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Filozofická fakulta

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Institute of Information Studies and Librarianship / New Media Studies

**The Relationship between Perceived
Parental Media Mediation and Media
Literacy of Secondary School Pupils**

Vztah mezi rodičovskou mediální mediací a mediální gramotností u žáků
druhého stupně ZŠ

Diploma Thesis

Diplomová práce

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Praha 2022

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Acknowledgements

I would like to express gratitude to the thesis supervisor Mgr. Michaela Slussareff, PhD. for providing me with valuable insights and feedback throughout the whole writing process. Furthermore, I would like to appreciate pupils from Kunratice Basic School for participating in the study and their parents for consenting with that participation. Lastly, a big thank you goes to my study companions, friends, and family, who kept motivating me to complete this project.

Declaration

I hereby declare that I wrote this diploma thesis solely by myself and that I have cited all the sources used while writing this thesis. This text has not been used for applying for the same or a different university degree or during another university program.

Excluding the appendices and the list of references, a wordcount of this thesis is 137,152 characters, which amounts for roughly 76 standard pages according to the ČSN ISO 690 standard.

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Tomáš Titěra

Abstract

This diploma thesis explores the relationship between parental media mediation and media literacy among Czech adolescents aged 13-15. Parental media mediation is conceptualized as strategies parents employ to manage children's media use. Media literacy is understood as the ability to access media, analyze, evaluate, and produce and communicate media messages, as well as the ability to use media effectively and safely. Literature review provided solid evidence for including screen time as a factor contributing to media literacy level. A quantitative survey of a sample of 131 secondary school pupils was conducted to explore relationships between the variables. Regression analyses revealed no evidence supporting that adolescents' media literacy levels are affected by either their screen time or the media mediation strategies their parents employ. In the discussion, it is argued this is the case due to a narrow conceptualization of parental mediation in academic literature. Results of the study show that restrictive and active parental media mediation strategies contribute to development of only a small portion of skills which constitute media literacy.

Keywords

parental media mediation, media literacy, media education, secondary school, screen time, media use

Abstrakt

Tato diplomová práce zkoumá vztah mezi rodičovskou mediální mediací a mediální gramotností českých dospívajících ve věku 13-15 let. Rodičovská mediace je koncipována jako strategie, které rodiče využívají k ovlivňování dětského užívání médií. Mediální gramotností jsou rozuměny schopnosti přistupovat k mediálnímu obsahu, analyzovat, hodnotit a produkovat a komunikovat mediální sdělení, a dále schopnost využívat média efektivně a bezpečně. Na základě studia literatury byl do studie zahrnut i čas strávený u obrazovek jako faktor, který může rovněž mediální gramotnost ovlivňovat. Jako podklad pro studii těchto vztahů bylo provedeno kvantitativní dotazníkové šetření mezi 131 žáky druhého stupně základní školy. Regresní analýzy neprokázaly žádný vztah mezi strategiemi rodičovské mediace nebo časem stráveným u obrazovek a úrovní mediální gramotnosti žáků. Následná diskuze poukazuje na úzké vymezení konceptu rodičovské mediace v odborné literatuře. Výsledky výzkumu potvrzují, že tradiční restriktivní a aktivní formy mediace rozvíjí jen některé kompetence, které přispívají k mediální gramotnosti mladistvých.

Klíčová slova

rodičovská mediální mediace, mediální gramotnost, mediální vzdělávání, druhý stupeň základní školy, čas u obrazovek, používání médií

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List of Abbreviations

Abbreviation	Explanation
AM	Active mediation
ASAM	Autonomy-supportive active parental media mediation
ASRM	Autonomy-supportive restrictive parental media mediation
CAM	Controlling active parental media mediation
CRM	Controlling restrictive parental media mediation
ČŠI	Česká školní inspekce (Czech School Inspectorate)
FEP BE	Framework Education Programme for Basic Education (Czech Republic)
FEP SGE	Framework Education Programme for Secondary General Education (Czech Republic)
IRM	Inconsistent restrictive parental media mediation
JSNŠ	Jeden svět na školách – education program run by NGO People in Need focusing on media education
MŠMT	Ministerstvo školství, mládeže a tělovýchovy České republiky (Ministry of Education, Youth and Sports of the Czech Republic)
PPMMS	Perceived Parental Media Mediation Scale (Valkenburg et al., 2013)
RM	Restrictive mediation

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1. Introduction

1.1 Why Media Literacy and Parental Mediation

We live in a media saturated age. The abundance of mediated content, its availability, and the amount of time we spend consuming it is unprecedented in the human history. The time we spend engaged with mediated content, especially through television, computer, or mobile phone screen, is making up a large portion of the 24 hours of the day for all age groups, including school children. In 2019, a typical adolescent aged 12-13 from the United States spent 3.8 hours in front of a screen on a regular day, excluding time spent on school related work (Nagata et al., 2022). This number is slightly lower for the Czech Republic where time spent in front of a screen amounted for 2.8 hours a day for children aged around 12 (Rubin et al., 2020), however, around 39% of adolescents aged 13-14 spend more than 4 hours online on a regular weekday, with this proportion increasing to 61% on the weekends (Bedrošová et al., 2018). In the United States, the average screen time for this age group has almost doubled during the Covid19 pandemic, reaching 7.7 hours a day in May 2020. Similar trend is likely to be seen in future studies covering adolescents' screen time in the Czech Republic.

With the vast amount of time children and adolescents spend consuming (digital) media content, it is crucial to understand how they approach what they see on their screens – whether they can understand and analyze it critically and be aware of the various risks associated with media use, such as coming across age-inappropriate content, dealing with cybercrime, cyberhate or cyberbullying or distinguishing false information. In other words, today's people are expected to be media-literate. One of the widely accepted definitions of the abstract term of literacy has been crafted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) – it states that literacy is “the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts” (Montoya, 2018, p. 2). The absence of an object in the syntax of this sentence already suggests that literacy is not just the ability to read and write, but that there are multiple literacies instead. New media provide us with ample possibilities to communicate such messages while leaving a

lot of room for (mis)interpretation. The ability to produce, receive and decode mediated messages is a part of what constitutes **media literacy**.

Judging from a personal experience of being a secondary school teacher of subjects related to media and information literacy for the past four years, the societal demand for children to learn to decode media messages and be able to navigate digital worlds keeps growing. Those who advocate for promoting media literacy (be it parents, opinion makers, governmental bodies, or children themselves) often see it as a tool for protection against fake news or as a preparation for their future jobs and personal lives which will be likely greatly digitized. School systems across the Western World meet these demands by including media education in their curricula (Zylka et al., 2011). This is also the case in Czechia, where media education is conceptualized a cross-curricular subject in its Framework Educational Programs for Basic and Secondary Education (Ministerstvo školství, tělovýchovy a mládeže ČR, 2021a; 2021b), which means that schools are obligated to include media education outcomes in their school curriculum in any of the related subjects such as computer science, language and literature classes, or civics.

However, a significant portion of the media education ‘burden’ lies on the backs of parents, as children experience most of their media exposure at home (Bedrošová et al., 2018). As Straker et al. (2018) note in their commentary for the *Journal of Pediatrics*, parents are nowadays confronted with conflicting guidelines regarding how they should approach their children’s media use. On one hand they are expected to follow public health agencies’ recommendations to limit the amount of time children use screen devices to prevent associated health risks of extensive sedentary activities such as obesity. On the other hand, they are also expected to contribute to children’s ability to navigate complex media landscapes and use digital technologies efficiently for both work and leisure.

To resolve this conflict and somehow manage children’s media use, many parents employ various **parental media mediation** strategies in the forms of rule-making, restricting, monitoring, discussing and co-viewing with regards to various media contents and their sources (Livingstone & Helsper, 2008). As Mendoza (2009) notes in her article on parental mediation effects, some of the more active instances of these interventions contribute to higher media literacy, as they allow

for guidance of children's media use directed to better understanding of media messages they see on their screens. On the other hand, restrictive forms of parental mediation have shown to be negatively associated with children's ability to interpret differences between television portrayals of reality and actual reality (An & Lee, 2010) or to protect themselves against online privacy risks (Shin & Kang, 2015). Furthermore, however far-fetched it may sound at first, Cingel and Hargittai (2018) also found evidence that restrictive mediation in childhood is a predictor of lower college grades later in life, as they theorize that lower media exposure means fewer opportunities to learn 'by accident' by, for instance, browsing the internet.

1.2 Research Questions

This thesis aims to contribute to the ongoing debate (both academic and non-academic) about the effects of parental media mediation on children's outcomes. More specifically, it explores the ways parents handle their children's media use and how that reflects on the children's media literacy level. It is assumed that a great deal of the process of children making sense of what they see in the media takes place in families. Furthermore, there is evidence that the amount of time a child spends using media comes into play in this relationship.

Therefore, this thesis' objective is to answer the following research questions:

RQ1: To what extent are adolescents' media literacy levels associated with media mediation strategies their parents employ?

RQ2: To what extent are adolescents' media literacy levels associated with the amount of time they use media?

1.3 Thesis Outline

In the theoretical part (Chapter 2), literature crucial to answering the posed research questions is reviewed. An emphasis is put on academic articles providing context in which media education and parental mediation take place, as well as recent studies on measuring media literacy and parental mediation. The literature

review provides a basis for formulation of hypotheses, which are then tested in the practical section. Chapter 3 is dedicated to description of the conducted quantitative study, in which participants completed a questionnaire testing their media literacy and asking about their perspective on media mediation strategies they experience at home, as well as their media use intensity. The results of the study are presented in Chapter 4 and discussed in a broader academic and societal context of media literacy and parenting in Chapter 5. This last chapter also summarizes found limitations of the present study and suggests ideas for further research into the topic.

1.4 Thesis Format

The citation style and general formatting of the thesis follow the 7th edition of the Publication manual of the American Psychological Association [APA] (APA, 2020). Figures and tables are included within the text, a list of figures and a list of tables, as well as a list of abbreviations are included after the list of contents.

Only two out of the four sources which were identified as related to the research topic in the original assignment of the thesis in the Student Information System (www.is.cuni.cz) ended up being used in the final thesis. Throughout the literature review process, they were replaced by multiple other sources which were found to be more relevant to the formulated research questions.

Literature review also revealed basis for assuming a relationship between the amount of media exposure (often conceptualized as screen time) and children's media literacy level. Therefore, in addition to the research question posed in the original assignment, a second research question focusing on this relationship has been added.

2. Theoretical Framework

2.1 Media Literacy

2.1.1 Basic Definition

It is necessary to first define what the concept of media literacy entails. One of the widely accepted definitions was agreed upon by the attendees of the 1992 Aspen Institute National Leadership Conference on Media Literacy, who defined media literacy as “the ability of a citizen to access, analyze, and produce information for specific outcomes” (Aufderheide, 1993, p. 6). This was further specified by Renee Hobbs (1998), who broadened the required skills by adding the ability to evaluate and communicate messages in a wide variety of forms. The media literacy skillset could thus be broken down into four specific areas: access, analysis, evaluation, and production of media messages.

Sonia Livingstone (2004) notes that this definition works with the idea of pan-media, or neutral media, that all operate in a manner similar to one another. She argues from a McLuhanian perspective that the skill-based approach towards media literacy is simply insufficient in the age of wide adoption of ICTs and the ubiquity of new media, as it is necessary to also understand the connotations of the interaction between the users and the technologies they are utilizing to access media content. This already suggests that media literacy does not exist in a vacuum, as there are numerous related concepts, or, more specifically, related literacies, most prominently information and digital literacy.

2.1.2 Interplay with Information and Digital Literacy

With regards to information literacy, there is an ongoing debate about whether media literacy is just an application of information literacy to a specific societal landscape (Potter, 2019), or whether it is a separate field going way beyond the ideas of information literacy by focusing not only on critical thinking, but also production of media messages or understanding media landscape and industries (Adams & Hamm, 2001, as cited in Potter, 2010).

A similar debate is being led regarding the difference between media and digital literacy. As Livingstone (2004) argues, one cannot nowadays exist without the other as the ability to understand and reflect on the ways we interact with technology we use to access media content is a crucial part of understanding how media operate. On the other hand, digital literacy can be seen as having its own distinctive features that are not necessarily exclusive just to media. Gilster (1997, as cited in Fieldhouse & Nicholas, 2008), identified that digital literacy comprises of four core competencies, namely knowledge assembly, internet searching, hypertext navigation and content evaluation. While knowledge assembly and content evaluation are directly derived from information literacy, internet searching, and hypertext navigation are skills required exclusively for operating digital devices. Thus, even though digital literacy, again, clearly overlaps with information and media literacy, it might be easier to identify distinctive features in this case by understanding it as purely digital technology related (Bawden, 2008).

However, as Ward (2006) notes, these discussions and attempts to demarcate every single information-related literacy are often just a matter of semantics cluttering the debate about the skills, importance and (symbolic) meaning of this knowledge area. Therefore, it seems justifiable to conclude by acknowledging that the concepts of information, digital and media literacies are intertwined and, in fact, often overlap. This becomes apparent when media literacy definitions make their way into policy making, such as in case of the 2010 European Parliament and the Council of the European Union Audiovisual Media Services Directive, which defines media literacy as *“skills, knowledge and understanding that allow consumers to use media effectively and safely. Media-literate people are able to exercise informed choices, understand the nature of content and service and take advantage of the full range of opportunities offered by new communications technologies”* (European Parliament and the Council of the European Union, 2010, p. 2). To be able to master all the outlined media literacy skills, one needs to be also digitally literate (to take advantage of new communication technologies) and information literate (to process media content to make informed choices). This further illustrates that the three concepts cannot exist without each another in both theoretical and practical sense.

2.1.3 Operational Definition for the Present Study

For this thesis, a combination of definitions by Aufderheide (1993), Hobbs (1998) and the European Parliament and the Council of the European Union (2010) seems the most suiting: *media literacy is the ability of citizens to access, analyze, evaluate and produce and communicate media messages in a wide variety of forms; skills, knowledge and understanding that allow consumers to use media effectively and safely; and the ability to take advantage of the full range of opportunities offered by new communications technologies.* Even though the definition is primarily skill-based, it allows for exploring the symbolic value of media literacy by discussing it in the context of democratic citizenship and the role of media in the context of information society. Also, by focusing on production and communication of messages it necessarily touches upon digital literacy skills required for such activities in the new media domain. This is further emphasized by the last sentence which draws attention to the seemingly unlimited affordances of new media and the benefits and risks associated with using them.

Therefore, the proposed definition effectively addresses the main concerns Livingstone (2004) expressed with regards to the definition by Aufderheide (1993) and updates it with the perspective of using new media brought about by the definition by the European Parliament and the Council of the European Union (2010).

This identified set of media literacy skills can be developed by various means. The following chapters discuss the ways in which media literacy level was found to be related to media education, upbringing at home and media exposure. The effects of these three shaping forces on media literacy are broken down with emphasis on their aims, affordances, and limitations.

2.2 Developing Media Literacy in Schools

2.2.1 Media Education Objectives

To discuss formal media literacy education in schools, it is important to understand the education goals schools have set out in this area. Generally, scholars distinguish between two main approaches towards media education: protectionist

and empowering (FrieSEM (2016); Hobbs (1998); Buckingham (1998)). Buckingham (1998) describes protectionism as a form of media education focused primarily on protecting students from negative influences of media in cultural, moral, or ideological sense. He calls protectionism an ‘early perspective’ which should be challenged by a more modern approach based on liberation and empowerment of students, which can be reached by focusing on students’ own experience with media content, self-reflection of media use and leading them to produce their own media content. Both Buckingham (1998) and Hobbs (1998) argue that by focusing on self-reflection and media production such approach (covertly or overtly) aims at developing skills for democratic citizenship or even democratization of the education process itself by encouraging students to actively participating in the media landscape.

In the Czech context, the binding document for schools providing basic education (years 1 – 9, ISCED levels 1 and 2 (UNESCO Institute for Statistics, 2011)) is the Framework Education Programme for Basic Education [FEP BE] (Ministerstvo školství, mládeže a tělovýchovy [MŠMT], 2021a) which stipulates objectives for basic education and outlines the education content to be covered in all the education areas.¹ The Framework Education Programmes came into existence as part of a general curriculum reform in the 2000s and their core entered into force in 2007. The aim of the reform was to decentralize contents of the education process on the level of individual schools (Janík, 2011a, as cited in Wolák, 2017), as schools are required to construct their own School Education Programme based on the framework – they have the liberty to decide in which subjects and in which time period the various objectives will be covered in the school curriculum.

