory and has a flexible structure that allows new knowledge regarding a poorly understood contemporary phenomenon and new theory to evolve (Saunders, Lewis & Thornhill, 2015). The research philosophy adopted is interpretivism and the research strategy is a survey in the form of semi-structured interviews. Qualitative methods are employed for data gathering and analysis and there is a purposive sample of children aged 6 to 8 years old. Techniques to ensure high reliability and validity, which are applicable to qualitative research are applied in

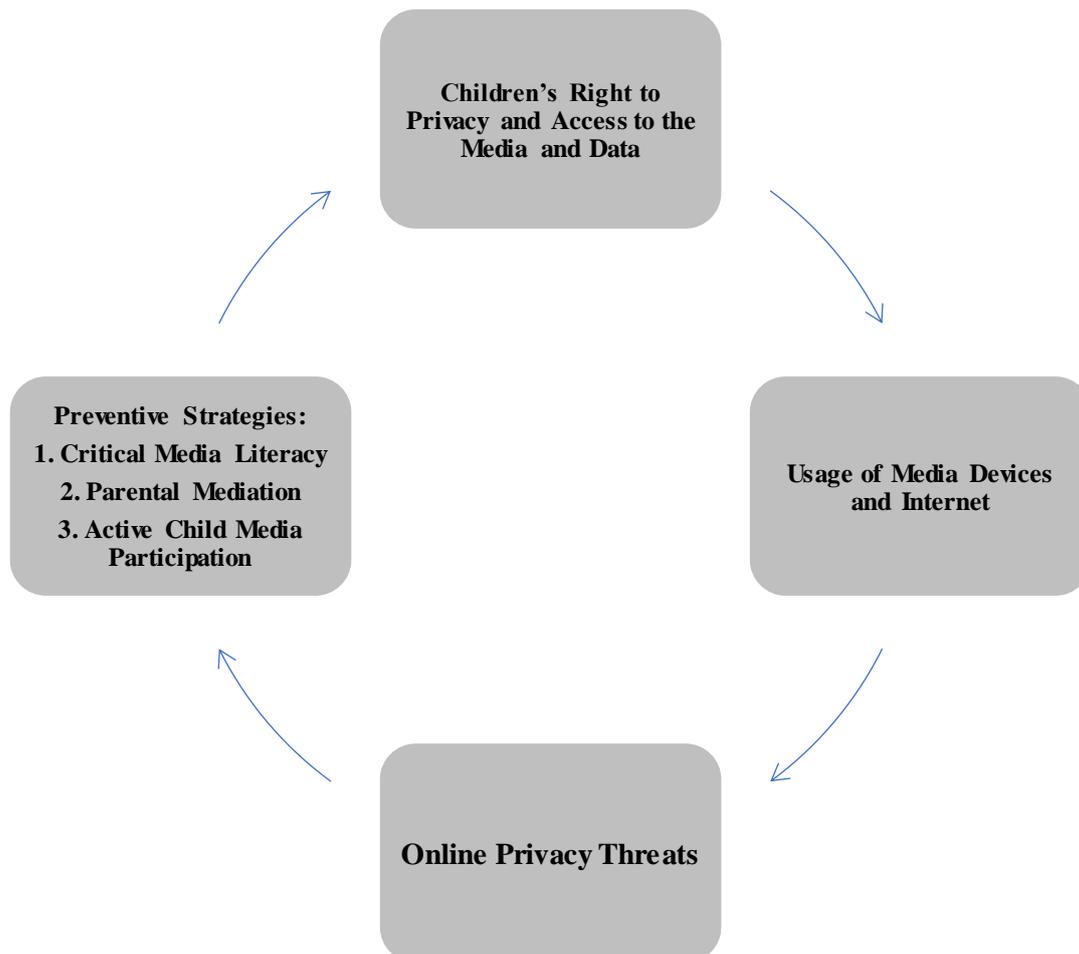
this study. The ethical standards of social science research are followed (Ritchie & Lewis, 2010). The conceptual framework of the research is examined in the next chapter.

2 Literature Review

2.1 Introduction

The main concepts examined in the theoretical part are demonstrated in the Table below (Table 2). First, the children's right to privacy and access to media and information is highlighted. According to these rights, children should have access to media devices and the internet. While online environments encompass threats, children need support to understand and cope with privacy risks. In this study, three methods for the support of children against online privacy risks and for the protection of their privacy rights are discussed.

Table 2: The Concept of the Theoretical Part: Protection of Children's Online Privacy



The current and next chapter cover the Literature Review, as a critical appraisal of the major theories and concepts that enable the researcher to answer the research questions, comprising a theoretical approach and findings from empirical studies. Initially the concepts of privacy and children's rights are evaluated, followed by concepts of media and media literacy. Therefore, the gaps in the existing knowledge are identified and questionnaires can be designed accordingly, in order to gather new information.

2.2 Privacy and Data Protection from a Child Rights Perspective

2.2.1 Definition of Privacy

Privacy is an ill-defined term, the meaning of which varies from the right to control intimate detail, secrecy about how much personal information to reveal, to the entitlement to live in seclusion, to be left alone (Glenn, 2003). A multicultural study of privacy by Newell (1998) found that most individuals in every culture considered that the most important element of privacy was not being disturbed. The term privacy has three dimensions, according to Rössler (2001, pp. 23-26): decisional privacy is the individual's right to determine their own life choices; local privacy means the possibility of a retreat, such as a sheltered apartment; informational privacy describes the autonomy of the individual to deciding who has access to information about him/her and to which information.

These definitions all infer personal preference of the individual to choose what level of information is known about him/her. This study follows Stein and Sinha (2002, p.414) in the adoption of the meaning of the personal privacy of individuals as referring to informational privacy. In this perspective, all individuals have the responsibility to manage their personal data in the way they decide; to share or not to share their personal information and with whom (Altam, 1975, p.24 cited in Trültzsch-Wijnen & Pscheida, 2013).

To this effect, public is defined as ‘everything being fully accessible to every other individual or group’ (Trültzsch-Wijnen & Pscheida, 2013). Whilst public information is available to everyone, private information is protected and relates to the right of individuals, groups or institutions to determine when, how, and to what extent they release information they possess/own to others (Westin, 1967, p.7 cited in Trültzsch-Wijnen & Pscheida, 2013); This concept is also described as ‘selective control of access to the self.’ (Altam, 1975, p.24 cited in Trültzsch-Wijnen & Pscheida, 2013, p.6).

The right to privacy extends to the protection of personal information, such as an individual’s name, date of birth, photos, e-mail address, telephone number, details about school, university and work place, as well as aspects of a person’s individuality, for instance emotions, thoughts, property, body or identity. (Trültzsch-Wijnen & Pscheida, 2013, p.27).

Research studies suggest that children understand privacy differently in each age group. For instance, the research conducted by Livingstone, Stoilova and Nandagiri (2018) found that children aged 5 to 7 years old, who used media and shared their data, had developed an understanding of ownership and had the ability to identify some information as sensitive. The conclusion is that developing an understanding of the term is gradual (Kumar et al., 2017) and challenging because it is an abstract concept (Chaudron et al., 2015), and thus most 5 to 7 year olds do not understand that sharing information could pose a threat to their privacy (Kumar et al., 2017). The major concepts of privacy on the internet possessed by 5 to 7 year old children (Livingstone, Stoilova & Nandagiri, 2018, p.18) are summarised in Table 3.

Table 3: The Privacy Stage at Ages 5 to 7 years

Age Group	Interpersonal privacy	Institutional and commercial privacy
5 to 7 years old	A developing sense of ownership, fairness and	Limited evidence exists on understanding of the

	<p>independence</p> <p>Learning about rules but may not follow, and don't get consequences</p> <p>Use digital devices confidently, for a narrow range of activities</p> <p>Developing the idea of secrets, know how to hide, but tend to regard tracking/monitoring as helpful</p>	<p>digital world</p> <p>Low risk awareness - focus is on device damage or personal upset</p> <p>Few strategies - can close the app, call on a parent for help</p> <p>Broadly trusting</p>
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These characteristics suggest an understanding of the meaning of privacy that is related to the children's personal identity and substantial lack of knowledge of how the data could be utilised by large organisations to their detriment. Despite children having the right to keep secrets or to be anonymous, there are many threats against their privacy, especially on the internet, therefore online privacy threats have been studied extensively.

2.2.2 Children's Rights to Media Usage and Privacy

The rights of children, which are directly related to issues of media and internet usage, are the following: the right to access digital media, child and youth protection, the right of privacy and honour and the right to freedom of expression, information gathering and information sharing; These are stated in Articles 17, 16 and 13 of the United Nations Convention of Children's Rights (CRC, 1989; UN, 2020).

The accessibility of digital media for children is a protected right, as stated in Article 17 of the Convention, which stresses that mass media play an important role in enabling children to obtain information, from a wide range of national and international sources, in order to support the development of their social, spiritual and moral well-being, as well as their physical and mental health. The inferences of this right are provided in detail and comprise five aspects:

- Mass media should be encouraged to publish information in a range of formats, as to enhance the social and cultural development of children, in accordance with Article 29, which concerns the general education and personal growth of children, as members of society.

- International collaboration should be sought to produce, exchange and distribute these culturally and nationally diverse materials.

- Production and distribution of books written especially for children.

- Informational material should foster learning by ensuring the linguistic needs of minority or indigenous groups of children are catered for.

- Development of effective and suitable guidelines to protect children from information that is likely to be harmful in accordance with Articles 13 and 18, which relates to the child's right to freedom of expression, except where national security and reputation of others are concerned, and recognition of the responsibilities of parents for child development respectively (CRC, 1989, pp. 4-5).

Of crucial importance to a child's well-being, when using digital devices and the internet, is the protection of their personal data. This is directly related to Article 16, which refers to the right to privacy and honour in the physical and virtual world, specifically:

“No child shall be subjected to arbitrary or unlawful interference with his or her privacy, family, home or correspondence, nor to unlawful attacks on his or her honour and reputation. The child has the right to the protection of the law against such interference or attacks” (CRC, 1989, p. 5).

The full details of these articles are available in Appendix 4. Although the existing legislation rightfully protects children's rights, it is essential that the children are aware of the online threats to their privacy and learn how to manage them, so that their rights are protected in practice also.

2.3 Threats to the Online Privacy of Children

Social interactions by means of laptops, tablets, and smartphones often blur the boundaries of the private and public sphere, and, despite their concerns about privacy, both adults and children sometimes choose to share personal data, in order to benefit from the advantages of social media. This behaviour is described as the privacy paradox by Barnes (2006). The privacy of children is also threatened by the actions of parents, public authorities and businesses, which all may have access to their data and store it online (Joinson et al., 2011). Whilst privacy settings can be altered to control the amount of private information that can be accessed, Livingston (2008) suggested that there was no privacy paradox, firstly because privacy has different meanings for individuals, but, more importantly for this thesis, that even older children find it difficult to manage the privacy settings on social media sites, which is partly a consequence of site design and partly of insufficient internet literacy.

Privacy risks are associated with several forms of data, for instance metadata, big data and internet protocols, to which all online users are exposed regardless of age (ICRC, 2018). Metadata, is generated when any type of data is transmitted by information systems and is, therefore, a primary online privacy risk because internet users produce a variety of data, for instance messages, emails and website access; the State is able to monitor metadata and use trojans to access it (Pfeifer, 2018). Big Data, which comprises huge collections of data gathered from diverse sources including messages, updates, images posted on social networking sites, data transmitted from sensor GPS signals from smartphones (McAfee & Brynjolfsson, 2012), is openly available information from private and public sources. Whilst this aggregation could be considered useful and valuable, as it can be used to allow personalisation of products or services to the consumer and higher levels of efficiency and effectiveness for business users (Tene &

Polonetsky, 2012; Reno, 2012) it potentially threatens the right of individuals to ensure the protection of personal information and to control how it is used (Tene & Polonetsky, 2012).

Data collection risks also apply to children who use online applications or websites that gather private information, for instance present and future locations, which could make them vulnerable to harm, such as kidnapping or rape (Lopez, Ray & Crispo, 2015). The vulnerable position of children in relation to privacy issues is associated with their incapacity to understand the potential short term and longer term impact of data sharing, due to the fact that their cognitive functions are still being developed (UNICEF, 2018, p.4). Neuroscience research has demonstrated that an individual's brain continues to develop until the age of 20 (Johnson, Blum & Giedd, 2009), confirming that children are not developmentally mature enough to grant informed consent or to gauge long term risk of internet and social media networks in the same ways as adults. In recent years, UK government ministers have suggested legislation that would allow young adults to delete data about them that may be embarrassing or discriminatory (Ward, 2015). The implication of being able to post personal information online, long before reaching a certain level of maturity and an understanding of the potential risks of this information's accessibility to businesses, governments and others is considered extremely serious. As a response to this realization, there has been a suggestion of applying expiry dates on data belonging to users under the age of 18 (Ward, 2015). Often, children's personal data is also posted online by their parents, even if the children disapprove of this action at a later date. For example, parents may complete applications on behalf of their children, which require their name, age, education or medical information. Data on children is collected from birth, so that by age of 18, there is comprehensive personal information, and the rapid technological developments mean that the quantity of data is growing and accessible for analysis for diverse reasons without their knowledge (UNICEF, 2018).

Children are particularly vulnerable as a result of the growing connectivity between devices, such as smart TVs and Google Home, used by both adults and children. The Samsung Smart TVs privacy policy warns users about discussing personal

information in front of the device, owing to its Voice Recognition technology, which means that the data gathered could be provided to a third party. The technology of these devices is so sensitive that it can record background conversations (Matyszczyk, 2015). Some smart devices are designed specifically for children, for example toys such as smart dolls, that record and transmit children's data. The dolls were referred to as 'hidden espionage devices' by the German regulators and were alleged to ask children very personal questions about their preferences for television programmes and toys, and passing the data to other companies (Ng, 2017). In contrast, the Google voice assistant service has random identifiers, which prevents its servers from identifying the person making the request (Matyszczyk, 2015).

Video gaming systems have similar data gathering features. For instance, Xbox Live facilitates users gaming with strangers (Maslakovic, 2017). Wearable devices are a particular threat to privacy. For instance some, such as Google Glass, have a camera integrated, which is able to record the conversations and locations of individuals and groups without their knowledge, even to the extent of taking photos of a person accessing a cash machine; this data could then be posted on the internet and/or used to commit fraud (Datta, Namin & Chatterjee, 2018). Parents often provide children with wearable devices to be able to track their location, in order to protect their safety, which is a positive action, however, they are simultaneously exposing the children to personal privacy risk because details of the children's medical information, location and routines are gathered whilst they are wearing the device (Ching & Singh, 2016; Datta, Namin & Chatterjee, 2018).

The inference from these studies and reports is that culturally the concept of privacy is changing and that technological advances and commercial priorities have shaped that change; absolute privacy is increasingly difficult to ensure. Many individual consumers are complicit in facilitating this shift so that the idea of a privacy paradox is a genuine one. This is understandable to a certain extent, as there are significant advantages, such as convenience, in aspects like predicting specific product preferences and specialized needs or interests. However, this must be balanced against the potential risks, for instance fraud or threat to personal safety. Children have

already been identified as a special case that requires specific new laws, rules and/or guidelines (Ward, 2015), also emphasised by UNICEF (2018, p.7):

“governments, businesses, parents, educators and children all have a role to play in advancing children’s privacy and freedom of expression in a digital world.”

This research responds to these objectives by focusing on the role of parents, the importance of media literacy and the self-responsibility of children.

2.4 Media Literacy

2.4.1 Introduction

Media literacy is a critical safety measure for the protection of children’s privacy rights. Children need to be media literate when they start to use media devices. If children have been taught how to critically assess online privacy with respect to the media and the internet usage, they could apply their learning more effectively. This is not a rapid but an emerging process, as indicated by scientific research on child development (Johnson, Blum & Giedd, 2009). This section of the Literature Review critically appraises the existing concepts of media, literacy and media literacy.

2.4.2 Media

Media is originally derived from the Latin adjective *medius* or the Greek *meos*, both translate to ‘in the middle of things’, which can be interpreted either in a physical or an abstract sense (Kafka, n.d., p.626); this is a very apt definition for this thesis, as it considers the cross over by physical human beings and the abstract virtual world of the internet. Over time, the term ‘media’ has been increasingly linked with communication. As chemical and mechanical technologies developed rapidly in the 19th century to enable fast production of words and images, ‘media’ came to mean a group of communication tools (Kafka, n.d., p.627). Media is envisaged as communication by the human use of objects as signs by Swertz & Fessler (2010, p.1).

