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Search Engines and Mobile Devices in the Everyday Life of Young People

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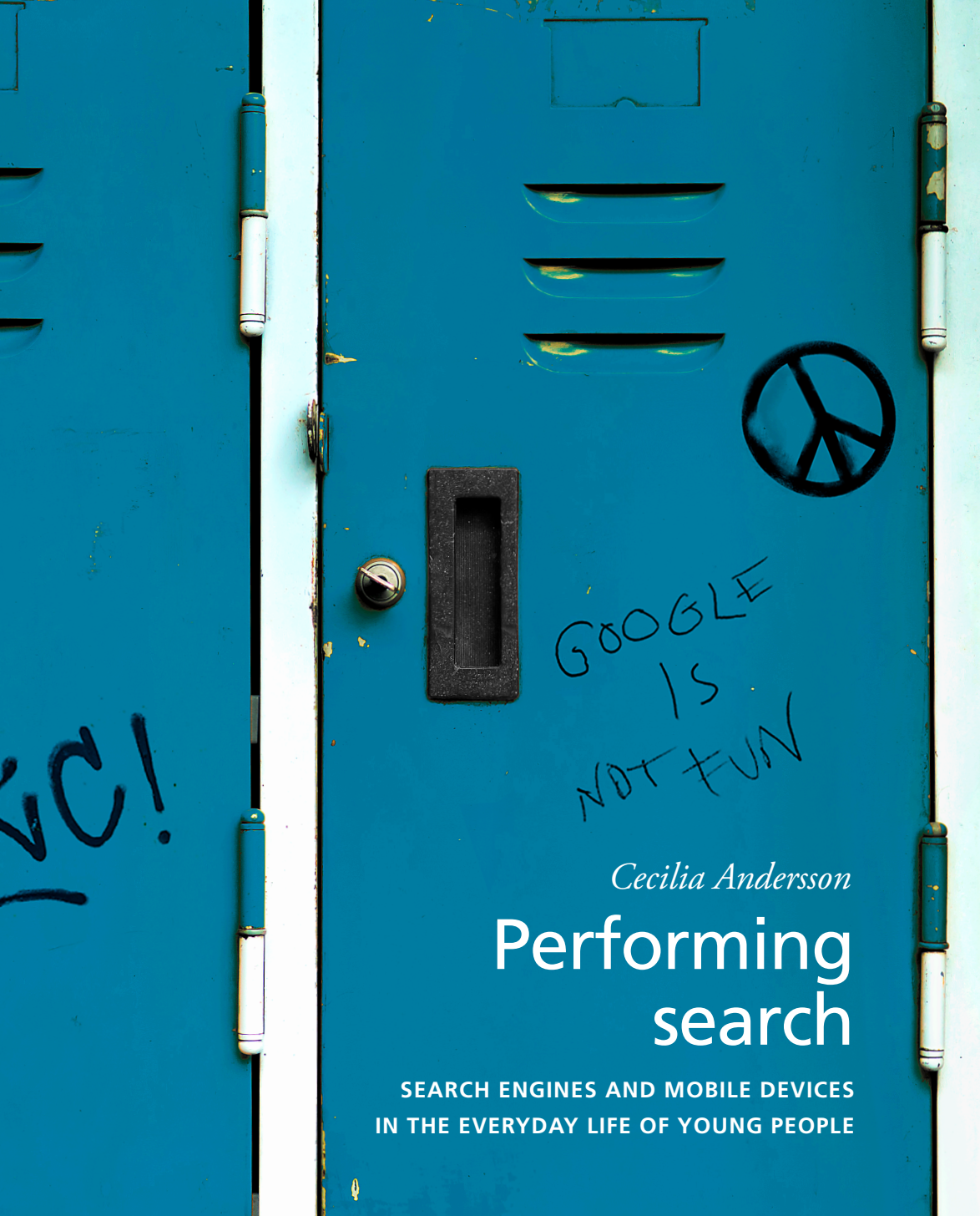
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Cecilia Andersson

Performing search

SEARCH ENGINES AND MOBILE DEVICES
IN THE EVERYDAY LIFE OF YOUNG PEOPLE

Search engines have become the gateway to finding information online in contemporary society. Through mobile devices, online search is made possible almost anywhere, anytime, and about any topic. Against this backdrop, this thesis addresses the role of search engines and mobile devices in the everyday life of teenagers in Sweden. Focus within the study is both on the way that teenagers use search engines, and how they navigate expectations and rules surrounding the use of search engines, and mobile devices, in various contexts. This is investigated through fieldwork in three different schools.

Drawing on theories of impression management and frame analysis, the thesis explores how online search is done in school, how Google Search is assigned meaning, conceptualizations of online traces of search, as well as the relation between the smartphone and online search. The thesis illustrates the way that online search is a taken for granted part of everyday life for young people. Young people's awareness of expectations and norms, surrounding the use of search engines and mobile devices, also surface within the study. At the same time, the activities of online search are not always reflected upon as they have become commonplace, and intertwined with many other everyday activities. The findings highlight the need for scrutinising the workings of search engines in everyday life.

Cecilia Andersson, Department of Arts and Cultural Sciences, Lund University. *Performing search* is her doctoral thesis in Information Studies



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PERFORMING SEARCH

Performing search

Search engines and mobile devices
in the everyday life of young people

CECILIA ANDERSSON



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Table of Contents

ACKNOWLEDGMENTS

I. INTRODUCTION	13
Situating the thesis and zooming in the research problem	20
Aim and research questions	24
Outline of the thesis	26
 2. PREVIOUS RESEARCH	 27
Young people	27
Online search	29
Search engines in society	29
Search engines and their role in the classroom	31
Search engines and critical research	34
Young people and digital devices	36
Online search and literacies	40
Literacies and search engines 'behind the scenes'	42
Search engines and facts	44

3. CONCEPTUAL AND ANALYTICAL FRAMEWORK	47
Starting in the everyday	47
A dramaturgical analytical perspective	49
Setting, behavioural regions and norms	50
Roles	52
Technology, flow of information and context collapse	54
Frame analysis	57
A sociomaterial reading of Goffman	58
An implicit power perspective	60
4. METHODS AND MATERIAL	63
An ethnographic stance	63
The empirical setting	66
Recruitment and overview	66
Focus group discussions	69
Classroom observations and go-alongs	70
Interviews	74
ICT contracts	76
Reflections on the fieldwork process	76
Initiating research and consent as an ongoing process	76
Performing research and research as performance	78
Google and the challenge of being explorative	80
Analysis	83
The parts and the whole, dividing and compiling ethnographic fieldwork	83
Transcribing	84
Applying a dramaturgical analytical lens	86
Analysing focus groups and coding material	88
Analysing information activities in school, Article I	89
Analysis of framings of Google Search, Article II	90
Analysis of online traces of search, Article III	90
Analysis of the framing of the smartphone, Article IV	91

5. SUMMARY OF STUDIES	93
Article I	93
Article II	95
Article III	97
Article IV	100
6. SUMMARISING AND CONCLUDING	103
Findings of the four studies	104
Impression management and online search	104
Framings of Google Search and the smartphone	109
Discussion	113
Implications and concluding remarks	116
SVENSK SAMMANFATTNING	121
REFERENCES	127
APPENDIX 1-6	139
PAPER I	153
PAPER II	173
PAPER III	203
PAPER IV	231

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1. Introduction

As I stand in a locker room getting changed after a workout, I overhear a conversation between a parent and a child. The child is maybe 10 years old and is complaining about a stomach-ache. The parent is sifting through information online, on a smartphone. ‘Let me just see here what it says on Google’, the parent says to the child. They go on like this, referring back and forth to the information found online. I recount this story not because it is exceptional, but because it is not. The story in many ways sums up the role of search engines, and mobile devices, in today’s society. It is a telling example of how searching is made possible almost anywhere, anytime, and about any topic. As well as about how searching online has become so routine that we hardly think about it (Sundin et al., 2017). This vignette also pinpoints how online search is part of young people’s lives, in various ways, from an early age. In fact, many of them have never known a world in which search engines could not be queried and provide a ranked answer. Search engines not only provide a means for searching but are in many cases a starting point for online activities and can be described as a ‘fundamental information infrastructure’ (Haider & Sundin, 2019, p. 1). This thesis is about how young people use search engines in everyday life, and how they navigate the use of search engines and mobile devices depending on social context. I examine the topic broadly, from how young teenagers (age 13-16) assign meaning to search engines, to how they make use of search engines, as well as how they deal with the traces that they leave behind when using search engines.

Vast changes have taken place in terms of how the internet is accessed, from bounded settings through desktop computers, to constant availability through mobile devices. Today, online search is seamlessly part of many everyday activities. From my viewpoint, a focus on search engines in every-

day life, thereby, demands that attention be paid to the devices that make search possible. The adoption of new technology, and widespread changes in general, tend to stir up questions on the consequences thereof. Both dystopian and utopian notions of the changes to come can be brought to the fore, not least in relation to children and young people, as will be further discussed in Chapter 2. Beyond owning a smartphone, most young people also have access to a combination of devices, such as a tablet, laptop and/or desktop computer (Davidsson et al., 2018). This holds true for the participants of this study as well. With the abundant access to mobile devices follows that most young people also have near-constant availability to search online. The smartphone, in particular, travel with young people where they go. It can be said to be wearable (Fortunati, 2014), and almost an extension of the body (Stoilova et al., 2020). The widespread access to various forms of mobile devices, has given rise to discussions and negotiations on how and when they should be used. In schools, there have been discussions on mobile bans in the classroom (Dinsmore, 2019; Merchant, 2012; Mifsud, 2014; Ott, 2017), in relation to young people's free time, public discussions about screen time have been brought forth (Livingstone et al., 2017; Stoilova et al., 2020). Such discussions and negotiations suggest that, although, young people have abundant access to devices and search engines, this does not necessarily say much about how they are used, or not used (Haider, 2017; Sandberg et al., 2019), in various situations.

danah boyd (2014) highlights that dystopian and utopian rhetoric do not enable an understanding of what actually happens when new technologies are widely adopted as 'reality is nuanced and messy, full of pros and cons' (p. 16). Throughout the writing of this thesis, my ambition has been to capture online search and mobile devices in a nuanced way. With such an ambition follows some degree of messiness. Messy implies two things here: that the role of search engines in my participants' everyday life is messy, in that its use is scattered across devices and contexts, in turn, researching search in everyday life is messy in that there are so many leads to follow. My way of tackling this has been through an ethnographic stance, where I follow different leads: starting in the activity of online search, in everyday habits, as well as in devices. My ethnographic stance is intertwined with my perspective on everyday life as that which is mundane and familiar, also steeped in

routines and rhythms: ‘we do the same things in the same places at the same time, day after day’ (Scott, 2009, p. 2). Such predictability allows us to take the everyday world for granted (Scott, 2009). This ties in with online search having become a taken for granted part of everyday life (Haider & Sundin, 2019). Writing this thesis in the midst of the covid-19 pandemic, the notion of predictability might seem foreign. At the same time, it is possible to see how quickly we have come to talk of ‘the new normal’ which, in my opinion, signals the way that people adapt to new circumstances and new rhythms are created. This also points to the way that everyday life is dynamic. I view attending school as part of that rhythm of everyday life for my participants. For me, everyday life is a theoretical perspective rather than a specific time of the day. This perspective is discussed further in Chapter 3. Fieldwork has been carried out in three different schools through focus groups, go-alongs, observations and interviews. At the same time, my interest is not limited to the school as a setting but as a part of my participants’ everyday life. This means that focus is not on learning. Instead, I am interested in how my participants search, not what they learn from searching. Even so, learning does come into the picture given that fieldwork is done in schools, and because previous research has often connected online search with learning, as will be discussed further along in this chapter, and in Chapter 2. Importantly, I follow the activities of online search. Through my different methods, I explore the ways in which online search and mobile devices are given meaning as they travel with my participants through various everyday situations, from riding the bus home to the family dinner. Still, it must be noted that having schools as field site comes with certain limitations. I have been able to ‘hang out’ with my participants during class as well as recess. This has given me a chance to witness their interactions with friends and teachers firsthand. However, I have not been able to do the same in relation to, for example, their home life. This will be discussed further in Chapter 3 and 4.