In the FEP BE, media literacy is conceptualized as a cross-curricular subject, meaning it is perceived as a knowledge area that touches upon multiple education fields. The English version of the curricular document describes the objective of

¹ The terms ‘basic education’ and ‘basic school’ in this thesis are used for education provided in Czech schools in Years 1 – 9 and is interchangeable with the term ‘primary and secondary school/education’. The term ‘secondary education’ by itself refers to education provided in years 6 – 9. Within the Czech education system, ‘high school’ refers to Years 10 – 13.

media education as “to equip pupils with a basic level of media literacy. This includes familiarizing oneself with certain basic findings regarding the functioning and societal role of contemporary media (history, structure) and acquiring skills which facilitate the individual’s educated, active and independent interaction with the media message. This primarily involves the ability to analyse the message, to judge its trustworthiness and to determine its intent or associate it with other messages. It further involves orientation in media content and the ability to choose the proper medium for meeting various different needs – source of information, education, leisure time activities.” (MŠMT, 2007, p. 106).

Jirák et al. (2018) argue that this definition combines both protectionist and empowering approach, although more emphasis is clearly put on the development of critical-analytical (and thus more protectionist) skills, as compared to creative and productive skills (which are associated with the empowerment strategy), which are mentioned only in passing as the ability to choose proper medium for communicating various messages.

What is also evident from the description of the objectives is the focus of media education on traditional media, which are characterized by limited possibilities of active participation by individuals as compared to traditional media producers. The conceptualization in the Programme does not operate with the networking affordances brought about already by Web 2.0, such as operation of social networking sites (O’Reilly, 2006) where we can all be prosumers – both producers and consumers of mediated content who utilize social media to perform their self to ourselves and others (van Dijck, 2013). Many of us have adopted this behavior as natural in the recent years, however, it comes with various risks and dangers which every active user should be aware of. The ability to navigate oneself in the world of new media is present in the definition of media literacy by the European Parliament and the Council of the European Union (2010), however, it is lacking in the FEP BE (2021). Jirák and Št’astná (2012) identified two main reasons for this omission: firstly, as the FEP BE was created in 2007, it seems the authors had not caught up with the emerging trends in the media world (the description of the cross-curricular subject Media education has not been updated since) and secondly, the authors decided to separate media and computer literacy in the

document, which resulted in a missing link between media literacy and the digital environment.

2.2.2 Media Education Implementation in Schools

The discussed limitations of the conceptualization of media education in the official curricular document lead to only partially effective development of media literacy skills in Czech basic schools. Kaderka (2018) outlines three options how schools incorporate media education in their School Education Programmes: by including media literacy outcomes in main subjects, by designing a separate media literacy subject or by one-off projects on media literacy topics. Although technically all these three options enable schools to fulfil what FEP BE requires from them in the area of media education, the impact of these interventions varies.

Recently, two studies exploring level of media literacy of Czech pupils have been conducted – one by the Czech School Inspectorate (Česká školní inspekce [ČŠI], 2018), which examined the state of media education on basic and high schools and one by the One World in Schools project (Jeden svět na školách [JSNŠ], 2017) run by the NGO People in Need, which focused only on the state of media education in high schools. Only 20% of schools surveyed by ČŠI (2018) claimed to have a teacher specialized in media education among their staff, which can be considered an indicator of higher focus on media education in the form of a separate subject. In the majority of schools its mostly multiple teachers of other subjects that are including media education in their classes (most commonly Czech language and literature, computer science and civics education). Even though over 73% of the teachers claim to be cooperating with other teachers teaching media education in their school, the cooperation mostly consists of sharing teaching materials and only 20% of the teachers cooperate in the form of preparing, teaching, and reflecting lessons together, which indicates lacking coordination of cross-curricular teaching in most schools and thus endangers successful and impactful addressing of all the objectives of media education set by the FEP. This threat seems even more real considering that 54% of high schools surveyed by JSNŠ (2017) reported that their students undergo less than 10 learning units (45 minutes each) of media education during the 4year course of their studies.

The lack of systematic approach is clearly reflected in the results of the students who undertook media literacy tests in the aforementioned study by ČŠI (2018) and in another study by JSNŠ (2018). Both studies focused on secondary school pupils or pupils from lower years of high school and tested only the receptive (critical-analytical) and not productive media literacy skills. In the test administered by ČŠI (2018), the average obtained score was 43%, in case of the JSNŠ (2018) study, it was 45%. Both studies claim that this indicates alarmingly low levels of media literacy among the Czech pupils.

2.2.3 Limitations of Media Education in Czech Schools

To summarize, media education is formally incorporated in the Czech Framework Education Programmes as a cross-curricular subject, which negatively impacts its systematic implementation, as it often fails due to lack of effective cooperation between the teachers of various subjects. Furthermore, the learning objectives set in 2007 do not reflect the current state of media landscape and the daily experiences of the pupils who are undergoing such education (for better illustration, the media education curriculum is the same age as current secondary school graduates). As a result, recent media literacy tests indicate low media literacy among Czech secondary and high school pupils in the areas of critical-analytical skills as conceptualized in the curriculum. This shows that there are several serious limitations of formal media education in Czech schools which negatively impact the possibility of Czech pupils to develop the skillset currently considered media literacy as conceptualized in the definition in the previous subchapter. On the other hand, this also indicates that possibly parents bridge this media education gap and their interventions contribute to their children's media literacy levels to a significant extent.

2.3 Measuring Youth Media Literacy

2.3.1 Self-Evaluation Approach

There are two general approaches towards quantifying and measuring media literacy, or literacy in general: self-evaluation and testing. The self-reporting

approach has been taken by, for instance, Rodríguez-de-Dios et al. (2016) who developed a digital literacy scale for teenagers based on a questionnaire, in which the subjects were to agree or disagree with statements such as: “I know how to compare different sources to decide if information is true” or “I know how to identify the author of the information and evaluate their reliability” (Rodríguez-de-Dios et al., 2016, p. 1070). Similarly, Chang et al. (2011) studied media literacy of elementary school pupils in Taiwan by asking about their agreement with statements such as “I can understand the content that media convey” (Chang et al., 2011, p. 71). Lee et al. (2015) constructed a new media literacy measuring instrument based on participants’ self-evaluation of their abilities in both critical media consumption as well as active production, which ensures higher validity of the findings as compared to measures focusing solely on the critical-analytical skills.

Nevertheless, as the authors themselves discuss, their instrument still suffers from the limitations of self-evaluation questionnaires: it may be hard for the participants to assess their skills without any benchmarks presented – how does one know whether they truly ‘understand the content that media convey’? It is unclear what the expected level of understanding is, which is especially crucial when surveying children who may be in different stage of mental development within the same age group. Furthermore, Lee et al. (2015) noted that reliability of such studies is endangered by the ceiling effect, a statistical issue occurring when too many subjects obtain maximum scores on the presented items, making it difficult to distinguish between various levels of literacy. To ensure that the ceiling effect will not occur, it is crucial to phrase the statements concretely enough to reflect the expected level of skill the respondents should relate their answers to. Lee et al. (2015) admit that this was a challenge in their study which required additional reliability testing when deciding on which items to include in the final model.

Furthermore, it is well-documented that in surveys based on self-reporting, subjects tend to suffer from self-reporting bias, meaning they respond to questions where normative behavior is at stake in a manner that portrays them in a positive light (Brenner & DeLamater, 2016). Even though this issue can be limited by self-administration of the survey, meaning there is no interviewer the subject could be

appealing to by answering in a socially desirable way, the effect has been found even in studies based on web surveys (Kreuter et al., 2008). There is a place for self-reporting in studies that focus on sensitive information or that are built around concepts that which difficult to measure objectively. However, as media literacy can be broken down into skills that can be tested, there is little need to resort to self-reporting, as studies such as the ones by Rodríguez-de-Dios et al. (2016), Chang et al. (2011) and Lee et al. (2015) could be interpreted more as one's literacy self-esteem rather than an actual skill level.

2.3.2 Skill Demonstration Approach

The second approach based on skill measurement rather than self-assessment was taken by Hobbs and Frost (2003), who operationalized the definition of media literacy by Aufderheide (1993) into a qualitative questionnaire for analyzing students' ability to critically assess the purpose, point of view, or target audience of media messages of various formats. They found their model to be valid by discovering a significant difference in pre-treatment and post-treatment scores of students who have undergone a media literacy course, as compared to no score difference among students who have received no instruction on the topic. However, as Arke and Primack (2009) point out, even though Hobbs and Frost (2003) found their questionnaire internally reliable, it could not be concluded whether the questions and tasks fulfill the content validity, i.e., whether they indeed measure the concepts that media literacy consists of.

Arke and Primack (2009) compensated for these shortcomings in their own study, in which they constructed the items to correspond with the different skills outlined in the definition by Aufderheide (1993) – to access, analyze and evaluate – which have been translated into tasks such as “Explain the purpose of the message” or “Identify the sender of the message” (Arke & Primack, 2009, p. 57). Based on reliability testing using media messages of different formats, they were able to construct a 7-factor composite media literacy score. However, even though this study showed media literacy can be effectively measured in a quantitative manner, the authors validated the study using a homogenous sample of only 34

college students and the study has never been replicated to prove the scale's reliability on a larger, more diverse sample.

A different approach was taken by Powers et al. (2018), who developed a media literacy scale based on subjects' (dis)agreement with opinion statements such as "Sending a document or picture to one friend on the Internet means no one else will ever see it" or "When you see something on the Internet you look at the source before deciding if it is trustworthy" (p. 2). The authors determined the correct choices for these statements (either agree and strongly agree or disagree and strongly disagree) and calculated a media literacy score based on the number of correct answers. The authors successfully performed a reliability test for the scale; however, validity testing was limited to loading the scale's items onto tenets of multimedia literacies (Hobbs, 2006), which are essentially statements about how media operate (i. e. "consumers of texts are defined, targeted, and conceptualized by producers of texts." or "texts use techniques that affect people's perceptions of social reality" (p. 21)). Even though awareness and understanding of these concepts can be seen as a demonstration of what is generally understood as media literacy (or rather critical thinking in general), it is rather far from the skill-based definition of media literacy by Aufderheide (1993), Hobbs (1998) and the European Parliament and the Council of the European Union (2010).

Maksl et al. (2015) constructed their measure of news media literacy based on Potter's (2004) cognitive model of media literacy, which comprises of five knowledge structures – two general ones (knowledge about the real world and the self) and three media-specific ones (media content, media industries and media effects), which are utilized in an individual based on one's drives, needs and intellectual abilities, as these characteristics enable us, in theory, to process information and construct any meaning from them. To remain true to Potter's (2004) robust model, Maksl et al. (2015) surveyed their subjects on all the five areas of knowledge, with multiple-choice questions about news media knowledge structures such as "Which of the following cable news networks is generally thought to have a politically conservative bias?" (p. 40). Furthermore, they tested the participants' thought processing abilities, the extent to which they believe they control media influences and their knowledge of current affairs. The authors found

evidence supporting the interplay between all the factors Potter (2004) identified. However, they admit to insufficiently focusing on measuring the subjects' ability to interpret and create specific media messages with regards to their effects on the audiences, which forms a crucial part of media literacy definitions by Hobbs (2008) or the European Parliament and the Council of the EU (2010). However, the measuring instrument seems to provide a valid and accurate picture of media literacy of US teenagers.

2.3.3 *Measuring Media Literacy in Czechia*

To provide meaningful insights about subjects' media literacy, such 'quizzing' on media-related knowledge needs to account for local specifics of media production, landscape, and market. Thus, the applicability and adaptability of such instruments as the one constructed by Maksl et al. (2015) is problematic and requires significant degree of localization, which then endangers validity and internal reliability of the adapted measurement. It is possible to successfully study media literacy of Czech youth only by presenting them with a measurement tailored to fit the way media operate in the country – for instance, it is much more feasible to assess Czech children's ability to distinguish between a news article and a press release using examples reflecting Czech context, as it does not cast a shadow of the doubt that instead of media literacy, the question is measuring the children's ability to follow international current events (in case an example from another country is used) or the ability to connect a fictional example with the rules our real world operates with.

Unfortunately, literature review has not revealed any measuring instruments specifically aimed at quantitatively evaluating media literacy of Czech media users which would have undergone reliability and validity testing as part of a peer-reviewed article. However, there is a pool of studies by other public and private research bodies which have tried to evaluate media literacy of the Czech population. Most recently, Burianec et al. (2021) have conducted a study of media literacy of people aged 15 and above using a measuring instrument constructed based on Hobbs' (2010) model of key competencies for digital and media literacy which are grouped into five categories: access, analyze and evaluate, create, reflect, and act.

This instrument's items combined both self-evaluation ("I know how to record a show on my TV") as well as skills and knowledge demonstration ("What are the characteristics of public service media" or "Read the following news titles and choose whether the article seems to be serious, tabloid or manipulative"). By correlating respondents' media literacy scores with their screen time and their media uses patterns, they concluded that those who use greater spectrum of media and often look up information online are more media literate across the media literacy categories identified by Hobbs (2010).

As for evaluating media literacy levels of the teenage population, only the two already discussed studies by JSNŠ (2018) and ČŠI (2018) are of relevance. The first one focused on surveying high school students about their knowledge of the Czech media landscape, their understanding of various aspects of online media content and their ability to evaluate and analyze media messages of different kinds. These skills were evaluated based on tasks such as "match the media outlet with its owner" (p. 24) or "which of these two Facebook posts sharing news articles seems more trustworthy to you?" (p. 38). The study did not focus on measuring productive skills, not even in a form of self-evaluation. Participants' media literacy scores were then correlated with their attitudes towards the role of media in the society – according to the authors, students who are more media literate are, for instance, more likely to be liberal about internet censorship or have higher expectations of journalists' adherence to professional ethical standards. These discovered relationships contribute to the assumptions about validity of the introduced measuring instrument.

The study by ČŠI (2018) was based on a media literacy test in which students were asked to complete tasks covering cognitive (understanding of media landscape and its operation) and critical (analyzing media messages) aspects of media literacy. The participants were also asked to self-assess their productive skills, such as the ability to use Microsoft Excel/Word, write a news article or actively participate in social networking media. Unfortunately, the ČŠI has not publicly disclosed the test questionnaire. The authors then correlated the score obtained in questions on the cognitive and critical aspects with the self-evaluation

scores on the productive aspect to find out there is no significant relationship between the two scores.

2.3.4 *Measuring Instrument Selection*

To conclude, instruments measuring media literacy can be categorized based on the following two characteristics: which of the aspects of media literacy (access, analyze, evaluate, produce and communicate media messages; use media safely and effectively) they cover and whether they rely on self-assessment or demonstration of relevant skills. When choosing the right instrument for analyzing the relationship between media literacy and other variable, a few other aspects should also be taken into account, specifically age-appropriateness of the test, its dependency on regional media context, its reliability and validity and lastly its availability for replicability purposes.

These criteria are best met by the study by JSNŠ (2018): Firstly, it covers majority of the media literacy competencies (understand underlying concepts of various media forms they can come across, analyze media messages, evaluate trustworthiness of media sources, access media with appropriate knowledge of their operation practices and navigate internet safely). Secondly, it relies on demonstration of skills, thus, providing a more realistic picture of actual literacy. Thirdly, it studies media literacy of adolescents in the Czech context and with minor adjustments can be used in the context of basic school curriculum as outlined in FEP BE. Lastly, it is also readily available for repurposing.

2.4 Parental Media Mediation

2.4.1 *Parenting Styles and Media Mediation*

The way parents manage their children's media use is frequently referred to as parental media mediation. To understand what this concept entails one needs to refer back to discussions about various parenting styles which have been thoroughly researched since the mid-20th century. One of the earliest works on this topic was written by Lewin et al. (1939), who introduced three types of parenting: authoritarian (parents tend to determine rules and strictly enforce them), democratic

(parents tend to discuss rules with children and use such discussions as learning opportunities) and laissez-faire (parents provide complete freedom to the children, intervene only when asked to do so by the child). In their experiment, Lewin et al. (1939) found evidence for differences in behavior and attitudes between children brought up in contexts defined by the three parenting styles.