Hence access to the world is facilitated by the media (Breinbauer (2011) and its meaning continues to be developed as technology advances, having now become an essential part of human life in a global sense (Kellner & Share, 2007), reflecting its original meaning of being in the centre of everything:

“The twenty-first century is a media saturated, technologically dependent, and globally connected world.” (Kellner & Share, 2007, p.3).

The general public have become so used to taking media for granted, that they do not question their presence. This is particularly true of digital media, for instance a person’s daily routines are very often co-shaped by digital media; it has become a habit and consumed unconsciously (Romele & Terone, 2018). Therefore, media has become linked to self-perception, self-understanding, since it shapes what the individual understands and knows, which is closely linked to literacy (Beck, 2012).

2.4.3 Literacy

Literacy is a word defined as the ability to read and write. ‘Literate’ was a term developed towards the end of the 19th century and associated with benefiting from an education (Swertz & Fessler, 2010, p. 2). Therefore, literacy is described by Kellner and Share (2007, pp.4-5) as a process in which individuals gain the skills and knowledge to learn and to communicate in a manner that is socially acceptable, in other words, to adhere to certain subjective social norms that depend on which cultural context and/or in which educational institutions formal learning took place; informal education can also have an impact on these norms.

New technologies have been important in the expansion of what constitutes media and have generated a range of new forms of literacy: media; information; media and visual; multimedia; multimodal; multi literacies (Swertz & Fessler, 2010, p. 2). The devices associated with these literacies are physical and/or digital, for instance information literacy comprises libraries, computers, networks, and television, which present different methods of developing media literacy. Literacy is also associated with scientifically based teaching methods to realise defined educational goals, which

may be focused on children acquiring media and information literacy (Swertz & Fessler, 2010, p.16).

The diverse concepts of literacy are grouped into four categories by Swertz and Fessler (2010, p.2): library related to traditional literature research, information and communication technology, computer literacy, internet literacy. The last three types of literacy are difficult to separate because they are all forms of information literacy, which integrate all forms of media development, including digital literacy and multimedia literacy. Television technology was originally the basis of the term media literacy and required visual and auditory skills. The more recent term media literacies encompasses digital and multimedia literacy (Swertz & Fessler, 2010, p.2), whilst multimodal literacy is often used in young learners' pedagogic literature to express the complexity of learning, which encompasses more than merely words. Multimodal literacy incorporates graphics and sounds in relation to print, electronic and face-to-face interactions and the combination of modes they employ to express meaning, for example movement, music and images (Marsh & Hallett, 2008, pp.122-123). The development of the meaning of literacy is important to this thesis, since it emphasises the growing complexity of literacy and the many influences on it, as well as the diverse opportunities for young children to be in a position of risk.

Media literacy is part of general education, the German term would be "Bildung", (Swertz & Fessler, 2010, p.16) and emphasises comprehension, critical appraisal and development of media materials (Livingstone et al., 2011, p.104). Consequently, media literacy is the educational goal, rather than the scientific teaching methods and comprises knowledge of the nature of media, how it works, and how it is used in an effective and creative way (Livingstone et al., 2011; Swertz & Fessler, 2010). Therefore, education, the German term would be "Ausbildung", can be understood as an important reflexive process between the individual and knowledge associated with information literacy (Livingstone et al., 2011; Swertz & Fessler, 2010, p.16).

The study of multimodal media literacy in children represents an opportunity to interpret how children deal with media and an effective didactic strategy to support children to develop a critical media perspective, which is poorly understood and a research gap, in the context of this thesis.

2.4.4 Media Literacy and Media Education

In the perspective of children's rights, media literacy is the requirement for the protection of various rights documented in Articles 13, 16 and 17 of UN Convention on Children's Rights (CRC, 1989), discussed in section 2.2.2. The Right of Privacy and Honour can be protected only if children are aware of this right, of the online dangers and of the available protection strategies. Therefore, in this study media literacy and media education are concerned with developing children's abilities to differentiate protection, provision and participation (Maywald, 2012, p.50) in relation to their personal data.

Frequently, media literacy focuses on reading and writing (Frau-Meigs, 2016, p.20), while it should also generally enable children to develop awareness of the media, how it functions and how to manage it (Schneider, Scherer, Gonser & Tiele, 2010, p.3). Media literacy is composed on four aspects: media criticism, media knowledge, media use and media design (Hugger, 2008, p.94). Media education reflects the pedagogical aspect, the ability to relate to media in a personal perspective and a world view (Hugger, 2008, p.97). Children need to become active media users, in order to organise and reflect on media on their own, so that media use is a form of media self-socialisation; children have the capacity to develop the necessary mechanisms to deal with media on a cognitive level and on a spontaneous level. But it is unclear how media literacy is developed. However, Marotzki and Jörissen, (2008, p.100) suggest that education is not a result of certain actions but the replacement of existing patterns with newer more complex perspectives of self and the world, that is accomplished by reflective processes, that are unique for each individual. However, this approach also fails to clarify the process or enable pedagogy to be devised for media education. Marotzki and Jörissen (2008, p. 106) wrote about the concept of dual reflection, meaning critically appraising the sources in the context of the information acquired, and developed a model of media education based on structural education theory. This describes education as a self-reflective learning and orientation process, with various levels of critical reflection associated with: knowledge, the critical reflection on the conditions and limits of knowledge; questioning the social dimensions, for instance ethics, morality and principles; pondering on aspects that cannot be understood in a

rational way; the anthropological or biographical subject matter related to self-respect. Accomplishing this fourth level, namely critical media literacy, for children is dependent on achieving the first three (Marotzki & Jörissen, 2008, pp. 100-106). Focusing on the critical aspect of media education, the approach is no longer media literacy, but critical media literacy, which conceives people as active individuals.

2.4.5 Critical Media Literacy

As a result of changes in society caused by advances in technology and media, development of critical media literacy in young children is necessary, to enable them to actively participate in a society with democratic principles (Kellner & Share, 2007, p.3). Media is an integral part of society, therefore critical reconstruction of education must apply media literacy pedagogies that enable students, teachers, and citizens to understand media culture and its impact/influences on them. The importance of critical media is stressed by Kellner and Share (2007) because it extends the meaning of literacy to include all forms of mass communication and popular culture, and its multimodal nature (Marsh & Hallett, 2008, pp.122-123) increases the potential of education to critically appraise the relationship between media and user, in terms of information and power. Children need to be supported, in order to cultivate the skills to interpret the multiple messages generated by texts, sounds and images, to identify stereotyping, and evaluate the content, so that they are able to use it in an intelligent manner and to construct their own alternative forms of media (Kellner & Share, 2007, p.4). The reflection process allows diverse media spaces to be analysed, and children to create their own meanings and identities and to shape culture and society in the future (Kellner & Share, 2007, p.5).

Dealing with media responsibly is important in ensuring online privacy protection. “Media and internet literacy are an antecedent for individuals to be able to understand, protect and defend their privacy and respect the privacy of others, at least in terms of informational privacy.” (Culver & Grizzle, 2017, p. 25)

This citation confirms the importance of the subject of the present thesis, that media education must integrate a critical approach to media, that enables young children to identify the limits of their privacy and that of others in media spaces. Its purpose is to protect young children by guiding them to effectively safeguard their personal information.

2.4.6 Summary and Research Gaps

This Chapter critically appraised the scientific discussion on media literacy from a pedagogical perspective; the way that children use the media demonstrates their levels of media literacy. Children must acquire critical media literacy for personal data protection purposes and to enable them to use media with responsibility. Privacy education can provide children with knowledge and practice on online privacy issues. The development of a critical perspective about online privacy issues is an indicator that children have critical media literacy. Knowledge about privacy can develop children's awareness about the conditions and limits of privacy. However, Damberger (2013) stresses that children must make these distinctions using their personal insight and with self-purpose, because by just following specific rules, they will not be able to learn how to deal with media in a self-responsible and self-determined way, especially in terms of privacy and protection of personal data, as part of personal identity (Damberger, 2013, p.13-14).

The methods for protection of children's right to privacy, which is the development of children's critical thinking skills and sense of responsibility toward their privacy, is presented and discussed in Chapter three. In this process, the role of parents who support the children in the development of their independence and self-efficacy is also emphasised.

3 Support and Protection of Children's Right to Privacy: Children's Self-Responsibility and Parental Mediation

The protection of children's right to privacy has never been more difficult, owing to the rapid advancement of information communications technology and the ever-increasing number of children who are active users of the internet. This research appraises three prevention methods for children's online privacy. In Chapter Two the importance of development of critical media education that enables the young internet users to have a critical perspective regarding online privacy risks was highlighted. Once critical literacy skills have been acquired, a sense of responsibility must be encouraged, that enables children to manage online privacy risks in a self-determined way. However, parental support to help the child develop responsibility is equally important.

3.1 Children's Self-Responsibility

Critical media literacy provides children with knowledge about media and the internet; children gradually develop a critical understanding of the existing threats against their privacy. However, even if children acquire knowledge about how to manage their online privacy risks, it does not necessarily mean that they can use this knowledge to solve a specific problem. Children have to develop competence that enables them to actually solve the problems that they are dealing with. The term competence is associated with having the knowledge required to solve a problem and the skills to accomplish the solution (Damberger, 2013, p.5). A potential method to develop competence is substantial practice but, even if children practice to solve problems, they must also develop the critical skills to be able to recognise the problems or risks on their own (Damberger, 2013, p. 6). A similar perspective on the meaning of competence is offered by Sesink (2011, p. 7), who proposes that competence is not demonstrated by affirmative problem solving, but by the ability to be able to judge what constitutes a problem and to decide on an appropriate solution, or to admit that the problem is irresolvable. In order for children to be capable of

protecting their privacy, they must have the knowledge about how to do so, the foresight to be able to recognize the risk and understand how to use the appropriate knowledge. Children need to develop media maturity which is a combination of self-determination and a sense of social responsibility (Gapski, 2001, p.78). These competences are also stressed by Damberger (2013, p.14), in order to enable them to be an active media user that takes a critical approach to his/her media usage.

Prevention of loss of privacy should not focus on controlling the young child or on highlighting the negative effects to him/her, but to fostering user activity and responsibility and helping to form active individuals. As Klimsa (2013, p.2) states, “effective media prevention is not characterised by conforming to predefined rules, social norms or values, but on developing user skills in realistic contexts”.

This way of prevention supports people under real living conditions and not by creating protected environments. It aims to developing ‘risk competence’, which is defined as “the ability to act in a risk-aware manner, to know one's own living conditions and their importance for risk behavior, and to make these living conditions not only low-risk but also beneficial.” (Klimsa, 2007, p.213). The process of dealing with media is no longer linear, but circular. People are encouraged to recognize the dangers on the internet and to interpret their effectiveness (Klimsa, 2013, p.8). Whilst this approach appears perfectly reasonable and logical, parents and teachers may not have the required influence; the challenge is that each child is unique, for instance some struggle to express their feelings or opinions, and have a different capacity to regulate their thoughts, emotions, and behaviours (Florez, 2011, p.1). Children regard digital media as just another environment, which allows them to perform the same activities they have always taken part in, but virtually instead of physically (Brown, Shifrin, & Hill, 2015, p. 54), and therefore, the appropriate solution is not setting limits, but the joint engagement and involvement of parents and children. (Zaman & Nouwen, 2016, p.6; Miyazaki, Stanaland & Lwin, 2009, p.87)

Despite risk aversion being encouraged when children interact with digital media, it is impossible to prevent the fact that every child will be exposed to online risks on some occasions, which may have negative consequences on child development, exploration, independence and participation (Livingstone, Stoilova & Nandagiri, 2018). Similarly,

creating a protected privacy environment for children does not actually eliminate the threats. Miyazaki, Stanaland and Lwin (2009, p.81) emphasised that, when online sites operate privacy notices for children, it makes them more likely to ignore them, even at pre-teenage years in some cases. Awareness of the online privacy risks, does not automatically infer that children are able to solve the dilemma of whether to post or to protect their personal data (Damberger, 2013). Children need to develop self-regulation (Florez, 2011, p.1; Miyazaki, Stanaland & Lwin, 2009, p.79), self-determination and social responsibility in order to be able to adequately manage online privacy risks. Therefore, Livingstone, Stoilova and Nandagiri (2018, p.31) concluded that gaining these skills as digital users should be considered a natural part of child development and learning.

Having confidence in children's abilities does not negate or minimize the importance of the role of parents in supporting child development and learning, in regards to digital media privacy. Therefore, the third proposed preventive measure relates to parents, whose role is to support their children, in order to help them become responsible, solve problems and find solutions, regarding online privacy risks.

3.2 Parental Support and Mediation

Most children are in favour of parental controls, while many children believe that parental controls should only be applied until the age of 15 (Internet Matters Team, 2018). Despite the great importance of parental support, parents find it challenging to balance children's online protection and independence and consequently need to be informed about online privacy threats, how to take the necessary security measures, how to support their children to stay safe online and to develop resilience to online risks, by having an ongoing dialogue with them, providing advice and guidance (Miyazaki, Stanaland & Lwin, 2009, p.89). Many studies have found that parental support makes a significant difference in children's protection on the internet (Byrne, Kardefelt-Winther, Livingstone & Stoilova, 2016; Walker & Kiesler 2015), but few studies focus on parental mediation related to the online privacy protection of children.

In order to protect children from online risks, parents are using mediation strategies, a range of social techniques and technical restrictions, such as tools, apps or services. Three categories of parental control are provided by Zaman and Nouwen (2016, p.2): functional, implementation, and design initiator. The functional type includes monitoring and tracking tools, plus restrictions on the time, content or activities permitted, where content generally indicates economic, social and entertainment activities. The second category, implementation, is concerned with security measures against operating systems, web browsers, computer control software that restricts child access to content, mobile devices intended to limit user profile details, and access to home network applications, such as routers that filter internet content before it reaches the computer screen and game consoles (Zaman & Nouwen, 2016, p.3). The last category, the design initiator, refers to controls that are incorporated at the design stage, for instance telecom operators are obliged by law to integrate parental controls that restrict content available to minors; other design initiators include software providers, social networking site owners, hardware manufacturers, game platform owners and content providers (Zaman & Nouwen, 2016, p.3).

These restrictive strategies support parents in reducing the privacy risks on the internet (Livingstone, Stoilova & Nandagiri, 2018), but they fail to help children to develop resilience to the online privacy risks and to find ways to assess them (Wisniewski, 2018). In this context, resilience is defined as “an individual’s ability to thrive, in spite of significant adversity or negative risk experiences” (Wisniewski, 2018, p.87) and the study conducted by Steeves and Webster (2008) confirmed that the children, who are most active media users and experience strong parental supervision, demonstrate lower privacy protection behaviour than the children who have less engagement with social media. The creation of protected environments, referred to as restrictive, does not eliminate the online dangers, which every child will experience over time.

Restrictive mediation refers to parental control and limited access that have the purpose of reducing the exposure of children to online risks; the opposite parental mediation approach is enabling mediation or parental support comprising discussion of online dangers and suggesting strategies to manage online threats appropriately

(Livingstone, Stoilova & Nandagiri, 2018, p.31). Open communication between parents and children could lead to deeper understanding of online risks and how to control them, and appears to be more effective because it represents active engagement with children to develop a critical perspective (Livingstone, Stoilova & Nandagiri, 2018, p.31). Similarly, Wisniewski, Jia, Xu, Rosson and Carroll (2015) described two types of parental mediation concerning privacy: the direct parental mediation that focuses on control and privacy settings and the active parental mediation that refers to dialogue and interpretation. The same research also revealed two types of children's privacy behaviour on social media: privacy risk taking, which refers to sharing personal information and getting involved in high risk interactions, and privacy risk management, which integrates safety behaviours and counselling on privacy issues. The study findings showed that direct mediation reduces the privacy threats and concentrates on controlling and correcting poor decisions. Active mediation empowers children to experience some privacy dangers in order to learn to manage risks alone, and to develop privacy resilience and awareness (Wisniewski et al., 2015). The findings of this study, although confirming that active mediation is more effective in media literacy education, are limited in terms of applicability, by the participants being in the 12 - 17 age group and living in the United States. Another study throughout Europe with 25.000 participants, found that children in Austria in the 9 – 16 age group have a high level of active mediation in internet safety, as 83% of children stated that their parents have discussed with them about different ways to use the internet with safety or how to interact with other people online. Their parents have also suggested ways to deal with unpleasant situations on the internet (Livingstone, Haddon, Görzig, & Ólafsson, 2011). The implication is that research into parental controls suitable for younger children about online privacy is currently insufficient.