Charlotte Aull Davies (2002) notes that within ethnographic research it is common for the problem area at the outset to be relatively broad. This was the case for me as I began doing fieldwork. Initially, the problem area was, as sketched above, the omnipresence of search engines and mobile devices in society, and their role in the everyday life of young people. A topic which had not been given much attention within information studies,

as I return to later in this chapter. Yet, my theoretical and analytical frame had not been completely established, beyond my perspective on everyday life. Billy Ehn et al. (2016) describe that the research process is often ‘a constant intermingling of writing, data producing, and analysis’ (p.4). This work process becomes particularly tangible, I would say, when writing a compilation thesis, which mine is. I will discuss this work process, as well as the question of writing a compilation thesis while doing fieldwork, in Chapter 4, under the heading *Analysis*. This way of working opened the door to the dramaturgical analytical frame of my thesis, which I will now briefly sketch. Upon doing focus groups, and some initial classroom observations, I noticed the way that my participants described a difference between the way that they search for information, and how they present their sources to teachers. I identified what they were doing as impression management (Goffman, 1959). A concept derived from Erving Goffman’s (1959) work *the Presentation of Self in Everyday Life*. A concept that has been further developed and extended by other researchers which are also of importance within this thesis (boyd, 2014; Hafermalz et al., 2016; Meyrowitz, 1985; Persson, 2012). In his work, Goffman (1959) uses terminology from the world of theatre, such as *audience*, *roles*, *frontstage*, and *backstage*. Social acts are viewed as performances wherein people have different roles. Therefore, the perspective is referred to as dramaturgical. Peter Aronsson and Lizette Gradén (2013) argue that ‘all social “acts” – whether or not designed and framed as performance – can be seen and analysed as performance’ (p.17). Impression management focuses on the fact that we present ourselves differently depending on social context and the audience of our performance, as norms and expectations differ. The audience is any person or group who is supposed to be convinced by the performance. The notions of frontstage and backstage are central to the analysis. Backstage represents the area that the audience does not, ideally, gain access to. Returning to the example of my participants’ way of searching, it can be said to have occurred in their backstage, which was in contrast to the way that they presented how they searched, frontstage. An investigation of front- and backstage activity thereby helped reveal what my participants acknowledge as appropriate, and inappropriate ways of dealing with search engines (Article I). In relation to social media, the theory has been used to analyse how people imagine an

audience for their self-presentation on various platforms, and questions of privacy (Marwick & boyd, 2014; van Dijck, 2013). Here, I instead use it to analyse how my participants make sense of online traces of search by imagining audiences, which shares similarities with self-presentation on social media (Article III).

Another important part of my theoretical perspective is that of Goffman's *Frame Analysis* (1974). Again, taking inspiration from a number of researchers who have developed and extended the scope of his work (boyd, 2014; Hafermalz et al., 2016; Meyrowitz, 1985; Persson, 2019; Sjöberg, 2018). Frame analysis revolves around the question 'what is it that's going on here?' (Goffman, 1974, p. 8). A question which, according to Goffman (1974), is implicitly asked throughout everyday life. Situations become intelligible through framings. As I grappled with the ways that my participants described their use of Google Search (Article II), frame analysis enabled an investigation into how my participants assigned varying meanings to the use of the search engine. Importantly, people's framings of activities are not individual constructs but, as with impression management, relates to shared understandings and social context. Frames often have a 'collectively maintained and agreed-upon character', although it is not always so (Jacobsen & Kristiansen, 2015, p. 122). The framing of a situation not only defines the meaning of the situation for people, but also guides people's involvement in situations. Here, focused on the use of Google Search, and also the use of smartphones (Article IV).

The concept of context has been mentioned throughout my introduction; a term which is value laden, yet elusive. In this thesis, the term operates on several levels. In a broader sense, I investigate online search in the context of everyday life (Haider & Sundin, 2019; Lomborg, 2015). The more specified meaning of context, in this thesis, relates to the dramaturgical perspective and draws together the social situation, space, and the people involved (boyd, 2014; Marwick & boyd, 2014; Meyrowitz, 1985). The more specified context is given meaning in relation to online search. The concept of audience is important in relation to context within a dramaturgical perspective, and previous research point to the fact that the audience does not necessarily need to be physically present to be part of a social context. For example, boyd (2014) describes that 'The imagined

audience defines the social context' (p.32). The quote refers to the way that young people, when using social media, imagine an audience for their posts. I will discuss this further in Chapter 3, in relation to information flows online.

The perspective provided by Goffman (1959, 1974), as described above, can be said to be underpinned by a sociocultural frame. Here, sociocultural refers to an anthropological or ethnological understanding (Ehn et al., 2016) that brings meaning-making, materiality and our social environment to the fore of the analysis (see Chapter 3 and 4). The starting premise of my perspective is that people's perceptions and habits are viewed as cultural products: 'they are learned, exercised, communicated [...]. Those processes take place in interactions with people and objects as well as mass media and public events' (Ehn et al., 2016, p. 5). In this thesis, such habits and perceptions refer to the use of search engines and mobile devices. Given such starting premises, my thesis shares much the same underpinnings as research within the research field of information practices, which I will discuss further below, when situating the thesis.

In a thesis about search engines and online search, there is a need to clarify precisely what is meant by those terms. Search, information searching, online search, and information seeking online is here used to refer to the use of a general-purpose search engine (Sundin et al., 2017). As a distinction, the concept of information seeking is used in a broader way, that can include other information sources than the internet (Savolainen, 2016). I investigate search through an exploratory approach which means that I have an open definition of search, and search engines, when talking to my participants. I thereby include searching on social media platforms, such as Instagram and Tumblr, in my scope. Likewise, YouTube, which can be described as a combination of search engine and social media, is included. Searching for images and multimedia is thereby also, to a certain extent, addressed within this thesis. Although I have an exploratory approach to search, Google cannot go unmentioned, as Google Search¹ has in many

¹ In this thesis, the reference to Google, primarily refers to Google Search, unless otherwise stated. When I refer to Google without any further description, I am referring to Google Search. The same goes for my articles where I mostly refer to Google, by which I mean Google Search.

ways become synonymous with online search or retrieving information online (Haider & Sundin, 2019; Hillis et al., 2013). It thus follows that even with my exploratory approach towards search, Google Search is brought into focus. As exemplified in the following excerpt from a focus groups discussion in my study:

Interviewer: What do you think of when you think of search?

Participant 1: Google.

Participant 2: Yeah, Google.

[...]

Participant 3: I mean you use Google. It's like: google it.

Participant: No Bing...

Everyone starts laughing (School A, year 9).

The thought of using the search engine Bing instead of Google Search is laughable. In tandem with search becoming omnipresent, so too has Google Search, something which is made evident in the title of the book by Ken Hillis et al. (2013), *Google and the Culture of Search*. In my articles, Google Search comes through in various ways, but is explicitly addressed in the second article

Together with Bing, Baidu and Yandex, Google Search is a general-purpose search engine. A general purpose search engine can be described as 'an information retrieval system that allows for "keyword" searches of distributed digital texts' (Halavais, 2018, p. 5). When using such search engines, people do not necessarily use keywords but also search through the use of everyday language, so called natural language, and also by posing questions (Borlund, 2016; Hariri, 2013). Beyond allowing for searching for digital text, image search is also a feature within most general-purpose search engines.

Situating the thesis and zooming in the research problem

Research on online search does not constitute a distinct research field, instead, contributions can be found from several disciplines, from computer science to the humanities (Jansen & Rieh, 2010; Lewandowski, 2012). It thereby follows that the way the topic of online search is researched differs. Within information studies, this thesis relates foremost to understandings developed in research on information practices (Carlsson, 2013; Lindh, 2015; Lloyd, 2012; Lundh, 2016; Rantala, 2010; Sundin & Francke, 2009), and information literacies (Gärdén et al., 2014; Limberg et al., 2012; Mansour & Francke, 2017; Subramaniam et al., 2015; Sundin & Carlsson, 2016). Outside information studies, the thesis relates to research emanating from media and communication studies that focus on information seeking online among young people (Sjöberg, 2018), digital media in the everyday life of young people (Livingstone & Sefton-Green, 2016; Sjöberg, 2010; Stoilova et al., 2020), and the role of the smartphone in everyday life (Bertel, 2013; Lomborg, 2015). The thesis also relates to research originating from educational science that investigate the role of devices in school (Ott, 2017; Selwyn et al., 2017), young people and digital literacy (Buckingham, 2015), and data literacy (Pangrazio & Selwyn, 2019), to give some examples. There are more concepts, and literacies, that are of relevance to my thesis; I will discuss this further in Chapter 2.

Information literacy is not easily defined as it is loaded with different meanings within research, but the concept often refers to activities such as seeking/searching for information, selection, evaluation, and critical assessment of sources (Limberg et al., 2012; Sundin & Francke, 2009). Information literacy thereby has a broader meaning than traditional literacy and its interest in reading, writing, and calculating. Ola Pilerot and Jenny Lindberg (2011) identify that within educational contexts, information literacy is viewed as a goal for educational activities, and, within research, it is often viewed as a study object. From my perspective, there is overlap between my study and information literacies research written in a sociocultural tradition. From a sociocultural perspective, the inseparability of information literacies and the setting and tools within which it unfolds, is brought forth.

Studies departing from such a viewpoint often refer to social practices (Hicks, 2018). Helena Francke et al. (2011) identify what follows with such a perspective: ‘When literacy is seen as related to social practices rather than to an inner state of mind, the study of literacy becomes primarily a social one’ (p. 676). Information literacy can then be understood as a way of ‘learning to communicate within a specific practice’ (Limberg et al., 2012, p. 116). With this follows that being information literate in one setting, does not necessarily easily translate to another setting. Information literacies is used in its plural form as literacies are viewed as multiple (Limberg et al., 2012; Lupton & Bruce, 2010). Which is in contrast with the generic, or functional, view of literacy as a discrete set of skills (Buschman, 2009; Hanell, 2019; Hicks, 2018; Lupton & Bruce, 2010). Studies have identified a link between learning and information seeking online. The research emphasizes the way that school as an institution is characterized by explicit and implicit norms. Being assessed is part of schooling and the way that online search is done thus relates to a syllabi and curriculum (Alexandersson & Limberg, 2012; Francke et al., 2011; Gärdén, 2016; Gärdén et al., 2014; Limberg, 2007; Rieh et al., 2016). From a dramaturgical perspective, it is possible to identify performances in relation to online search and information literacies. In my first article, such a performance is identified, and the performance is viewed as reflecting my participants’ understanding of what it means to be information literate in the school setting (Article I). In writing this thesis, I am motivated by an interest in how young people navigate the use of search engines in relation to a complicated online environment. Seemingly little attention is paid to teachings of search engines in school (Davies, 2018; Sundin, 2015), at the same time as search engines are widely used in society and school (Halavais, 2018; Rutter, 2017). This is further described and discussed in Chapter 2.

I do not particularly draw on practice theory within this thesis. However, there is a certain level of overlap in my vocabulary, such as the use of the term activity, information activities (Article I), and practices. This is partly due to me situating my thesis in relation to information practices, but foremost due to the vocabulary provided by my dramaturgical frame. For example, in relation to impression management, Goffman (1959) writes: ‘I shall be concerned only with the participant’s dramaturgical

problems of presenting the activity before others' (p.8). The word activity is used throughout Goffman's work (Goffman, 1959; Persson, 2019). Furthermore, research on what young people do online, often use the term online activities (Marwick & boyd, 2014; Stoilova et al., 2020). I therefore denote online search as an activity within my thesis. Except for in my first article, where I use the term information activities, by which I refer to activities such as online search, the critical assessment of sources, and credibility judgements. In line with previous research, I view the term social practice to encompass an arrangement of activities (Hicks, 2018; Lundh, 2011). Yet, I primarily use the term to denote the way that activities of online search happens within a number of social practises in everyday life.

While online search has become a cornerstone of everyday life, as described above, Jutta Haider and Olof Sundin (2019) identify that there has not been much attention paid, empirically, to the investigation of the use of search engines in everyday life within information studies. This is as also reflected in the studies presented above. More is therefore known about how school shapes online search than the ways in which other social contexts do. Also, research has primarily focused on online search in relation to research assignments in school. Primary focus has been on searching in relation to the textual genre, although exceptions exist (Lundh, 2011; Rantala, 2010). Haider and Sundin (2019) discuss that the reason for the lack of attention to search engines within everyday life, might be the division of labour within information studies, where questions related to searching through search engines have primarily been in focus within quantitative studies. In turn, researchers with a qualitative approach and interest in everyday life, and practices, have not taken an interest in search engines. A few exceptions are put forth, for example, a study by Soo Young Rieh (2004), where online search in the home environment was investigated. In the study, it was identified that 'the Web has become embedded in everyday life' (Rieh, 2004, p. 751). Rieh also found that the web was interpreted in different ways, such as, as an information retrieval system, and as an information organization tool. Within the study, it was further noted that even though the web had become part of everyday life, families chose to place computers away from the areas where families typically hang out. Rieh (2004) concluded this to mean that the web was viewed as work-re-

lated rather than being viewed as a ‘family-shared information channel’ (p.751). Although the study was made in the early years of 2000, the way that devices come to be viewed in different ways, such as related to school or free time, comes through in my thesis (Article III). Furthermore, the ways that search engines are assigned meaning throughout my studies (Article II, Article IV), can be likened to the interpretations brought forth by Rieh (2004) in relation to the web. Beyond the division of labour in terms of methods, as pointed out by Haider and Sundin (2019) above, there has also been a divide in terms of perspective, where a focus on information seeking has been directed towards either work, or non-work contexts. Everyday life information seeking (Savolainen, 1995) has been a way of putting a name to the information seeking that happens outside of work or school. The term has been used as a replacement for non-work, and, as a way of giving value to information seeking outside of the context of work. Research has approached the two contexts as separate, and to some extent, as dichotomous (Dalmer & Huvila, 2019). Furthermore, Melissa Ocepek (2018) argues that although the field concerned with everyday life information seeking has grown and evolved, much research within the field is not typical for people’s everyday experiences. Ocepek argues for focusing on the ordinary parts of everyday life over the extraordinary, which is in line with my intention. Moreover, as online search is made possible through mobile devices, the division between work and school, as well as other spheres of everyday life, is hard to maintain. As noted by Stine Lomborg (2015): ‘As we carry our devices everywhere, activities and contexts of interaction become more interlaced in everyday life’ (p. 37). This becomes apparent also within my thesis.