These three parenting styles have been further broken down by various authors who have taken a more granular approach towards parenting practices. Baumrind (1991) distinguishes between seven parenting styles: authoritative (high responsiveness to children's needs as well as high demandingness), democratic (not too assertive, but highly supportive), directive (highly restrictive, demanding and not very responsive), good-enough (medium levels of restrictiveness, demandingness and responsiveness), nondirective (non-restrictive, yet responsive, however quite disorganized) and unengaged families (neither demanding nor responsive). She found evidence for the link between different parenting styles and the ability of parents to protect their children from substance abuse with authoritative parents being the most successful, which shows that parenting style of the child's parents can have a preventive effect against exposure to risk phenomena.

Parenting styles have been extensively studied in relation to children's experience with media consumption and its impacts. In this context, a term 'parental mediation' is often used. Collier et al. (2016) note that parental mediation is a form of monitoring of child's or adolescent's behavior or attitudes in which parents engage to protect them from harm or to support them in forming socially acceptable attitudes and behavior. Livingstone and Helsper (2008) define parental mediation as parenting strategies on managing the relationship between the children and media in the forms of rule-making, restricting, monitoring, discussing and co-viewing with regards to various media contents and their sources.

2.4.2 Three Types of Parental Media Mediation

Authors generally distinguish between three types of parental mediation (Nathanson, 2001; Valkenburg et al., 1999; Nikken & Jansz, 2006; Collier et al., 2016): restrictive (or controlling), active (often evaluative or instructional) and co-viewing (or co-watching, co-playing, co-using – depending on the media involved).

Restrictive mediation is characterized by parents setting up rules or prohibiting the child from consuming specific media content and the time the child spends consuming media contents. In terms of Lewin et al.'s (1939) typology, it corresponds with authoritarian parenting style. Active mediation, on the other hand, relies on discussing the nature of media contents with the child and giving the child an opportunity to express their opinions on the content. Parents then attempt to provide guidance for the child by expressing their approval or disapproval with the content the child views or by helping the child understand why they are worried. This could be compared to Lewin et al.'s (1939) concept of democratic parenting. Lastly, the social co-viewing strategy is based on intentional and non-incidental media consumption of the parent and the child, which provides an opportunity for mediation by just simply engaging with the media together.

Nathanson (2001) or Valkenburg et al. (1999) originally anchored the concept in the context of television viewing. However, later authors have successfully established the concept's validity when examining parental mediation practices in the areas of videogames (Nikken & Jansz, 2006; Shin & Huh, 2011) or internet use (Livingstone & Helsper, 2008; Lee, 2013). However, in their study on parental mediation of children's videogames playing, Nikken and Jansz (2006) raise concerns about effectiveness of the three types of mediation in the context of new media: firstly, as videogames and other new media forms are comparably more immersive, parents rarely engage with them with the same intensity as the children, thus it may be difficult for them to mediate something they have only a limited understanding of. Secondly, internet browsing and videogames playing are far more solitary activities as compared to the social nature of television viewing (if a teenager chooses to play videogames with someone else, it will most likely be their peers and not their parents) and therefore, there may be only limited opportunities for co-using or co-playing, or actively mediating based on the media contents the child engages with. However, their study found that parents nevertheless attempt to apply the same kinds of mediation as with television viewing.

2.4.3 Parental Media Mediation Effects

Parental mediation has been linked with various effects on children's media use. In their meta-analysis of studies on the effects of parental mediation, Collier et al. (2016) argue that all the three mediation types have the power to change the child's perception of the media content or the medium itself, which often results in change in media use. This change can then, in turn, result in change in behavior and attitudes of the child. In the studies the authors included in their meta-analysis, they found evidence for often contradictory effects of mediation. Restrictive mediation has been shown to mostly result in decreased overall media use and the amount of viewing violent and pornographic content. In terms of behavior and attitude, restrictions can lead to decreased aggressiveness, however, some studies found evidence for the opposite – increase in imitated aggressive behavior in younger children (Vandewater et al., 2005; Nathanson, 2002).

Similarly, even though active mediation does usually result in decrease in screentime and age-inappropriate content consumption, there is also evidence that it can lead to a higher risk of substance abuse (Austin & Chen, 2003) among adolescents, as more frequent talking about alcohol or drugs by a parent can make the substance appear appealing to the teenager, no matter the initial cautionary intentions. Collier et al. (2016) also note that effects of parental mediation vary based on the child's age and its personality characteristics, rendering some mediation strategies ineffective for a given child at a given time. A general trend of decreasing effectiveness of parental mediation with child's increasing was observed in the meta-analysis. These inconsistencies indicate that even though parental mediation is generally considered a good parenting practice, there is no clear evidence that it always leads to positive, socially desirable outcomes.

2.5 Measuring Parental Media Mediation

2.5.1 Parent's Perspective

Researchers take two general approaches when measuring parental mediation: either they measure mediation from the perspective of the parent, or by evaluating the perceptions of the child.

In the first case, parents are asked about their parental strategies with regards to the child's media use. Valkenburg et al. (1999) conducted a telephone survey of Dutch parents to construct a valid scale for measuring parental mediation from the perspective of parents. They succeeded by creating a scale with questions asking about frequency of occurrences of instances of the three main mediation types: instructive/active (questions such as "How often do you point out why some things actors do are good" (p. 59)) restrictive ("How often do you set specific viewing hours for your child" (p. 59) and co-viewing ("How often do you watch your favorite program together?" (p. 59)). Social co-viewing has emerged as the most frequent strategy, followed by active and restrictive mediation.

Similarly, in their study on parental mediation of young children's internet use, Nikken and Jansz (2014) asked parents questions about the frequency at which they engage in the three main types of mediation: active (questions such as "How often do you explain how to behave on social networking sites"), restrictive – which was broken down to general ("How often do you tell your child when/how log to use internet" (p. 260)) and content-specific ("How often do you say which products may be bought online" (p. 260)) and social co-use ("How often do you surf together, because the child wants to" (p. 260)). A fifth strategy which the authors have identified as the most prominent one was monitoring, which they established by asking questions on the frequency of the parents keeping an eye on the child and the computer or allowing the child to web surf only when the parent is present.

2.5.2 *Child's Perspective*

Measuring instruments which focus on parental mediation from the perspective of a child take on a similar form. Fisher et al. (2009) have studied influence of parental mediation on children's sexual behavior using items asking about frequency of the three types of mediation as perceived by the child. For social co-viewing, children were asked how often their parents watched television together with them. For restrictive mediation, the questions focused on the frequency of parents limiting time watching television or prohibiting from watching certain shows. Active mediation was operationalized in the form of questions on how often parents help the child understand television content or how often they

suggest TV programs which would help child learn about sexuality or drugs. The authors themselves admit that due to weaker factor loadings, a longer survey consisting of more items would yield more reliable and valid results.

This was achieved by Valkenburg et al. (2013), who developed and validated a Perceived Parental Media Mediation Scale [PPMMS]. They had done so by constructing scales and subscales measuring adolescents' perceptions about the frequency of parental mediation, this time not limited only to television, but covering TV, digital media, and internet use. The authors omitted social co-viewing from the analyzed mediation styles as they found it unfeasible in today's extensive use of digital media where it is less likely to occur due to web browsing or videogames playing rarely provide opportunities to become family social activities as compared to watching TV, which is where the concept originated. They asked children about the frequencies of restrictive and active mediation (four items each) they experience. The authors then followed up with another question in which the child was presented with statements about the nature of such mediation to choose which one is more likely to occur in their family. For instance, one of the main restrictive mediation item was asking how often their parents forbid them from playing computer games that are meant for older children with a follow-up item asking them whether their parents were more likely to explain them why it is better to not play those games (authors would identify this as autonomy-supportive restrictive mediation), or they would become angry if the child still wanted to play those games (controlling restrictive mediation), or that the child would know that even though parents forbade them from playing such games, they would still be able to do so after a while (inconsistent restrictive mediation). For active mediation, it made sense to only distinguish between autonomy-supportive and controlling strategy. The main items thus enabled to establish frequency of the two main mediation strategies with regards to different media uses and the follow-up items provided evidence for the reasons why parents employ these specific strategies.

Valkenburg et al. (2013) argue that both restrictive and active mediation can have positive effect on socially desirable behavior and attitudes of children if applied in an autonomy-supportive way. They indeed found evidence for autonomy-supportive restrictive and active mediation to be correlated with less

family conflict, less antisocial behavior, and more prosocial behavior among the respondents. The scale's validity and reliability has been verified by Vanwesenbeeck et al. (2016), who have used it for examining relationship between parental mediation and advertising literacy and have been able to replicate the reliability testing conducted by the original authors.

2.5.3 Studying Parent-Child Dyads

Lastly, there are authors who have combined the two methods together and measured parental mediation from the perspectives of both the teenager and the parent. Livingstone and Helsper (2008) asked child-parent dyads the same binary questions about whether specific internet use mediation practices occur in their home – such as whether the child is allowed to buy anything online or use chatrooms, or whether the parent later checks sites the child had visited. Based on both answers the authors were then able to identify the most prevalent form of mediation for each family – active co-use, technical restrictions, interaction restrictions or monitoring. Nikken and Jansz (2006) used a similar strategy to identify patterns of parental mediation of children's (aged 8-18) videogame playing. Both groups were asked questions about frequency of instances of the three main mediation styles (restrictive, active, co-playing). They found the items to be loading on the same factors for both parents' and children's responses. Nevertheless, they found that children generally underestimate the absolute frequencies of mediation as compared to the parents views, however, in a relative sense, the both groups generally agreed on the proportionate distribution of the three mediation types the parents apply. The results Livingstone and Helsper (2008) and Nikken and Jansz (2006) obtained indicate that surveying parent-child dyads leads to higher validity and reliability of the measurement. However, conducting such study requires a more robust research design and higher sample size to ensure that collected data remain valid even after discarding outliers and nonsensical responses.

2.5.4 Measuring Instrument Selection

Generally, both main methods of gathering data on parental mediation – surveying parents or surveying children – have a track record of providing valid

and reliable insights into frequencies and types of occurrences of the main mediation types. Opting for surveying child-parent dyads may provide a higher level of confidence that the collected data demonstrate a representative picture of mediation strategies employed in a given family. The reviewed measuring instruments differ mostly in the phrasing of the items dependent on whether it is intended for parents or children, the age of the children and the medium of interest.

When taking these differences into consideration, Valkenburg et al.'s (2013) instrument seems the most suitable for the present study as it has a proven track record of reliability, validity, and utility. The authors also build a strong case for omitting co-viewing as an outdated and ineffective form of mediation. Furthermore, the scale has been constructed specifically for measuring parental mediation from the perspective of adolescents and takes a more granular approach at understanding both restrictive and active mediation as multidimensional concepts which can take on either an autonomy-supportive, a controlling, or, in case of restrictive mediation, an inconsistent form.

2.6 Screen Time

2.6.1 Definition

Previous studies on parental mediation have identified patterns between screen time of children and certain mediation types, as well as their media literacy. Therefore, it should be included in the present study as a variable with possible effect on the relationship between parental mediation and media literacy.

In their meta-analysis on the conceptualization of screen time, Kaye et al. (2020) discuss various definitions of the term. The definitions often differ based on the focus of the study – in studies which relate screen time to health concerns, it is often narrowed down to sedentary passive watching of screen-based media (World Health Organization, 2019). Such definitions are too narrow for the purpose of studying the effects media consumption has on children's outcomes such as media literacy, as it omits media activities which are not sedentary, such as playing geolocation-based videogames like Pokémon GO. Also, a proper definition of the term should consider that we use media on different occasions with different

motivations, such as to seek information, communicate with others or entertain ourselves. Using digital devices for work or learning also adds up to our screen time, however, as Kaye et al. (2020) note, this time should not be included in the calculation, as it is often not up to the individual to control it. The authors also suggest distinguishing between screen time on a weekday and on a weekend – this appears to be good practice as studies such as EU Kids Online show that these numbers differ greatly for children (Bedrošová et al., 2018). Furthermore, it is advised to ask participants about their screen time in a certain time range for better recall.

2.6.2 Collecting Screen Time Data

Kaye et al. (2020) also discuss that previous studies had shown limitations of value of self-reported screen times, especially when children had been surveyed, as they may not recall their screen time correctly or not be willing to provide accurate numbers due to not being comfortable with the amount of time they spend using devices. The authors suggest that the best way to collect such data is by monitoring use by dedicated applications in devices. This would indeed yield trustworthy data in terms of screen time of child's personal mobile device, however, would not provide any information about other screen times, such as time spent using a computer, watching TV, or playing videogames on a gaming console.

Another way to overcome these shortcomings is by collecting data about another variable that has been proven to correlate with screen time. Schaan et al. (2018) found evidence for a relationship between screen time and unlimited access to internet among Brazilian adolescents. Similar conclusions can be drawn from a study by Mullan and Hofferth (2022) who found differences in screen time between children in the UK and in the USA to be associated with lower internet access availability for the children in the US. Report from the most recent EU Kids Online study (Bedrošová et al., 2018) shows that 97% of Czech children aged 9-17 have access to the internet. Therefore, it is necessary to take a more detailed approach to identify those with limited access. The study also identified that 84% of children access internet through their smartphones. Considering the established high internet penetration within Czech households in general, the distinguishing feature appears

to be access to mobile data, which allows children to access internet outside of home in their free time.

Therefore, to establish amount of time children spend using screens of various digital devices it makes sense to collect self-reported data on estimates of screen time over a given period on a typical weekday and a weekend day and to support such data by collecting information on child's possibility to access internet using mobile data in unlimited or somehow limited form.

2.7 Linking Parental Media Mediation, Screen Time and Media Literacy

2.7.1 Previous Meta-Analyses

A significantly large body of literature has concerned itself with a connection between parental mediation, screen time and effect on protection against risks associated with media use. A majority of such studies have been discussed in two meta-analyses: Collier et al. (2016) examined 57 studies to find whether parental media mediation influences child outcomes, namely media time, aggression, substance use and sexual behavior. Chen and Shi (2019) focused in their analysis of 52 studies solely on the effects parental mediation can have on screen time and media-related risks incidence.

In terms of screen time, both studies found negative correlation between restrictive mediation and media use, in other words, the more restrictive mediation was applied, the less time children spent using media. For active mediation, only Chen and Shi (2019) found the same relationship, although with noticeably smaller effect size. The opposite applies for co-viewing – only Collier et al. (2016) found a relationship between this parental strategy and screen time, and in a positive direction: the more co-viewing was applied, the more screen time of the child, which seems intuitive, as this strategy relies on creating enough opportunities for co-viewing.

Chen and Shi (2019) also studied the relationship between parental mediation and the incidence of media-related risks, which they defined as “being exposed to inappropriate content, undesirable contacts, and cyberbullying, which

threaten physical and psychological health” (p. 174). Those are phenomena which media education, as defined above, attempts to prevent – in other words, a media-literate child should be equipped with strategies how to avoid, or deal with, such situations. The authors found all three parental mediation types to be related to lower media risks incidence among the children in the analyzed studies. For better clarity, the relationships between variables as found in both studies are presented together in Table 1.

Both Collier et al. (2016) and Chen and Shi (2019) report tiny, or at best small effect sizes for all the discovered relationships as per Cohen’s (1988) classification. In both studies, authors demonstrate that this is likely due to often contradictory findings in the analyzed studies and suggest these relationships should be studied further with clearer focus on what moderates the effectiveness of parental mediation strategies in terms of prevention of risk behavior (excessive screen time and media-associated risks). Chen and Shi (2019) also found evidence for a negative moderating effect of age on effectiveness of parental mediation, thus, the three main mediation styles are generally less effective in adolescents than in children in impacting screen time and preventing media risks incidence.

Table 1

Reported effects of three parental media mediation strategies on screen time and incidence of media-related risks in meta-analyses by Collier et al. (2016) and Chen and Shi (2019).

	Screen time		Media risks incidence	
	Collier et al. (2016)	Chen and Shi (2019)	Collier et al. (2016)	Chen and Shi (2019)
Restrictive mediation	Negative $r = -.06^{**}$	Negative $r = -.12^*$	x	Negative $r = -.06^*$
Active mediation	No effect	Negative $r = -.05^*$	x	Negative $r = -.08^*$

Note: x = relationship not studied; * = reported at $p < .001$; ** = reported at $p < .01$.