The research conducted by Livingstone, Stoilova and Nandagiri (2018, p.31) proposed that resilience could be increased by self-monitoring, practicing self-control in terms of thinking about the possible risk instead of accessing sites automatically, and risk management. When children are allowed to take risks, they learn how to avoid them or how to protect themselves from the existing dangers, and in that way,

that the risk becomes the learning tool. Children attempt to manage low level risks and ask for help with higher level risks, this process representing a developmental learning approach (Livingstone, Stoilova & Nandagiri, 2018, p.31). This research was a systematic literature review on studies involving children under 18 years of age, so young children are included, but again, it underlines the lack of research focused solely on the younger age groups. Children seek parental support and guidance. Parental control is desirable and monitoring is not ineffective and harmful if it is based on dialogue with children regarding their intentions, the online threats and the possible ways to protect personal data. Parents should discuss the settings that threaten their children's online privacy, as "communication supports the development of a mutual understanding of the degree of self-regulation and autonomy that is still granted to the child." (Zaman and Nouwen, 2016, p.5).

3.3 Summary

The restriction of access to media and internet is against children's rights but the associated online threats are real and children need to receive support and counselling in order to become aware of online privacy risks and to manage them. In this study, three preventive methods were discussed, that do not violate of children's privacy rights. The first strategy is critical media literacy, which enables children to develop a critical perspective towards online privacy issues as well as knowledge and awareness of privacy. The second preventive strategy is parental mediation, which supports children in handling risks via counselling and dialogue, and the third strategy is active child media participation, which helps children develop responsibility and resilience to privacy risks. In the Table below (Table 3) the concept of the theoretical part is clearly presented.

The theoretical part of this study has demonstrated the substantial gap in knowledge regarding how to effectively develop young children's resilience to the online privacy risks by means of media education, including parental involvement. Although the methods suggested in the theoretical part for older children may be useful as a guide, for younger children, adjustment and supplementary interventions may be required to

ensure their effectiveness in this context. Therefore, the empirical part of this study purposes to fill these knowledge gaps and answer the research questions.

EMPIRICAL PART

The theoretical considerations described in the first part of this thesis are the foundation for the empirical investigation, which will be presented in this work. The following chapters deal with data collection, data analysis by means of qualitative content analysis according to Mayring (2014), and finally with answering the research question.

4 Methodological Approach

The aim of the present study is to carry out a research in the field of Privacy under the perspective of children's rights, in order to subsequently be able to formulate an answer to the questions:

RQ1: What are the experiences and perceptions of children in Vienna in the age group 6 to 8 years about media and internet usage?

RQ2: What knowledge and opinions does this group of children have regarding sharing personal data on the internet and methods of protecting it?

RQ3: Which mediation strategies do parents apply regarding their children's media and internet usage, as well as online personal data protection?

In order to be able to make targeted research on 6 to 8 year old children's opinions regarding their internet usage and the privacy, the appropriate method must be selected and the terms must be defined (Ravaja & Kivikangas, 2009).

The subject of research is the opinions and statements of the children about privacy and data protection. This is an issue that would allow only conditionally meaningful conclusions with qualitative evaluation. Most of the aforementioned studies are qualitative (Education Group GmbH, 2016; DIVSI U25, 2014; Feierabend et al., 2017; Zartler, Kogler & Zuccato, 2018 and etc.), but they had not investigated privacy issues, as they concern children younger than nine years old.

Which qualitative methods could be used to query this research topic? From a pool of qualitative research methods, the participant's observation would be appropriate for collecting data on naturally living environment and occurring behaviors (Bortz & Döring, 2006, p.322). It would be ideal to have the opportunity to observe the participants during their internet usage and privacy decisions, but the participants often believe that the observation would restrict their private sphere (ibid.). Consequently, in the context of this study, the author of this paper could not know with certainty that the children were answering with complete honesty or if their perception of events corresponded to the facts. Narrative interviews would be optimal for collecting data on individuals' perspectives and experiences. In narrative interviews the aim is to obtain a more detailed understanding of the participant's reactions and experiences about the topic of interest (ibid., p.316). The difficulty that arises with narrative interviews in this case, is that 6 to 8 year old children are used to giving very short answers.

To overcome this difficulty, the method that seems to be the most appropriate, in terms of field research process and the research question, is semi-structured interviews (ibid., p.239). Semi-structured interviews are characterized by a number of questions that are used in every interview, although the sequence of the questions might vary (ibid., p.239). The chapters of data collection and qualitative content analysis present the following criteria of qualitative research: (Mayring, 2002, p.144) "Procedural documentation" is an accurate and gradual description of the research process. "Argumentative interpretation assurance" is based on reasoned argumentation and theoretical preconception. This was mainly applied in this study for the results of the research and their relation to the relevant theory and past studies. "Rule-baseness" means that the qualitative research takes place under a systematic approach. This criterion was mostly important in the process of content analysis according to Mayring, which includes seven steps of "research question, definition of categories, coding guideline, coding, revision, final work through and analysis" (Mayring, 2014, p.96). "Proximity to objects" was assured by the fact that the research was carried out in the field. During the research process, the researcher visited all participants in their apartments, where they would feel more comfortable.

For the interviews regarding media and internet usage, privacy and the parental role, semi-structured interviews were conducted with nine children who were 6 to 8 years old and living in Vienna. They consented to using a dictation machine and their interviews were recorded and subsequently transcribed. After transcription, the interviews were evaluated with the qualitative content analysis outlined by Mayring (2014). To abide by the rules of research ethics, all interviewees were informed about the research at the beginning, the informed consent form was obtained and the intention to anonymize was discussed. The scientific aim of the work is to contribute to the current discussion about children's online privacy protection in the context of children's rights.

4.1 Access to the Research Field

In this research, nine semi-structured interviews were conducted with children 6 to 8 years old. The participants were chosen according to three criteria: 1) all of them were permanent residents of Vienna 2) all of them were 6 to 8 years old 3) they stated that they were willing to participate in the research.

All the interviewees were living in Vienna, but not all of them were born in Austria. Contact had already been established with their parents and they agreed to take part in the research, as part of the master's thesis. The interviews were conducted only after the written permission of the parents or guardians was obtained. The first contact with the parents or guardians of the interviewees was made via phone calls or in person and then an appointment was arranged. The interviews were conducted in the nine participants' homes, in order to help the interviewees feel more comfortable.

The access to Elementary schools in Austria for research purposes is restricted and very few researchers manage to obtain a permission. For this reason, the sample for this study was defined through the social contacts of the researcher. All of the potential interviewees that were approached agreed to participate.

4.2 Sample

The sample of this research was nine children, aged 6 to 8 years old. There were six boys and three girls. Two children were 6 years old, three children were 7 years old and four were 8 years old. They were chosen based on their age, the city that they were living in, and their willingness to participate. There were no criteria for the sample regarding their gender, if they were born in Austria, their social milieus or their home districts. The reason for that is the non-probability convenience sampling for this study (Creswell, 2002). The findings cannot be generalized to the population of Vienna because it is unknown if they are representative of the population. The findings only describe the opinions of nine children 6 to 8 years old in Vienna. However, the sample can provide useful information on the research topic (Creswell, 2002).

Despite there being no criteria of gender, districts and social milieus, the children attended different schools, lived in different areas and districts of Vienna, and were from different socio-economical milieus. The sample is quite heterogeneous and this is important for qualitative research. The following Table (Table 4) summarizes the characteristics of the interviewees and it attributes a code letter for each of them.

Table 4: Characteristics of the Interviewees

Code Letter	Sex	Age	Born in Austria
A	Male	6	Yes
B	Male	8	Yes
C	Female	7	No
D	Male	8	No
E	Female	7	Yes
F	Male	8	Yes
G	Male	7	Yes

H	Male	8	No
I	Female	6	No

4.3 Collection Method: Semi-Structured Interviews

The data was collected via semi-structured interviews and evaluated using the qualitative content analysis outlined by Mayring, which will be further detailed in a following section.

The interviews reflect the perspective of the participants. They express their personal and subjective opinions and their perspective is central to the research. Interviews provide information about knowledge, values and preferences, and most importantly, the views and beliefs of respondents (Tuckman & Harper, 2012).

The research tool of this study is the semi-structured interview, which is a special form of qualitative research. There are three categories of interviews in qualitative research, namely 'structured', 'semi-structured' and 'unstructured'. Dunn (2005) explains the difference among these types:

“Structured interviews follow a predetermined and standardised list of questions. The questions are always asked in almost the same way and in the same order. At the other end of the continuum are unstructured forms of interviewing such as oral histories...the conversation in these interviews is actually directed by the informant rather than by the set questions. In the middle of this continuum are semi-structured interviews. This form of interviewing has some degree of predetermined order but still ensures flexibility in the way issues are addressed by the informant.” (Dunn, 2005, p.80)

The semi-structured interview method is a verbal interchange, where the interviewer asks questions to another person, in order to elicit information. Although the questions are predetermined, “semi-structured interviews unfold in a conversational manner, offering participants the chance to explore issues they feel are important” (Longhurst, 2003, p.143). This type of interview also allows interviewees the freedom to express

their experiences and views in their own terms. The questions of a semi-structured interview can be open or closed. Longhurst (2003, p.147) mentions that questions “may be designed to elicit information that is ‘factual’, descriptive, thoughtful, emotional or affectual”, so a combination of different question-types could be effective. Interviews often start with a question that could be easily answered and is more likely to create a pleasant atmosphere.

While it is possible to try to take notes to capture the answers of the respondents, it is difficult to focus both on conducting an interview and on taking notes at the same time. This approach could possibly result in poor quality or incomplete notes and also detract for the development of a connection and continuity between interviewer and interviewee. Development of rapport and dialogue is essential in semi-structured interviews.

Taking all this into consideration, a questionnaire that includes 19 questions with possible sub-questions was formed by the author of this thesis under the supervision of the assigned university professor. Before the actual test series was carried out, two pilot interviews were conducted, one with an 8 year old boy and another with a 6 year old girl. The pilot research helped to improve the research tool and to ensure that the vocabulary and the structure of the questions were better suited to these ages.

The language of the questions is compatible to the developmental level of children 6 to 8 years old. The content of the questions pertains to the type and regularity of media use, the level and type of parental support, control and supervision. There were questions that related to internet use and the children’s privacy security. Below are the main questions of the interview. The extensive questionnaire with the sub-questions is available at the Appendix 1:

Media and internet usage:

- Do you sometimes use a computer (laptop) at home?
- Do you sometimes use a mobile phone (smartphone) at home?
- Do you sometimes use a tablet at home?
- Do you use the internet?

- Do you watch videos on YouTube?
- Do you look for information on Google?
- Do you play online games?
- Have you ever heard of WhatsApp?
- Have you ever heard of Facebook?
- Have you ever heard of Instagram?

Privacy and protection on the internet:

- Imagine that you are playing on the computer/tablet/mobile phone and suddenly there is a message that you should write your name. Would you do that?
- Do you have a password?
- Imagine you take a picture of yourself. Would you put it on Facebook/WhatsApp/Instagram?

Parental role:

- Can you use the computer/tablet/phone for as long as you like or do your mom and dad tell you when to quit?
- When you are at the computer/tablet/phone, is your mom and dad sitting next to you?
- If you do not know something about your computer/tablet/phone, do you ask your mom and dad?
- Do you know if mom or dad has a picture of you on Facebook/Instagram?
- Did you talk with your mom or dad about showing your name or photos on the internet?
- Did you make any settings with mom or dad on your computer/tablet/phone so other people cannot see your name or photos?

In any social research process, such as interviews, it is essential not to act contrary to the principles of research ethics. The following subchapter deals with this subject.

4.4 The Principles of Research Ethics

In qualitative research, ethical issues are of great importance. For the purposes of this study, it is a top priority that the research participants are not harmed in any way. Before agreeing to participate in the research process, the potential interviewees and their parents/guardians received detailed and accurate information about the objectives of the research project. All parents/guardians gave their written informed consent for their children, stating that participation in the research project is voluntary and all relevant information has been provided prior to the interview (Gläser & Laudel, 2010). The declaration of consent explicitly provided information on the research subject, the structure and duration of the interview process, as well as the use, transcription, storage and presentation of data, for the purposes of scientific papers or events.

Another important issue in research ethics is the anonymization of the data. The preservation of anonymity was mentioned in the 'Declaration of consent' and it was also discussed with the parents/guardians of the participants (Bogner, Littig & Menz, 2014). All nine interviewed persons opted for anonymization. The confidentiality of data is another important component of social science research (Von Unger, 2014). The parents/guardians of the participants needed to be assured that the data would remain protected. In order to ensure the confidentiality, in regards to the interview contents, the data has only been included with the expressed consent of the respondents.

Furthermore, it was explained that the data would be collected through interviews and recorded on a dictation machine, because recording allows for focusing on the interview and the interaction instead of being preoccupied with the pressure to write down carefully each of the participants' words (Valentine, 2005).

The preceding explanations on the topic of research ethics were always taken into account throughout the survey process. The results of the research will be provided to the parents or guardians of the participants at the completion of the project, if they express interest in acquiring them. The following section, will discuss the conduction of the interviews in detail.

4.5 Conducting the Interviews

All interviews took place between 10.12.2018 and 20.12.2018 in the interviewees' respective homes in Vienna, because that was more convenient for the participants and their families. The interviews were conducted in quiet rooms, in order to minimize possible interruptions or disturbing background noises. The initial contact was with the participants' parents and only after they had given their consent, the researcher conducted the interviews with the children. The parents were given the option of whether they wished to be present during the interview process or not. Some parents chose to be present during the whole process of the interviews, while others did not. Before the interviews, the required information was given to the parents and the participants. This includes an explanation of the research project, the recording of the interviews, the subsequent transcription, the use of the collected data and the process of anonymization, if anonymization was desired. In order to preserve the desired anonymity, a more detailed presentation of the cases is waived. All nine interviewees gave their consent to recording the interview using a voice recorder, with the duration of the interviews being approximately 10 minutes. Subsequently, the interview recordings were transcribed.

4.6 Transcription of the Interviews

The transcription of the nine interviews followed the transcription guidelines of Dausien (1996) and was done in German language, as German was the mother language of all participants. For the needs of this study, the transcription guidelines and the parts of the interviews that are needed for the evaluation of the data have been translated into English. (Dausien, 1996, p.615; translation from German AC). Below is an explanation of the transcription abbreviations used.

- Prosodic caesura, barely audible pause
- Short break

4.7 Qualitative Content Analysis

4.7.1 Definition of Content Analysis

The primary goal of content analysis is the analysis of communication-based material (Mayring, 2015). Berelson (1952) gives the following definition of content analysis: “symbols (verbal, musical, pictorial, plastic, gestural) which make up the communication itself.” (Berelson, 1952, p. 13). This definition explains that the content analysis works with any form of symbolic material that constitutes communication. Additionally, many analysts support that this process needs to be systematic, which means that it should proceed based on explicit rules. The rule-based approach allows others to understand the analysis and ensures intersubjective verifiability. Furthermore, good content analysis and interpretation follows a theoretical background. The material to be examined is analyzed and interpreted, taking into account the theoretical context and is thus linked to the experiences and results presented by other scientists. Last but not least, the analysis is a part of the communication process and it is a conclusive method (Mayring, 2015).

The basic functions of content analysis could be summarized as “analyze communication, analyze fixed communication, proceed systematically, proceed in a rule-based manner, proceed on a theory-guided basis and pursue the goal of drawing conclusions about certain aspects of communication” (ibid., p.13; translation from German AC). Having defined the meaning of content analysis, the following section explores the qualitative content analysis that was used in the study, as the method for the analysis of the material.

4.7.2 Qualitative Content Analysis According to Mayring

The definition of qualitative analysis according to Rust (1980) is helps us gain a better understanding of the overall concept:

“Qualitative analysis therefore pursues a double strategy: it forces the object of analysis to reveal its structure in a de-totalizing approach which inquires into the relationship between individual aspects and general appearance, but does this with the aim of achieving a conscious re-totalization, so as not to

lose sight of the overall social core content of every statement.” (Rust 1980, p. 21)

The qualitative content analysis is used to extract information from collected data and to process it separately. The data is provided in this study through the interview transcriptions. The qualitative content analysis follows explicit rules to ensure that it proceeds systematically in a rule-based manner. The data is analyzed in a theory-guided basis (Mayring, 2015). In the present study, this aspect is covered by the research question, which provides a theoretical framework to work on and is closely analyzed in the first part of the thesis. Mayring (2014, p.64) presents three different forms of interpretation of the qualitative content analysis: “Summary, Explication and Structuring”.

“Summary: The object of the analysis is to reduce the material in such a way that the essential contents remain, in order to create through abstraction a comprehensive overview of the base material which is nevertheless still an image of it.

Explication: The object of the analysis is to provide additional material on individual doubtful text components (terms, sentences...) with a view to increasing understanding, explaining, interpreting the particular passage of text.