Recurring Swedish and international surveys have recognized the rapid spread of digital devices in early ages, not least the smartphone, and the important role of search in young people’s everyday life (Anderson & Jiang, 2018; Carlsson, 2019; Davidsson et al., 2018; Livingstone et al., 2017; Stoilova et al., 2020; Swedish Media Council, 2019). Yet, little is known about how young people search in everyday life, what meanings they assign to search engines, and what devices are used for searching. Furthermore, information studies has had a focus on cognitive processes and mental models, and has to a lesser extent paid attention to materiality, and the role of physical devices.

es (Foss et al., 2012; Hicks, 2018; Lundh, 2016; Rutter, 2017). Research within information studies, as well as within media and communication, and education, argues for the need to bridge the gap between school and other contexts in developing literacies (Buckingham, 2015; Haider & Sundin, 2020; Subramaniam et al., 2015). To do so, knowledge is needed on the different ways in which young people make use of, for example, search engines in everyday life. Some studies have noted that within a school context, the use of YouTube is very limited, and sometimes forbidden (Bunting & Lindström, 2013; Rantala, 2010). In contrast, it has been suggested that YouTube is a very important search engine for teenagers in their free time (Pires et al., 2019). The thesis contributes to information studies by beginning to address this gap. I also argue that the thesis brings a material perspective, with an interest in the physical devices of searching, that will become evident in Chapter 3, which has been largely absent in relation to studies of online search within information practices (Haider & Sundin, 2019). The thesis navigates in the overlaps between searching, everyday life, information literacy and young people, which will be further elaborated in Chapter 2. For now, it is enough to state that taken together, these four angles construct an important problem space in information studies.

Aim and research questions

The aim of this thesis is to advance knowledge about the role of search engines and online search in the everyday life of young people (age 13-16). As put forth in the introduction, I view the relation between online search and mobile digital devices as an important part of understanding the role of online search in everyday life. This thesis therefore explores the relation between search engines and mobile devices, and how the two are used, and negotiated, in various social contexts. Drawing on a dramaturgical frame, the analysis focuses both on how search engines are used, and the way that young teenagers navigate expectations and rules surrounding the use of search engines and mobile devices in various contexts.

The thesis is written as a compilation; consisting of four articles (I-IV). To achieve the aim of the thesis, each article addresses a different aspect of online search. The following research questions guide the thesis:

1. How is online search done in school, and how is the activity legitimised in a school setting?
2. What framings can be identified when teenagers describe their use of Google Search?
3. How do young people become aware of their online search traces, and what strategies do they have for managing them, if any?
4. What framings of the smartphone can be identified in the way that young people use and describe smartphones, and how do the framings relate to online search?

The research questions each correspond to one of the articles (I-IV). However, minor adjustments have been made in the phrasing of the research questions, as compared to how they appear in the articles. In addition, the aim of the fourth article has been re-written into a research question. The questions are here posed in the same chronology as the articles are presented within the thesis. The four articles can be said to follow two different themes. Article I and III focus on impression management, in relation to how online search is done (Article I), and in relation to online traces of search (Article III). Article II and II focus on framing, of Google Search (Article II), and of the smartphone (Article IV).

This thesis is an empirical, methodological and theoretical contribution to information studies. Empirically, by exploring online search beyond specific research assignments in school, as well as by expanding the scope through investigating online traces of search. In addition, by exploring the role of mobile digital devices in relation to online search. Theoretically, by highlighting the perspective of everyday life, together with a dramaturgical approach, as a means for analysing online search and the shifting ways in which it is done, and framed, in various contexts. The methodological contribution comes from showcasing, and scrutinising, the benefits of using ethnographic methods as a way to approach online search in everyday life.

Furthermore, as search engines are also of interest to other disciplines, it is my hope that the thesis will provide insights that go beyond a narrow understanding of information studies, making a valuable contribution also to fields such as media and communication studies, educational sciences, and studies on young people. For example, by showing the way that young

people are mindful of norms and expectations in different contexts, as related to online search. Also, by describing the ways in which school's usage of Google Search, and the use of Google for Education, contribute to the way that online search is taken for granted in everyday life.

Outline of the thesis

In this introductory chapter, the problem area and aim of the thesis has been outlined. In the second chapter, previous research relating to the thesis topic will be discussed. In the third chapter, the theoretical and conceptual framework of the thesis will be outlined. The thesis is framed by a focus on everyday life, and I draw on the work of Goffman's (1959, 1974) in my analysis. How the frame provided by Goffman, and everyday life, intersect is described in the chapter. In the fourth chapter, my methods and material are presented. The way that my ethnographic stance is interlaced with my focus on everyday life is also described in the chapter. The fifth chapter provides a summary of the four articles of the thesis. Finally, in the sixth and concluding chapter, the four research questions are addressed and discussed in relation to the aim of the thesis.

2. Previous research

Young people

Marc Prensky's notion of the 'digital native' is now twenty years old and has been problematized and nuanced (Prensky, 2001). Digital native was used as a catchphrase for describing young people born after 1980, who had grown up surrounded by digital devices and the internet, as opposed to digital immigrants, i.e., those not born into such circumstances. A generational divide between young people and older generations was thereby depicted, and according to Prensky (2001), digital natives 'think and process information fundamentally differently from their predecessors'(p.2). Such portrayals of the younger generation have been, as mentioned above, nuanced and problematized, and instead calls have been made for realistic and nuanced research into the way that young people interact with technology in their everyday lives (boyd, 2014; Hanell, 2019; Scolari, 2019; Selwyn, 2009; Sjöberg, 2010; Thomas, 2011). Within information studies, such calls, I would say, can be viewed as related to approaches taken within the field of information practices. I am in agreement with Anna Lundh (2016) who proposes a focus on 'creating understandings of various information practices which involve people of young age', rather than 'trying to explain how children in general are and therefore behave with information' (no pagination). The ways that children and young people are conceptualized, in relation to information seeking, is ongoingly discussed within information studies (Bernier, 2007; Lundh, 2016; Rutter, 2017). These discussions are tied to questions of theoretical underpinnings of research, ranging from a focus on individual attributes, to viewing information seeking as cultural (Lundh, 2016), as in this thesis. In relation to

young people within information studies, Anthony Bernier (2007) notes that research on young people's information seeking through the 1980s emerged primarily from teacher and library concerns with student research and retrieval skills. During the 1990s there was a shift in research focus; 'from examining what young people knew and learned to how they learned' (Bernier, 2007, p. xiii). When reviewing the literature on young people's information seeking, Bernier (2007) found that most often the category of young people was conflated into the category student and that young people's information seeking was conceptualized as an individual process rather than as an activity that happens in interaction with one's social environment. This might help explain why there are more studies connecting learning and information seeking than research connecting information seeking and everyday life, as illustrated in my introductory chapter. It might also be that information seeking in relation to learning is easier to demarcate within research than that of information seeking in relation to everyday life, a topic I return to in Chapter 4.

Above, it was noted that the concept of digital native has been problematized. Yet, attempts to find a suitable name for the generations that are growing up surrounded by digital devices continues with *the Google generation* (Rowlands et al., 2008), and the *App generation* (Gardner & Davis, 2013) to name a few. In this thesis, I will not further explore the meaning of these concepts, except to say that they are indicative of the magnitude of changes that have taken place in relation to the use of mobile digital devices and the role of online search for finding information. These changes have sparked discussions on what young people need to know in order to navigate an everyday life infused with online activities, a topic I return to when discussing literacies. Importantly, it also pinpoints how we have all changed in the ways that we look for information. In fact, Ian Rowlands et al. (2008) argue that 'We are all the Google generation, the young and old, the professor and the student and the teacher and the child' (p. 308). The role of search engines in general, and Google Search in particular, will be discussed further below. In her thesis on the use of search engines in primary school, Sophie Rutter (2017) addresses the question of children as a distinct user group. Based on her findings, Rutter notes the importance of considering not only age, but also the setting in which search happens.

While Rutter found differences in relation to how young people search in relation to age, there were more similarities in terms of how the setting influences the activity of search than there were differences related to age, within a certain age interval.

The presentation of previous research on young people, above, shows the way that societal changes can create strong narratives in relation to the younger generation, as alluded to in my introductory chapter. It also shows that more nuanced accounts have come forth, something that this thesis also seeks to contribute with.

Online search

Search engines in society

Much research points towards the centrality of online search in contemporary society, as mentioned in my introductory chapter (Haider & Sundin, 2019; Halavais, 2018; Hillis et al., 2013; Lomborg & Kapsch, 2019; Noble, 2018; Vaidhyanathan, 2011). Together with colleagues, I have earlier stated that it is possible to argue for a search-ification of everyday life and a mundane-ification of search. The theme of search-ification refers to the ways in which many everyday activities, from cooking to shopping, depend on or involve online search. The mundane-ification of search, on the other hand, captures how the activity of searching has gone from being a specialised, professional activity, to being a routine part of many practices of everyday life (Sundin et al., 2017). This is not to say that people did not search for information previously. As Jack Andersen (2018) draws attention to, this was done in other ways, such as by going to the library or using an encyclopaedia for example. Yet, this was not viewed in terms of a culture of search (Hillis et al., 2013). Andersen (2018) points out that this change is due to search engines, which ‘have turned the very activity of search into a mundane cultural activity’ (p. 1141). This shift took place as the activity of online search moved from bounded settings, such as the library. With this change, search engines became ‘an information network that pervades home, work and play’ (Knight & Spink, 2008, p. 279). The

movement away from bounded settings has become even more prominent with the use of smartphones and other mobile devices. It is this mundane aspect of search and how it is just part of everyday life, coupled with the ability to search through mobile devices, that the thesis seeks to address in relation to young people.

Ken Hillis et al. (2013) argue that Google is the most powerful both innovator and driver of the development of search. However, the history of the modern search engine began in the non-commercial area of academy and research institutions (see Van Couvering, 2008, and Haider & Sundin 2019, for further historical overview). The rise of Google Search started in the late 2000s, during the dot-com boom. An important driving factor behind the success of Google Search is attributed to their algorithms, primarily PageRank, which ‘transformed the practice and conceptualization of what it was to search the web’ (Hillis et al., 2013, p. 3). PageRank weighs interaction between websites, referred to as in-links and out-links, when ranking results. A webpage, according to PageRank, is analysed based on the quantity and quality of links that point to it. Google Search continues to change and refine its algorithms and take more aspects into consideration when ranking, such as location, use of device, and previous searches to mention a few, although there are hundreds more. The aim of the fine tuning of the algorithms is to improve the relevance of search results (Haider & Sundin, 2019; Lewandowski, 2012). These algorithms are what contributes to search results feeling relevant, such as receiving local suggestions when searching for a store or restaurant. Yet exactly how Google’s algorithms work is unknown (Haider & Sundin, 2019; Hargittai, 2020; Lewandowski, 2012; Willson, 2017). Taina Bucher (2018) describes the algorithms of corporations such as Facebook and Google as their ‘secret sauces’, which ‘give shape to the information and data flowing online’ (p. 41). By this, she means that the algorithms determine how, for example, search results are ranked on Google Search and what people encounter on their Facebook feed.