2.7.2 Relating Parental Mediation to Media Literacy

As noted above, Chen and Shi (2019) focused in their meta-analysis only on the relationship between parental mediation and prevention of occurrence of online risks such as inappropriate content exposure or cyberbullying. As discussed in previous chapters, this constitutes only a portion of what is generally considered media literacy. Even when looking individually at the studies included in the meta-analysis, it appears it is always only fragments of the whole scope of what media literacy entails that are analyzed.

To verify this assumption, an analysis of the concepts covered in the studies included in the meta-analysis has been conducted. For that purpose, the definition of media literacy as proposed in Chapter 2.1 has been broken down into the key competencies of media literacy it entails: to be able to *access, analyze, evaluate, produce, communicate, and understand (media messages); use media safely and effectively*. From the studies Chen and Shi (2019) analyzed, only the ones that studied relationship between parental mediation and the ability to avoid or deal with media risks were chosen. Altogether, 12 studies fulfilled this criterium. The studies were then coded based on the concept the authors correlate parental mediation styles with. These concepts were also paired with the appropriate media literacy aspect (competency) it is related to the most. Notes were made on the relationships between the mediation types and the concept – whether it was present and in which direction. Furthermore, it was noted whether the media literacy-related skill was directly affected or indirectly moderated by media exposure in form of screen time, frequency of media use or incidence of specific media behavior. Results of the analysis are presented in Table 2.

Most of the studies focused on analyzing whether parental mediation had any effect on children's ability to use media safely, namely, to protect against cyberbullying (Chang et al., 2015; Mesch, 2009; Navarro et al., 2013) or against privacy invasions such as online solicitation of private information (Chen et al., 2016). In these cases, the authors found both restrictive and active mediation to be effective. Except for one study, all included frequency or intensity of media exposure as a variable in their models and found it to be negatively related to the

ability to protect against the studied risks, i.e., higher media exposure led to lower ability to protect oneself from the presented risks.

Several studies also studied the relationship between parental mediation and child's ability to evaluate online privacy risks and then act safely – this concerned situations such as avoidance of contact with strangers or voluntary disclosure of private information online (Chen et al., 2016; Livingstone & Helsper, 2008; Shin & Ismail, 2014; Shin & Kang, 2015; Shin et al., 2012). Some discrepancies can be observed in terms of effectiveness of restrictive mediation for development of these skills, as Shin and Ismail (2014) and Shin and Kang (2015) found evidence for a negative effect of this strategy on the ability to evaluate online media risks, contrary to the conclusions of the remaining authors, who have found the two concepts to be positively correlated.

Only four studies focused on the relationship between parental mediation and the ability to understand and analyze media messages. An and Lee (2010) found no relationship between restrictive mediation and the ability to perceive television 'reality' as different from actual reality. A positive association was found between active mediation and higher levels of this skill. Buijzen and Valkenburg (2005) found both of the main mediation styles to be positively impacting child's ability to analyze and comprehend advertising techniques which, if not uncovered, lead to higher materialism, purchase requests and conflicts about these attitudes with parents. Desmont et al. (1987) also found evidence for parental mediation (no clear distinction was made between restrictive and active form in the study) to be positively associated with young children's ability to analyze and synthesize plots of TV shows or comprehend content and persuasive intent of TV commercials. Lastly, Rasmussen et al. (2015) found active mediation to be a predictor of the ability to protect oneself from possible negative effects of high pornography exposure, such as low self-esteem. To be able to do so, an adolescent must understand the toll pornography can take on an individual, and active mediation appears to be able to develop this skill. Out of the four studies, only Buijzen and Valkenburg (2015) included media exposure in their model and found higher advertising viewing frequency to contribute to children's inability to unravel advertising strategies they are exposed to.

Although not included in the meta-analysis by Chen and Shi (2019), a study on the relationship between perceived parental mediation and advertising literacy by Vanwesenbeeck et al. (2016) has been added to the mix. By utilizing the PPMMS by Valkenburg et al. (2013), the authors found partial evidence for both autonomy-supportive active and restrictive mediation to be positively predicting advertising literacy of adolescents. Frequency of exposure to advertisements was also positively related to literacy. This provides further evidence for the findings of effectiveness of autonomy-supportive mediation of both forms, as argued by Valkenburg et al. (2013).

An in-depth review of studies which analyze relationships between parental media mediation and some aspects of media literacy revealed insufficient focus on the abilities to access, produce and communicate media messages and to use media effectively. However, even the inconclusive evidence reveals trends which can be used as a basis for hypotheses for the present study.

2.7.3 Hypotheses

There is a clear trend of active mediation and partially also restrictive mediation to be a predictor of child's or adolescent's ability to protect oneself from various media risks and to be able to understand, evaluate and analyze underlying concepts in various types of media messages. Valkenburg et al. (2013) and Vanwesenbeeck et al. (2016) specify this relationship to be present only in cases of autonomy-supportive active and restrictive mediation, however, other studies found this to be the case for the two main mediation strategies in general. To verify these findings and apply them to the whole concept of media literacy, following hypotheses are proposed:

H1: Perceived controlling restrictive parental media mediation [CRM] has a positive effect on pupils' media literacy.

H2: Perceived autonomy-supportive restrictive parental media mediation [ASRM] has a positive effect on pupils' media literacy.

H3: Perceived inconsistent restrictive parental media mediation [IRM] has a positive effect on pupils' media literacy.

H4: Perceived controlling active parental media mediation [CAM] has a positive effect on pupils' media literacy.

H5: Perceived autonomy-supportive active parental media mediation [ASAM] has a positive effect on pupils' media literacy.

As for other factors that can come into play while examining the relationship between parental mediation and media literacy, a majority of the reviewed studies also found evidence for media exposure (screen time or frequency of viewing or engaging with certain media contents) to be negatively associated with subjects' media literacy skills. Therefore, an additional hypothesis shall be tested in the present study:

H6: High self-reported screen time has a negative effect on pupils' media literacy.

There is no basis for assuming that media literacy scores will differ significantly between male and female participants. However, as the media literacy quiz tests skills and abilities the level of which can accrue over time and completed years of school, it can be assumed that Year 9 pupils will, on average, score higher than Year 8 pupils in the test. This assumption is captured in the last hypothesis:

H7: The obtained media literacy scores of Year 9 pupils will be significantly higher than scores of Year 8 pupils.

Table 2

Relationships between parental mediation strategies, media exposure and media literacy competencies identified in the reviewed studies

Authors	Concept	M. L. comp.	R. M.	A. M.	M. E.
An and Lee (2010)	Perception of television reality	Understand Analyze	0	+	x
Buijzen and Valkenburg (2005)	Understanding advertising	Understand Analyze	+	+	-
Chang et al. (2015)	Cyberbullying protection	Safe use	+	+	-
Chen et al. (2016)	Online privacy protection	Evaluate Safe use	+	+	x
Chng et al. (2015)	Prevention of internet addiction	Safe use	+	0	-
Desmond et al. (1987)	Understanding television	Understand Analyze	+	+	x
Livingstone and Helsper (2008)	Online privacy protection	Evaluate Safe use	+	x	-
Mesch (2009)	Cyberbullying protection	Safe use	+	+	-
Navarro et al. (2013)	Cyberbullying protection	Safe use	+	+	-
Rasmussen et al. (2015)	Reducing negative effects of pornogr.	Understand Analyze	x	+	x
Shin and Ismail (2014)	Privacy protection	Evaluate Safe use	-	0	-
Shin and Kang (2015)	Online privacy protection	Evaluate Safe use	-	+	-
Shin et al. (2012)	Online privacy protection	Evaluate Safe use	0	0	0
Vanwesenbeeck et al. (2016)	Advertising literacy	Understand Analyze	+ *	+ *	+

Note: *M. L. comp.* = media literacy competencies; *R. M.* = restrictive mediation; *A. M.* = active mediation; *M. E.* = media exposure; + = positive relationship; - = negative relationship; 0 = no relationship found; x = relationship not studied; * = only autonomy-supportive restrictive/active mediation.

3. Method

3.1 General Research Design

To answer the stated research questions and test the proposed hypotheses, a quantitative survey was conducted. A questionnaire consisting of three parts was administered to the research population sample – part one consisted of demographic questions – gender and age (year they attend) – and Likert scales on the subjects' media exposure (screen time and mobile data access). The second part was a media literacy test with multiple-choice questions. Lastly, Likert scale questions about frequency of perceived parental media mediation were presented, with each item followed-up by a sub-item asking about the nature of experienced mediation. The results of the test, perceived parental media mediation, media exposure and gender and age were then compared and correlated to observe relationships between the variables as hypothesized.

3.2 Studied Population

The research questions narrows the studied population down to children aged 13 – 15 for the reasons associated with the media use among this age group. Based on survey data from 19 countries within the EU Kids Online project, it can be concluded that in most EU countries, children of this age spend almost twice as much time online as their 9 to 10 years old counterparts (Šmahel et al., 2020). This is also the case in Czechia, where, based on self-reported data, children aged 9-11 spend 114 minutes online per day on average, whereas for children aged 15-16 it amounts to 252 minutes per day (Šmahel et al., 2020). The vastness of this amount of time increases exposure to media contents, which, in turn, leaves plenty of space for the interference of parental media mediation to play out in daily media use. In younger ages, there is a wider gap between various activeness of use – as Bedrošová et al. (2018) note, there is 22% of children aged 9-10 who spend little to no time on the internet on a regular weekday as compared to only 1 % of children aged 15-17 with such a low exposure. The concept of parental media mediation in its established form does not concern restrictions on time spend using media, but

exclusively on restrictions imposed by parents on types of content consumed (Valkenburg et al., 2013). Therefore, focusing primarily on younger children with generally lower screen time averages would possibly yield non-representative data.

On the other hand, focusing on children above the age of 15 could possibly compromise the findings of the study as well. The data from the EU Kids Online study support the general assumption of children becoming increasingly autonomous with age in all spheres of life including the online environment – for instance, 23 % of the surveyed Czech kids aged 9-11 report their parents forbid them from using social networking sites, which indicates a significantly greater control their parents are holding over their digital self when compared to only 1% of children aged 15-16 having the same restrictions imposed on them (Šmahel et al., 2020). Therefore, conversely focusing solely on children aged 15 and above could result in insignificant results in terms of effective parental media mediation.

To sum up, focusing on children aged 13-15, which corresponds with the Czech 8th and 9th grade, should enable a meaningful comparison of their media literacy and their experience with parental media mediation, as, based on survey data on their media use, they have on average a higher media exposure than their younger counterparts and yet their parents still have some degree of control over their media use and therefore some power to demonstrate any of the variants of parental media mediation.

3.3 Sampling

As already discussed within the literature review, the approach towards media literacy education differs greatly among Czech primary and secondary schools, as there are no binding outcomes for this cross-curricular subject within the Framework Education Programme for Basic Education [FEP BE] (MŠMT, 2021a), only areas to be covered. This applies to higher education levels as well – no specific outcomes cannot be found in the Framework Education Programme for Secondary General Education (Grammar Schools, abr. FEP SGE) (MŠMT, 2021b) either. This inconsistency results in substantial differences in media literacy levels among pupils from different schools (Kaderka, 2018). Attempting to study a representative sample of Czech secondary school pupils could thus prove

problematic when identifying the effect of parental media mediation. Varying media literacy education quality among schools could act as a confounding variable when studying the hypothesized relationship between media literacy and perceived parental media mediation rendering the results biased.

Narrowing the sample down to a group of pupils from one school can limit this effect, as all the studied subjects would have been educated based on the same School Education Programme – therefore, they should all have the same knowledge base to reach into when answering the first part of the research survey. Thus, only children aged 13 – 15 (year 8-9) attending the Kunratice Basic School in Prague have been sampled to participate in the research study. The author of this thesis has been employed in the school as an informatics teacher in the period of data collection, which has proven useful in establishing rapport with the study participants and obtaining additional contextual information for the construction of the research design as well as the subsequent data analysis, ensuring higher validity of the findings.

Kunratice Basic School is located on the outskirts of Prague and offers education to children aged 6-15 in years 1-9. In its School Education Programme, media literacy education is included as a cross-curricular subject within other subjects such as Czech language, civic education, informatics, or history (Beran, 2021). The school focuses on the development of critical thinking and reading and writing skills with media literacy being a part of these wider areas of literacy. Judging from author's personal experience, media literacy education is systematically implemented in the school's curriculum following current trends in the media landscape while responding to children's everyday media experiences. Therefore, it is assumed their media literacy scores would be comparable to scores from the original survey by Jeden svět na školách (2018).

3.4 Operationalization of Media Literacy

3.4.1 *Measuring Instrument Description*

The concept of media literacy has been, as discussed in the literature review, broken down to key competencies of being able to *access, analyze, evaluate,*

produce, communicate, and understand (media messages) and use media safely and effectively. Out of the reviewed measuring instruments which have been previously used to measure media literacy of adolescents in the Czech context, a questionnaire by JSNŠ (2018) has been selected.

The original questionnaire consists of 15 items with multiple-choice response options. The authors of the study divided them into three main topical groups: knowledge of Czech media outlets, their owners, and media legislature; specifics of consuming various online contents; and analysis of specific media contents. In the actual questionnaire, questions from the three areas were shuffled for higher response validity.

In the first section, participants were asked questions about differences between commercial and public service media, stipulations that public service media must follow, knowledge of commercial media owners and the ability to connect different media outlets with their corresponding target groups.

In the section about internet content, two questions about scenarios respondents can come across while using internet were presented: firstly, whether two users conducting a Google search of the same term, at the same time and at the same place, view the same search results and ads. Second question focused on content displayed on social networking sites and asked the participants to select whether Facebook users view on their timeline either all posts by their friends and liked pages, or just a random selection of those posts, or only posts randomly selected by Facebook based on user's previous behavior on the site. Two more questions were included in this section, one on the reasons why online service operators put ads on their websites and one in which respondents were presented with five cases of online behavior, for which they were supposed to respond whether it is legal or not (situations included "writing Facebook posts calling for physical attacks on Muslims", "registering on a social networking site with a nickname instead of your real name" or "uploading songs or movies to online storage services and inviting your friends to download them" (p. 30)).

In the last section, respondents were presented with five media messages and questions based on them. In the first question, they were supposed to correctly identify a possible author of a press release and determine a general target group

for this format. In the second question, they were asked to choose the most suitable explanation for the meaning of the word “sponsored” above a Facebook post. Third question was based on two news items about a real event – a news report and a commentary. The participants were asked to determine which of the two article is more likely to provide factual information about the event. Question number four included a screenshot of an article claiming that flowers near Fukushima nuclear plant are mutating due to radiation accompanied by a photo of slightly faded daisy blooms. Participants were to take a stance whether the photo is a sufficient proof of dangerous radiation situation in Japan. Lastly, participants were presented with two Facebook page screenshot, one of a verified profile of a well-established online news portal and another one of an unverified profile with a similar name, showing a post with a clickbait title. Participants had to choose which page is more likely to be a source of trustworthy information.

To determine the questionnaire’s suitability for the present study, the questions were evaluated based on their relation to the key media literacy competencies identified in the accepted definition of the term – what objectives the questions seek from the participants. Results of the analysis are presented in Table 3. As the table shows, the first section of questions on media ownership and legislature focused mostly on understanding of the media landscape, a prerequisite of which is to be able to access the various media outlets in question. The second section on online content tested the abilities to evaluate various media scenarios and use online media safely and efficiently for different communication purposes. In the third section, the most prevalent objective was to analyze presented media messages and evaluate their various qualities. In absolute numbers, the competencies with the highest representation are: to understand (8), evaluate (6) and analyze (5) media messages (or media outlets in a broader sense). On the other side of the spectrum are the abilities to use media safely and efficiently and the ability to communicate media messages with one or two instances. No question focused on the ability to produce media messages, which is difficult to examine by a test.