Structuring: The object of the analysis is to filter out particular aspects of the material, to give a cross-section through the material according to pre-determined ordering criteria, or to assess the material according to certain criteria.” (Mayring, 2014, p.64)

From these three techniques of qualitative content analysis, “Summary, Explication and Structuring” (Mayring, 2014, p.64), the technique of structuring was chosen in order to extract a specific structure of a category system from the material, which corresponds to a deductive approach. The structuring technique allows all aspects of the material, which correspond to the criteria, to be crossed. Mayring (2014, p.95) explains that “all text components addressed by the categories are then extracted from the material systematically”. The description of the structuring procedure is important. At first the dimensions are carefully determined according to the problem and are theoretically based. After that, the dimensions are subdivided into separate features. Subsequently, the separate features must be brought together in order to form the

category system (ibid.). The categorization according to Mayring (2014) has three stages:

“1. Definition of the Categories: It is precisely determined which text components belong in a given category.

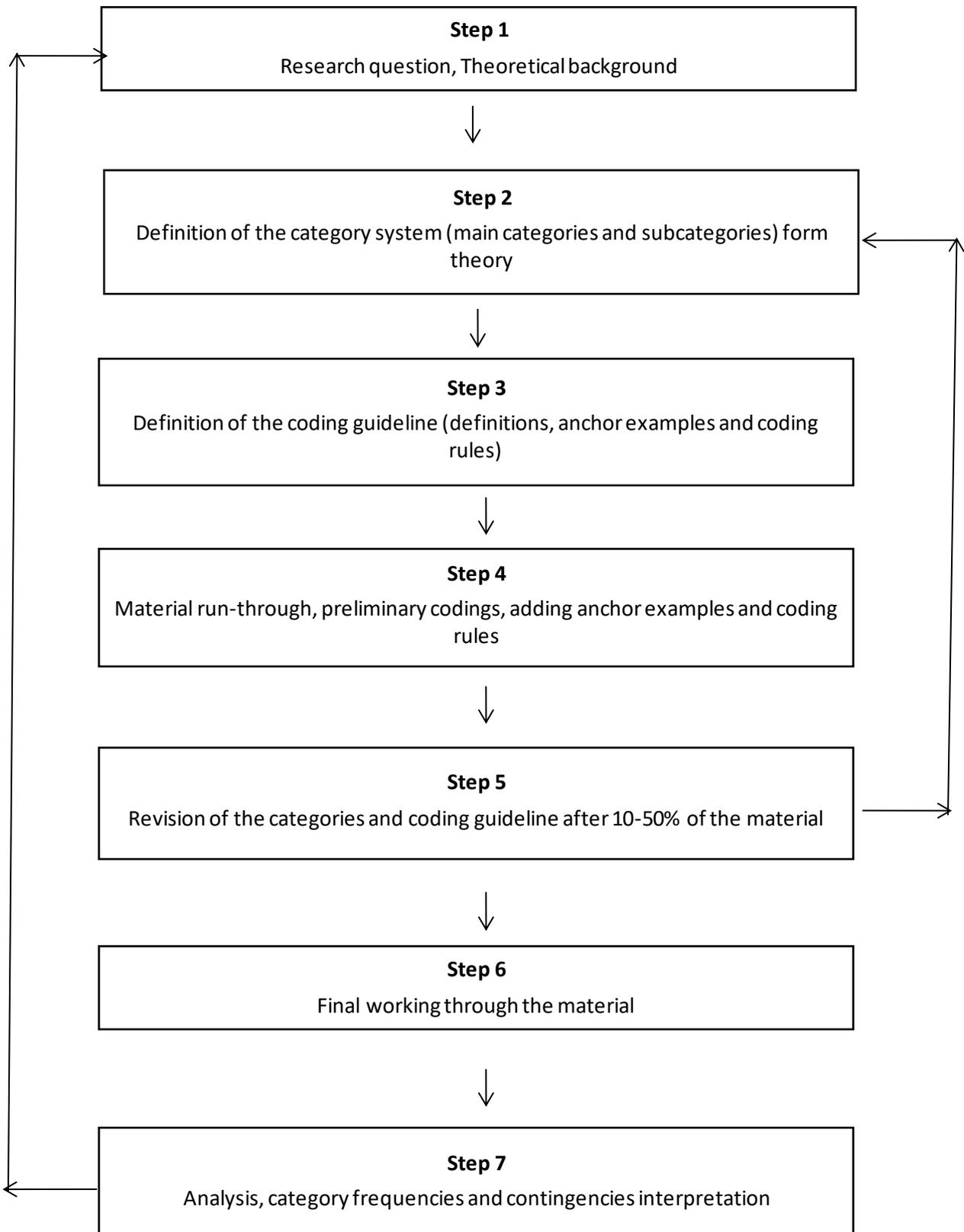
2. Anchor samples: Concrete passages belonging in particular categories are cited as typical examples to illustrate the character of those categories.

3. Coding rules: Where there are problems of delineation between categories, rules are formulated for the purpose of unambiguous assignment to a particular category.” (Mayring, 2014, p.95)

The material run-through has two stages, namely the stage of marking the points of the material and the stage of extracting and processing them. After that they must be summarized and analyzed.

Mayring (2014, p.96) describes in the following Table (Table 5) the model of a structuring content analysis which includes the seven steps of “research question, definition of categories, coding guideline, coding, revision, final work through and analysis” (Mayring, 2014, p.97-98):

Table 5: Steps of Deductive Category Assignment



4.8 Evaluation of Data

For the needs of content analysis, the nine interviewees were referred to as interviewee A, B, C, D, E, F, G, H and I, so as not to violate the ethical principles. The structuring corresponds to a deductive approach, as the establishment of the category system comes prior to the coding of the text. The categories derive from theory or research, but they are not deduced from the material as in the inductive approach. Two category systems are included in the deductive category assignment: the nominal and the ordinal. The ordinal category system is characterized by the fixed order and the graduation from the minimum to the maximum (Mayring, 2014). In contrast, the nominal consists of many different independent criteria, which are included in the structuring dimension. The result of this system is “a list of categories related to text passages, eventually frequencies of their occurrences” (ibid., p.98).

In this study, three categories have been derived from the theory: media and internet use, privacy and protection online, and parental role. The following sections present the categories in detail and provide a definition, as well as examples.

Category

Media and Internet use

Definition and Examples

Definition: The media devices that children use at home and whether they own such devices or not. The frequency of media use and for what purposes the interviewees use the media devices. Information regarding whether children use the internet and if so, in what way. Three sections are examined: entertainment, communication and information.

Examples: ‘I: Do you sometimes use a computer or a tablet or a smartphone at home?’

N: Yes. All of them.

I: What are you doing on the phone?

N: Playing football – watching videos on the YouTube – and learning’ (Interviewee A, 8-9)

'I: Do you play online games?

N: Yes

I: Which games do you play?

N: I put clothes on girls --- Minecraft --- Mario Cart ---.

I: Did you do that only once or a few times?

I: A few times – every day.' (Interviewee E, 38-43)

Category

Privacy and protection online

Definition and Examples

Definition: Whether children share and protect their personal data on the internet.

Example: 'I: Imagine that you are playing online and then a message comes, asking for your name. Would you do that?

N: I give it quickly to mom.' (Interviewee A, 45-47)

Category

Parental role

Definition and Examples

Definition: The role of parents. Sometimes they control their children's media use, help them if they do not know something or even supervise them.

Examples: 'I: If you do not know something about your phone, what do you do?

N: I ask my mom.' (Interviewee G, 19)

I: Are these devices yours or do they belong to mom or dad?

N: Mine. Mom and dad have their own.' (Interviewee D, 1-4)

'I: Can you use the computer, the tablet and your phone for as long as you like or do your mom and dad tell you when to quit?

N: --- Well, actually I stop be myself.' (Interviewee F, 17-19)

Having completed the category definitions and descriptions, providing examples, the following chapter presents the results of this study, based on this category system.

5 Results

In this chapter the results will be analyzed and interpreted. The presentation and interpretation of the results is supplemented by interview excerpts, which are intended to enable the conclusions to be understood. The citation style is similar to that of the references. The number of each interviewee is listed, following by line specification of the transcript.

5.1 Media and Internet Use

5.1.1 Media Devices

This category examined which media devices the participants use and how often (Table 6).

Table 6: How Children Use Media Devices

<i>Media Devices (N=9)</i>	<i>Active users</i>	<i>Own Devices</i>	<i>Regular Use of Device</i>
<i>Media device</i>	9	3	3
<i>Smartphone</i>	8	2	3
<i>Tablet</i>	4	3	2
<i>Computer</i>	2	2	2
<i>Smartphone + Tablet</i>	4	2	2
<i>Smartphone + Tablet + Computer</i>	2	2	2

- **Media devices:** The media devices that have been included in this study are smartphones, tablets and computers.
- **Active Users:** The table shows how many participants use each media device, or a combination of media devices.
- **Own Devices:** The table shows how many participants own media devices and which media devices they own.
- **Regular Use of Devices:** The table shows how many participants use media devices daily and which media device they use daily.

According to the interviews, all participants use smartphones, tablets, or laptops. Participants are more likely to use a smartphone, and less a tablet or a computer. 8 out of 9 children stated that they use a smartphone. Only two children reported that they use a computer (Interviewee D and F). Regarding the tablet, four of the participants (Interviewee D, E, F and H) stated that they use one, but the participant F clearly mentioned that, although he has one, he rarely uses it: *'I have a tablet, but, actually I almost never use it'* (Interviewee F, 15). Also, the participant H stated that *'I was using a tablet when I was younger'* (Interviewee H, 25).

Most children were users of a media device, mainly a smartphone, but only two of the participants, Interviewees D and F, were active users of all three devices (smartphone, tablet and computer).

Additionally, children provided information about the frequency of their media use. Most participants mentioned that they do not use media devices every day; only 3 out of 9 (Interviewee D, F and C) stated that they use them every day. It is important to mention that Interviewees D and F own the devices, which could give them more opportunities to use them every day.

The results show that there are three profiles of participants (Table 12). In the first profile, are participants A, B, C, G, H and I, who use mostly a smartphone, do not own a device and mostly do not use a device every day. In the second profile is participant E who owns one media device and does not use it every day, but regularly. In the third profile, the two participants D and F use all media devices frequently and own all three devices.

5.1.2 Internet Use

This category contains the information that was collected, on whether and how children use the Internet.

Most children (8 out of 9) use the internet (Table 7). Only one child (Interviewee B, 8 years old) does not use the internet at all. Three aspects were examined regarding children's online activities: entertainment, information and communication. For the purposes of this research, the category of information is represented by the use of Google search, the category of entertainment is represented by the use of YouTube and online games, and the category of communication is represented by the use of the following social media applications: WhatsApp, Facebook and Instagram.

The first part focuses on entertainment and information (Table 7) and the second part focuses on communication (Table 8).

A) Internet Use: Entertainment and Information

The following data represents the findings of the interviews about what children's internet use entails and how often children use the internet for their online entertainment (YouTube and online games) and for acquiring information (Google).

Table 7: How Children Use the Internet: Entertainment and Information

<i>Internet (N=9)</i>	<i>Active Users</i>	<i>Regular Use</i>
<i>Internet</i>	8	-
<i>YouTube</i>	7	6
<i>Online Games</i>	6	6
<i>Google</i>	5	2
<i>YouTube + Online games</i>	5	5
<i>Google + YouTube + Online games</i>	1	1

- Internet: Children's internet use is examined by asking whether they use the internet for their entertainment (YouTube and online games) and for finding information (Google).
- Active Users: This category shows how many children are active users of the different online programs (YouTube, online games, Google) and also examines the combinations of use.
- Regular Use: This category shows how many children use the online programs daily.
- - : The participants have not been asked if they generally use the internet daily.

Regarding the category of entertainment, 7 out of 9 children reported that they use YouTube and 6 of them that they do it regularly. 6 out of 9 children reported that they play online games and all of them that they do it regularly (Table 7). These activities

seem to be popular with 6 to 9 year old children. 5 out of 9 participants (Interviewee A, C, D, F and I) stated that they both watch videos on YouTube and play online games and that they do it regularly (Table 7).

I: Do you play online games?

N: Yes.

I: Which games do you play?

N: A very popular game - Fortnite.

I: Do you play that often?

N: Very often. I play it every day.’ (Interviewee F, 63-68)

I: Do you watch videos on YouTube?

N: YouTube? Yes – a lot.

I: What do you watch?

N: I watch movies, cartoons and other videos.’ (Interviewee A, 31-34)

Interviewees G and H stated that they watch videos on YouTube but they do not play online games, only games that do not require an internet connection. Interviewee E stated that she does not use YouTube but she does play online games. So, the interviewees who use only YouTube or only online games are the minority:

I: Do you play online games?

N: Yes.

I: Which games do you play?

N: I put clothes on girls --- Minecraft --- Mario Cart ---.

I: Do you do that often?

N: A few times – every day.’ (Interviewee E, 38-43)

The five participants who use both online games and YouTube for their entertainment claimed that they do so regularly. Interviewee E who plays online games, but does not use YouTube, stated that she plays regularly and Interviewee H stated that he frequently watches videos on YouTube.

Regarding the category of information, the participants were asked about Google, as a representative web search engine. Generally, 5 out of 9 children reported that they use Google (Table 7). Although more than half of the children use Google, only 2 in 9 (Interviewee D and E) stated that they use the search engine often: *‘I look for information on Google, when I want to learn about something. A few times a week.’*

(Interviewee D, 39). 3 out of 9 participants (Interviewee C, F and G) reported that they use Google rarely: ‘*I search on Google only sometimes when I want to find my birthday present*’ (Interviewee F, p.2). 3 out of 9 interviewees stated that they have never searched for information on the web.

In summary, searching for information on the web does not seem to be very familiar to the participants, as only two of them do it regularly, while the rest do it rarely or not at all.

In conclusion, there are three profiles of participants in this category (Table 12). The first profile (Participant B) refers to the participant who does not use the internet at all. The second profile (Participants A, C, E, F, G, H and I) refers to the participants who do not use Google or have used it only once, but they do use YouTube and play online games. The same profile includes children who use either YouTube or online games, as well as participants who use Google and online games but do not use YouTube. The third profile (Participant D) represents the participant who uses online games, YouTube and Google.

B) Internet Use: Communication

The findings from the interviews on the topic of children’s online communication are presented below. The questions related to which social media the children were aware of or had used and whether they had a personal account. This category is particularly relevant to the risks related to privacy issues.

Table 8: How Children Use the Internet: Communication

<i>Online Communication (N=9)</i>	<i>Recognize/ Have used it</i>	<i>Account</i>
<i>Social media</i>	7	-
<i>WhatsApp</i>	4	2
<i>Instagram</i>	4	-
<i>Facebook</i>	2	1
<i>Facebook + WhatsApp</i>	1	1
<i>Facebook + WhatsApp + Instagram</i>	1	-

- **Online communication:** Children's online communication has been examined through questions about three popular social media applications: Facebook, WhatsApp and Instagram.
- **Recognize/have used it:** How many children recognize the social media applications and which ones. This category also includes a participant who does not have an account, but she has used a social media application with the support of a family member.
- **Account:** How many children have a personal account on social media applications.
- - : It represents the participants who claimed not to have a personal account.

Regarding online communication, Interviewees H and B stated that they had never heard about any of the social media apps, while the other 7 out of 9 children stated that they had seen or used a social media application. 2 out of 9 recognized Facebook, 4 out of 9 recognized WhatsApp and 4 out of 9 recognized Instagram. Participant E is the only participant that had no personal account, but she stated that she had sent a message to a family member with the support of another family member.

The participants were also asked whether they had personal accounts on social media (table 8). In order for children to create a social media account, providing a name, a date of birth and an active e-mail address is required. Despite the fact that, according to the GDPR law, children aged 6 to 8 are prohibited from having their own social media accounts in Austria, two interviewees (Interviewee D and F) stated that they had their own profiles on WhatsApp and they were both 8 years old. All of their family members had profiles on this social media application and both of the children used WhatsApp to communicate with their family members and some close friends. Interviewee F was the only participant, who was aware of all three applications, he had a personal account on WhatsApp and Facebook, but he only actively used WhatsApp. He also mentioned that he had seen his older brother using Instagram but he had never used it himself: *'My brother has Instagram. Sometimes I watch when he uses it - but I didn't use it alone or with him.'* (Interviewee F, 105-106).

In summary, three profiles of participants can be determined (Table 12). The first profile refers to children who do not recognize or have not used the social media (B and H). The second profile represents participants who, with the support of their parents, have seen or used a social media application, but they do not themselves have

a personal account (A, C, E, G and I). The third profile represents the participants who have their own personal account on social media (Participants D and F).