The lack of transparency of the workings of Google Search is problematic given the crucial role of the search engine in online activities and information searching. In addition, using a search engine is seemingly quite simple, which further enables a concealment of the workings of the search

engine (Haider & Sundin, 2019; Halavais, 2013; Huvila, 2016). Isto Huvila (2016, p. 572) notes that using a search engine ‘feels easy’ to such an extent that is hard to see how a search engine could be improved. Stine Lomborg and Patrick Heiberg Kapsch (2019) investigated how people decode and imagine algorithms, and note that when their respondents view Google Search as the best search engine, it is because ‘they expect its algorithms to give the most precise results’ (p. 9). The way that Google Search just works smoothly and gives, what most people experience as, good results make it easy not to question the search engine. In a similar vein, Alexander Halavais (2013) refers to search engines as medias of attention:

As Google reminds us each time we search, there is never just one page on the web that might suit our interests; it is a rare query that does not produce hundreds of thousands of results. Instead, search engines are designed to warp the information environment. They are a tool that allows us to blind ourselves to the distractions inherent to the web, and focus attention on a relatively small handful of pages that – the search engine assures us – are most applicable to the topic at hand. (p. 249)

The way that attention is directed at a small number of results is further discussed in relation to literacies, later in the chapter.

Search engines and their role in the classroom

Google has also made its ways into the educational setting, both in terms of the search engine being used for information searching and through *Google for Education*. *Google for Education* is a cloud-based service that provides schools with various software, such as Google Classroom, Google Drive, Google Docs, and so on. Google’s laptop, Chromebook, has also made its way into many Swedish schools. Using Sweden as an example, Hanna Carlsson (2021) notes that ‘Google for Education positions itself as a much-needed bridge, in the shape of digital information infrastructure, between digital policy and educational practice’ (p. 17). A streamlining of ICT solutions, which makes it easier for pupils and teachers to manage activities such as classroom exercises and communication, is thus one ar-

gument for the implementation of the system (Carlsson, 2021; Grönlund, 2014; Lindh et al., 2016; Lindh & Nolin, 2016; Sundin et al., 2017).

In the Swedish school system, changes have also taken place in terms of teaching, with a transition from teacher-directed instruction to pupil-centred learning methods. More emphasis is placed on pupil's independent search for knowledge: 'more often than not in the form of independent research via the computer' (Alexandersson & Limberg, 2012, p. 132). Anna Lundh (2011) notes that these ways of working mean that teachers must redefine their roles in terms of being deliverers of information, and children, in turn, need to be able to direct themselves through their assignments. In relation to information literacies, there has been much research focused on how young people search for and evaluate information sources when working with independent research assignments, the findings of which will be described further along in the chapter. For now, it is worth mentioning that in the school setting, Google Search has been identified as a starting point for online search (Borlund, 2016; Julien & Barker, 2009; Sundin & Francke, 2009). Further, Heidi Julien and Susan Barker (2009) identified that Google was equated with the internet among their participants in that the two terms were used interchangeably. This reflects the way that Google Search dominates in society at large, as sketched above. In my second article, particular attention is paid to my participants' framings (Goffman, 1974) of Google Search, and how they reflect on questions such as ranking. Previous research has also identified a link between Google Search and Wikipedia in that pupils begin an assignment by searching on Google and then follow the first link, which takes them to Wikipedia. At the same time, Wikipedia is not considered an altogether credible source by young people in the school context (Francke et al., 2011; Rantala, 2010; Sundin & Francke, 2009), a topic which I also explore in my first article. The connection between Wikipedia and Google also relates to the important role of Google's ranking in relation to searching for information online. The way that Google's ranking is used as a way of finding other sources that support what is stated on Wikipedia was also identified by my colleagues and I (Sundin et al., 2017). I will return to the topic of Google's ranking when discussing literacies. In relation to online search in primary school, Rutter (2017) puts forth that search engines are used in more ways in school

than reflected by current research. Beyond searching for specific research assignments, ways of searching include, but are not limited to, dictionary-type searching to find out spelling, and to search for answers to questions posed by children in the classroom or that come up in discussion. Searching happens in planned as well unplanned manners (such as arising from discussion) (Rutter, 2017). This is indicative in different ways of the reliance on search engines in schools. It also shows the value of investigating search beyond specific research assignments to capture the many ways in which it happens, something my thesis also seeks to contribute with.

The fact that young people search by visual means, using image search, has also been put forth in the literature (Borlund, 2016; Lundh, 2011). Pia Borlund, for example, identified the use of image search and with that ‘a change of search style, from classic querying and relevance assessment in the form of reading of results to querying and scanning of pictures for relevancy’ (Borlund, 2016, p. 320). The role of image search, which causes some frustration among my participants as the ranking is considered messy in comparison with textual ranking, is something that is brought forth in my second article. In relation to feelings such as frustration, Carol Kuhlthau’s (1991, 2008) work on the way that young people search for information in relation to school assignments is worth mentioning. Her information search model was of importance to the research field concerned with young people, as it drew attention to feelings such as frustration and uncertainty during the processes of seeking information (Case & Given, 2016; Haider & Sundin, 2019; Hicks, 2018; Lundh, 2011). However, the research was carried out in school libraries during the 1980s with pupils using the library system to find information for an assignment. It is thereby a quite different scenario than when my participants search for an image by initiating a Google search on their laptops. The primary overlap is the role of emotions.

At the same time, research indicates that the extent to which search engines, and online search, shape how information is found, is not reflected in how it is dealt with in the educational context (Davies, 2018; Sundin, 2015; Sundin & Carlsson, 2016). In a review of the curriculum for Swedish compulsory schools, Olof Sundin (2015) identified that search engines are viewed as neutral and that a critical perspective of information searching

is absent. While a critical perspective is directed towards evaluation of sources and media's role in society, 'searching is above all treated as use of technology' (Sundin, 2015, p. 206). In line with those findings, Huw Davies (2018) argues that 'despite their impact on many young people's gateway to knowledge, Google's algorithms are rarely, if ever, mentioned in educational contexts' (p. 2777). It should be noted that in 2018 (Skolverket, 2021), so-called digital competence (in Swedish, digital kompetens) was written into the curriculum for Swedish compulsory school. The National Agency for Education (2021) highlights four focus areas when it comes to digital competence: 1) understanding the impact of digitalization on society; 2) using and understanding digital tools and media; 3) having a critical and responsible approach; and 4) solving problems and turning ideas into action. Their platform includes material targeted at teachers for working with questions related to how search engines and algorithms work (Skolverket, 2021a). The concept of digital competence has relations to various forms of literacies, as presented in the introduction, and which will be presented further along in the chapter. However, this concept was added to the curriculum after fieldwork for the thesis ended.

Search engines and critical research

There is also critical search engine research drawing attention to issues associated with the workings of search engines and their role in society (Bucher, 2018; Carlsson, 2021; Haider & Sundin, 2019; Hillis et al., 2013; Lewandowski, 2012; Lindh & Nolin, 2016; Noble, 2018; Rogers, 2019; Vaidhyanathan, 2011). For example, in the book *Algorithms of Oppression*, Safiya Noble (2018) questions the perceived neutrality of search in relation to issues of racism and sexism, and puts forth that 'search happens in a highly commercial environment, and a variety of processes shape what can be found; these results are then normalized as believable and often presented as factual' (p. 24). The connection between facts and search engines is brought forth within my study, in particular in Article II and IV. I will return to the topic later in the chapter. Researchers also caution against the potential consequences of implementing *Google for Education*. Findings from Hanna Carlsson (2021) suggest that 'the material, social and cultural

implications may be that Swedish pupils run the risk of never facing alternatives to the biased Google way of handling information and data, the raw material of our time' (p. 18). In a similar vein, Maria Lindh et al. (2016), argue that 'as pupils are educated according to the goals of the Swedish educational system, they are also trained into becoming Google users. This is a process of domestication in which the use of diverse Google software becomes taken for granted'(no pagination). Based on these descriptions, it is hard to see why and how young people would feel the need to search through another search engine than Google Search.

Google Search, as sketched above, clearly dominates the landscape when it comes to online search and is not challenged by other general search engines. In the lives of young people, it is only challenged by searching that takes place on social media. Fernanda Pires et al. (2019) propose that 'YouTube, more than Google, is for many teens the main search engine' (p. 2). In their study, they describe that the different ways that YouTube is used are interwoven with teens' everyday routines, something I also find in my research (Article IV in particular). Pires et al. (2019) identified five ways in which YouTube was used: radiophonic, televisual, social, productive and educative. In relation to radiophonic use, the authors found that some participants rely on YouTube's algorithms to suggest music while others use the site as a search engine for finding songs. This type of searching is mostly motivated by personal interests. The participants also made use of certain features of the platform, such as YouTube's recommendation system. YouTube also functions as an online archive. In relation to educative use, the platform was used for finding new games and features within games. However, it was also noted that there was a wide range of topics being searched for, from how to take care of a pet to academic content. They propose that this happens as 'teens see YouTube as a free platform where they can literally find any kind of content, working as a tutorial repository' (Pires et al., 2019, p. 13).

Taken together, the research in this section points towards the reliance on search engines in general, and Google Search in particular, in relation to online search within the classroom and in society at large. At the same time, the complex workings of the search engine are concealed, and search appears as something that is easy, and unproblematic, to do. The research

also points towards the need to consider both Google Search and other ways of searching, such as YouTube, to understand the role of search in the everyday life of young people. I will now proceed from the search engines that are used for searching, to discuss the devices that make search possible.

Young people and digital devices

The omnipresence of search, as mentioned in my introduction, is related to the shift from using desktop computers in bounded settings, to the use of mobile devices. As an example of this shift, statistics show that in 2010, 12% of 15-year-olds in Sweden used their mobile phone to access the internet. By 2018, this number had risen to almost 100%—a change that has been influenced by the spread of smartphones (Swedish Media Council, 2019). These patterns are similar to those of the US and other countries in the EU in terms of ownership and use of mobile devices among young people (Anderson & Jiang, 2018; Livingstone et al., 2017). In tandem with widespread access to the internet and mobile devices in society, devices have also moved into classrooms. The introduction of digital tools in school, on a widespread level, can be traced to the introduction of the electronic calculator in the 1970s. During the 1980s, personal computers were introduced in classrooms and specific computer rooms were created (Skolverket, 2018). Torbjörn Ott (2017) identifies that the 1980 curriculum stipulates that pupils should learn about computers and how they function. In 1984, this was turned into a subject that can be loosely translated as ‘computer knowledge’ (Ott, 2017, p. 24). The more encompassing digitalization took place as schools began being able to provide each pupil with a digital device. This took off in 2007–2008 as internet access became more stable and widespread (Skolverket, 2018a). Many schools in Sweden have worked towards the goal of ‘one-to-one’: one computer for every pupil (Grönlund, 2014). In compulsory school, the statistics show that seven out of ten pupils use computers to carry out school assignments and the internet has become a staple within education. Statistics further show that among pupils in Years 7–9, 97% use the internet in school for school assignments, a majority of them on a daily basis (Internetstiftelsen, 2019).

Smartphones have become part of the school day, and the classroom, not

on initiative from the school but because smartphones are part of the daily life of young people (Ott, 2017). Schools have different ways of dealing with the omnipresence of smartphones. In an analysis of the debate in two daily newspapers in Sweden regarding mobile phones in schools, Ott (2014) identified that mobile phones became controversial in school settings due to the devices being the pupils' private possessions and not belonging to the learning institutions. The way that smartphones challenge the boundedness of the classroom has also been seen to cause struggles in the classroom (Dinsmore, 2019; Mifsud, 2014). Brooke Dinsmore (2019) identifies that mobile devices blur local and remote contexts and that teachers have less control over classroom space. To deal with this, teachers might ban the use of smartphones altogether, or work with 'differentiation strategies' wherein some uses of mobile technology are viewed as residing within the educational sphere, 'namely uses that were teacher-directed and controlled' (Dinsmore, 2019, p. 672). At the same time, the use of mobile devices in the school setting has been described as shaped by pre-existing structures within school (Ott, 2017; Selwyn et al., 2017). Based on an investigation of the everyday use of smartphones, laptops and tablets in three Australian high schools, Neil Selwyn et al. (2017) argue that 'far from being a source of substantially different practices, the one-to-one presence of personal digital devices seemed largely to support the reinforcement of established ways of "doing" school' (p. 306). These ways of 'doing school' included using devices for preparing, writing up, and submitting their work. According to Selwyn et al. (2017), the dynamic potential of using mobile devices was not realized, although they did describe devices being used in a way that can be considered 'contemporary screen based ways of working' (p. 306). These ways of working refer to using devices for multitasking, between and within devices, switching between the main task of work, using applications such as dictionary or calculator, checking messages, and so on. Moreover, the devices gave pupils the ability to listen to music and play games.