Table 3*Media literacy competencies identified in the questionnaire by JSNŠ (2018)*

Question	Media literacy competencies
1.1 Which media outlets are public service / commercial?	understand, access
1.2 What stipulations do Czech laws impose on public service TV broadcasting?	understand, access
1.3 Which media outlets are bound by law to provide objective and balanced news?	understand, access
1.4 Connect media outlets with their typical target groups	understand, access, evaluate
1.5 Connect media outlets with their owners	understand
2.1 When two people Google search the same term (same space, same time), do they see the same results and ads?	understand, use efficiently
2.2 Do people see all friend's and pages' posts, only a selection, or just random posts on their Facebook timeline?	understand, evaluate
2.3 What is the reason why web services operators put ads on their websites?	understand, evaluate
2.4 Which of the presented online activities are not legal?	communicate, use safely
3.1, 3.2 Who produces press releases and for whom?	analyze, communicate
3.3 What does the "sponsored" label under a Facebook post mean?	understand, analyze
3.4 What tends to provide factual information – news report or commentary?	analyze, evaluate
3.5 Is a photo of faded daises a sufficient proof of high radiation near Fukushima?	analyze, evaluate
3.6 Which of the two presented Facebook pages is a more trustworthy source of information?	analyze, evaluate

The distribution of competencies covered by the test roughly corresponds with the predominantly protectionist nature of the Czech media education curriculum (Jiráček et al., 2018) as formulated in FEP BE, which was taken as a starting point in the study by JSNŠ (2018) for examining media literacy of Czech high school students. On one hand, this incomplete coverage of the questionnaire limits application of the possible findings to only some aspects of media literacy. On the other hand, it enables to frame the results of the study within the context of media education in Czech schools, which is a crucial factor influencing media literacy level of the studied population.

3.4.2 Pilot Study

To further establish the questionnaire's suitability for the present study, a pilot study had been conducted on a sample of 12 Year 9 pupils of Kunratice school in 2020. The results the pupils obtained were then compared with the results of the JSNŠ (2018) study, which was conducted on a representative sample of 1002 Czech high school students to see how much they differ from the average results.

The pilot study was conducted using a blank questionnaire provided by JSNŠ. The sample consisted of 12 9th grade pupils - 6 boys and 6 girls aged 14-15. They had been provided with simple instructions on how to fill in the questionnaire at the beginning. They had also been asked to underline any word in the questionnaire they had trouble comprehending. A 30-minute timeslot was allocated to completing the questionnaire.

Most of the participants were able to complete the questionnaire within 15 minutes. None of the participants took more than 22 minutes to complete the form. Therefore, the 30-minute timeslot was deemed sufficient when administering this part of the questionnaire in the actual data collection process.

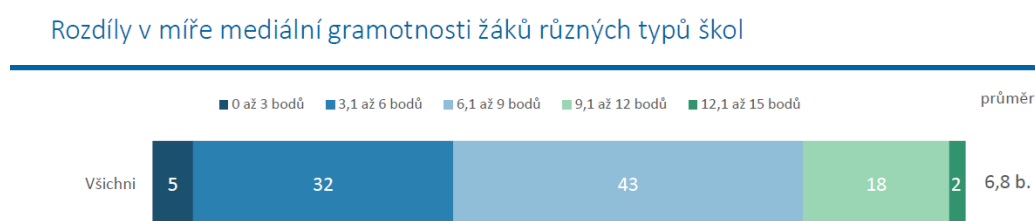
The questionnaire was scored using mark scheme from the original questionnaire by JSNŠ (2018). One point was awarded for correct answers in simple multiple-answer questions. For questions based on linking items into corresponding pairs and for questions using a battery of items with the same responses selection, a full point was awarded for all the correct answers and half a point was awarded

for the number of correct items higher than one achievable by a random guess (higher than 50%). No points were subtracted for wrong answers.

On average, the pilot study participants scored 6.84 points in the test. This is in line with the 6.8 average obtained by high school students in the original study. Unfortunately, JSNŠ (2018) does not provide median values for the scores in the original study, thus, it cannot be compared to the median scores obtained in the pilot. In the original study, the authors divided the participants into 5 groups based on their score: 0-3; 3.1-6; 6.1-9; 9.1-12; and 12.1-15 points. The distribution of the participants in the original study shows signs of a gaussian distribution (see Figure 1). For comparison, same division was done for the pilot study sample. In this case, the 0-3 points group included 8% of the results, the 3.1-6 points group 17% of the results and the 6.1-9 points group 75% of the results. The two categories with the highest scores were empty. This negative skewness shows that even though the mean scores for high school and secondary school students are comparable, the secondary school students generally scored lower on the test in the pilot study. This indicates that in order to administer test to secondary school students, adjustment of some of the questions are required.

Figure 1

Distribution of scores on the media literacy test by a representative sample of high school students - percentages (Jeden svět na školách, 2018).



To determine which questions would require adjustments, various factors were taken into consideration, including comparison of sample scores with high school students scores, interviews with 8th and 9th grade teachers in the school and indications of a lack of comprehension by the participants in the test (underlining of words that were difficult to understand).

Firstly, scores for individual questions of the pilot sample were analyzed and compared with the scores obtained by high school students. Questions with the highest average success rate differences were identified. Pupils mostly struggled with answering questions on the media industry operation and legislature in the Czech context.

In question 2, participants had been asked to link media outlets with their owners. 92% pupils were able to link Jaromír Soukup and TV Barrandov and almost half correctly identified Andrej Babiš as a (former) owner of MF Dnes. However, almost none were able to link the media outputs owned by Zdeněk Bakala, Ivo Lukačovič or Ivo Valenta, suggesting they have only overt knowledge of media ownership situation in the Czech context. Therefore, the latter three media owners and their outlets have been eliminated from the question in the actual study, leaving pupils with only three options to pair.

In question 5, participants had been asked to link media outlets with their intended target groups. They were successful in making the connection between Stream TV and young people, ČT :D and kids, Šlágr TV and the elderly, Elle with women and Sport.cz with men. However, they lost points for not identifying whether Deník Právo is for the left-wing voters and Hospodářské noviny for the right-wing voters, or the other way around. In three cases, they underlined they do not understand what “right-wing” and “left-wing” means and the two interviewed teachers have confirmed this is a concept beyond what is emphasized in the secondary school curriculum of civic education. Therefore, these two newspapers as well as the left-wing and right-wing target group have not been included in the final version of the questionnaire.

Question 6 had focused on identification of the three Czech public service media outlets. Three pupils scored 0.5 points by correctly guessing some, others scored 0. The underlining of the word “public service” and the discussion with the teachers have shown that pupils have little idea about the meaning of the word, but they should understand the concept. To provide the respondents with reasonable guidance, a brief explanation of what “public service media” means has been included in the actual survey.

Question 7 had asked about the media which are required by law to follow the guidelines for objectivity and balanced reporting. The key to the right answer is knowing that this law applies to all TV and radio broadcasters. Most of the responses were based on random guesses, some identified only public broadcasters, some only radio stations, but only one participant scored 0.5, others scored 0 points. As this question requires a specific knowledge of Czech media legislature beyond the scope of secondary education, it should either be replaced with a different question more in line with the FEP BE, or provide an explanation of objectivity and balanced reporting. In order to stick with the scope of the original study, the latter option was chosen.

The questionnaire was also assessed by two secondary school humanities teachers at Kunratice Basic School. Beyond the suggestions already mentioned above, they recommended to simplify the wording of some of the questions, clarifying the instructions for questions with batteries of items and using more relevant examples in questions about social media – with the declining active user base of Facebook among the youngest population, the pupils are not too familiar with Facebook’s interface. Therefore, it might be difficult for them to distinguish verified profile in question 10. However, as the blue “tick” has become a somewhat universal sign for a verified account over the years, it was decided to leave the question like it is. Nevertheless, in question 11, which concerns how social networking sites’ algorithms work, Facebook was replaced with Instagram, so that the respondents can base their answer on their personal experience.

The final version of the questionnaire which has been used in the present study which incorporates the adjustments discussed above is attached in Appendix 1.

3.5 Operationalization of Parental Media Mediation

3.5.1 Measuring Instrument Description

As already indicated in the literature review, based on consideration of factors such as age of the respondents, their availability and previously proven reliability, validity and utility of the reviewed measuring instruments, the Perceived

Parental Media Mediation Scale (PPMMS) by Valkenburg et al. (2013) has been selected for the present study.

The scale, as reprinted in full in a sourcebook by Graham and Mazer (2020), consists of eight main items, each followed by a sub-item. The main items ask about frequency at which participants encounter their parents either prohibiting them from consuming various media contents and limiting their media use time (i.e., restrictive mediation) or making statements that should help them understand media-associated risks, such as explaining differences between reality and its media portrayal (i.e., active mediation). Prior to presenting participants with the questions, they are advised to consider in their answers various kinds of media use (watching TV or movies, playing games). The authors also clarify that by the term parent they mean either a mother or father or any other adult who is mostly involved with participant's media use.

There are four main items about frequency of restrictive parental media mediation [RM] and another four items about frequency of active parental media mediation [AM]. For restrictive mediation, respondents are asked about the frequency of their parents forbidding them from watching certain video content and playing certain video games because they are meant for older children, forbidding them from watching TV shows or movies because they are too violent and how often the parents limit the child's time they are allowed to play videogames. For active mediations, questions focus on the frequency of parents explaining the child that violence in the media is different from real life, that what one sees in movies and commercials is different from real life, that people in the media are too rude to each other and that there is too much violence in the media.

For each of the questions, respondents can choose frequency of such parental mediation on a Likert scale of never; almost never; sometimes; often; and very often. In case they choose "almost never" or any higher frequency, they are then presented with the follow-up item – selection of statements from which they should pick the one they think is more accurately describing what response would follow from their parents after employing given mediation strategy. This is done in order to distinguish between specific parenting style for each mediation (controlling, autonomy-supportive or, in case of restrictive, inconsistent mediation).

As a result, the scale provides data both on frequency of the two general mediation types as well as incidence of the more specific mediation styles.

For instance, if the participant answers that their parents forbid them from watching certain TV shows or movies because they have too much violence in them almost never or more frequently, they are then asked whether the parents would (a) get mad if they still wanted to watch these shows or movies (controlling restrictive [CR]), (b) explain to them why it's better not to watch such shows or movies (autonomy-supportive restrictive [ASR]) or (c) tell them they are not allowed to watch these show or movies, but the child would know that next time they would want to watch these shows or movies, they would be able to (inconsistent restrictive [IR]).

As for active mediation, an example of a main item and a follow-up item is “How often do your parents tell you that the people you see in the media (for example, on TV or in movies), are too harsh or rude to each other?”, with a sub-item asking how would parents discuss this topic with them: either they would think they are right and the child cannot do anything to change that (controlling active mediation [CAM]) or they would be curious to know how the child feels about this (autonomy-supportive active mediation [ASAM]).

3.5.2 *Measuring Instrument Modifications*

In order to utilize PPMMS in studying parental mediation in the context of a broader sense of media literacy, only minor adjustments have been made to the phrasing of questions as compared to the original study by Valkenburg et al. (2013). Recent media use studies such as EU Kids Online (Bedrošová et al., 2018) show a clear trend of changing modes of media use among adolescents. An increasing portion of screen time nowadays takes place via mobile screen as compared to television. Videogames are not played just on PCs, but a larger number of children have access to gaming consoles. To accommodate for these changes, the wording of the question cues and general survey instructions were modified not to focus solely on television, movies and computer games, but also websites, YouTube channels, social networking sites profiles and videogames in general. Furthermore, to cover more instances of inappropriate media use being mediated by the parents,

content of sexual nature was added to the wording of the questions which concerned parental mediation being applied to content that is too violent. For higher relevance of the results, participants were also asked in the instructions at the beginning of this part of the survey to remember the past year and refer all their responses to this time frame.

The discussed changes are based on the Czech translation of PPMMS provided by the supervisor of this thesis (M. Slussareff, personal communication, April 17, 2020) as part of a larger research project. The full final version of the modified PPMMS as used in the present study translated back to English is attached to this paper as Appendix 2.

3.6 Operationalization of Screen Time

To account for the possible effect of screen time on media literacy, the respondents were asked questions about their media use intensity. To adhere to the accepted definition of screen time by Kaye et al. (2019), participants were asked to imagine their typical day in the last month and to estimate how much time they have had spent using a phone, computer, gaming console and other digital devices for leisure activities, such as watching videos, using social networking sites, or playing games. Inclusion of a specific timeframe provides participants with a point of reference and enables to capture the nature of media use of the participant in a mid-term range. This item was divided into two questions: one about a typical week day and another about a typical weekend day, to adjust for the differences between these two scenarios as found by, for instance, Bedrošová et al. (2018). For these two questions, participants could have chosen one of the six responses: less than one hour; one to two hours; three to five hours; six to eight hours; more than eight hours; I'd rather not tell.

To allow for correction of the self-reporting error in terms of screen time, an additional question on respondent's mobile data availability was asked, as there are reports of mobile internet access to be associated with adolescents' media use intensity (Schaan et al., 2018; Mullan & Hofferth, 2022). Participants were asked whether they have no mobile data; limited mobile data; or unlimited mobile data.

3.7 Data Collection

The data were collected using a Google Forms online survey. The survey was administered to the Kunratice Basic School pupils from Years 8 and 9 by the author of the study based on the school director's written consent in January 2021.

Prior to participating in the study, participants and their parents signed an informed consent form informing them about the nature and purpose of the study, the way the data would be processed, and assuring that no known risks are associated with partaking in the study. Participants were informed their participation in the study is completely voluntary and that they can stop participating at any moment with consequences resulting from doing so. Contact information for future communication about the study were also provided. The signed consent forms have been archived by the author of this study.

The data was collected anonymously – the Google Form was set up in such a way as not to require participants to sign in or use any other form of identification. No connection has been made between submitted responses and the pupils who took part in it at any point of the study.

To further ensure that participants take part in the study in a safe environment, an option 'I'd rather not tell' was included for questions of demographic nature – gender, mobile data availability and screen time.²

Altogether, 131 pupils from 6 classes took part in the survey. The data was collected using computers in the school's computer lab as part of computer science lessons. All parts of the questionnaire were in Czech. Before participants started completing the survey, the author of the study informed them one more time about the objective of the study and the structure of the questionnaire. They were once again reminded they can stop participating at any moment. The author of the study was present during the entire time to provide any necessary assistance with understanding the questions or navigating the online questionnaire. One teaching period (45 minutes) was dedicated for survey completion with an option to extend this time – that was however not necessary in any of the instances, as all the participants managed to complete the survey in allocated time.

² This resulted in uneven group sizes in some of the analyses presented in Chapter 4

4. Results

4.1 Data Analysis

The obtained data have been processed using Microsoft Excel 365 – answers to the media literacy test were marked using the marks scheme from the original study by JSNŠ (2018) and total scores were calculated based on the same grading rubric as described in chapter 3.4.2. Pilot study results. The respondents' responses on questions on perceived parental media mediation have been categorized based on item and factor associations identified by Valkenburg et al. (2013) to determine respondents' scores for the different types of mediation.

The processed data were then transformed into variables in IBM SPSS Statistics 26 in order to perform descriptive statistical analyses as well as to test the hypothesized relationships between the variables.

4.2 Descriptive Statistics

Altogether, 131 participants took part in the survey, no responses were deemed invalid due to extreme outlier or clearly nonsensical responses. Questions about four statistical parameters which were identified as possible intervening variables were included: the sex the participants identified as to control for gender-based differences in media use and exposure, the year they attended to control for age difference and two indications of media exposure: their access to internet (measured as availability of mobile data) and screen time as an indication of media exposure (participants were asked to self-report separately for an average weekday and an average weekend day).

Out of the total 131 participants, 38.9% identified themselves as females, 54.2% as males and 6.9% did not report their gender. Thus, the sample can be characterized by a slight overrepresentation of males.

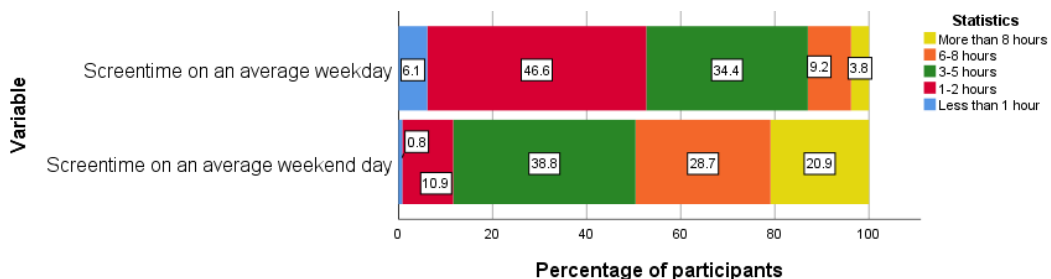
The survey was distributed among pupils in year 8 (49.6%) and year 9 (50.4%) classes, therefore, the participants' age ranged from 13 to 15 with balanced age distribution across the whole sample.

In terms of access to mobile data, 9.9% of the participants had no mobile data plan, so the majority of the participants had either limited mobile data access (60.3%) or an unlimited access (29.8%) to mobile internet.