5.2 Privacy Security and Online Protection

This section explores children’s opinions about privacy, as well as their behavior and habits, in regards to online privacy threats and sharing personal data online. The participants did not use the term ‘privacy’, but they seemed to be able to understand that certain information about themselves was important and to define which information specifically, such as their names, photos or telephone numbers.

Table 9: How Children Deal with their Private Data Online

<i>Privacy</i> (N=9)	<i>No</i> (Without Account N=7)	<i>No</i> (With Account N=2)
<i>No understanding of the term “privacy”</i>	2	1
<i>Use real name online</i>	5	1
<i>Use personal photos online</i>	3	1
<i>Positive reaction if a stranger sees a personal photo on the internet</i>	-	2
<i>Have a conversation with strangers online</i>	-	2
<i>Ignorance that their data is permanently online</i>	1	-

- **Privacy:** Children’s opinions regarding their personal data on the internet have been researched through questions about the term ‘privacy’, the use of their real name and personal photos, the potential threats when unknown people see personal photos of the participants online, having conversations with strangers online, and the permanence of data on the internet.
- **No (Without Account):** How many participants, who do not have a personal account on social media applications, responded negatively to the topics discussed.

- **No (With Account):** How many participants, who have a personal account on social media applications, responded negatively to the topics discussed.
- - : None of the participants responded negatively.

5.2.1 The Term ‘Privacy’

Many participants defined ‘private’ as ‘something that is mine’, any information which describes them and they have to keep safe or secret from strangers: ‘*Photos show who I am. I would never share my photos on Instagram. Only if mama says yes.*’ (Interviewee A, 65-66); ‘*My name says who I am. On the computer I would write a weird name.*’ (Interviewee D, 68). Interviewee H also learned from his parents that ‘*when I use the smartphone, I must keep my name and other things, like mom’s number secret. Never tell others.*’ (Interviewee H, 65-66), which indicates that he can identify both a name and a personal phone number as private information.

5.2.2 Private Data: Full Name

In order to find out how willing children are to share their private information online, during the interviews they were asked some corresponding questions. The first question was if they would write down their name in order to continue playing an online game. 5 out of 9 participants (Interviewee A, C, E, G and H) said they would not write it. When they were asked about the reason for their decision, some of them only repeated ‘*I wouldn’t write it*’ (Interviewee G, 74); or said ‘*I don’t like it*’ (Interviewee C, 68); or even mentioned ‘*I will give it quickly to mama*’ (Interviewee A, 49). Their spontaneous negative reaction could be due to their parents’ behavior, or their subconscious fear about the internet. In the same question Interviewee B claimed that he would ask his parents if he was allowed to write his name and Interviewee D said that ‘*I would write another name*’ (Interviewee D, 54). 7 out of 9 participants gave answers that indicate that their personal data would remain private, because they would choose not to write their name or to write another name or to ask for their parents’ help. On the contrary, only 2 out of 9 participants, Interviewees F and I, mentioned that they would write down their names.

5.2.3. Private Data: Personal Photos

The next topic is about sharing data online, in the form of publishing personal photos on the internet. This question was used to examine the children's habits and opinions, in regards to sharing private data online. Various different answers were given to this question. 4 out of 9 children (Interviewee C, D, E and H) stated with confidence and very directly that they would not post their photos online. Participant A was explicitly negative and said loudly that he would not do that, but after a while, he added that only after his mother's permission, he would publish a photo on Instagram: '*NO. Photos show who I am. I would never share my photos. Only if mama says yes.*' (Interviewee A, 65-66). Participant B was very indecisive and unsure about this question, repeating the same sentence many times: '*I don't know. I don't know. Um (P/4 sec) I DON'TKNOW.*' (Interviewee B, 54). With participant F, the following dialogue took place:

N: Imagine you take a picture of yourself. Would you put it on Facebook or Instagram?

I: ((laughing))/ Actually my mom always posts photos of us all the time on Instagram. But I don't really.

N: But you told me, that you have a photo of yourself on WhatsApp.

I: Yes - I have. Actually - I did it only once.

N: Do you think it could be dangerous if someone you don't know sees your photo?

I: No – it's not good. I don't like it. (Interviewee F, 134-141)

This part of the interview was very interesting, as this child's instinct to share a personal photo online was negative and a threatening feeling could be noted, when he thought of strangers seeing his photo, but he nevertheless had already used his photo online once, at the age of 8. The next participant, Interviewee G, gave a contradictory answer, as he mentioned that he would post a photo of himself, but he thought that it could be a dangerous choice. Finally, Interviewee I stated that she would definitely share her photo on Facebook, like her mother did, and she thought that this was not a threatening choice at all. It is possible that her decision was shaped by her mother's behavior and was based on her trust in her mother, who she felt confident imitating. The three participants who were willing to publish photos of themselves, were asked whether they believed that it could be dangerous if someone, who they didn't know, saw their photo. 2 out of 3 children could not find any problem with this scenario.

This could indicate that they were not well informed about privacy issues and how their personal data can be used online. It is worth noting, however, that they were the minority of the interviewees. In summary, most children (5 out of 9) felt uncomfortable at the thought of sharing photos on the internet but they were not able to explain the reasons. They only stated that they had a bad feeling or they thought that it could be dangerous or threatening.

5.2.4 Accounts on Social Media

The next section is concerned with children's accounts on social media and whether they share their personal information. As previously mentioned, 2 out of 9 children (Interviewee D and F) had their own profiles on WhatsApp. These two participants were asked if they used a photo of themselves as their profile picture, if they used their full name and if they would ever have a conversation with a stranger on WhatsApp. Interviewee D appeared to be very suspicious and careful. In particular, he mentioned that he didn't have a photo of himself, just a funny profile picture and that he used a false weird name as his username. In the hypothetical question, if a stranger texted him, he said that he would not answer those messages and that he would inform his mother about it. His behavior could be a result of his parents' advice, as he appears to be using WhatsApp very carefully and his private data seems to be very well protected. On the opposite side, Interviewee F, mentioned that he had a photo of himself as his profile picture and that he was not sure whether his full name was on WhatsApp. However, he stated that, if a stranger texted him, he would not reply. These two children had different replies and reactions, and Interviewee F could be characterized as being more at risk on the internet, but both of them agreed that they would not reply to a stranger.

5.2.5 Storage of Online Data Using the Example of Google

This section focuses on children's understanding of what happens to online data. As an example, they were asked if Google saves their questions, or not. Interviewees D and F said with confidence that Google does not save their questions, which means that they possibly believe that what they are looking at or writing on Google is something that no one else has access to and when they delete it, no one can find it.

Interviewees C and E were very skeptical in answering this question and they both stated that they have no reply. Interviewee G mentioned that he is sure that Google saves all questions and that, according to his opinion, this fact is good and not dangerous.

When asked to explain his point further, he did not want to say anything more. 4 out of 9 children were not informed about the durability of data on the Internet, even though they use it.

Summarizing the responses to the last topics regarding privacy security and online protection, it becomes obvious that a minority of children has developed the understanding of “privacy” as data that is personal. Children were mostly negative to sharing their real name online, but positive to sharing their personal photos on the internet. At the same time, most participants believed that posting a personal photo on the internet could be threatening to their safety. Children with personal accounts on social media have contradictory beliefs regarding dealing with the protection of their personal data, but they agreed in not interacting with strangers online. Finally, almost all participants were not aware that their data could remain permanently on the internet.

According to the results, there are three profiles regarding the issues of privacy on the internet (Table 12). In the first profile are Participants B and I, who mostly could not express any opinion about the issues of online privacy and, when they had an opinion, it was not protective of their personal data. For example, Participant I would share her real name and photos on the internet and Participant B was totally undecided and he could not express any opinion on these subjects. In the second profile are Participants A, C, E, F, G and H, who all mostly responded in a non-protective way to questions about their privacy, but all of them had at least two areas, where their reactions were protective of their online privacy. For example, Participant A had developed and understand of the term “privacy” and would not use his real name on the internet. But he would share a photo of himself, as he believed there was no threat, if a stranger saw his personal photos and he also thought that data on the internet vanished, when he deleted it. The third profile represents Participant D who had a mostly protective behavior towards his personal data on the internet. He had an understanding of the term “privacy” and he did not use his real name and personal photos on the internet. Also, he stated that he would not have any conversations with strangers online and he felt that it would be threatening if strangers saw his personal photos on the internet.

5.3 The Role of Parents

The role of the parents is multifarious, as they are involved in a variety of children's activities. Their opinions and actions have an enormous influence on children's behaviors, opinions and decisions. A detailed analysis requires the examination of their role under different perspectives and situations. This sub-chapter is divided into two parts. The first part describes the role of parents regarding children's media and internet use. The second part focuses on the parental mediation regarding privacy issues of children on the internet.

5.3.1 Parental Mediation Strategies Regarding Children's Media and Internet Use

This sub-chapter focuses on the role of parents in how children use the internet and media.

Table 10. Parental Mediation Strategies Regarding Children's Media and Internet Use

<i>Parental Mediation Strategies</i> (N=9)	<i>Yes</i>
<i>Parental support for media</i>	8
<i>Media devices from parents</i>	7
<i>Time restriction from parents</i>	7
<i>Parental monitoring</i>	7
<i>Parental support for social media</i>	5
<i>Parents know the passwords of children</i>	3

- **Parental Mediation Strategies:** The mediation strategies of parents have been researched by the following topics: support for media, media devices of parents, time restriction, monitoring, support for social media and knowing the passwords of children.

- **Yes:** How many participants corresponded positive to the topics above.

A) Parental Mediation: Media Devices

The parents decided when their children started using the media devices and for what reasons, as well as if their children would have their own media devices or they would use their parents' devices. The participants stated whether they owned a media device or not. Most interviewees reported that they used their parents' media devices. Interviewees D and F mentioned that they owned the media devices they used:

I: Do you sometimes use a computer or a tablet or a smartphone at home?

N: Yes. All of them.

I: Are these devices yours or do they belong to mom or dad?

N: Mine. Mom and dad have their own.' (Interviewee D, 1-4)

'N: Smartphone and table are both mine. But I have also other devices.'

(Interviewee F, 7)

Interviewee E stated that she used her parents' computer, but that she also had her own tablet. 5 out of 7 children, who used their parents' devices, reported that they used their mothers' smartphones (Interviewees A, C, G, H and I) and Interviewee H used his sister's phone. It seems that most of the children did not have their own media devices and the role of their parents and especially their mothers was very important, regarding the use of media devices at home. Only one child mentioned that she used a media device that belonged to her father (Interviewee E). This could possibly indicate the importance of the role of the mother in media device usage at home. But there is a possibility that children of this age do not separate what belongs to their father and what to their mother, or they do not pay attention to whose device they are using. It seems that most parents give their own devices to their children, which gives the parents the opportunity to have control on when and how the children use them.

B) Parental Mediation: Time Restrictions

The role of parents also determines children's media consumption times. 7 out of 9 participants (Interviewee A, B, C, E, G, H and I) mentioned that their parents told them how long they were allowed to use media devices. Interviewee D mentioned:

I: Can you use the computer, tablet and smartphone for as long as you like?

N: Sometimes I am allowed to play as long as I want and sometimes mom says when to quit. (Interviewee D, 17-19)

At the same time, there were parents who allowed their child more freedom and hand over responsibilities, to self-regulate the time spent with media devices. Interviewee F stated that he was completely independent on this matter and he had the responsibility to make such decisions: *'Well – actually I stop myself. Mom never tells me when to stop. It's up to me.'* (Interviewee F, 19). Participant D claimed that his parents sometimes told him when to stop and sometimes not. Both participants D and F were 8 years old, which indicates that parental time restriction could be getting less, as children get older and able to be more independent with their media use.

C) Parental Mediation: Monitoring

Parents very often monitored their children, as they supervised what children did with their media devices, in order to secure their safety and support them where it was needed. 7 out of 9 children were being monitored by their parents while they were using their media devices but the level of monitoring varied. 3 out of 7 participants (Interviewee G, H and I) mentioned that whenever they were using a media device, their parents were always monitoring them and what they were doing with the media devices. Interviewee I said *'When I play with mom's phone, she sits next to me and sees what I play'* (Interviewee I, 18). However, Interviewee E explained that when she used the smartphone, her parents sat next to her, but when she watched a film or a video on YouTube on her own Tablet, she watched it alone. A potential reason for this difference in behavior by the parents, could be that they wanted to make sure that nothing was pressed, changed or deleted on their cell phones. 3 out of 9 children (Interviewee B, C and D) claimed that their parents did not supervise them the entire time they used the media devices, but rather, some of the time: *'No. – Not always'* (Interviewee D, 22), *'It depends. Sometimes my sister – sometimes not.'* (Interviewee

B, 18). The last category includes the Interviewees A and F, who mentioned that, when they used the devices, their parents did not supervise them at all: *'I am alone. No one is watching me when I play with the smartphone or I watch videos.'* (Interviewee A, 29-30). Interviewee F explained that his mother gave him her smartphone and when the time was over, she would come and tell him to stop. The parental monitoring could be characterized strong, as most children (7 out of 9 participants) were fully or partly supervised by their parents, while they were using the media devices. But still there were many different levels of monitoring, which possibly indicates that, in this age, there is a progression from control to independence, regarding the use of media devices.

D) Parental Mediation: Support and Protection

According to the interviews, the role of parents seems to be important in regards to issues of support and protection. 8 out of 9 participants (Interviewee A, B, C, D, E, G, H and I) explained that when they did not know something about their media device, they asked their parents. For example, Interviewee I (20-21) said that *'when something is difficult, I ask my mom to help me. Sometimes I do not know what to do. I give mom the phone and she does it'*. It is also noteworthy, that children looked for their parents' protection and help when they felt that they were in danger. Interviewee A mentioned that:

'N: Imagine that you are playing online and then a message comes, asking for your name. Would you do that?

I: I would give it quickly to my mom' (Interviewee A, 47-49).

This dialogue indicates that participant A could feel threatened or surprised by such a message and he would possibly not be prepared to handle this situation. His reaction would be to reach for his mother's help and support, believing that she is able to take right and safe decisions for him.

Similarly, Interviewee D said that, if a stranger texted him on WhatsApp, he would not write back, but immediately inform his mother about this message. Because of the interviewees' young age, their reaction seems very reasonable, as they are still developing their abilities to protect themselves and they do not have the cognitive

capabilities and the experience to handle all privacy dangers that are hidden on the internet.

The assistance provided by parents seems to also be important in regards to children's internet use, as the participants search for information online with the help of their parents or ask their parents to find information for them. Children are also aware of social media, because of their parents. Interviewees A, C, G, H and I (5 out of 7) have seen or used WhatsApp, Facebook or Instagram on their parents' phones, which could indicate the strong influence of parents regarding children's interaction with social media. Interviewee C (57-58) mentioned: *'My mom has Facebook and sometimes we see her Facebook together. There are many Photos there'*. Most participants were aware of applications such as WhatsApp or Instagram and had used them with their parents.

E) Parental Mediation: Password

With regards to passwords, which are confidential data, it was examined how many children have their own passwords and how they deal with this information. In short, results showed that a third of the children surveyed had a password of their own and used it with varying degrees of security, while two thirds didn't have one.

Interviewees D, E and F had their own passwords, probably due to the fact that they had media devices of their own, as mentioned earlier. All three respondents stated that they would not give their password to anyone except their family members. Nonetheless, interviewee F was willing to show the researcher his password, even though it was the first time he had met her. This raises questions about whether he would really be able to keep his password secret from other people. Moreover, the three participants said that their parents already knew their passwords. The passwords were not completely secret, but gave parents the opportunity to monitor what the children were doing. The other 6 out of 9 children did not yet have their own passwords. Interviewee A stated that he did not have a password but his mother had one, so he would give her the smartphone and she would put in the password. He explained that a password consists of numbers and letters and then he mentioned that he knew the numbers and the letters. It was very interesting that he could explain the role and the format of a password at the age of 6 years.

With regards to the role of parents concerning passwords, one could conclude that the majority of them do not allow their children the responsibility to have their own passwords at such a young age, and thus help to protect their security online. Only those parents that entrusted their children to have their own media devices, also allowed them to have their own passwords. In this study, however, it was not examined what measures the parents had taken to inform their children about passwords and how to create and store them securely. This information would be an interesting subject for further study.

Summarizing the previous points, there are three profiles of participants in regards to the parental mediation in children’s media and internet use (Table 12). All participants had at least some parental mediation. The first profile includes the Participant E, who received strong parental mediation. In the second profile are the Participants B, F, G, H and I that received parental mediation, such as time restrictions and monitoring or counseling from their parents when they ask for it. The third profile includes participants A, C and D who received less parental mediation/control.

5.3.2 Parental Role Regarding Children’s Personal Data Online

This sub-chapter focuses on the role of parents and their mediation, in the protection of personal data of children online.