The way that devices are used in conjunction, as described above, rather than replacing each other has been noted within research (Dirndorfer Anderson, 2013; Stoilova et al., 2020). Theresa Dirndorfer Andersson (2013) describes this in terms of young people using devices as collective tools. In a similar manner, Mariya Stoilova et al. (2020) note that when children grow

up in device-rich homes, they tend to use smartphones as part of a range of technological devices (Stoilova et al., 2020). Yet exactly how they are used in conjunction, and which roles the different devices have, is not evident. Dirn-dorfer Andersson (2013) suggests smartphone use as an activity that takes place in between other activities. In relation to online search, the smartphone has been described to ‘facilitate an “always at hand” gateway to information and the possibility to seek answers in real time’ (Stoilova et al., 2020, p. 137). The need to retrieve information ahead of times is thereby reduced (Bertel, 2013). Still, due to, for example, a social code, people might refrain from searching as it can be a conversation killer (Haider, 2017). The mobility of mobiles has also been discussed. Leopoldina Fortunati (2014) describes the way that mobiles are only mobile as far as people are, and when people become sedentary, so do mobiles (Fortunati, 2014). That mobile devices are used for accessing the internet within non-mobile settings, such as in front of the TV or while in bed, has also been explored (Church & Oliver, 2011). Importantly, the concept of mobile, here, pinpoints the way that the smartphone, most of the time, moves with my participants. When they go to bed, so does the mobile, when they go to have dinner with their family, so does the mobile, and so on. This opens up for negotiations concerning where the smartphone should be placed and how it may be used in various everyday situations. Interestingly, my colleagues and I found that the young people in my study seem to prefer searching on a desktop computer, as compared to on a smartphone (Sundin et al., 2017). At the same time, when my participants were asked when they couldn’t search, one of the answers was that searching was not possible when their phones were out of battery (Sundin et al., 2017), thus signalling that they do indeed search using their smartphones. Yet exactly how or when was not explored in the article, a topic I instead return to in my fourth article. Which devices young people prefer for searching online has not been widely explored. However, in a study of adolescents’ online searching at home, focused on a desktop computer, Elizabeth Foss et al. (2013) brought forth that focusing on mobile devices could potentially extend their findings as they noticed the use of mobiles and other mobile devices among their participants.

Sonia Livingstone and Julian Sefton-Green (2016) shed light on the fact that with the abundance of media devices follows questions in households

about how they should be used and where they should be placed. For instance, if young people should be allowed to use media on their own in their room or in plain sight in the living room. In my study, such questions come through in the way that, for example, one participant described that his gaming computer was placed in the family's living room rather than in his own room. This issue also appears in relation to whether phones are allowed when having dinner, as explored in my fourth article. Billy Ehn et al (2016) propose that an investigation of meals and how they are carried out enables a focus on cultural reproduction. They pose the question of what children learn from the experiences of meals and how this leads to cultural continuity and change, something I discuss in relation to smart-phones in my fourth article. Drawing on Erving Goffman, Jayde Cahir and Justine Lloyd (2015) investigate text messaging practices in the presence of others. Although not focused on young people, the study shows how devices are seen as challenging to face-to-face interaction. Based on their findings, they suggest that text messaging practices in the presence of others implies 'the individualization of shared social situations that are expected to be communal' (Cahir & Lloyd, 2015, p. 714). The way that using the smartphone is viewed as an individualized activity, in contrast to watching TV, is also explored within my fourth article. This resonates with findings from Livingstone and Sefton-Green (2016), who found that limiting screen time was strived for in almost all homes in their study of young people. One way of maintaining this was by giving the TV a positive role.

The smartphone has been described as the most personal and private of young people's devices (Vickery, 2015). In addition, the individualized use of the smartphone has been brought forth as furthering youth 'bedroom culture' (Stoilova et al., 2020, p. 131), which, in simplified terms, refers to young people's individualized, often screen-based, media use in Western society (Livingstone, 2007). Stoilova et al. (2020) note that the individualized and private use of the smartphone heightens parental anxiety about what young people are doing online. At the same time, in relation to privacy, young people can be said to have less of it to begin with, given their social status, and they might also be sharing rooms and devices with other family members (Vickery, 2015).

The research on young people and mobile devices indicates the way that the use of devices is ongoingly negotiated in various social contexts. It seems that young people use a combination of mobile digital devices in everyday life, although the smartphone surfaces as the most private device. The smartphone is present almost constantly and enables retrieving information in the here and now. However, the relation between the smartphone, as well as other devices, and online search is less evident. I will now turn my attention to research relating to information literacies and other forms of literacies related to online search.

Online search and literacies

In Chapter 1, it was sketched that the thesis relates to research on information literacies written in a sociocultural tradition. Here, I will discuss the results and findings from such studies that are of relevance for my thesis. I will also draw on research from areas such as new literacies and digital literacy. Starting from technological changes, new literacies foreground the way that technological changes lead to many new forms of literacies, and the ways in which literacies will continuously change and multiply (Coiro et al., 2008; Hanell, 2019). Hanna Carlsson and Olof Sundin (2016), for example, describe that ‘the search engine is one of many recently introduced technologies of literacy in schools that are connected to “new literacies”’ (p. 991). Digital literacy, as the term implies, connects to the question of the digital environment, and as such there is overlap with new literacies. Yet neither concept is precise in its definition, and many interpretations exist. David Buckingham (2015) argues for a broad definition of digital literacy that goes beyond a functional view of information seeking in a digital environment. In relation to young people, Buckingham (2015) identifies the way in which digital media are used as cultural forms and argues that ‘if educators wish to use these media in schools, they cannot afford to neglect these experiences: [...] they need to provide students with means of understanding them. This is the function of what I am calling digital literacy’ (p. 23). The need to focus beyond functional skills is a theme within much research on search engines and the digital environment (Bowler et al., 2017; Lomborg & Kapsch, 2019; Subramaniam et al., 2015; Willson, 2017), and also an area of importance

within this thesis. These different approaches to literacies overlap as I am interested in the situatedness of search engine use in everyday life. Beyond these forms of literacies, presented above, there are numerous concepts and literacies put forth in research in relation to search engines, the digital environment and algorithms, as mentioned in Chapter 1. Trying to define and map out all these concepts in relation to each other is a Sisyphean task. I will instead focus on describing the results of such research, and when necessary, define concepts.

In an overview of current literature on searching behaviour with respect to learning tasks, Soo Young Rieh et al. (2016, p. 21) discern two different perspectives within previous research: ‘searching to learn’ and ‘learning to search’, further identifying that within information studies, learning has traditionally been conceptualized as a context for searching, which is also evident in the research presented below. In the studies that focus on learning to search, students’ searching behaviour in relation to the research process in school assignments is in focus. In relation to learning to search, focus is on how students’ search skills can be improved. Renee Morrison and Georgina Barton (2018) identify that in class, search engines are not used for explicit skills lessons in relation to the internet. Instead, their participants’ digital literacy, or lack thereof, as they conclude, stems from repeatedly ‘searching to learn’ and rarely ‘learning to search’ (p. 44). The authors also found inconsistencies between the way that the pupils described their search behaviour and the behaviour in practice, something that might suggest that pupils are aware of what a good searcher should be even if this is not something they practice. Research points towards search engine use being focused on the subject content that is searched for, and to a lesser degree, the workings of search engines (Davies, 2018; Morrison & Barton, 2018; Rantala, 2010; Sundin, 2015; Sundin & Carlsson, 2016). Sundin and Carlsson (2016) found that teachers have difficulties in conceptualizing search as something they can teach. When in focus, searching was instead identified as a practical skill. Research thus indicates that in a school context, search engines are mostly used as neutral tools that enable retrieving information on subject matters, and less attention is drawn to the more complex issue of the workings of search engines, as will be discussed below.

Literacies and search engines ‘behind the scenes’

In tandem with the development in which search engines have become gateways to information, concepts and literacies such as infrastructural meaning making (Haider & Sundin, 2019), data awareness (Bowler et al., 2017), data literacy (Lomborg & Kapsch, 2019), algorithm skills (Hargittai, 2020), algorithm awareness (Gran et al., 2020), and personal data literacies (Pangrazio & Selwyn, 2019) have been brought forth. Such research points to the invisible work of algorithms in relation to search engines, and other platforms, in structuring how and what information is found, as also alluded to previously in the chapter. It calls attention to placing focus on the way that information is found, as much as focusing on evaluation of the information once it is found. As such, the research can be said to place an emphasis on the workings ‘behind the scenes’, and the arguments put forth in relation to the different concepts rest on the acknowledgement of the important role played by search engines and algorithms in everyday life. For example, Michele Willson (2017) argues that ‘internet connectivity and associated digital literacies are increasingly necessary for the enactment of activities and functions that could be readily classed as everyday practices’ (p. 139).

Christie Kodama et al. (2017) investigate the way that young people (10–14 years old) conceptualize Google by asking them to draw how they think the search engine works ‘behind the scenes’. Six different categories emerged in the analysis: Google as people, as equipment, as connections, as a physical space, as an interface, and as codes. Google as people was the most represented typology. Furthermore, they noted that the term ‘trust’ was also used in conjunction with the people behind the scenes. Kodama et al. discuss the fact that envisioning a person behind the screen/search engine mirrors the way that people are used to finding information offline, by asking people who they trust, and receiving an answer. They propose that such an understanding of Google might contribute to explaining why young people rely on Google’s rankings (Kodama et al., 2017). Such conceptions of the working of Google Search are also present in my third article. In a similar vein, Sundin and Carlsson (2016) identify that pupils seem to have high trust in the search engine. Furthermore, the placing of search engine results can be said to become part of the assessment: ‘A website is

given its significance not just according to its content, but also due to how the media ecology functions on the web and how well a website is adjusted to the algorithms of Google' (Sundin & Carlsson, 2016, p. 1002). A similar conclusion is derived by Ulrika Sjöberg (2018) who, drawing on Goffman (1974), analysed young people's framings in relation to online search. Her study focuses on questions about what kinds of interpretative framing processes take place when children make sense of information about a critical event, such as Ebola, from various digital sources. The study also considers how the different framings affect children's perceptions of credibility. Six different framings were identified: a 'networked I framing', a 'celebrity framing', an 'easy access framing', a 'proximity framing', an 'interactivity and gamification framing', and a 'suspicion framing'. The children in the study preferred concise information with few words, as well as images and visual elements. An easy access framing is also identified within my fourth article, in relation to the smartphone, pointing to the same expectation of instant availability of information. Identifying that today's society is characterized by a high-speed culture, Sjöberg (2018) argues that for young people, new criteria for credibility assessments emerge, such as having a top ranking on Google. She further identifies how other aspects, beyond usefulness, such as 'engaging through liveness and visual material', are of importance (Sjöberg, 2018, p. 135). Manuela Pietraß (2010) argues for the benefits of frame analysis in relation to teaching digital literacy. As a theory that takes interaction into account, Pietraß notes that it fits well within the multitude of communicative contexts that digital media provides

As mentioned in Chapter 1, there are discussions about teachings of various forms of literacies reaching beyond the classroom (Buckingham, 2015; Julien, 2016). However, it has been found to be difficult to translate teachings of information literacies from school to other areas of life. Moreover, in the school setting, a critical assessment of sources is evaluated by teachers and might influence grading. This thereby creates an incentive for evaluation, one that is absent outside the classroom, and information might be assessed differently (Sundin, 2020, p. 8). Leslie Haddon et al. (2020) describe the following difference in relation to young people and digital skills: 'to use the internet effectively in everyday life, a wide range of digital skills is likely to be required. But if the task is to find and evaluate informa-

tion, then specifically information literacy is what is needed' (p. 25). This, I believe, can be translated to the different demands present in various situations. Notably, research emphasizes making algorithms and data meaningful in relation to ordinary situations (Lomborg & Kapsch, 2019; Subramaniam et al., 2015). For example, Lomborg and Heiberg Kapsch (2019) stress that data literacy should focus, beyond technical knowledge and skills, 'also on showcasing, real life examples of algorithmic work in different contexts, relatable to the life of ordinary people' (p. 15).