Media exposure operationalized as self-reported screen time yielded the following results: 6.1% of participants spend less than one hour using their digital devices for their free time activities on an average weekday. On the weekend, the number falls to 0.8%. The next group with 1-2 hours of screen time per day has a size of 46.6% for an average weekday and 10.7% for an average weekend day. Going further up, there is 34.4% who spend between three and five hours using their digital devices on a regular weekday, with the percentage rising to 38.2% for the weekends. The difference between weekdays and weekends can be also seen in the group which spends 6-8 hours per day being exposed to screens – 9.2% on a weekday and 28.2% on a weekend day. Only 3.8% of the participants fall into the last group of eight and more hours of screen time per day on weekdays, rising to 20.6% for the weekends. For better clarity, the percentages for weekday and weekend screen times are displayed in a bar chart (Figure 2).

Figure 2

Time spent using digital screens for leisure purposes per day in the last month on an average weekday and a weekend day (self-reported by the participants, n = 131)

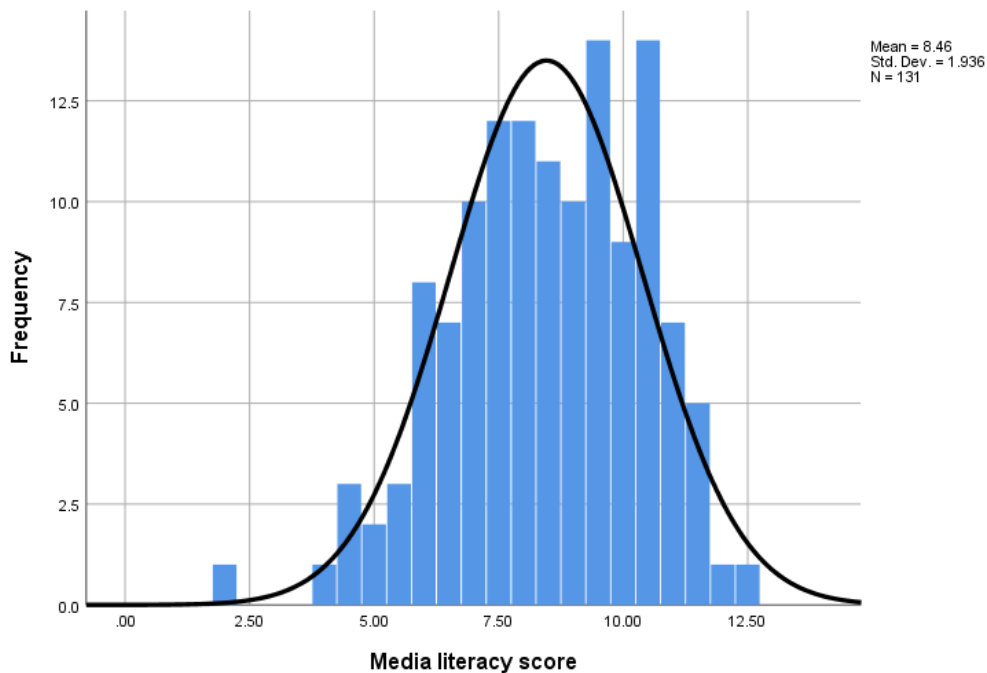


In the next part of the survey, the participants undertook a media literacy quiz testing their knowledge of traditional as well as digital media landscape. The maximum number of points they could have obtained is 15. As shown in Figure 3, obtained scores are of a relatively great range with a mean value of $M = 8.46$, $SD = 1.936$. A low skewness value of -0.412 confirms negative skewness visible in the visual representation of the data. Together with a low kurtosis value of -0.032, this would suggest normal distribution of the data, nevertheless, a Kolmogorov-

Smirnov normality test indicates that the media literacy test results do not follow a normal distribution, $D(131) = .09, p = .006$.

Figure 3

Frequencies of obtained media literacy test scores



When grouped into quintiles by scores obtained in the same manner as in the original study (JSNŠ, 2018), the participants can be divided into five groups of following volumes: 0 - 3 points 0.8%, 3.1 - 6 points 13.0%, 6.1 – 9 points 47.3%, 9.1 – 12 points 38.2% and lastly 12.1 – 15 points 0.8%. This is comparable to the results obtained in the original study by JSNŠ (2018) as displayed in Figure 1.

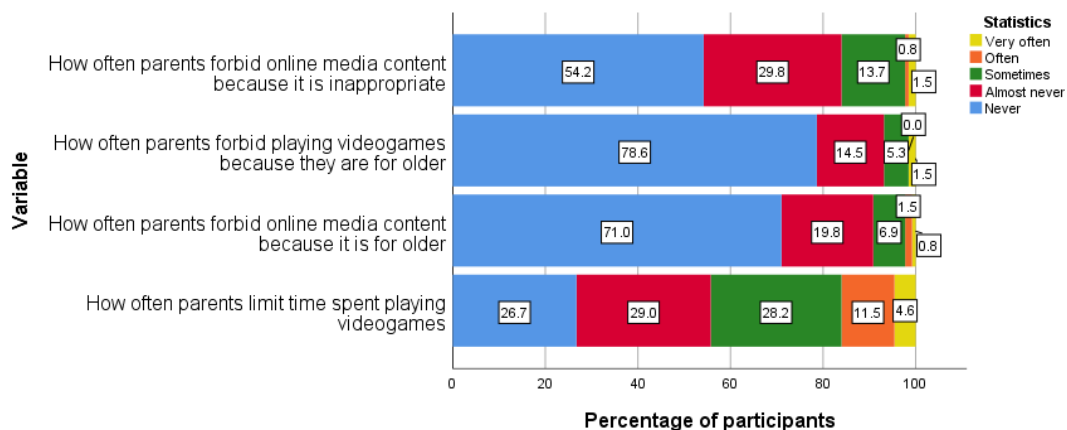
Furthermore, participants responded to questions regarding their perceived parental media mediation. This part of the questionnaire contained eight main items identifying whether the respondents perceive active or restrictive parental media mediation and 20 follow-up items identifying the various types of the two main mediation styles as introduced by Valkenburg et al. (2013). For the main items, the respondents were asked about the frequency of various cases of restrictive or active mediation on a scale “never”, “almost never”, “sometimes”, “often”, “very often”. In case their answer was “almost never” or anything more frequent, they were asked the follow-up question, where they identified themselves with a statement

corresponding with a specific type of restrictive mediation (controlling, autonomy-supportive or inconsistent) or active mediation (controlling or autonomy supportive).

The mean percentage of responses across the items focused on RM with a frequency “almost never” or more often is 42.4% ($SD = 23.0$). When it comes to specific situations, the responses show that restrictive mediation mostly happens to the participants in as a restriction of time they are allowed to play videogames (73.3% “almost never” or higher frequency) or various content being forbidden by the parents because it is inappropriate (45.8% responded at least “almost never”). On the other hand, only a limited number of participants experience mediation based on age-appropriateness of online media content in general (only 29.0% responded at least “almost never”), with the percentage dropping to 21.4% when specified to videogames only. Full distribution of responses for restrictive mediation is displayed in a chart in Figure 4.

Figure 4

Frequency of experienced forms of restrictive parental media mediation by the participants (n = 131)

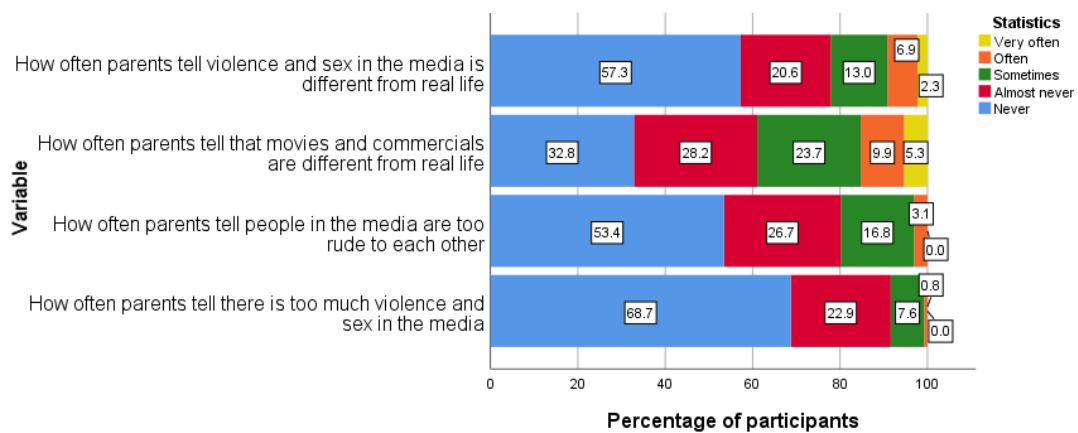


As for active mediation, the frequencies of encounter are generally higher compared to restrictive mediation ($M = 47.0\%$, $SD = 15.0$). Altogether 67.2% of the participants have responded at least “almost never” to the question about how often their parents tell them that media content they watch is different from real life. When specified to differences between violence and sex in the media as compared

to real life, the number drops to 42.8%. Furthermore, 46.6% of the participants have had recently experienced their parents telling them that people in the media are too rude to each other. On the other hand, only 31.3% of the participants have recalled ever being told by their parents there is too much violence and sex in the media. Full distribution of the responses is displayed in a chart in Figure 5.

Figure 5

Frequency of experienced forms of active parental media mediation by the participants (n = 131)



The follow-up items were not displayed to participants who responded “never” to the corresponding main item. For restrictive mediation, the participants can thus be divided into four groups for each main item: those who have never experienced such form of mediation, those who experience it in a controlling manner, those who experience it in an autonomy-supportive manner and those who face it in an inconsistent form.

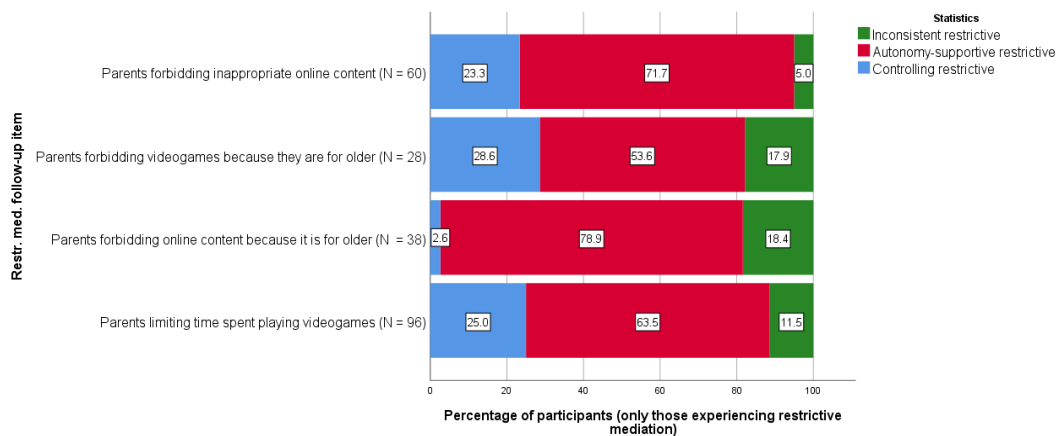
As Figure 6 shows, the majority of the participants who have experienced restrictive media mediation from their parents have perceived it as autonomy-supportive. This was particularly the case for situations in which parents forbade participants from watching inappropriate online content. Autonomy-restrictive mediation, which was in these sub-items represented by a statement that parents would explain them why they better not watch such content, was chosen by 71.7% of the participants in cases when the content was deemed inappropriate by the parents due to its overly sexual or violent nature and by 78.9% in situations when they were considered too young to watch some content. The percentages remained

high for situations related to videogames – when parents forbade them from playing videogames because they are meant for older children (53.6% responded their parents would explain to them why it’s better not to play these games) and when their parents limit the time they are allowed to spend time playing videogames (63.5% claimed parents would explain to them why they don’t want them playing games too much).

It is not as frequent for the participants to experience controlling restrictive mediation. Only roughly 25% of them experience it in cases when parents forbid them from watching inappropriate content, playing videogames because they are for older children or when they limit their time spent playing videogames. In those cases, one quarter of the respondents claim their parents get mad or threaten to punish them when they do not comply with the restriction. This is less frequently the case when parents forbid the respondents from watching online content because it is meant for older children: in this case, only 2.6% of the pupils get threatened with punishment if they keep watching.

Figure 6

Distribution of types of restrictive parental media mediation participants perceive to experience in various situations

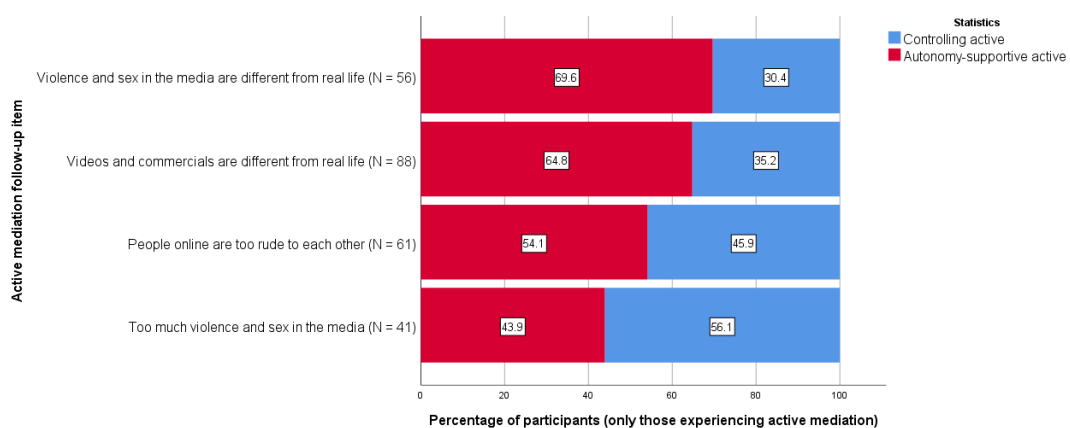


There is also a non-negligible proportion of participants who experience inconsistent restrictive mediation. It is predominantly present in instances when parents forbid certain online content or videogames because they are meant for older children (18.4% and 17.9% respectively).

As shown in Figure 7, the follow-up items for perceived active parental media mediation present a clearer picture, as they all result in dichotomous variables because Valkenburg et al. (2013) do not consider inconsistent active mediation to be possible. Across the items, it is again the autonomy-supportive forms of mediation which prevail ($M = 58.1\%$, $SD = 11.5$). This means that participants mostly identified with statements that when talking about rudeness, violence, and sex in the media and how it is different in real life their parents would be curious to know how their children feel about these topics. This was not the case only for the situation in which parents tell the participants there is too much violence and sex in the media – here the majority (56.1%) claimed that the parents would have an opinion on this which could not be changed.

Figure 7

Distribution of types of active parental media mediation participants perceive to experience in various situations



4.3 Validity and Reliability

4.3.1 Media Literacy Score

The results of the media literacy test are further in the data analysis utilized as a single value. The items it is based on in the questionnaire the participants filled in could not be considered factors and therefore, testing its internal validity would not yield meaningful results. Nevertheless, its validity can be assumed due to the following three factors:

Firstly, it is a replicated study which had originally been designed and conducted by JSNŠ, who provided their capacity in the field of media literacy, and MEDIAN, one of the foremost Czech surveying and polling agencies. MEDIAN was founded in 1993 (Vojtěchovská, 2020) and is a member of SIMAR, a professional membership organization of Czech polling and research agencies (SIMAR, 2022) which all adhere to the organization's research standards as well as to the International Chamber of Commerce / European Society for Opinion and Marketing Research International Code (ICC/ESOMAR) (ICC/ESOMAR, 2016), which stipulates both ethical and professional standards for both data collection and data analysis.

Secondly, the original study was conducted on a large sample of 1,002 participants representative of the high school students' population in terms of age, type of school and NUTS2 region, which enabled the authors of the original study to conduct reliability testing.

Thirdly, the aim of the original study was to measure media literacy as conceptualized in the FEP SGE (MŠMT, 2021b), which, as discussed in the literature review, covers the same areas of skills and knowledge as the FEP BE (MŠMT, 2021a). The three main areas of the questionnaire (knowledge of Czech media outlets, their owners and media legislature; specifics of consuming various online contents; and analysis of specific media contents) are in line with the topical areas in FEP BE: critical reading and interpretation of media content, interpretation of the relationship between media content and reality, construction of media messages, perception of authors and origins of media messages and the societal impact of the media (MŠMT, 2021a). Therefore, it can be assumed the test the participants undertook in the first part of the survey is valid for assuming the level of their media literacy.