Table 11. Parental Role Regarding Children’s Personal Data Online

<i>Parental Role Regarding Personal Data (N=9)</i>	<i>Yes</i>
<i>No settings with children for the protection of personal data</i>	8
<i>No discussion about personal data</i>	6
<i>Parents share personal photos of their children online</i>	5
<i>Children approve their parents’ decision to share their children’s photos online</i>	4

- **Parental Role Regarding Personal Data:** The topics that have been researched regarding the role of parents in the protection of children's personal data on the internet.
- **Yes:** How many participants had a positive response to the above topics of the research.

A) Parental Mediation: Discussion about Privacy Security

This part refers to the parental role, regarding discussions or measures to protect their children from sharing private data online. The participants were asked if they had ever had a conversation with their parents about showing personal information on the internet. Most children (Interviewee A, B, E, F, G and I) stated that they had never had a dialogue on this topic with their parents, or at least they were not able to recall it. However, participant C mentioned that she had had such a discussion with her mother, who told her never to write her real name or other personal information online. Likewise, Interviewee D shared during the interview that his mother had told him *'that I should not talk online'* (Interviewee D, 84), because he played online games very often, but taking place in online chat discussions with strangers could be dangerous for him. Finally, Interviewee H stated that his parents had told him that *'when I use the smartphone, I must keep my name and other things like mom's number or address secret. Never tell others.'* (Interviewee H, 65-66). The parents' possible reasons for not (or not sufficiently) discussing this topic with their children are unclear and were not recorded in the study. It could be that the parents had postponed the conversation for a later date, that they felt they had enough control over their children's online activities, or perhaps even that they were paying little attention to the subject.

Additionally, during the interviews the participants had been asked if they had made any settings on their media devices with their parents, so that their personal data is not accessible to strangers. 8 out of 9 children explicitly stated that they had not made any settings. Only Interviewee E stated that *'with dad we made my tablet safe. Now other people can't see anything about me'* (Interviewee E, 95-96).

B) Parental Mediation: Children's Digital Footprint

This section is concerned with children's views on their parents' publication of photos or other information about their children.

When the children were asked about this topic, 3 out of 9 stated that they did not know if their parents had published photos of them or other personal data. Participant D mentioned that his parents never posted photos or personal information about him or his brother online. The five participants, who were aware that their parents had shared such information on social media, were asked how they felt about this fact and if they thought that sharing their photos could be dangerous, if strangers could see those photos and information. Four of them (Interviewees A, C, H and I) were positive to their parents' actions: *'Mama has Instagram and she takes many photos of me and she posts it and I like it'* (Interviewee A, 69-70). Although, two of them, Interviewees C and H found it dangerous that strangers could see those photos, they were unable to articulate any of the ways in which this could be dangerous for them. Finally, Interviewee F (8 years old), appeared to be undecided and very confused by this topic and ultimately settled on the fact that his parents posting photos of him online was a negative thing:

N: Do you know if mom or dad have a picture of you on Facebook or Instagram?

I: Yes - mom has many photos of us on Instagram.

N: Is that ok?

I: Um. Yes. I don't know.

N: Could it be dangerous if someone you do not know sees the photo?

I: For sure not dangerous – but – um – yeah.

N: Not so bad but not so good?

I: Um --- Yes.

N: Both of them or you are not so sure?

I: Actually - it's not good.

N: Why isn't it good?

I: It is good when someone does not see my photos – I just don't like it.'
(Interviewee F, 142-153).

His answer demonstrated some signs of critical thinking and, despite his confusion, he was trying to decide what his opinion was. In summary, it can be said that the first reaction of all 5 participants to the publication of their photos was quite positive.

After the confirming question, some participants had second thoughts. No participant responded completely negatively to their photos being shared online and there were some answers that demonstrated critical thinking. However, the fact is that ultimately only one child stated that having their photos published by their parents could be inappropriate.

In conclusion, three profiles of participants can be determined, in regards to the topic of the parental role regarding children’s personal data online (Table 12): The first profile includes the participants A, B, G and I, who appeared to have received no parental mediation regarding online data protection. The second profile includes the Participants C, E, F and H, who appeared to have had at least one protective measure for personal data put in place by their parents. The third profile includes Participant D, whose parents had not posted his personal data online and they also had discussed the topic of personal data protection on the internet with him.

A summary of the three profiles of participants follows, which presents the characteristics of the children in relation to media and internet usage, online privacy protection and parental mediation on these matters. All the data selected by the interviews is summarized in Table 12. In each topic, every one of the participants belongs to one of the three profiles. Here, their answers have been compiled and summarized, and each participant is assigned a profile based on the combination of all of their answers and all of the categories together.

Table 12. Summary of Interviews’ Data

	D	F	C	E	H	A	G	I	B
Use of Media Devices	+	+	±	±	±	±	±	±	±
Own Media Devices	+	+	-	±	-	-	-	-	-
Regular use of Media Devices	+	+	±	±	-	-	-	-	-
Active Internet Usage (information & entertainment)	+	+	+	±	±	±	±	±	-
Regular use of the internet	+	±	±	±	±	±	-	±	-
Recognize social media applications	±	+	±	+	-	±	±	±	-
Regular and autonomous online communication	+	+	-	-	-	-	-	-	-
Account on social media applications	+	+	-	-	-	-	-	-	-
Understanding of the term “privacy”	+	-	-	-	+	+	-	-	-

Do not share personal data online	+	-	+	+	+	±	±	-	-
Do not have a conversation with strangers online	+	+	-	-	-	-	-	-	-
Awareness that their data is permanently online	-	-	-	-	-	-	+	-	-
Negative reaction to a stranger seeing a personal photo on the internet	+	+	-	-	-	-	-	-	-
Parental Media Support	±	-	+	±	+	+	+	+	±
No/rare parental restrictions and monitoring	+	+	±	-	-	±	-	-	±
Parents do not know children's password	-	-	-	-	-	-	-	-	-
Discussion about personal data	+	-	+	-	+	-	-	-	-
Settings with children for the protection of personal data	-	-	-	+	-	-	-	-	-
Parents do not share their children's photos online	+	-	-	-	-	-	-	-	-
Children disapprove of their parents' decision to share their children's photos online	-	+	-	-	-	-	-	-	-
Profile type	3	3	2	2	2	2	2	2	1

Note: + positive, - negative, ± both positive and negative.

Profile 1

The first category includes only Participant B, an 8 year old boy, born in Vienna. He stated that he used a smartphone that did not belong to him, the usage was not regular and he did not use the internet at all. He was not aware of any social media applications, he had never used any social media to write a message with the support of his family, and he had never used YouTube, Google or online games. Participant B did not know how to protect his privacy and asked for help whenever he faced media issues.

Profile 2

Most participants belong to the second category (Participants A, C, E, G, H, I). They mostly used their parents' smartphones, but not daily. They were active internet users. Most of them played online games and watched videos on YouTube, but had never used Google and those that had, had only used rarely. They recognized at least one social media application and some of them had used it with their parents, but they did not have personal accounts. Regarding their personal data on the internet, some of them were more protective of their personal data on the internet, than others were. Some of their decisions would not result in secure data and they did not appear to know that their data is permanently stored online. The parental mediation in this category was strong, as parents set time restrictions and applied intensive monitoring.

Furthermore, the children received parental support in using the internet and social media, and some children had spoken with their parents about protecting their privacy online. As a final point, most children were in favor of their parents' decision to share their photos online.

Profile 3

This category includes Participants D and F, both 8 year old boys. They were active media users and they owned many media devices. They used media and the internet regularly for many different activities, such as watching YouTube videos, playing online games and using Google. One of them (Participant F) was aware of many social media applications and had two accounts on two different applications. The other one (Participant D) could recognize only WhatsApp, on which he had a personal account.

There were differences between the two participants, in terms of their approach to online privacy protection. Participant D did not use his real name and did not share personal photos. He also had had a discussion with his parents about online privacy protection and had received parental support when using the internet. On the contrary, Participant F used his real name and posted personal photos online. According to the answers he gave, he had neither had a conversation nor had he received any support from his parents regarding the protection of his personal data. Both participants stated that they would never have a conversation with a stranger on the internet and they had a negative feeling about the idea that a stranger could see a personal photo of them on the internet. However, neither of them were aware that their data could remain on the Internet permanently.

Regarding parental mediation, both participants stated that they self-regulated their media consumption and received minimal parental monitoring. Neither of them received any parental support for social media. Furthermore, their parents knew their passwords, but did not make any settings with their children to protect their personal data. Participant F disapproved of his parents' decisions to share his photos online, while Participant D's parents did not share any of his photos or other personal data on the internet.

6 Discussion

In this chapter, the most important results are discussed and compared to findings of other studies on this subject, and the research questions are answered. This study aims to research the following points: firstly, experiences and perceptions of children in Vienna in the age group from 6 to 8 years about media and internet use; secondly, the knowledge of this group of children about the sharing of personal data on the internet and about methods of protecting it; thirdly, the interventions parents implement regarding their children's internet use and the protection of their children's personal data.

With older children, it might be possible to dig deeper into the concept of data protection, and it would be easier to have a conversation about the protection of private data and online privacy risks. However, the group of children between 6 and 8 years is an interesting study group, because, despite their young age, they are already active media and internet users and only very few studies on this age group have been conducted. In order to investigate their perceptions on online privacy threats, first it has to be determined whether they use the internet, as it is not self-evident. After acquiring information on if and how children of this age use media and the internet, then it is possible to ask questions about online privacy, risks and protection. The study was conducted in 2018. The children stated their opinions and described their actions. This material will be used to compose the study's findings and compare them with results of other studies on this subject.

RQ1: What are the experiences and perceptions of children in Vienna in the age group 6 to 8 years about media and internet usage?

According to the results of this study, children 6 to 8 years old in Vienna grow up having access to media devices at home. All participants in this study used media devices, such as smartphones, tablets or laptops. Similar results were found in the study conducted by Chaudron et al. (2015, p.7), namely that most children live in "media-rich homes". In this current study, almost all children were found to use smartphones and many children used them exclusively. Most children used only one device, while some of them used two different kinds of devices. The media device used less frequently was the computer. The children, who used a computer, were the same two participants who used all three media devices. Many children used a tablet,

but only a few of them used it regularly. This fact is contrary to the findings of Chaudron et al. (2015), who found out that, in same age groups, in other countries, tablets were the favorite device (ibid., p.8). A possible reason for the preference of smartphones could be that they are less complicated than computers, and they are easily accessible at any place and at any time. Chaudron et al. (2015, p.8) states that “smartphones are the melting pot devices, as they are very versatile in their use”. In Germany, about 17% of families with children between 3-7 and 6-11 years of age own a tablet (Medienpädagogischer Forschungsverbund Südwest, 2012a). Both studies (Chaudron et al., 2015; Medienpädagogischer Forschungsverbund Südwest, 2012a) were conducted a few years before this current study and the different findings of this study could possibly be due to the new technological developments of smartphones; for example, smartphones now have bigger screens, special applications for children are available, and also more people can afford to buy smartphones than in the past.

This study has found that all children mainly used the media devices to play. The Ofcom (2017) study found that 66% of children aged 5-7 years play games using media devices. Some children in the current study also mentioned other activities, like learning, communicating and watching films or videos. Particularly the interviewees mentioned that they searched for information on the internet, used the internet to communicate with their families and close friends, used YouTube to watch videos and songs, played different games and watched films. These findings are consistent with previous studies by Ofcom (2017), Chaudron et al. (2015) and Holloway, Green & Brady (2013).

Almost every child used the internet and there were very few children 6 to 8 years old who did not use the internet at all. This is consistent with the results of the 2013 study by Holloway, Green & Livingstone. In comparison, other past studies have shown that nearly 70 % of children of the same age in the US (Gutnick, Bernstein & Levine, 2011) and 79% of children 5-6 years old in Australia use the internet at home (Australian Bureau of Statistics, 2012).

Children use the internet for many reasons; in this study the following categories were examined: entertainment, information and communication. Most children in the current study regularly watched videos on YouTube and played online games. Most participants responded that they watched videos on YouTube and almost all of them did so regularly, which means that YouTube is a popular activity for the participants.

In agreement with the results of this study, the Ofcom study (2017) found that 71% of children aged 5 to 7 use YouTube. Holloway, Green and Brady (2013, p.18) wrote the following, regarding YouTube: “it is unfortunate that there seems to be minimal research investigating very young children’s (0 to 8) responses to what they encounter on video sharing sites”. In the current study, the participants are younger than 9 years old and they mentioned that they watched cartoons, animations, mini-movies or song videos on YouTube. Online games are also popular, as 6 out of 9 participants stated that they frequently played games on the internet. Most children both watched videos on YouTube and played online games regularly. Only a few children only watched YouTube or only played online games.

The results of this study show that most children rarely used the internet to search for information, as only two of the participants stated that they had done so, occasionally. An interesting point is that almost all children, who had used Google to search for information, stated that they had done so, without any parental mentoring. Four children explicitly mentioned that they had never used Google. It appears that many children are aware of Google, but only a few use it, and rarely.

According to the findings of this research, children also use the internet to communicate. Almost all children had heard of at least one social media application, like Facebook, Instagram or WhatsApp from their parents, while 2 out of 9 children were not aware of any of them. Two of the children interviewed, both aged 8 years old, had their own accounts on WhatsApp and used it to communicate with their family members and some close friends. One of the two, also had an account on Facebook. Ofcom (2017) found that 3% of children ages 5-7 had a social media profile. It appears that the nine participants were mostly informed about the social media applications and most of them had used them already, but always with support and under mediation from their parents. Instagram and WhatsApp were the most popular applications among the participants, while only two children were aware of Facebook. Only one child knew of all three social media applications, the same child, who had an account on two different applications. None of the children had accounts in all three applications.

The children who use the internet to communicate regularly are the same who own a media device, as well as an account on social media. Creating a social media account presupposes providing a name, a date of birth and an active e-mail address. Ofcom (2017) found that 3% of children aged 5 to 7 had a social media profile.

In summary, nine children in Vienna between the ages of 6 and 8 reported that they mostly use the internet in order to watch YouTube videos and to play games. The media and internet usage of these participants can mainly be characterized as frequent and regular. The internet in its informative function is hardly used and communication over the internet takes place regularly only with those participants who own media devices.

A closer look at the results allows for three different user profiles to be distinguished: Users with weak, medium and strong media engagement and understanding. In the first profile of low media engagement, the children were active media users, but not internet users. The participants did not own a media device and did not use them frequently. Also, they were not familiar with social media applications, YouTube, online games, or Google.

The majority of children is represented by the second profile, those who have some independence and frequency concerning online activities, such as YouTube and online games. Despite being online users, they were not familiar with Google. The most popular media device among this group was the smartphone, but the majority of children did not own one and mostly used their parents' devices. They were no strangers to social media, but they mostly only recognized one of the applications. None of the children in this group had a personal account on any of the applications.

The third profile is characterized by strong media engagement, as the participants were active media and internet users. They had access to many different media devices, which they owned. They were taking part in many activities online, such as YouTube, online games and Google. They frequently used social media and they had their own accounts.

RQ2: What knowledge and opinions do this group of children have regarding sharing personal data on the internet and methods of protecting it?

The participants described the word 'private' as 'something that is mine', any information which described their identity, that must be kept safe or secret from strangers. When asked if they would write down their name in order to continue playing an online game, most children said that they would not write it. Their reaction was spontaneously negative and some of them said that they would inform their parents about this message and ask them how to respond. Only a few children said that they would write a fake name. However, a minority was willing to write their

full-name without any questioning. The majority of the children gave an answer that could be considered as protective of their private data. An interesting observation is that most children just answered 'no', without mentioning parental support. That might suggest that they already know how to deal with these situations without asking their parents. Contrary to these results, the study of Ey and Cupit (2011) in Australia, with children aged 5-8, found that most children failed to identify unreliable information and revealing personal information as internet risks. The different results could possibly be explained by the changes that have occurred in the digital media landscape since 2011, when the aforementioned study was conducted, and the possible change in the understanding and use of media devices by children since then. Cultural differences between countries and continents must also be taken into account.