Discussions related to the workings of algorithms behind the scenes also draw attention to questions of privacy and security. Leanne Bowler et al. (2017) posed the question of what the term data means in young people's everyday life. Two conceptualizations of data are presented in their material: data as numbers and quantitative evidence, and data in terms of the digital traces of online behaviour. They found an awareness of security issues related to social media but conclude that what data is and how it flows were not part of the thought process of young people. This might not be so surprising as it is a difficult term to grasp, Luci Pangrazio and Neil Selwyn (2019) argue that 'as digital data become more ubiquitous to everyday life, it is also becoming increasingly difficult for non-specialists to define and understand' (p. 420). In relation to algorithmic skills, Eszter Hargittai et al. (2020) distinguish between awareness, understanding and attitude. Awareness is defined in terms of: 'knowing that a dynamic system is in place that can personalize and customize the information that a user sees or hears' (Hargittai, 2020, p. 771). Understanding is defined as a next-level skill and as the ability to understand certain aspects of algorithms. Attitude is not considered a skill per se but instead focuses on how people feel about various systems. The concept of data and traces comes into focus within the thesis in relation to the question of my participants' conceptualization of online traces of search. This is addressed in my third article

Search engines and facts

When considering research on young people's information seeking and online search, as well as in relation to search engines as tools for locating information, the role of facts is prominent, as briefly mentioned earlier in

the chapter. It has been identified that pupils' experience information seeking as fact-finding, and that fact-finding is in focus when pupils carry out information seeking for school assignments (Gärdén et al., 2014; Limberg, 1999; Sundin & Francke, 2009; Todd, 2006). Rieh et al. (2016) argue that 'current search engines are optimized for only a certain kind of learning – acquiring factual knowledge – but are less successful at facilitating other kinds of learning, such as understanding, analysis, application or synthesis' (p. 20). Rieh and her colleagues relate this to the interface of the search systems and the ranking of results, which give people a signal to choose relevant search results quickly and easily (cf. Huvila, 2016). The use of facts is thereby accentuated in relation to search systems. It would thus seem that search engines work best for 'lookup' searches, as described by Gary Marchionini (2006, p. 42), as opposed to search types referred to as 'learning', and 'investigating'. Searching for the purpose of learning, according to Marchionini, normally demands multiple iterations and the results require cognitive processing and interpretation. Learning is defined in terms of developing new knowledge. Investigative search is explained to take place over longer periods of time and involve analysis, planning, and evaluation. Marchionini describes lookups as a basic type of search that demands less of people, whereas learning and investigative searches are described as an exploratory process. How online search is described by my participants corresponds with aspects of Marchionini's definitions of search, which comes though particularly in my second and fourth articles. However, I also identify the way that different forms of searching are collapsed into the category of fact-finding. In my fourth article, a discussion is brought forth on the association between lookup searches and the use of smartphones.

The way that facts are associated with certain genres and modalities has also been in focus within research (Gärdén et al., 2014; Rantala, 2010; Sjöberg, 2018; Sundin & Francke, 2009). In relation to genre, facts are often contrasted against what is not considered to be facts, such as images and opinions (Gärdén et al., 2014; Lundh, 2011) or not containing factual content, such as blogs (Sundin & Francke, 2009). Also, various forms of cultural expressions, such as movies and music, are not considered facts (Gärdén et al., 2014). When children search for images in school, it has

been found to be done in a playful manner and resembles a game, thereby 'the activity of seeking pictures is temporarily separated from the research method of working' (p. 249). Rather than conveying information, images instead serve decorative purposes within research assignments. Focusing on images, Lundh and Alexandersson (2012) argue that information literacies are not merely text-based but multimodal.

In addition, Gärdén et al. (2014) found that facts were described in terms of concrete external entities, and as true and neutral. Facts as concrete external entities came through in the way that verbs functioned in relation to the term, such as 'searching for facts' and 'finding facts' (Gärdén et al., 2014, no pagination). Facts as true and neutral arose from adjectives such as pure, clear and neutral being used in conjunction with facts. Gärdén et al. note that the expression of 'pure facts' seems to be a strong part of the discourse in Swedish schools (Gärdén et al., 2014, no pagination). Taken together, research indicates that a focus on facts is present when young people are working with school assignments and furthermore, that the use of search engines might turn complex problems into simplified ones in order to make them searchable. What is considered easy to search for, and not, is discussed in my second and fourth article.

3. Conceptual and analytical framework

In this chapter the theoretical and analytical frame of the thesis will be outlined; beginning with a description of the perspective of everyday life, and what it means within the thesis. Thereafter, I will describe the dramaturgical analytical perspective and how it relates to everyday life. Thereafter, I will present concepts of importance in relation to the analytical perspective, firstly, in relation to self-presentation, and secondly, in relation to frame analysis.² Finally, I will end the chapter by relating my theoretical frame to sociomateriality, and questions of power.

Starting in the everyday

Within information studies, everyday life has been explored through different perspectives. Through the lens of practice theory, everyday environmental information (Gramini & Haider, 2018), information literacy and language learning (Hicks, 2018), and resuscitation and CPR standards (Lindh, 2015) have been examined. From a sociocultural perspective, everyday life has, for example, been investigated in relation to credibility assessments on Facebook pertaining to everyday information (Mansour & Francke, 2017).

My focus on everyday life is intertwined with my ethnographic stance and methods (see Chapter 4). In the book *Exploring Everyday Life: Strategies for Ethnography and Cultural Analysis* (2016), Billy Ehn et al. argue for

² *Frame Analysis* with capital letters, refers to the book written by Goffman in 1974, whereas frame analysis with lower case letters, refers to the analytical concept.

starting in the everyday, as many of the routines and activities that are taken for granted play a powerful role in the reproduction of society. As described in Chapter 1, given the omnipresence of online search in society, it can be viewed almost as a routine. Unpacking the meaning of it can thereby point to larger societal concerns. My stance is aligned with that of Jutta Haider and Olof Sundin (2019), who describe online search as something usual and normal; ‘as an activity that has established itself as a central part of various routine practices, that is, as one of the taken-for-granted elements making up the practice in question’ (p. 4). The notion of taken-for-granted and mundane attributes is recurring in research on everyday life (Ehn et al., 2016; Scott, 2009). At the same time, in the literature on everyday life, it is both referred to as that which is routine, and equally as something that is hard to capture, and thus challenging to research. As noted by Sarah Pink (2012), ‘the everyday is where we live our lives. [...] Yet we cannot directly capture its constant flow. It both prevails on us and slips through our fingers’ (p. 30). Pink notes that fields have different ways of dealing with this challenge.

In my thesis, adopting everyday life as a perspective has meant working towards making the familiar strange, identifying routines, and finding underlying rules and conventions. It has also meant considering what would happen if rules are broken (Ehn et al., 2016; Scott, 2009), which my dramaturgical perspective has aided me in. This thesis is an attempt to contribute with an investigation that sheds light on online search as an ordinary part of everyday life, as well as how online searching is shaped by the settings and situations within which it is done. As illustrated by Susie Scott (2009), ‘what is mundane and ordinary to one person might be quite extra-ordinary for another. Indeed, this is part of the problem in trying to pin down what we mean by “everyday”’ (p. 4). Although I view school as an integral part of the lives of the participants in this study and believe it offers a window into their everyday lives, I would not argue that I have gained a comprehensive view of the entirety of my participants’ everyday lives by shadowing them in their school days. Rather, I focus on the role of online search and mobile digital devices through the window offered by my fieldwork in the schools.

A dramaturgical analytical perspective

As described above, everyday life is the starting point for my inquiry. Routines and taken-for-granted ways of performing activities are in focus, along with the ways that these are shaped by norms and social situations. This is also the point of intersection with Goffman's theories and concepts as I understand them. In his work, the focus is on the ways that people act and carry out activities in relation to what is identified as situationally appropriate, and in relation to the impression one aims to foster. I draw on Goffman's dramaturgical theory, in which key concepts are self-presentation and impression management (Goffman, 1959). The overlap between my focus on the everyday and the dramaturgical perspective, is the attention paid to mundane and recurring routines, as illustrated by David Shulman (2017):

People live in a world with preestablished expectations about how to act, from learning a language in order to communicate, to being children under adult sway. This mundane conforming is not about scenarios where conforming means consciously ignoring right and wrong [...]. People conform and work to meet social expectations in everyday life because doing so enables people to live together, understand one another, and predict the actions that others take in advance (p. 56)

Thus, people learn how to interact in relation to different settings and situations, as the social expectations are not uniform across contexts. For instance, in school, where I have done fieldwork, there are certain norms surrounding how to behave. As an example, in the classroom, pupils learn to raise their hand when they want to speak. Yet, how to conduct oneself in a school setting is also shaped by the local context, in Sweden it is appropriate to call a teacher by their first name while in other countries teachers are addressed with their title.

As described in my introduction, within the dramaturgical perspective, social action is understood as performance; people act and also reflect on how actions are perceived by others, i.e. the audience of the performance

(Persson, 2019). Put simply by danah boyd (2014), ‘based on their understanding of the social situation—including the context and the audience—people make decisions about what to share in order to act appropriately for the situation and to be perceived in the best light’ (p. 48). This withholding or sharing of information is achieved through the separation between front- and backstage, which I will elaborate on below.

Setting, behavioural regions and norms

In line with the dramaturgical perspective, Goffman uses the terms front and back region, or frontstage and backstage to denote the different behavioural regions. Frontstage then is where the performance takes place, in front of an audience. Goffman (1959) notes that the behaviour in the front can be viewed as ‘an effort to give the appearance that his activity in the region maintains and embodies certain standards’ (p. 110). Backstage, like in the world of theatre, is where people can relax and prepare their performance (Goffman, 1959). In relation to regional behaviour, Shulman (2017) explains that ‘a front and backstage in the sociological sense reference situations where people anticipate meaningful social judgements to be ongoing about expected performances’ (p. 21). In my thesis, within the classroom situation, and the social situation in school at large, I would say that people anticipate social judgements. Goffman (1964) defines a social situation as something that arises ‘whenever two or more individuals find themselves in one another’s immediate presence, and at least until the next-to last person leaves’ (p. 135). I will return to a discussion of the definition of a situation in relation to immediate presence further along in the chapter, under the heading *Technology, flow of information and context collapse*’

There is not one frontstage and one backstage but many, and decisions on how to act relate to what is considered situationally appropriate. An investigation of frontstage behaviour can thereby reveal what people acknowledge as legitimate ways of behaving and carrying out tasks in a certain setting, such as school. When writing about front-and backstage, I find it necessary to point out that I am not approaching this as a matter of finding my participants’ true backstage. In fact, I do not view one version as more real or true than another. Instead, I am in agreement with

Ella Hafermalz et al. (2016) in their reading of Goffman, in which they describe that:

there is no ground that is “real” as an objective yardstick against which performances can ultimately be judged. Rather, some ways of doing things become solidified as the practice, and these then act as a background against which other performances are judged as being appropriate or inappropriate (p. 10).

What is considered appropriate is anchored in the setting within which the performance takes place. While not drawing on Goffman’s concept, Cecilia Gärdén et al. (2014) identify that beyond learning subject content in school, pupils also need to learn ‘to act and speak in ways that are considered appropriate for a student, which includes ways of performing and speaking about information seeking and use’ (no pagination). This also bears meaning on how activities, such as online search, are framed within the classroom, as will be elaborated further later in the chapter. In my view, the way in which online search is carried out and how mobile devices are used in the classroom are shaped by school culture and notions of schooling. School culture is here understood as a way of referring to implicit as well as explicit rules and norms in schools (Bunting & Lindström, 2013; Limberg et al., 2012). For example, when investigating performances in school, the fact that learning is assessed in ways such as grading needs to be kept in mind. In this thesis, front- and backstage is analysed in relation to information activities in school, in the first article, as well as how my participants conceptualize traces of online search, in the third article. It is a way of grasping how and why my participants make decisions in relation to writing out sources in school reports, as well as the removal of parts of their search history. Both cases are ways of presenting oneself, and the task at hand, in a way that is situationally appropriate. In relation to the performance of tasks, Goffman (1959) acknowledges that a performance does not necessarily reflect an individual’s personal characteristics, but that instead ‘it often happens that the performance serves mainly to express the characteristics of the task that is performed’ (p. 84). Returning to the example with writing out sources, the way that my participants make deci-

sions in relation to them is here viewed as an expression of how they understand the nature of the task, and how it should be carried out, rather than an individual trait. Here, as mentioned in Chapter 1, I see an overlap with how information literacies can be viewed as a way of learning to communicate within a practice (Limberg et al., 2012).

In relation to children and adults in domestic life, Goffman (1971) notes that people of higher rank typically have greater size of territories related to the self (such as personal space) and also greater control across the boundaries between spaces. In a literature review on impression management and family life, Jessica Collett and Ellen Childs (2009) identify that impression management occurs within families, as well as when families together stage a performance to the outside world. This is in line with my findings where it is possible to identify parents as imagined audience in relation my participants online activities (Article III).

Roles

Above, I explained the ways in which performances are viewed in light of the setting and context in which they take place. Another concept inherent in the dramaturgical perspective is roles. The same behaviour is not expected by all people involved in a performance. In a classroom, the roles of a teacher and a pupil are not expected to be performed in the same way. The role of a pupil in itself can be performed in a number of ways; one person might take on the role of class clown while another is the diligent scholar. Scott (2015) notes that 'there may be a standard idea of what a role entails, but there are an infinite number of possible ways of performing it, depending on actors' different interpretations' (p. 74). In this thesis, and the articles included in it, I sometimes refer to my participants as pupils. This is because I analyse their performance within the role of a pupil. In relation to my findings that focus on the home environment, the role of a child in a parent-child relationship is instead accentuated. In both cases, the audience in my analysis is primarily the adult world, in the form of parents and teachers. However, friends and classmates are sometimes in focus as audience (Article III), as will be discussed in my concluding chapter. This is also further explained in Chapter 4, under the heading *Analysis*.