4.3.2 Perceived Parental Media Mediation Scores

The types of perceived parental media mediation are constructed of sub-items which had sufficient factor loadings in the original study by Valkenburg et al. (2013). A confirmatory factor analysis has been attempted as part of the current research study. Theoretically, the sample size of 131 participants should be

sufficient for testing internal validity based on Cronbach's alpha adhering to the 10-participants-per-item rule of thumb. To test whether there is sufficient common variance among the items, the Kaiser-Meyer-Olkin [KMO] test and the Barlett's test of sphericity have been conducted for both restrictive and active perceived parental media mediation. The tests revealed that the sampling adequacy was not sufficient for factor analysis in case of restrictive mediation, as the value of the KMO test was lower than 0.60 ($KMO = .51$, Barlett's $p = .005$). Even though the results would be sufficient in case of active mediation ($KMO = .63$, Barlett's $p = .002$), it would pass the limit of 0.60 only barely. Therefore, due to overall mediocre results of the sampling adequacy testing, factor analysis for the parental mediation scale was not conducted as it would possibly yield misleading results.

Nevertheless, internal reliability of the PPMMS has been sufficiently tested by Valkenburg et al. (2013) when it was constructed (all Cronbach's alpha scores $> .75$) and by Vanwesenbeeck et al. (2016) who have included the scale in their model of influences on adolescents' advertising literacy – factor analysis which yielded Cronbach's alphas of .68 and higher has enabled the authors to include all the items in the study. It can thus be assumed that the collected data provide a reliable picture of the participants' perceived parental media mediation in the present study.

4.4 Relationships between the variables

4.4.1 Effect of Gender on Media Literacy

An independent samples t test has been conducted to find out whether media literacy scores do not differ significantly between pupils who identified themselves as male and female in the survey. This has been done to verify that differences in the media literacy test scores are not gender-based and therefore the hypothesized relationships are not moderated by what gender the participants identify with. The two-sample t test has revealed no significant difference between media literacy scores between female ($M = 8.5$, $SD = 1.7$) and male ($M = 8.5$, $SD = 2.0$) participants in the study ($t(120) = -0.17$, $p = .868$, two-tailed).

4.4.2 Effect of Age on Media Literacy

To find out whether there is any significant difference between the media literacy scores of the two age groups included in the study – Year 8 and Year 9 pupils, another independent samples *t* test has been conducted. In absolute numbers, the mean scores of the older respondents are higher as compared to the younger respondents (8.9 vs. 8.0). The test has confirmed this observation by revealing that there is a statistically significant difference at the 95% confidence level between media literacy scores of participants attending Year 8 ($M = 8.0, SD = 1.9$) and Year 9 ($M = 8.9, SD = 1.7$), $t(129) = -2.46, p = .008$, one-tailed. The magnitude of differences in the means was found to be small (eta squared = .05).

The difference in the means takes on the expected direction of media literacy scores to be higher for older pupils, accounting for their general level of development and completed years of school. Therefore, the hypothesis *H7*, which states that the obtained media literacy scores of Year 9 pupils will be significantly higher than scores of Year 8 pupils is accepted.

4.4.3 Effect of Media Use on Media Literacy

Another factor which is hypothesized to affect pupils' media literacy is their extent of digital media use (i.e., screen time) in a sense that the higher the self-reported screen time, the lower the measured media literacy. To establish whether this is the case, three regression analyses were conducted to find out how much of the variance in media literacy scores can be explained by established measures of media use: average weekday and weekend day screen time in the past month and subject's availability of mobile data access.

A linear regression model of average weekday screen time in relation with media literacy has revealed no significant relationship between the two variables at the 95% confidence level, $R^2 = .02, F(1, 129) = 3.21, p = 0.08$.

Similarly, the second linear regression analysis revealed no correlation between average weekend day screen time and respondents' media literacy, $R^2 = .02, F(1, 127) = 2.94, p = 0.09$.

Lastly, the measure of availability of mobile internet access also provided no explanatory value in terms of media literacy scores, as the third regression

analysis also revealed no relationship between the two scores, $R^2 = .00$, $F(1, 129) = 0.09$, $p = 0.77$.

Based on the results of the three regression analyses, hypothesis *H7* can be safely rejected, as there is no statistically significant evidence that media use operationalized as screen time and availability of mobile internet access explains any variance in media literacy scores obtained by the surveyed sample.

4.4.4 Effect of Parental Media Mediation on Media Literacy

To establish whether there is a relationship between perceived parental media mediation and media literacy a multiple regression analysis has been conducted. Media literacy scores have been correlated with the obtained scores for the five styles of perceived parental media mediation identified by Valkenburg et al. (2013) – controlling restrictive (CRM), autonomy-supportive restrictive (ASRM), inconsistent restrictive (IRM), controlling active (CAM) and autonomy-supportive active (ASAM). For each participant, the frequencies their responses corresponded with each of the mediation styles have been counted. As a result, there are six properties for each of the 131 participants: their media literacy score (0 – 15 scale) as a dependent variable and their score for each of the five perceived parental media mediation style (0 – 4 scale for each) as independent variables, which has enabled standard multiple regression to be conducted. The aim of the regression analysis is to test the following hypotheses formulated based on the literature review:

H1: Perceived CRM has a positive effect on pupils' media literacy.

H2: Perceived ASRM has a positive effect on pupils' media literacy.

H3: Perceived IRM has a positive effect on pupils' media literacy.

H4: Perceived CAM has a positive effect on pupils' media literacy.

H5: Perceived ASAM has a positive effect on pupils' media literacy.

In order to test the hypotheses in a regression model, two multiple regression analyses have been conducted: one for the hypothesized effect of restrictive

mediation and one for the hypothesized effect of active mediation. All the variables have been entered into the model at the same time - the independent variables were all measured using the same scale, therefore there is no base for utilizing hierarchical regression.

To determine the effect of restrictive parental media mediation on media literacy, a standard multiple regression with casewise diagnostics for residuals and outliers outside 3 standard deviations with pairwise exclusion of missing value cases has been conducted. No collinearities have been identified among the independent variables (all collinearity tolerance values are above .70). No residuals have exceeded the critical values for Mahalanobis as well as Cook's distance as provided by Tabachnick and Fidell (2013), therefore normality, linearity, homoscedasticity, and independence of residuals can be assumed.

The overall regression model has shown no significant relationship between the included predictors and media literacy ($R^2 = .08, p = .79$). A closer look at the individual variable relationship reveals very weak and still insignificant negative correlations between media literacy and CRM (Pearson's $r = -.16, p = .18$) and ASRM ($r = -.10, p = .19$) and IRM ($r = -.20, p = .20$). Therefore, only a very slight and statistically insignificant effect between perceived restrictive parental media mediation and pupils' media literacy has been found. Thus, hypotheses *H1*, *H2* and *H3* are not accepted.

Same regression analysis procedure has been applied to the remaining two hypotheses about the relationship between perceived active parental media mediation and pupils' media literacy. Again, no collinearities have been found to be present among the variables (collinearity tolerance values above .90) and no breaches of normality, linearity, homoscedasticity, or independence of residuals have been observed.

This regression model has also shown no significant relationship between the predictors and the dependent variable ($R^2 = .003, p = .95$). The relationships between the two active mediation styles and media literacy are even weaker than in case of restrictive mediation, while also remaining statistically insignificant for both CAM ($r = .03, p = .42$) and ASAM ($r = -.06, p = .31$). Based on the poor results of

the analysis, hypotheses *H4* and *H5* are also not accepted, as no evidence has been found for active mediation to affect subjects' media literacy level.

5. Discussion

5.1 Results of the study

Analysis presented in the previous chapter revealed several findings about the studied sample. The 13-15 years old pupils attending Kunratice Basic School who took part in the study achieved media literacy levels comparable to their older counterparts who participated in the original study on Czech high school students' media literacy levels by JSNŠ (2018) with a similar distribution of the obtained scores. The fact that the average media literacy scores of the 9th Year pupils were significantly higher than those of the 8th Year pupils serves as a further indication that the test indeed reflects levels of a set of skills which are intentionally developed in schools as part of media education.

In terms of perceived parental media mediation, only 10 out of the 131 participants responded that they have never experienced any of the presented mediation scenarios in the past year. This indicates that children's media use is a topic of discussion in the families of the surveyed pupils.

The results show that the participants perceive that their parents prefer to engage in active rather than restrictive mediation, thus, they are more likely to explain why they prefer the child does not consume inappropriate content or does not use media excessively rather than prohibit it straight away. In discussions which may arise afterwards the parents are also slightly more likely to listen to the child's opinions on the matter rather than just impose their own views. If the parents do resort to restrictive mediation, it is also most likely to be done in an autonomy-supportive way. This means that even when they prohibit certain media use or limit the amount of time the child is allowed to use media, they still want to know how the child feels about it. Almost one-fifth of the children however also experience inconsistent mediation – especially when their parents tell them that they are too young for some content, they know that next time they will be probably able to watch it anyways. This may however also just reflect that parents naturally lift the bar of what constitutes inappropriate content over time.

The prevalence of active mediation over restrictive and autonomy-supportive style over controlling is what could be seen as “good parenting”, as

previous studies found autonomy-supportive style to be associated with less family conflict, less antisocial behavior, and more prosocial behavior (Valkenburg et al., 2013), or the ability to understand selling intentions in advertisements (Vanwesenbeeck et al., 2016). However, as the regression analyses in the present study revealed, none of the parenting mediation style, including autonomy-supportive, seemed to have any effect on participants' media literacy level. With confidence levels so deep below the acceptable 95% threshold it is very unlikely that this relationship possibly exists in given research design conditions.

No relationship was also found between the intensity of media use (conceptualized as screen time and availability of mobile internet access) and obtained media literacy scores among the surveyed adolescents. This served as a basis for not accepting the hypothesis that higher screen time results in lower media literacy, which was suggested based on the assumption that high screen time is a result of low or non-existent parental mediation. Put simply, no relationship was found between the amount of time the child spends using screens and their ability to use media safely, efficiently, and with high level of understanding.

5.2 Implications of the Findings

The fact that none of the main hypothesis about the relationship between parental media mediation and media literacy among adolescents can be accepted should not be seen as a failure. Instead, the results of the present study indicate that the two concepts may have far less in common than what our common sense may suggest at first.

Media literacy as conceptualized by academics, policy makers and educators alike, is a complex concept based on mastering of various skills on different learning objectives levels. To be truly media-literate, one must not only be able to deconstruct media messages, but also have enough knowledge of the context in which they are produced. One must be able to use media effectively as to achieve various goals for both work and leisure purposes. Our shifting from consumers of mediated content to prosumers of interactive content also means we face challenges regarding our own production of media messages – we should be able to encode them and convey them efficiently so that they can be understood by

the receiver. We should also be able to do all this in a safe manner so as not to compromise our (or someone else's) online privacy. Finally, we should also learn how to use media in ways which are not detrimental to our health. Parental mediation as traditionally conceptualized in previous studies (Collier et al., 2016; Chen & Shi, 2019) does not account for all these scenarios.

Restrictive mediation, even in its autonomy-supportive form, is based solely on protecting the child from consuming any harmful media content and generally limiting the amount of media use. The fact that the present study found lower screen time not to be correlated with lower media literacy should not be understood as an incentive for simply restricting media use of children for the greater good. Some of the media literacy skills (mostly the productive and creative aspects) can be mastered only by actively using various media forms and by heavily restricting screen time without any other guidance the parent deprives their child of valuable learning opportunities.

At the first sight, active mediation appears to support children's learning by focusing on liberal guidance instead of strict control. However, as the results of this study show, this strategy still does not necessarily yield any results in terms of developing child's media literacy. The educative nature is only illusory, as the active mediation strategies are still based on a protectionist approach of what media content is allowed and what isn't. By making statements about, for instance, what videos the parent does not like the child to watch, parents are creating a normative framework of what constitutes acceptable and unacceptable media use. This may help the child to learn to evaluate which videos are appropriate for their age and what risks are associated with watching age-inappropriate videos in terms of exposure to themes and imagery they are just not ready for yet. However, just the mere act of mediation does not teach the child anything about how to react if they see some inappropriate content and how they should act so as not to come across such content by accident. It may be the case that this kind of guidance is what parents provide right after they engage in autonomy-supportive mediation, but at this point, we cannot be sure – this is not what participants are asked about in currently used parental media mediation scales.

To understand what parental strategies positively affect their children's media literacy level, the traditional concept of parental mediation should be modified and rapidly widened. In the age of interactive online media, it is not enough just to protect the children from adverse media effects – they should also learn at home how to prevent them and how to utilize the affordances new media provide us with safely and efficiently for various gratifications. An ability to provide such guidance should be seen as a good parenting practice.

A greater societal focus on these strategies would perhaps resolve the dilemma discussed by Straker et al. (2018) between the need for parental mediation for mental and physical health reasons and the expectations of media-savvy children by policy makers. Not all screen time is necessarily bad and using it as an opportunity for media education at home seems like a meaningful utilization.

In her recent book on parenting in the digital age, Michaela Slussareff (2022) argues that replacing media use restrictions with open discussion and agreed-upon rules is an effective way to prepare children for life in media-saturated times. This can be understood as a call for a shift of focus beyond just mediation as a means of protection to active guidance as a means of empowerment and development of media literacy skills.

Faith Rogow (2022) takes this debate even further in her book on media literacy for young children. She claims that children's media literacy should be promoted by adults through various low-tech activities which help children understand how media messages are constructed and with what intentions. Media education is seen by Rogow as something that should happen continuously by embedding development of media analysis skills into play and other informal learning opportunities. Even though the book is intended for education professionals, it can still provide guidance for parents on how to promote their children's media literacy consciously and continuously beyond the normative approach of determining appropriate content and appropriate amount of screen time.

Even though both discussed books focus on parental guidance of young children's media use, they still indicate a possible general approach to different conceptualization of effective parental mediation for digital age. Redefining media-

related parenting and extending what it entails to include empowering and instructional strategies could prove to be beneficial for media literacy levels of children and adolescents alike.

5.3 Limitations of the Study

While working on this thesis project, three main limitations have been identified in relation to its methodology.

Even though the utilized media literacy test is a replication of a study conducted by research professionals and its results show a bell-shaped trend, there is only circumstantial evidence of its reliability. Using a scale with a proven track record of reliability and validity confirmed by a peer-reviewed study would provide greater certainty about the obtained results. Unfortunately, no such scale which would be adaptable to the context of media literacy of Czech secondary school students was revealed in the literature review.

Furthermore, the study was not conducted on a representative sample of the population of Czech 13-15 years old secondary school pupils. As described in the methodology section, a decision was made to sample pupils from only one school to eliminate the risk of media literacy scores being affected by varying quality and intensity of media education among schools instead of parental mediation strategies. However, this has resulted in a sample to be homogenous in other aspects, such as socio-economic status determined by the school's location in a highly urbanized area. Perhaps including a broader sample pupils from different schools could be accounted for in the analyses by including a dimension of participant's school's media education approach based on the categorization by Kaderka (2018) – i.e., whether media literacy is taught as a separate subject, as a cross-curricular subject, or in a form of one-off projects.

The sample size of 131 participants has enabled for all the planned statistical analyses to take place while observing the generally accepted standards for minimum sample sizes. However, in case of some of the specific mediation styles, the sizes of the groups of participants who have had experienced such parenting were considerably smaller. Nevertheless, as the results of the regression analyses revealed the relationships to be insignificant by non-marginal numbers, it appears

that increasing the sample size with the same sampling method and inclusion criteria would not have any effect on the main results of the research project.

5.4 Further Research Ideas

There are several directions in which future research into the relationship between parenting and media literacy could be headed.

To confirm that there is indeed no relationship between parental media mediation (as currently conceptualized in academic literature) and media literacy (as currently conceptualized in policies), a confirmatory study on a larger and more diverse sample could be conducted, perhaps using different measuring instruments for each of the two main concepts – a different media literacy test and a different mediation scale, possibly from a perspective of both children and parents. Furthermore, this study focused solely on the population of Czech adolescents aged 13-15. Conducting research on the studied relationship's presence in different age group could also yield different results, as previous research has shown that parental mediation tends to be more effective in children's younger ages.