On the question about posting personal photos online, most of the children in this study were reluctant to share photos online, or would only post with their parents' permission. In other words, that the majority of children would take a safe route on this issue and thus the protection of their privacy would be guaranteed. It is interesting to note that however, that they were unable to explain their answer, they simply felt bad about it or thought that it was dangerous or threatening. The parental mediation seems to be not as prominent, as the participants appeared to have the confidence to deal with this issue themselves. However, three participants were positive about publishing personal photos. One of these three children gave a conflicting answer, as he stated that he would post a photo, despite believing that it could be dangerous. The other two children explicitly mentioned that it would not be in any way dangerous. One could deduce from this that they are either unaware or not sufficiently informed about online threats and how to use the internet safely. One child was very indecisive and couldn't answer the question. This means that 3 out of 9 children, that is 33 percent, would post personal information about themselves on the internet. In comparison, the study of Hasebrink et al. (2011) found a lower proportion of children who shared sensitive information online. In their study, it was 12 percent of children between the ages of 9 and 12 who had their phone number and/or address on their social media profiles. They emphasized that "younger children should be the focus of safety measures because the potential severity – their subjective perception of harm – tends to be greater, and because they are less well equipped to manage risks themselves" (Hasebrink et al., 2011, p.70). The difference between the two studies could be explained by the different ages of the participants and also by the changes in the use of media devices since 2011.

The participants who had accounts on social media, were also asked if they had ever posted a profile photo of themselves online, if they used their full name and if they would have a conversation with a stranger on WhatsApp. The children's responses differed in terms of privacy protection. One child stated that he just used a funny profile picture instead of a real photo of himself and a fake username, and also that he would never have a conversation with a stranger online, but would immediately inform his parents if approached. This child could be characterized as a careful and well protected media user. On the other hand, there was a child who had posted a profile photo of himself online and used his real name as his username, but also would not reply to messages from a stranger. Given these two cases, it seems that there are two completely different user behaviors: Users who are very concerned and careful with their personal data and users who are more careless and exposed. It is possible that the reason for this difference in attitude and behavior could be due to parental mediation and support.

Children's understanding and opinions about what happens to data online are examined with questions about finding information on the web. Many children in this study had never looked for information on the internet, either alone or with their parents. Most of the children, though, had previously used Google, and their opinions on this topic were varied. Some children believed that data on the internet disappeared the moment they deleted it. Some children were very skeptical and they could not answer the question. This study shows, that the majority, namely 8 out of 9 children, were not aware that their data remains online. Only one child mentioned that the data was stored on the internet, for example that Google saved his search history, but he didn't think that this could be dangerous in any way. This finding could indicate that the participants did not understand that anything they write, upload or post on the internet stays online as data forever, and could potentially be used by third party companies.

In summary, nine children, aged 6 to 8, shared their opinions and understanding of protecting their privacy on the internet. Despite their limited knowledge, most children would act in a protective way towards their privacy, largely based on their intuition or parental mediation. Their knowledge about privacy was limited to the feeling of being in possession of their data, but the group of participants was barely informed about the scope of online dangers. In addition, the participants mostly did not know that their data remains on the internet or that it could be used by companies.

The children that had their own social media accounts, seemed to have a better idea than the other children, of what happens to their personal data on the Internet, but expressed opposing views, in terms of willingness to disclose this data. However, they were in agreement, in regards to not responding to strangers willing to contact them.

Here, too, three different profiles can be identified for dealing with the protection of online privacy. The participants in the first profile expressed their confusion and inability to take decisions about online privacy issues. They had not yet developed an understanding of privacy online, which was to be expected, as they did not seem to have any experience using the internet. They were undecided regarding posting their personal data online and had been unable to express an opinion on whether doing so could pose a threat to them.

Children in the second profile would largely protect their personal information, without having developed a real understanding of the internet or having discussed this issue with their parents. Still, in many cases, their choices would not protect their privacy. Also, they were unaware of the permanence of data on the internet.

Finally, the children in the third profile seemed to have conflicting opinions about privacy protection, but they agreed on not having online-conversations with strangers and recognized the potential negative consequences of having strangers access their personal information on the internet.

RQ3: Which mediation strategies do parents apply regarding their children's media and internet usage as well as online personal data protection?

The final part of the results in this study is concerned with the interventions and mentoring methods that parents apply, in relation to internet use and the protection of online privacy. Parents make important decisions about their children's media consumption starting point, frequency, accessibility and independence. The data collected from children's interviews describe the interventions and mentoring their parents used. First of all, the access to media devices and thus also to media consumption is examined. The children answered questions about whether they used a computer, smartphone or tablet at home and whether it belonged to them or their parents. According to the results of the current study, the majority of children did not own a media device, yet and used their parents' devices, which represents strong parental control. This is consistent with the findings of the study of Chaudron et al.,

(2015). The participants mostly used their mother's devices and a minority used their fathers' or even their older siblings' devices. The results showed that children who owned devices had more freedom to use them, than children who did not own a device and who were subject to more control and supervision. Three children in this study already had personal media devices, which is in line with the results of the Ofcom (2017) study, in which 5% of children between the ages of 5 and 7 had their own smartphone and 35% had a tablet. One of the three children used both her own device and her parents' device. This could indicate a transition towards more independence, in terms of use of media devices. In most cases, parents applied restrictive mediation, in the form of controlling their children's usage of media devices, but there was also a minority that used active mediation strategies, by giving the freedom to their children to own media devices and to have more flexibility to use them.

Another research area was the frequency and the level of independence of participants, in relation to media use. The majority of the participants mentioned that their parents would set time restrictions and regulated their daily media usage. Most children did not use media devices every day, but they did so regularly, a finding that is consistent with the study of Jungwirth (2013), and only three participants used them daily. It seems that most parents did not want their children to use media devices daily. This intervention is considered a form of restrictive mediation. As mentioned before, the children who owned a device, also had more opportunities and independence to use them every day. This could be a matter of easy accessibility or self-regulatory usage. An interesting finding was that, regardless of the parental mediation, all parents of the participants supported their children's access to media devices.

In further exploring the topic of time restrictions, the interviews also highlighted the parental role, in regards to how much time children spent with media. Most children (7 out of 9) did not self-regulate their media consumption, as their parents would tell them when to stop playing. Similar findings were shown in the studies by Chaudron et al. (2015) and Livingstone and Helsper (2008). As mentioned above, most children fell into one category, in which their parents determined the amount of time they could spend using media devices. In the second category is the one child who stated that he was completely independent and responsible to make such decisions. In the third category is a child, who was sometimes allowed to regulate media use himself,

but other times was subject to the restrictions of his parents. These three categories indicate that, while parental controls are still very strong and most parents use restrictive mediation by setting time constraints, a progression towards independence in terms of media use could possibly develop in this age group.

The next subject of research was that of parental supervision. Three children stated that they were constantly monitored when using media devices, two claimed that they had no supervision at all and most children mentioned that they did not have continuous parental monitoring. Nikken and Jansz (2011) conducted a study of the parents of 792 Dutch children aged 2-12 and found that more privileged families provided more mediation than poorer families. Even if this study did not examine a connection between socioeconomic milieu and parental mediation, the findings showed that most children (7 out of 9 participants) received full or partial supervision. This also coincides with the results of the studies by Zaman and Nouwen (2016) and Chaudron et al. (2015). At the same time, 5 out of 9 children reported having little to no supervision. It seems that even if children are mostly supervised, only the minority is often or always under parental monitoring. Two 8-years-old children stated that they mostly self-regulated the length of time they spent with media, which could indicate that parental time constraints progressively decrease, as children get older (Livingstone, Ólafsson & Staksrud, 2011).

Part of the parent's role, regarding media, is also to provide support and protection for their children (Zaman & Nouwen, 2016). Almost all the children in this study mentioned that when they had questions about media, they would ask their parents, and if they felt in danger or threatened, they would immediately inform their parents and ask for help. Only one child, aged 8 years old, stated that he would deal with any problem alone. This finding is consistent with Chaudron et al. (2015, p.7), who found that on the internet children "encounter situations that they do not manage, for which they have to ask for help." Open communication between parents and children is part of active mediation.

Engaging with children actively is a strategy that most parents applied, according to the interviews with the participants. An example for this, is that children knew about social media, mainly because of their parents and their parents had showed them how social media works or they had used them together. It seems that parents played an important and supportive role in how children interact with social media.

The findings about sharing personal data on the internet showed that most parents had never discussed with their children not to disclose personal information online. It can be deduced from this that most parents used restrictive mediation strategies regarding online privacy protection. However, three participants mentioned that their parents spoke to them about online privacy issues, applying active mediation. Their discussions were centered on topics such as not sharing personal information online and not talking to strangers online. The Ofcom (2017, p.13) study findings were quite different: “nearly all internet users aged 8-15 recall being told about how to use the internet safely, with this advice most likely to have come from a parent or teacher” (Ofcom, 2017, p.13). The different findings of these two studies could be due to the different ages of the sample groups and also the fact that they were conducted in different countries. It is possible that parents may prefer to discuss online privacy with their children once they are older or more involved with the internet.

The results of this study also show that almost all participants did not make any settings on their media devices with their parents, in order to protect their personal data from strangers. There is only one exception, one child who stated that she and her father had made her table safe. One explanation could be that parents are possibly postponing taking measures for their children’s online protection, as Chaudron et al. (2015, p.8) mentioned in their study:

“They generally postpone worries about the risks of technologies to the future, as many parents believed that robust strategies to mitigate online risks do not need to be developed until children get older, despite evidence that some children have already encountered either violent, inappropriate content or commercial risks, and that other children can bypass safety settings.”

It is also possible that parents had changed the settings on the devices without their children knowing, as Ofcom (2017, p.16) found that “one in five parents of 5-15s have changed the settings on a tablet or mobile phone to prevent their child downloading apps or making in-app purchases”. If parents had made privacy settings by themselves, it did not happen with the children’s active participation or dialogue, and therefore the monitoring strategy in this case was restrictive.

Another focus of this research was children’s opinions on the use of passwords, as it could provide useful information for dealing with online protection of personal data. Two thirds of children in this study did not have a password (6 out of 9) for a media device or for social media accounts, while one third of children (3 children) did have passwords. The children who had passwords, were the same ones who owned media

devices and they shared similar opinions on this topic. They all claimed that they would not give their password to anyone, except their family members. Parents knew their passwords in all cases and could have access to the children's social accounts and media devices, so a restrictive mediation approach can be derived from the interviews with the children. One child was willing to give the researcher his password, which raises doubts as to whether this child, or perhaps even children in general, would actually keep their password secret from strangers. Although most of the children surveyed did not yet have a password, they still understood the use and knew the format of a password, which indicates that they could be able to use it in the near future. From the answers it can be deduced that the password seems to be thought of as very personal information by the participants and that they could understand that they should keep it secret from strangers. This indicates that their privacy would probably be fairly well protected in this area.

The last aspect examined was which mediation strategies parents used with regards to their children's media and internet use, as well as the online protection of personal data, concerning the publications by parents about their children on social media. Most children in this study stated that their parents had posted photos and other information about them online, which was also true in the study by Holloway, Green and Livingstone (2013), where it was stated that:

“Children’s digital footprints are now taking shape from very young ages. Some parents are writing blogs, and parents and grandparents regularly post photographs and videos of babies and children. These digital footprints are created for children who are too young to understand or consent (or who may not even be born, if their parents post ultrasound scans). Children’s future ability to find, reclaim or delete material posted by others is uncertain.”
(Holloway, Green & Livingstone, 2013, p.5)

In the study carried out by the author of the present work, the majority of participants stated that their parents shared photos of their children online. These children were then asked how they felt about this and whether sharing their photos could be dangerous, when strangers saw those photos and this information. The answers varied. Some children were positive towards their parents' decisions and did not find it dangerous. This opinion could be interpreted as being naïve about possible online dangers or it could indicate a lack of critical thinking on the matter, which is understandable, because of their young age (Chaudron et al., 2015), their limited media use and because they may not have had a discussion with their parents on the subject yet. Other children, while agreeing with their parents' actions, believed that if

this information ended up in the wrong hands, it could pose a threat for them. Only one participant was very unsure, almost confused, on this topic, but at the end of the interview he stated that posting photos was not a safe choice. It should be emphasized that no participant had an entirely negative reaction to their photos being shared online. In agreement to this study, a German study with 632 parents of children 2-5 years old found that around 53% of parents had a personal account on a social network and 33% used it to publish pictures, videos or information about their children's activities (Medienpädagogischer Forschungsverbund Südwest, 2012b). These results indicate that it would be advisable to increase the awareness of parents about the possible long-term consequences of a posted photo, in order to better protect the privacy of children on the Internet.

Below is a brief summary of the statements of the nine participants on their parents' mediation strategies regarding their children's media and internet usage and online personal data protection. All parents used restrictive mediation, concerning issues of passwords and privacy settings on media devices. On the other hand, the majority of parents used active mediation to support their children on social media and when the children had questions about media or when they felt like they could be in danger or threatened online. Both mediation strategies, but mostly the restrictive ones, are applied to topics such as how often and for how long children use media, or to discuss about privacy, or even whether children should own a media device or not.

The division of the participants into three profiles results in the following: In the first profile, the children received restrictive parental mentoring and time restrictions, but not continuously. On issues of online privacy protection, they had not had any parental mediation.

The second profile is characterized by strong and mostly restrictive parental mentoring combined with support and sometimes discussions or other protective measures about privacy protection on the internet. Parents applied time limits and intensive monitoring during children's media usage, but they also offered their children advice and support on issues such as social media or searching for information.

The two children in the third profile shared many similarities with the second profile, but they received less restrictive parental mediation or even no mediation at all. Their parents played a more supportive role, as the children mostly regulated their media

consumption themselves and were allowed to use the internet on their own. In the first case, the parents of the participant had not published any personal data of him online and had discussed the topic of personal data protection on the internet with him. In the second case, there was some evidence that critical thinking had been developed around privacy issues, as the participant pointed out that his parents' online posts with his private photos and data were not a safe decision for his privacy. The parents of the children that are included in this profile knew the passwords of the participants and had access to their devices, which represents a restrictive parental mediation method.

By and large, it can be said that the results of this study are mostly in agreement with the literature and with results from other studies. Only in a few cases the findings were different. For example, in this study, smartphones were the most popular media device for children aged 6 to 8, while older studies by Chaudron et al. (2015) and Medienpädagogischer Forschungsverbund Südwest (2012a) found that tablets were children's favorite device. One possible explanation is that smartphones are now more financially affordable and technologically more advanced than they used to be.

Another difference between the results of this and other studies found in the relevant literature is the absence of a conversation between parents and children about the protection of online privacy and in particular about the non-disclosure of personal data on the internet. While this study found that most participants had not had such a conversation with their parents, Ofcom (2017, p.3), had found that nearly all internet users, aged 8 to 15 years old had received counselling on this topic from a parent or teacher. The different findings could be due to the different ages of the participants or to the cultural differences between the countries in which the studies were conducted.

Another point of differentiation is that in this study most children, with few exceptions, would not disclose their real names and personal photos on the internet, whereas the study of Ery and Cupid (2011) in Australia had opposing findings. They found that children 5 to 8 year old were willing to share personal information on the internet, without seeing any risk in doing so. The study of Hasebrick et al. (2011) also found that children aged 9 to 12 were sharing personal data on their profiles on social media. Possible reasons for the different results are the time that has passed since 2011 and a now existing increased awareness of data protection, differences between countries and continents, different parental mentoring interventions or the increased influence of peer groups.

7 Summary and Outlook

Finally, a summary is presented and the research questions are once again answered briefly and succinctly, a summary is drawn and the research questions are again answered succinctly. The questions are the following: What are the experiences and perceptions of children in Vienna in the age group 6 to 8 years, about media and internet usage? What knowledge and opinions does this group of children have regarding sharing personal data on the internet and methods of protecting it? Which mediation strategies do parents apply regarding their children's media and internet usage as well as online personal data protection?

The interviews make it clear that all children experience media, internet and data protection subjectively and individually. They have different personalities, receive different parental mediation and control, and differ in terms of accessibility to media devices and independence. Nevertheless, parallels can be found between the statements of the respondents and thus guarantee a comprehensive answer to the research questions. According to the results, there are three different profiles of users: Users with weak, medium and strong media engagement and understanding. The participants' answers in all three points have been summarized and compiled in Table 12, so that each participant belongs to one profile based on all of their answers. According to that, the participant B belongs to profile 1, the participants A, C, E, G, H and I belong to profile 2 and the participants D and F to profile 3.

RQ1: What are the experiences and perceptions of children in Vienna in the age group 6 to 8 years about media and internet usage?

The findings of greatest importance are the plenty stimuli of new technologies that children have as well as the variety of their activities, not only with media devices, but also on the internet. Almost all children use the media devices regularly, mostly to play. The smartphone is a particularly popular media device. However, most children do not have their own devices and use their parents'. Additionally, the majority of children use the internet, although not all of them are able to identify it. YouTube and online games are popular among children of this age. Searching for information and communicating online are not such regular activities. Furthermore, almost all children are aware of social media, but only a few have a personal account and they use it restrictively to their family members and closest friends. The children who own media

devices, mostly use them on a daily basis and are quite independent users, with rare parental mentoring.