In relation to impression management, Goffman (1959) makes a distinction between information that people *give* and information that people *give off*. The distinction identifies the difference between that which we share unintentionally (give off), and things that we reveal about ourselves consciously in interactions (give). When interacting, people can interpret certain things about a person without that person actively working to express it, such as age for example, but a person can also choose to emphasize certain aspects of themselves. The way that a performance, or the giving and giving off by an individual, is understood by others is shaped by norms and culture in the given context (Goffman, 1959). boyd (2014) explains that ‘when interpreting others’ self-presentations, we read the explicit content that is conveyed in light of the implicit information that is given off and the context in which everything takes place’ (p.48). It is thus not entirely possible to separate giving and giving off. Anders Persson (2019) clarifies that the sender has more control over what is given whereas the receiver has more control of expressions given off as ‘they are the result of the receiver’s interpretations of what the sender communicates’ (p. 2). Decisions made in relation to what to share and what not to share about oneself are influenced by people’s understanding of the situations and the impression they wish to foster therein. In dramaturgical terms it relates to what roles people are performing (Goffman, 1959). During fieldwork in the school setting, my age, for example, casts me in the role of an adult. Yet, there is not merely one role for an adult, although in a school setting, adults are typically staff or parents. I thereby must work towards establishing a role for myself, knowing that the setting influences the way that such attempts are perceived. This is discussed further in Chapter 4, in relation to the fieldwork process.

While each social situation can be analysed as a performance in itself, Shulman (2017) maintains that ‘acts that people repeatedly perform have cumulative implications beyond the sole individual instance in which someone does something’ (p. 10). The classroom situation, as I see it, with the recurrence of the same people coming together has cumulative implications. The pupils and teacher are not blank slates in relation to each other every day. Similarly, as a researcher, while analysing specific situations, the situations are also put together and as such contribute to a cu-

mulative understanding.

When not performing in the role of a pupil, in front of the teacher as audience, it can be considered backstage. This divide signals the way that behavior in the front, is contradicted by behavior backstage. This separation of audiences enables a person to perform multiple roles (Goffman, 1959). At the same time, Louise Mullany (2011) suggests viewing front- and backstage as a continuum rather than two completely separated stages, since slippage between stages occurs. Slippage can be described as backstage behaviour being revealed in the frontstage. For example, in my first article, this came through in the way that my participants described teachers not upholding the standards set for pupils in terms of when to search online.

Performances are not isolated to individuals but can also refer to the way that people together with others, a team, stage a performance. Goffman (1959) defines a team as ‘any set of individuals who cooperate in staging a single routine’ (p.85). He further explains that ‘whether the members of a team stage similar individual performances or stage dissimilar performances which fit together into a whole, an emergent team impression arises’ (p. 85). For example, parents might have a united front when before children, teachers similarly so. In turn, pupils can act together in front of teachers, a group of teens in relation to parents. Team members must keep each other’s secrets and not give the show away. It is thereby possible to focus an analysis on the team level or the individual level. In the thesis, I primarily focus on the individual level, although, in Article III, I draw on a non-dualist reading of Goffman, as will be presented further along, and view my participant’s device as part of a team performance.

Technology, flow of information and context collapse

As illustrated above, people present themselves differently depending on context, which builds on a separation of audiences. In his writings, Goffman (1959) focused on physical location in relation to dividing regional behaviour. Much has changed since Goffman’s time, and continues to change, in terms of information technology and the activities made possible through them. Writing this thesis during the covid-19 pandemic, where

homes have become workplaces and webcams commonplace, the delimitation of physical location in the separation of audience becomes challenged. Watching my partner remove piles of laundry out of sight from the webcams reach, I see a frontstage being created within an otherwise backstage area. Furthermore, during the pandemic, many schools have closed, and homes have become classrooms and teaching happens through webcams. Young people's backstage thereby also becomes challenged. The use of artificial backgrounds within web conference programs can be viewed as one way to maintain privacy, and the maintenance of a frontstage. As portrayed above, performances are read in light of the context where they take place, one's background thereby being a way of creating a suitable backdrop for the performance within an educational and/or professional context. This resonates with a description from Daniel Miller and Jolynna Sinanan (2014) in which they argue that using a webcam can be likened to reading the work of Goffman as 'both lead to an increasing consciousness and self-consciousness about the frames of human interaction' (p.8). However, Miller and Sinanan argue that we are not more framed or less framed when using technology, but rather that it leads to a different awareness. Regardless, an analysis of the consequences of the covid-19 pandemic, in relation to everyday life for young people, is beyond the scope of this thesis.

Thinking of a classroom today and comparing it with one twenty years ago, much is the same when it comes to desks, shelves, chairs and so on, yet there are also widespread changes relating to technology through the presence of laptops, tablets and smartphones. This has consequences for how activities are carried out, as well as how the audience is segregated in relation to one's different roles. Joshua Meyrowitz (1990) presents an adaptation of Goffman's work that is of interest to my analysis. Noting that place is not necessarily that which defines a situation or interaction but rather the way that information flows, he writes: 'As information-systems, rather than places, situational boundaries are affected not only by physical barriers but also by media of communication' (p. 93). He further discusses the fact that front and back regions are not determined by place, but rather by who is present. A back region can be turned into a front region depending on who enters the room. Returning to the reference to the

covid-19 pandemic, the presence of webcams in people's homes has led to spouses and family members accidentally walking in on work meetings held via webcam. Meyrowitz (1990) proposes that information flow should be in focus and that the social situation should not be defined by face-to-face interaction. Questions that people ask to guide how to behave, such as who can see and hear me now, are no longer answered by just looking around and assessing the physical environment. Media must also be taken into consideration (Meyrowitz, 1990).

While Meyrowitz (1990) wrote in relation to TV, radio and the telephone, there are now even more forms of technology, and information flows, to consider. Zeynep Tufekci (2008) explains that information technology and the digital environment are challenging in relation to controlling audience as well as boundaries 'between the private and the public, the past and the future, disclosure and privacy' (p. 20). This is due to factors such as persistence and searchability of online information. In the digital environment, the audience is not visible, it is not possible to see who is looking. Further, given the persistence of information, an audience can exist in the future (Marwick & boyd, 2014; Tufekci, 2008). In relation to social media in particular, the notion of front- and backstage has proved useful for investigations, and the notion of context collapse has become an established concept. As explained by boyd (2014): 'A context collapse occurs when people are forced to grapple simultaneously with otherwise unrelated social contexts that are rooted in different norms and seemingly demand different social responses' (p. 31). The credibility of a performance is related to the audience not gaining access to the backstage, and this is made more complicated in a networked setting where one relies on other people, and technologies, to not give away information inappropriately. As mobile devices travel with my participants between home and school, the notion of backstage becomes challenging to grapple with, as the flow of information in the digital environment is not translucent. This is in focus in my third article on online traces of search.

Frame analysis

Goffman's 1974 work *Frame Analysis* focuses on the notion of situation, or more precisely, how people answer the question of what it is that is going on in a certain situation. According to Goffman (1974), people draw on different frameworks to make sense of what is going on in various situations. He explains that 'acts of daily living are understandable because of some primary framework (or frameworks) that informs them' (p. 26). People are not necessarily aware of the applications of frames, but they make 'what would otherwise be a meaningless aspect of the scene into something that is meaningful' (p. 21). In *Frame Analysis*, Goffman explicitly draws on the work of Gregory Bateson in defining and developing the frame concepts, noting that Bateson identified that animals both fight and play-fight and that the difference between the two corresponds to framing. Through different cues, a fight can be interpreted as serious or play, and this can also shift swiftly. A distinction is made between natural and social frameworks. Natural frameworks are seen as unguided by the social and instead have 'natural determinants' (Goffman, 1974, p. 22). On the other hand, social frameworks, point toward those occurrences viewed as guided by people's doings. I draw on Persson (2019) in referring to changes of framing in terms of nuance shifts, which 'results in an established frame leading the action in another direction' (p. 52).

Given the fact that frames focus on deciphering the meaning of a situation, Persson (2019, p. 50) highlights that frame analysis is best suited for analysing actions and interactions that seem to mean the same thing but do not. This is a key point in relation to this thesis, as frame analysis enabled an investigation into how my participants assign meaning to the situation of searching online, in the second article, and how the smartphone is framed, in the fourth article. While online search seemingly explains what is going on, it is framed in different ways by my participants.

To make the frame concept visible, Persson (2019) breaks down the question of what it is that is going on, into three useful sub-questions: 'How do I usually act in such a situation?; What do other people expect from me in this situation?; and' How should one act in situations such as this?'. Taken together, these address the questions 'What applies here?' (p.65). These

questions illustrate the way that frames, as mentioned in Chapter 1, are not individual constructs but correspond to people's experience, norms in society, culture, and institutions. Writing on framing of learning activities in an educational context, Annika Lantz-Andersson (2009) notes that 'the framing in institutional practices is not merely local but embedded in education as a practice' (p. 54). This becomes important in my thesis as well. The way that a person frames a situation not only defines the meaning of the situation for that individual but also how one is to act within it: 'All frames involve expectations of a normative kind as to how deeply and fully the individual is to be carried into the activity organized by the frames' (Goffman, 1974, p. 345). Applying frame analysis to young people's information seeking online, Ulrika Sjöberg (2018), as mentioned in Chapter 2, identifies six framings in her interview material, noting that the young people 'employ various media logics that have implications on their uses, expectations and evaluations of media output' (p. 135). In my second and fourth article, I identify the ways that frames shape online search.

A sociomaterial reading of Goffman

I have maintained an interest in material aspects throughout the writing of the articles and this thesis, and this interest has grown and developed. In the first article, through the work of Trevor Pinch (2010), I drew attention to the role of materiality in the staging of performances. In that specific case, it was the way in which the smartphone was used as a dictionary in the classroom. Pinch (2010) identifies the ways in which the connection between performance and materiality is most visible when the materiality changes. When using a smartphone as a dictionary, the teacher needs to explain what she is doing as it is not evident. In the words of, Torsten Cress (2015), whose work I draw on in my fourth article, the ambiguity of the smartphone needs to be limited for it to be meaningful in the situation.

In my fourth article, I complement Goffman's (1974) theory with an object-oriented frame analysis. Cress (2015) suggests that frame analysis allows for an ethnographic approach to things. Frame analysis is thereby extended to a specific focus on things/objects. In my fourth article, I draw on Cress's developments to analyse the framing of the smartphone in dif-

ferent contexts. An important starting premise being that things do not have stable meanings but are given meaning within situations. In particular, I draw on the notion of *limiting ambiguity*, which ‘allows for conceptualizing the transformations described as processes of framing’ (Cress, 2015, 389). Hence, an object becomes framed through a limiting of ambiguity. In my material, the ambiguity of the smartphone is reduced when it is use, for example as a calculator, and as referred to above, as a dictionary. Cress (2015) also proposed that objects are framed by their physical properties, which ‘gives users and observers some indication of the scope and limits of possible ways of interacting with them and therefore also of the limitations to the role they can play in a given situation’ (p. 385). Here, I see an overlap with theories of affordances as developed within sociomaterial theory, which I also draw on in my fourth article. The overlap lies in the ways that physical properties of things, in the thesis foremost digital devices, exist independent of people, but affordances and framings, do not. Both concepts also refer to what objects affords as well as constraints, which is embedded in the contexts in which they are used. Paul Leonardi (2013) explains it the following way: ‘The perceptions of what functions an artifact affords (or constrains) can change across different contexts even though the artifact’s materiality does not’ (p. 38). Similarly, framings can change even though the materiality does not.

Many different terms are used in the literature, for example things, objects, artifacts, and technology (Cress, 2015; Leonardi, 2013). I will not go into detail about the definitions of the various terms, except to say that in this thesis I use the theory to enable a discussion of digital devices, such as smartphones, tablets, and laptops, as they relate primarily to online search but also other online activities. In relation to studying material aspects, Haider and Sundin (2019) identify several challenges, noting that search engines and digital objects are particularly difficult to study as they are elusive, multi-layered and multiple: ‘they are packed into other technological objects, flattened on a screen or into a smart speaker’ (p. 129). Leonardi (2017) describes that ‘physical materials are bearers for digital materials’ (p.282). In relation to digital devices, software also contributes to how affordances are perceived. This is drawn to the fore in my fourth article where the physical properties of the smartphone, coupled with its

software, becomes a first-hand choice for online searching in certain situations.