To extend our understanding of what other factors outside of school affect pupil's media literacy, a broader definition of parental mediation should be developed and studied in relation to media literacy. Conceptualizing the empowering and educating approach into specific parental practices could provide basis for constructing a measurement scale which goes beyond restrictive and active mediation. With regards to promoting media literacy, but also, more importantly, a healthy relationship between children and technology, we can hope that these emerging parenting trends will keep on showing promising results in relation to children's outcomes.

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Appendix 1: Media Literacy Questionnaire

English translation of the questionnaire with adjustments of the original questionnaire in a study by JSNŠ (2018). Correct answers are in **bold**.

This part of the questionnaire focused on media literacy is based on a survey by the People in Need project “One World in Schools” in cooperation with Median Agency. <https://www.jsns.cz/projekty/medialni-vzdelavani/vyzkumy/medialni-gramotnost>

1. What do you think is meant by the ‘Sponsored’ tag by this Facebook post?



Café Evropa sdílel(a) svoji událost.
Sponzorováno · €

Kdy bude pro zavedení eura v Česku vhodný čas? Je na to naše ekonomika připravena? Přijďte se o tom pobavit na 21. debatě Café Evropa s hosty Elenou Kohútikovou a Janem Skopečkem! Registrace: bit.ly/CafeE21

Café Evropa
Česká republika a euro - ...
čt 18:00 · Evropský Dům Praha · Praha
204 lidí má zájem · 31 lidí se zúčastní

9 1 komentář

- Post generates donations for a non-profit project.
- **Post is a paid advertisement.**
- Post was registered on Sponzorováno.cz web portal.
- People have crowdfunded financing of this post.
- I don't know

2. **Andrej Babiš, Ivo Valenta, Jaromír Soukup. Those are the names of entrepreneurs who have major ownership interests in leading Czech media companies. Which of them owns which of the following media outlets? Always select only one option in each column and row.**

	Andrej Babiš	Ivo Valenta	Jaromír Soukup
Web ParlamentniListy.cz		<input type="radio"/>	
TV Barrandov			<input type="radio"/>
Web iDnes.cz	<input type="radio"/>		

3. **Look at this part of an online article and answer the following two questions:**

SKUPINA ČEZ / PRO MÉDIA

Tiskové zprávy
Multimedia
Aktuální témata
Aktuality z jaderných elektráren
Čísla a statistiky
Ke stažení
Na pravou míru
Užitečné odkazy
Kontakt pro média

Úvod / Pro média / Tiskové zprávy

V Hulíně mají 10 nových lip, babička jednu vysadila pro vnučku Karolínu

Podzimní výsadba stromů je v plném proudu, a to platí i pro město Hulín na Zlínsku. Díky padesátitřicovému příspěvku Nadace ČEZ vysadili místní v lokalitě Podstávek alej deseti lip a 120 sazenic ptačího zobu jako bariéru proti větru, prachu i vhodné místo pro hnízdění ptáků.

Do sázení se i přes sychravé počasí čile zapojila také 74letá Drahomíra Střalková. „Přece nebudu sedět doma. Celý život jsme pracovali kolem domu, dříve bylo tady na louce hřiště, o které se starali všichni sousedé. Tak jsem ráda, že můžu zase pomoci,“ svěřila se důchodkyně, která vysadila lípu pro svou vnučku Karolínu. „Chtěla taky přijít, ale studuje cestovní ruch ve Zlíně a k tomu nějaký obor se zviřaty v Praze, takže se ani nestihla vrátit do Hulína. Ale ta lípa jí bude pořád ukazovat směr k rodnému městu,“ dodala babička.

Who do you think is most likely the author of this article?

- Karolína's grandmother (Drahomíra Střalková)
- Mayor of Hulín
- A journalist from the Zlínský deník
- A spokesperson of the company ČEZ

The article is published under the ‘press releases’ section. Who do you think press releases are mainly meant for?

- Advertising companies
- **Journalists**
- Sportswomen/sportsmen
- Printing houses workers

4. The photograph below started circulating online one week after the Fukushima nuclear disaster. Do you think it is a sufficient proof about the impacts of the radiation leak after the Fukushima power plant accident?

NEBEZPEČNÁ RADIACE

Panika v Japonsku: Květiny u Fukušimy děsivě mutují!



396
To se mi líbí

Témata: [Fukušima](#), [sedmikrásky](#), [havárie](#), [radiace](#), [nebezpečí](#), [mutace](#)

Čtyři roky od jaderné havárie je Fukušima a okolí zřejmě stále pod vlivem nebezpečného záření. V blízkosti jaderné elektrárny byly nalezeny zdeformované sedmikrásky.

Sedmikrásek si všimnul obyvatel města Nasushiobara, které se nachází 110 km od jaderné elektrárny v [Japonsku](#), kde po zemětřesení a následné vlně tsunami unikla radioaktivní voda.

Tweet

G+

- Yes, the photo is a sufficient proof
- **No, the photo isn't a sufficient proof**
- I don't know/I can't tell

5. What do you think are the typical target groups of the following media outlets? Always select only one of the options in each column and each row.

	Children	Younger people	Women	Older people	Men
Stream.cz		<input type="radio"/>			
Šlágr TV				<input type="radio"/>	
ČT :D	<input type="radio"/>				
Elle magazine			<input type="radio"/>		
Sport.cz					<input type="radio"/>

6. Select for each of the following media outlets whether it is or isn't a public service medium. Public service media don't have a private owner and they are financed mainly through TV and radio fees, which are paid by Czech citizens. Choose only one option for each row.

	Is public service medium	Isn't public service medium	I don't know
Czech Television	<input type="radio"/>		
MF DNES		<input type="radio"/>	
FTV Prima		<input type="radio"/>	
Czech Radio	<input type="radio"/>		
Czech News Agency	<input type="radio"/>		
Nova TV		<input type="radio"/>	
Impuls radio		<input type="radio"/>	
Parlamentní listy		<input type="radio"/>	
Hospodářské noviny		<input type="radio"/>	

7. Select for each of the following media outlets whether or not they are obligated by Radio and TV Broadcasting Law to follow the rules of neutrality and objectivity. By neutrality we mean that the medium

must in its news provide the same space for all the parties involved in any given topic. By objectivity we mean that the medium is not taking sides with anyone.

	Has to follow	Doesn't have to follow	I don't know
Czech Television	<input type="radio"/>		
MF Dnes		<input type="radio"/>	
FTV Prima	<input type="radio"/>		
Czech Radio	<input type="radio"/>		
Nova TV	<input type="radio"/>		
Impuls Radio	<input type="radio"/>		
Parlamentní listy		<input type="radio"/>	
Hospodářské noviny		<input type="radio"/>	

8. According to your knowledge, what do the Czech laws stipulate Czech Television (CT) to do? Choose whether the following statements are true or not. For each row select only one option.

	True	False	I don't know
CT must report about government's decisions only in positive light		<input type="radio"/>	
In their newsroom, CT must employ members of all minorities that live in Czechia.		<input type="radio"/>	
Main source of income of CT is revenue from advertisements.		<input type="radio"/>	

- CT must provide balanced programming for all citizen groups (ethnic minorities, religious groups, etc.).
- CT must contribute to Czech citizens' knowledge of laws and development of their cultural identity.
- CT must report about the country's EU membership only in positive light

9. Which of the following articles do you expect to provide more factual information about the case of Jiří Kájínek, a murderer serving a life sentence, who received a pardon from president Zeman?

- First article
- **Second article**
- It's unclear
- I don't know



2. 3. 2018 | [Názory / Komentáře](#)

Zeman dal jen devět milostí. To je strašně málo, přitom výběrové řízení vyhrál Kájínek

výjimek je očividně vadný. Kapitola sama pro sebe bylo propuštění Jiřího **Kájínka**: výsměch všem těm, na které se s odvoláním na Zemanova kritéria s milostí



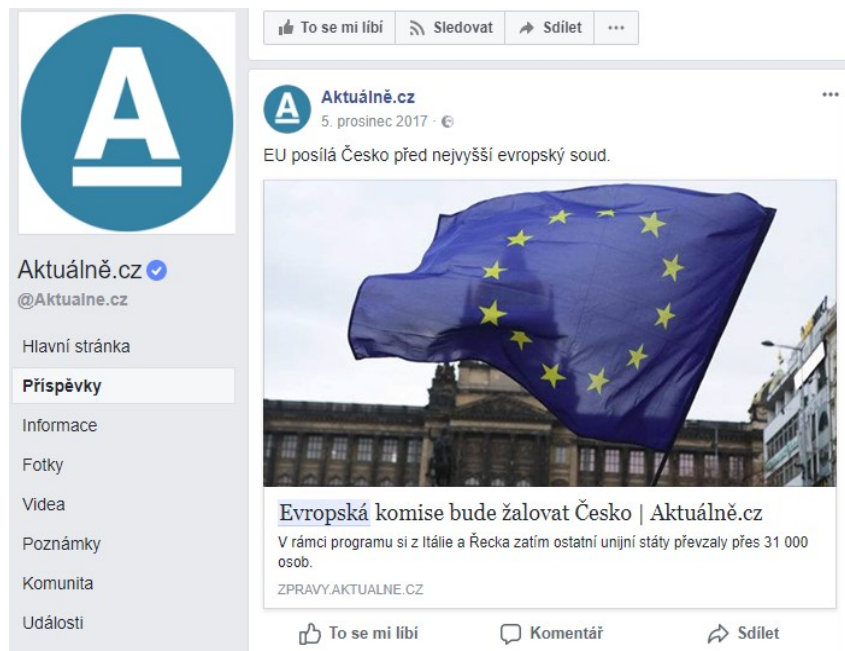
AKTUALIZOVÁNO 23. 5. 2017 | [Zprávy / Domácí](#)

Kájínek je na svobodě. Doživotně odsouzený vrah opustil po Zemanově milosti věznici

Nejznámější český vězeň Jiří Kájínek strávil za mřížemi 23 let.

10. Which of the two following Facebook posts do you think is a more trustworthy source about the institutions of the European Union?

- **First post**
- **Second post**
- **It's unclear**
- **I don't know**




Aktuálně.cz
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Příspěvky
Informace
Fotky
Videa
Poznámky
Komunita
Události

To se mi líbí Sledovat Sdílet ...

Aktuálně.cz
5. prosinec 2017 · 🌐

EU posílá Česko před nejvyšší evropský soud.



Evropská komise bude žalovat Česko | Aktuálně.cz
V rámci programu si z Itálie a Řecka zatím ostatní unijní státy převzaly přes 31 000 osob.
ZPRAVY.AKTUALNE.CZ

To se mi líbí Komentář Sdílet



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Vytvořit stránku

To se mi líbí Sledovat Sdílet ...

Je zima v téměř opuštěných chodbách Rady Evropy ve Štrasburku. Vytápění nejspíše neběží nebo jenom velmi málo. Souvisí to nějak s akutními finančními problémy této tradiční organizace? Není to jasné.



Radě Evropy hrozí nedostatek financí, musí se dohodnout s Ruskem! - ČeskoAktuálně.cz
Je zima v téměř opuštěných chodbách Rady Evropy ve Štrasburku. Vytápění nejspíše neběží nebo jenom velmi málo. Souvisí to nějak s akutními finančními...
CESKOAKTUALNE.CZ

To se mi líbí Sdílet

11. What posts do you think see Instagram users in their feed on the home screen?

- All posts from users they follow
- Randomly picked posts from the users they follow
- **Posts systematically selected by Instagram based on their previous activity on Instagram**
- I don't know

12. Imagine that everyone in the class, at the same and at the same place, searches the same term on Google. You all see your own search results and ads on your phone screens. Which of the following scenarios do you think will happen?

- Everyone will see the same search results and ads
- Everyone will see the same search results, but different people will see different ads
- Different people will see different search results, but everyone will see the same ads.
- **Different people will see different search results and different ads**
- I don't know

13. What do you recon is the main reason providers place advertisements on their websites?

- They want to recommend the best products and services to their websites' visitors
- **They get money for the ads**
- They fill in the space that would otherwise stay empty
- Search engines show websites with ads as the top results
- I don't know

14. Which of the following actions may constitute a crime? Only select one option for each row.

	Ano	Ne	Nevím
Uploading songs or movies online and telling your friends to download them.	<input type="radio"/>		
Share false alarming news on social networking sites.	<input type="radio"/>		
Constantly contacting someone who does not like it.	<input type="radio"/>		
Use your nickname instead of your real name when registering on a social networking site.		<input type="radio"/>	
Post calls for physical attacks on Muslims on social media.	<input type="radio"/>		

Appendix 2: Perceived Parental Media Mediation Scale

Original version by Valkenburg et al. (2013), as reprinted in a sourcebook by Graham and Mazer (2020) with adjustments for the present study.

Abbreviation in the parentheses indicates the **mediation style** the question concerns.

Response options for the main items (indicated in numeration as x.) are always Never - Almost never - Sometimes - Often - Very often.

Follow-up items (indicated in numeration as x.x) were shown only to participants who have responded with a frequency of “almost never” or higher to the main item.

Instructions: We would like to know how your parents have handled in the past year your media use, for example, when you use a computer, a smartphone, a tablet, a gaming console or other media (i.e., watching YouTube, playing games, etc.). Some parents pay a great deal of attention to the media their teens use, other parents pay less attention. In the questions below, we use the word “parents.” When you read parents, you might think of your father, your mother, or another adult who is mostly involved with your upbringing.

1. How often do your parents forbid you from watching certain websites, YouTube channels, profiles on social networks, etc. due to inappropriate content? (RM)

1.1. And if your parents forbid you/would forbid you from doing so how would they discuss this without you?

- They would get mad if I still want to watch these shows or movies. (CRM)
- They would explain to me why it’s better not to watch such content. (ASRM)
- They would tell me that I am not allowed to watch such content, but I know that the next time I want to watch it, I will be allowed to. (IRM)

2. How often have your parents in the past year told you that you are not allowed to play computer games because they are meant for older? (RM)

2.1. And if your parents tell/would tell you this, how would they do this?

- They would get angry if I still want to play those games. (CRM)
- They would explain to me why it's better not to play these games. (ASRM)
- They would say that I am not allowed to play those games, but I know that after a while, I can play those games again. (IRM)

3. How often have your parents in the past year told you that you are not allowed to watch some content on the internet (for instance on YouTube, a website, on social networks) because it is meant for older? (RM)

3.1. And if your parents tell/would tell you this, how would they do this?

- They would threaten to punish me if I want to watch this content after all. (CRM)
- They would explain to me why it's best not to watch such content. (ASRM)
- They would tell me that I am not allowed to watch such content, but I know that the next time I want to watch this kind of content, I will be allowed to. (IRM)

4. How often have your parents in the past year limited the amount of time you are allowed to spend playing games on your phone, a computer, a gaming console, etc.? (RM)

4.1. And if your parents tell/would tell you this, how would they do this?

- They would threaten to punish me if I keep on gaming. (CRM)
- They would tell me why they don't want me to play games too much (ASRM)
- They would tell me that I am not allowed to play games, but I know that most of the time I can just keep on doing it. (IRM)

5. How often have your parents in the past year told you that violence and sex in the media (for example, in games or videos) are different than in real life? (AM)

5.1. And if your parents tell/would tell you this, how would they discuss this with you?

- They would only tell me how they would feel about it and would not be interested in the opinion of others. (CAM)
- They would be curious to know how I feel about this. (ASAM)

6. How often have your parents in the past year told you that what you see in videos and commercials is different than in real life? (AM)

6.1. And if your parents tell/would tell you this, how would they discuss this with you?

- They would value their own opinion more than mine. (CAM)
- They would encourage me to voice my own opinion. (ASAM)

7. How often have your parents in the past year told you that people you see on the internet (on websites, YouTube, social networking sites) are too harsh or rude to each other? (AM)

7.1. And if your parents tell/would tell you this, how would they discuss this with you?

- They would think they are right and I cannot do anything to change that. (CAM)
- They would be curious to know how I feel about this. (ASAM)

8. How often have your parents in the past year told you that there is too much violence and sex in the media (for instance on YouTube, websites, social networking sites)? (AM)

8.1. And if your parents tell/would tell you this, how would they discuss this with you?

- They would have an opinion on this and this cannot be changed. (*CAM*)
- They would want to know what I think. (*ASAM*)