Concerning the three profiles of users, in the first profile the children are active media users but do not use the internet. They do not use the devices often and do not own a device. They do not recognize social media applications, do not use YouTube, Google and do not play online games. Also, in this profile the users are not familiar with many different media devices, only the smartphone. In the second category the children use the internet often, mostly for entertainment (YouTube, online games) and less for information (Google). They use Google only with the support of their parents and not often. They mainly use smartphones, and less often tablets, that belong to their parents. Regarding online communication and the social media applications, the participants of this profile are aware of at least one application and they use it with their parents, but they do not have a personal account. The participants of the third profile own and use frequently many different media devices, such as the smartphone, tablet and computer. They use the internet for their entertainment, information and communication. In particular, they use YouTube, play online games and sometimes use Google. They know at least one social media application and are active social media users, as they have a personal account. The first research question was answered with these statements. The results of the second question research are summarized below.

RQ2: What knowledge and opinions does this group of children have regarding sharing personal data on the internet and methods of protecting it?

The majority of children were cautious when it comes to publishing personal data on the internet. In many cases the children mentioned that they would get their parents' permission first or write a fake name. Even children who had already shared private data, admitted that it was not a safe choice. Only a few children were willing to publish personal data. All children who had a password kept this information secret and only shared it with family members. Children with a personal account on social media were the minority and they were handling their private data in opposite ways. Specifically, some of them were very cautious and careful and others were careless and exposed. Most of the children were in favour of parents uploading their children's photos to social media.

Regarding the three profiles, there are three different levels of dealing with online privacy protection. In the first profile, the children were confused and unwilling to

deal with online privacy issues. Since they were not internet users, they lacked the experience needed to form their own opinions regarding issues of personal data on the internet. They could not decide if there would be any threat for their private data online and they could not criticize their parents' choices to share personal photos of them online. In the second profile, participants were quite protective of their privacy but mostly because of parental support or an intuition, not because of reasoning or understanding. Some of their choices would be protective to their personal data and some of them would not. Mostly they would not share personal information but could not explain the reasons for this choice. Most participants did not know that all online data remains permanently on the internet. In the third category, children had different opinions about dealing with privacy, but they realized the possibility of negative effects when their personal data was exposed on the internet. They were also against any online conversations with strangers. After answering the second research question, the results of the third research question are summarized below.

RQ3: Which mediation strategies do parents apply regarding their children's media and internet usage as well as online personal data protection?

The role of parents is very important for children's media and internet consumption and privacy protection. It appears that most of the participants' parents had adopted restrictive mentoring practices and only a few actually used active mentoring. On the one hand, active mentoring was applied by the parents mainly when children had questions about media or social media usage or they felt threatened. On the other hand, the participants' parents mostly used restrictive mediation strategies regarding the privacy settings on media devices and children's passwords. There were gray areas as well, where some parents used active mentoring, but actually most parents used restrictive strategies, on issues such as time limits, regulation of the independence and accessibility of content, regulation of the frequency and duration of children's media usage, owning a media device or discussing about online privacy risks and the protection of personal data on the internet.

Concerning the three profiles of the participants, in the first category the parental monitoring was restrictive, but not continuously. The parents had not made any settings or talked with their children about privacy protection, but when the children needed help, the parents supported them. In the second category, there was a combination of active and restrictive mentoring strategies. Some participants have had conversations or made a setting on a device with their parents for online privacy

protection. The parents also counseled and supported their children, concerning their use of Google and social media or any other difficulties they may have had online. They applied strong monitoring and time limits to control the children's media and internet usage. In the third profile, there was less restrictive mediation and the parental role was more supportive. Children mostly regulated their media consumption themselves and dealt with their difficulties alone. It seemed that they had developed a deeper understanding of their personal data, as they were against or suspicious of sharing private information on the internet, and some of them had discussed about personal data protection with their parents. However, the parents still knew the children's passwords, thus having access to all their media devices, online conversations and activities.

Finally, an outlook on possible subsequent research projects should be given. This study is part of the research conducted in Austria, that explores the characteristics of children 6 to 8 years old as media and internet users, as well as their opinions about privacy and protection on the internet. This master's thesis could only provide a small insight into the research topic. The interview material still has a lot of potential for a more detailed analysis on different subject areas. For example, the focus of further research could be the perspectives of children of this age group throughout Austria and not only in Vienna and the examination of the differences in the results, among the states in Austria. Another example is that children's opinions could be examined in relation to their parents' views on the same topic, the parents being able to share more accurate information that confirms or refutes, but definitely completes the perspectives of children. These ideas for further research projects make it clear that this research field is far from exhausted.

The results of this master's thesis, as well as possible further research projects in this field, are an important research area for pedagogy. In particular, taking into account the vulnerability of children aged 6 to 8 as internet users, and the violation of children's right to privacy on the internet, the educational relevance of the research area becomes clear, in that the risk of online privacy threats is very high and therefore children need to develop resilience to online data protection risks.

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Appendix

1. Questionnaire

Media use:

1. Do you sometimes use a computer (laptop) at home?

If so,

- i. Is it your computer or does it belong to mom/dad?
- ii. What are you doing on the computer (laptop)?
- iii. Do you play with it every day?

2. Do you sometimes use a mobile phone (smartphone) at home?

If so,

- i. Is it your phone (smartphone) or does it belong to mom/dad?
- ii. What are you doing on the phone (smartphone)?
- iii. Do you play with it every day?

3. Do you sometimes use a tablet at home?

If so,

- i. Is it your tablet or does it belong to mom/dad?
- ii. What are you doing on the tablet?
- iii. Do you play with it every day?

4. Can you use the computer/tablet/phone for as long as you like or do your mom and dad tell you when to quit?

Parental support:

(Depending on what the children answer when using the media, the following questions apply to computer, tablet or mobile phone)

5. When you are at the computer/tablet/phone, is your mom and dad sitting next to you?

6. If you do not know something about your computer/tablet/phone, do you ask your mom and dad?

Internet usage and online security:

7. Do you use the internet?

If so,

- i. What are you doing on the internet?
- ii. Are you doing this alone or with your mom/dad?

8. Do you watch videos on YouTube?

- i. Do you do that only once or a few times per day?
- ii. Are you doing this alone or with your mom/dad?

9. Do you look for information on Google?

If so,

- i. Do you do that only once or a few times per day?
- ii. Imagine that you write a question on Google. Does Google save your question?
- iii. If so, is that good or bad?

10. Do you play online games?

If so,

- i. Which game do you play?
- ii. Do you do that only once or a few times per day?
- iii. Is your mom or dad also watching when you play?
- iv. Imagine that you are playing online and then a message comes, asking for your name. Would you do that?

11. Have you ever heard of WhatsApp?

If so,

- i. Does your mom or dad have WhatsApp?
- ii. Do you have WhatsApp on your own?

<p>If so,</p> <ul style="list-style-type: none">i. Do you have a picture of you on WhatsApp?ii. Is your whole name on WhatsApp?iii. Imagine, somebody that you do not know writes to you. Would you answer him/her?	<p>If not,</p> <ul style="list-style-type: none">i. Have you texted a WhatsApp message before?ii. To whom?iii. Alone or with your mom/dad/anyone else?iv. Was that only once or a few times?
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12. Have you ever heard of Facebook?

If so,

- i. Does your mom or dad have Facebook?
- ii. Do you have Facebook on your own?

<p>If so,</p> <ul style="list-style-type: none">i. Do you have a picture of yourself on Facebook?ii. Is your full name on Facebook?iii. Is your date of birth/phone number/address on Facebook?iv. Someone you do not know wants to be friends with you on Facebook. Do you accept that?	<p>If not,</p> <ul style="list-style-type: none">i. Do you know Facebook from your Mom or Dad or anyone else?ii. Have you used it or tried it alone?iii. Was that only once or a few times?
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13. Have you ever heard of Instagram?

If so,

- i. Does mom or dad have Instagram?
- ii. Do you have Instagram on your own?

<p>If so,</p> <ul style="list-style-type: none">i. Do you have a picture of yourself on Instagram?ii. Is your full name on Instagram?iii. Imagine someone follows you whom you do not know. Do you think that's good or bad?	<p>If not,</p> <ul style="list-style-type: none">i. Have you seen Instagram from your mom or dad or anyone else?ii. Have you used it alone?iii. Was that only once or a few times?
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14. Imagine that you are playing on the computer/tablet/mobile phone and suddenly there is a message that you should write down your name. Would you do that?

15. Do you have a password?

If so,

- i. Would you give someone your password?

- ii. Who would you give it to?
- iii. Did you write down the password somewhere or you know it by heart?
- iv. Do your parents know your password?
- v. Has the computer/tablet/phone ever asked if it should save your password?
- vi. If so, did it save your password?

16. Imagine you take a picture of yourself. Would you put it on Facebook/WhatsApp/Instagram?

- i. If so, is it good if someone that you do not know sees that photo?

17. Do you know if mom or dad has a picture of you on Facebook / Instagram?

If so,

- i. Is that ok?
- ii. Could it be dangerous if someone you do not know sees the photo?
- iii. If yes, why?

Privacy Security:

18. Did you talk with your mom or dad about showing your name or photos on the internet?

- i. If so, what did they say?

19. Did you make any settings with mom or dad on your computer/tablet/phone so other people cannot see your name or photos?

Personal data:

Full name: _____

Age: _____ Male / Female

2. Letter for Parents



Vienna, 10th December, 2018

" Online privacy protection: A qualitative study on children aged 6 to 8 years in child rights perspective "

Information and Declaration of Consent

Dear Parents,

I am conducting a scientific research project for my master thesis for the University of Vienna at the Department of Education on the topic " Online privacy protection: A qualitative study on children aged 6 to 8 years in child rights perspective " under the supervision of Univ.-Prof. Dr. Christian Swertz. For the needs of this research I conduct a scientific survey with children 6 to 8 years old, who live in Vienna.

In times when children's lives are increasingly influenced by digital media and especially the internet, the protection of the youngest is of particular importance. Consequently, I want to examine the experiences, attitudes and habits of the children as media and Internet users as well as their personal dealing with privacy issues. The interviews are planned to have **15 minutes** duration and they will be **recorded** and they will be **conducted by me personally**. Participation in the study is voluntary. The contents of the discussions and questionnaires are treated confidentially, anonymized and exploited only in an aggregated form.

With your signature, you agree that your child may participate in the interview as part of the project "Online Privacy Protection and Kids". In addition, you agree that the material may be evaluated for research purposes only and for the purposes of anonymity, and the results may be published. The data will be destroyed immediately after the evaluation. By signing, you confirm that you have been adequately informed about the project, have approved your child's participation in the project and have understood and accepted the respective explanations and conditions.

Child's name and age: _____

Date and signature of child's parent or guardian

Would you like to receive the results of this research? Yes / No

If yes, your e-mail address: _____

3. CRC, 1989

Article 13

1. The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.

2. The exercise of this right may be subject to certain restrictions, but these shall only be such as are provided by law and are necessary:

(a) For respect of the rights or reputations of others; or

(b) For the protection of national security or of public order (order public), or of public health or morals. (CRC, 1989, online)

Article 16

1. No child shall be subjected to arbitrary or unlawful interference with his or her privacy, family, home or correspondence, nor to unlawful attacks on his or her honour and reputation.

2. The child has the right to the protection of the law against such interference or attacks. (CRC, 1989, online)

Article 17

States Parties recognize the important function performed by the mass media and shall ensure that the child has access to information and material from a diversity of national and international sources, especially those aimed at the promotion of his or her social, spiritual and moral well-being and physical and mental health.

To this end, States Parties shall:

(a) Encourage the mass media to disseminate information and material of social and cultural benefit to the child and in accordance with the spirit of article 29;

(b) Encourage international co-operation in the production, exchange and dissemination of such information and material from a diversity of cultural, national and international sources;

(c) Encourage the production and dissemination of children's books;

(d) Encourage the mass media to have particular regard to the linguistic needs of the child who belongs to a minority group or who is indigenous;

(e) Encourage the development of appropriate guidelines for the protection of the child from information and material injurious to his or her well-being, bearing in mind the provisions of articles 13 and 18. (CRC, 1989, online)

Article 18

1. States Parties shall use their best efforts to ensure recognition of the principle that both parents have common responsibilities for the upbringing and development of the child. Parents or, as the case may be, legal guardians, have the primary responsibility for the upbringing and development of the child. The best interests of the child will be their basic concern.

2. For the purpose of guaranteeing and promoting the rights set forth in the present Convention, States Parties shall render appropriate assistance to parents and legal guardians in the performance of their child-rearing responsibilities and shall ensure the development of institutions, facilities and services for the care of children.

3. States Parties shall take all appropriate measures to ensure that children of working parents have the right to benefit from child-care services and facilities for which they are eligible. (CRC, 1989, online)

Article 29

1. States Parties agree that the education of the child shall be directed to:

(a) The development of the child's personality, talents and mental and physical abilities to their fullest potential;

(b) The development of respect for human rights and fundamental freedoms, and for the principles enshrined in the Charter of the United Nations;

(c) The development of respect for the child's parents, his or her own cultural identity, language and values, for the national values of the country in which the child is living, the country from which he or she may originate, and for civilizations different from his or her own;

(d) The preparation of the child for responsible life in a free society, in the spirit of understanding, peace, tolerance, equality of sexes, and friendship among all peoples, ethnic, national and religious groups and persons of indigenous origin;

(e) The development of respect for the natural environment.

2. No part of the present article or article 28 shall be construed so as to interfere with the liberty of individuals and bodies to establish and direct educational institutions, subject always to the observance of the principle set forth in paragraph 1 of the present article and to the requirements that the education given in such institutions shall conform to such minimum standards as may be laid down by the State.

4. Abstract

Previous research on privacy and young media and internet users has shown that children are vulnerable users and their lack of skill may pose a risk. The present study's aim is to examine the experiences and perceptions of children in Vienna in the age group 6 to 8 years about media and internet usage; the knowledge and opinions this group of children has regarding sharing personal data on the internet and methods of protecting it; and mediation strategies parents apply regarding their children's media and internet usage as well as online personal data protection. This is also explored, in regards to the rights of children, in accordance with the United Nations Convention on the Rights of the Child, for example the right of access to the media and the right to privacy. A qualitative research was conducted, where nine participants were interviewed with semi-structured interviews. The qualitative content was analyzed according to Mayring (2014). Data analysis indicated that there are three profiles of media users: weak, medium and strong. Most children are active media and internet users and the majority of children is cautious about sharing personal data on the internet. However, there are still children who are careless about online privacy issues. Finally, the parents' role is crucial for children's media and internet use but often parents are not prudent about internet privacy hazards to their children.

Keywords: online privacy protection, child rights, privacy risks, critical media literacy, parental monitoring, self-resilience

5. Zusammenfassung

Frühere Untersuchungen zum Datenschutz und zu jungen Medien und Internetnutzern haben gezeigt, dass Kinder verwundbare Benutzer sind und ihr Mangel an Fähigkeiten ein Risiko darstellen kann. Ziel der vorliegenden Studie ist es, die Erfahrungen und Wahrnehmungen von Kindern in Wien in der Altersgruppe von 6 bis 8 Jahren in Bezug auf Medien- und Internetnutzung zu untersuchen, um herauszufinden, welche Kenntnisse und Meinungen diese Kindergruppe über den Austausch personenbezogener Daten im Internet und über Methoden zu deren Schutz hat und die Mediationsstrategien zu erforschen, die Eltern in Bezug auf die Medien- und Internetnutzung ihrer Kinder sowie den Schutz personenbezogener Online-Daten anwenden. Dies erfolgt auch in Hinblick auf die Rechte der Kinder gemäß der Kinderrechtskonvention der Vereinten Nationen, also zum Beispiel das Recht auf Zugang zu Medien sowie auf Privatsphäre. Es wurde eine qualitative Untersuchung durchgeführt, bei der 9 Teilnehmer mit halbstrukturierten Interviews befragt wurden. Hierbei wurde die qualitative Inhaltsanalyse nach Mayring (2014) angewandt. Die Datenanalyse ergab, dass es drei Profile von Mediennutzern gibt: schwach, mittel und stark. Die Mehrheit der Kinder ist vorsichtig mit dem Austausch personenbezogener Daten im Internet. Es gibt jedoch immer noch Kinder, die mit Online-Datenschutzproblemen unvorsichtig umgehen. Die Rolle der Eltern für die Medien- und Internetnutzung von Kindern ist von entscheidender Bedeutung, jedoch lassen die meisten Eltern nicht genug Vorsicht in Bezug auf mögliche Gefahren für die Privatsphäre ihrer Kinder im Internet walten.

Schlüsselwörter: Online-Datenschutz, Kinderrechte, Datenschutzrisiken, kritische Medienkompetenz, elterliche Überwachung, Selbstbeständigkeit