In relation to my dramaturgical perspective, I also draw inspiration from Ella Hafermalz et al. (2016) and their sociomaterial non-dualist reading of Goffman's performance perspective, in which they propose that a Goffmanesque focus on performance can be anchored in a sociomaterial tradition. In the same way that a sociomaterial perspective does not presuppose given relations between humans and technology, they argue that Goffman's performance perspective does not presuppose who is an actor and what constitutes frontstage and backstage is not decided a priori (Hafermalz et al., 2016). Yet the most important point of the sociomaterial perspective for the analysis is that actors are not necessarily people and the roles of technology are not given, or necessarily consistent across contexts, but brought into being. This thereby underlines that a performance can include technology in other roles than tool or platform and that we should avoid deciding in advance which ways a sociomaterial collective is involved in maintaining a certain reality (Hafermalz et al., 2016). As described above, this reading enabled identifying a device and one of my participants as a performance team (Article III).

An implicit power perspective

In my articles I do not discuss power, except briefly in the fourth article. Yet it merits some elucidation as it can be viewed as of importance to my thesis, both in relation to young people in a school setting and in relation to the use of search engines. Goffman does not explicitly discuss the issue of power, yet his contribution to theorizing power has been brought forth by others (e.g. Hacking, 2004; Jenkins, 2008; Persson, 2019). In conceptualizing power, I draw on Persson (2019), who identifies what he refers to as an *implicit power perspective* within Goffman's writing: 'it can be said to deal with influence and avoidance of influence in different forms' (p. 138). In my material, this is evident, for example, in the way that my participants deal with their online traces. My participants are trying to circumvent the flow of information that might harm the way that they wish to present themselves in relation to teachers, friends, and parents. Drawing

together the imagined audience and the complex digital environment, thereby also pinpointing the role of the search engine.

Persson (2019) suggests that the dramaturgical perspective represents a combination of political and cultural perspectives as it ‘combines an exercise of power in the form of influence (albeit, on a level of social interaction rather than on a societal level) with values, or, in Goffman’s version, norm’ (p. 5). This becomes evident when looking at a definition of norms, provided by Goffman (1971), where he explains that ‘a social norm is that kind of guide for action which is supported by social sanctions, negative one providing penalties for infraction, positive one providing rewards for exemplary compliance’ (p. 95). Goffman further makes the distinction between formal sanctions that refer to regulations, and informal sanctions that refer to social pressure. From my viewpoint, this resonates with descriptions of school culture as relating to implicit and explicit expectations, as I referred to in relation to *Setting, behavioural regions and norms*, above. Beyond power as influence in relation to impression management, Persson (2019) also identifies the workings of power in relation to framing. Then it is the definition of the shared situation that becomes the site for the exercise of power.

4. Methods and material

In this chapter I will present my fieldwork process, methods, reflections on fieldwork, and my analytical process. The chapter will begin my describing my ethnographic stance, and then go on to describe the empirical setting for my investigation. Thereafter, I will describe the way that I have worked with focus groups, interviews and a combination of go-alongs, and classroom observations. I will then proceed by reflecting on pertinent issues in relation to the fieldwork process. The chapter will conclude by a presentation of my analysis on an overall level, and in relation to my respective articles.

An ethnographic stance

With the aim of investigating online search and mobile devices in everyday life, material was produced through an ethnographic approach. With its roots in anthropology, ethnography initially referred to writing an account of a community or culture, usually one foreign to one's own. Over time, the concept has been repurposed and recontextualized within several disciplines interested in human lives (Davies, 2008; Hammersley & Atkinson, 2019). Within information studies, there is a growing body of research being carried out with an ethnographic approach (Griffin, 2017). The method has been used to gain insights into how teacher trainees' appropriate and use digital tools within their education (Hanell, 2019), and how primary school children work with project-based learning (Lundh, 2011), as well as to investigate everyday knowledge organization (Hartel, 2010), to give a few examples. Karolina Lindh (2015) identifies an alignment between the adoption of ethnographic methods and the focus on information practices, or the practice turn, within information studies.

Before proceeding to outline my approach, I will briefly touch on the way that previous research, within information studies, point to the benefits of multiple methods in relation to investigating online search. Within information studies, online search, in relation to young people, is often investigated through the use of search tasks. It can be tasks set by researchers (Bilal, 2002; Borlund, 2016), and also tasks that are part of pupils assignments in school (Cole et al., 2013; Francke et al., 2011; Julien & Barker, 2009; Rutter, 2017; Spink et al., 2010). Studying a search task is often intended to reflect the way that search would usually occur or be carried out. Still, working with tasks is challenging. Pia Borlund (2016), for example, describes that ‘the major challenge when using simulated work task situations is the design of authentic and applicable simulated work task situations, which are relevant and realistic to the test participants’ (p. 321). Borlund proposes supplementing tasks with interviews or questionnaires for better insights. In relation to their investigation of query reformulations, Dania Bilal and Jacek Gwizdka (2018) suggest that in future research, it might be beneficial to elicit participants’ reasoning in relation to query reformulation as it ‘may help glean deep insights about their intentions’ (p. 1038).

Based on a literature review of children’s search tasks, Sophie Rutter (2017, p. 39) puts forth that while search tasks are designed to investigate particular characteristics, they are rarely found to be derived from real life. Furthermore, that the field has had a narrow scope and that few search tasks are empirically derived, thereby ‘a large part of what children are actually doing in real-life when searching for information has not been studied’ (Rutter, 2017, p. 39). In a similar vein, Jarkko Hautala et al. (2018), in relation to their eye-tracking study, in which search tasks were used, put forth that ‘it is important to note that these results only tell us about students’ ability to evaluate search results when they can focus on a limited amount of search results’ (p. 769). Thereby pointing out that the scenario might play out differently outside the controlled context. Their study was conducted in a controlled laboratory environment where the search results were manipulated by researchers. Outside of a laboratory environment, a challenge is how to capture search as it happens across situations and devices and does not necessarily follow a specific pattern or regularity (Church & Oliver, 2011; Sundin et al., 2017).

My way of trying to tackle some of these issues, described above, has been to use ethnographic methods. Ethnography does not have one unified definition but an interest in everyday contexts over ones created by researchers is characteristic, as well as an explorative and open-ended research process. The explorative and open-ended research process made it a suitable fit for my study. The research process is commonly described as fieldwork, the length of which can vary, but denotes an ongoing engagement with the people studied (Davies, 2008). Fieldwork for the thesis took place in three schools between December 2014 and June 2016. Within ethnographic research it is common to use multiple methods in order to capture both how people describe their way of doing things as well as to observe these doings in context (Livingstone & Sefton-Green, 2016). That was also the case here, where I conducted focus groups, go-alongs, classroom observations, and interviews, which I will describe in more detail later in this chapter. The use of multiple methods enabled me to observe my participants using their mobile devices and carrying out online search as well as have them explain their activities. Through this process, I worked towards identifying and uncovering the taken-for-grantedness of mobile devices and online search. The way Sonia Livingstone and Julian Sefton-Green (2016) describe the foci of ethnographic research is closely aligned with the way that I have been working, and the way that I view the approach:

The idea is to uncover the significant patterns immanent within the taken-for-granted nature of people's ordinary practices. This means talking to people in order to get insights into how they explain and interpret their actions but also observing their actions in context, recognizing that talk and action may not match (p. 45).

Focus is thus on both sayings and doings. In relation to young people and technology, ethnographic approaches have also been adopted within media studies (Itō, 2010; Sjöberg, 2010; Livingstone & Sefton-Green, 2016). In relation to media and technology, Mizuko Itō (2010) describes that using an ethnographic approach means that 'we work to understand how media and technology are meaningful to people in the context of their everyday

lives' (p. 10). It is precisely such a viewpoint, but in relation to how search engines and mobile devices are assigned meaning in everyday life, that permeates my approach.

The empirical setting

The participants in the study attend Swedish compulsory school, which consists of Year 1–9. Prior to compulsory school, most children attend preschool. Children normally start preschool the year they turn six. Compulsory schooling is divided into year 1–3, 4–6, and 7–9. Pupils are given grades from Year 6 and final grades are set in Year 9. The participants in this study attended Years 7–9. When I use the term lower secondary school, it is to denote that the participants are in Years 7–9. After Year 9, schooling is voluntary although most pupils go on to upper secondary school. Schools in Sweden are either municipal or independent. In the present study, fieldwork was conducted in two municipal schools and one independent school. Municipal schools and independent schools alike are regulated by the Education Act (2010), the national curriculum (Skolverket, 2018), and national syllabi and time schedules (Skolverket, 2021).

Recruitment and overview

As mentioned above, fieldwork took place between December 2014 and June 2016 at three different schools. As shown in the table below, I continued to carry out fieldwork in two of the schools, A and B, after the initial focus groups. This choice was made as the youngest participants in the focus groups, the ones in Year 7, came from Schools A and B. Continuing the fieldwork in these schools thereby created the opportunity to follow the same participants for a longer period of time.

Table 1. Fieldwork overview

	2014	2015	2016
School A	Focus groups Year 7 & 9	3 classroom observations with go-along	6 classroom observations with go-along 10 interviews
School B	Focus groups Year 7 (two groups)	1 classroom observation	5 classroom observations and go-along 7 interviews
School C	Focus groups grade 8 (two groups)		

With everyday life being the starting point for my project, as described in Chapter 1 and 3, I needed a field site in which everyday life unfolds for young people. I also wished to stay in contact with the same young people throughout the fieldwork. To that end, schools were chosen as field sites. As described in Chapter 1, I view attending school as a part of the rhythm of everyday life for my participants. At the outset, I had ideas about complementing my fieldwork in schools with doing fieldwork in home environments. Yet, several of my participants were not comfortable with that and I therefore worked towards other ways of gaining insights into those aspects of their lives. This is described in more detail in relation to how the interviews were conducted.

To gain access to the schools, I emailed the headmasters of several schools and asked if I could come to the schools and recruit participants for focus groups. The following schools are part of my study:

- School A: an independent school located in a mid-sized town. The pupils all had their own school laptops that they could bring home and were designated for the pupil's sole use while attending the school.
- School B: a public school located in a suburban area. The pupils had access to laptops through their school but did not have their own designated laptops.
- School C: a public school located in a suburban area. The school had some laptops but not enough for all pupils at once.

I came to the schools and introduced my project to different classes and gave them a chance to ask me questions. I explained thematically what my project was about and that it was voluntary to participate. The ones who were interested in participating signed their names on a list and were given consent forms to hand to their parents or guardians. The consent forms described the project and included my contact information. These were later collected by teachers and I kept in touch with them to set up the practical arrangements surrounding the focus groups. During the focus groups, I asked the participants if they would consider participating in interviews as well, which many of them wanted to. I thus returned to Schools A and B on another occasion and talked to the participants, explaining the next steps of my fieldwork: classroom observations, go-along and interviews. I explained the fact that it was voluntary and that their names would be anonymized in my writing. I also explained that the information in the interviews was intended for me and the other researchers in the group, and not for their teachers or other persons. The ones who wanted to continue were given a new consent form to be signed by their parents. A total of 43 participants took part in the project. Of these, 39 participated in the focus groups and the other four were classmates of pupils that had taken part in focus groups and were recruited as I continued my fieldwork. The ones who were recruited in a later stage were friends of my participants. As they spent much of their school day together, they became interested in my project, and I was also interested in including them in it. I therefore explained the project to them and asked if they wanted to be interviewed. I gave them consent forms to bring to their parents/guardians.

In the initial phase of fieldwork, I also participated in activities that do not fit into the category of a specific method but still informed my understanding of the topic. I went with one lower secondary school class, at a school other than Schools A, B, and C, to a study visit at a newspaper. During the visit, the pupils were guided into how a newspaper is created and how content is chosen. The pupils also got to create a newspaper and headings. These events did not explicitly make it to the analysis as such, but they opened my eyes to things that have been of importance for my study. For example, during the visit at the newspaper I became aware of

how easy it is as an adult to end up in conversations with other adults present rather than with the young people. The teachers were eager to talk to me and reflect on technological changes, making it hard to distance myself. The visit also made me aware of the ways in which young people are encouraged to be critical of information that they find online.

The thesis is part of an externally funded project called *Knowledge in a Digital World: Trust, Credibility and Relevance on the Web*, which ran between 2013 and 2017. Material from that project was included in an article co-authored by several members of the project entitled *The search-ification of everyday life and the mundane-ification of search*. Findings from the article are in part drawn from material from my focus group. I therefore refer to the article in the concluding chapter of the thesis even though the article is not part of the thesis as such.

Focus group discussions

A total of six focus groups were carried out between December 2014 and March 2015. Each focus group consisted of between four and ten pupils who were in the same Year, and were classmates. This was beneficial as the pupils shared the experience of going to school together, which fostered insight into attitudes and shared understandings within the groups. The focus group discussions lasted between 30 and 75 minutes. I acted as a moderator for the discussions, and they were recorded and transcribed by me. During one focus group there was a problem with the recording and the discussion has not been transcribed but instead notes were taken during and immediately following the discussion.

The discussions were semi-structured, and all followed an interview guide (Davies, 2008); see Appendix I. The interview guide contained three themes that focused on: (1) searching for information on a general level, (2) the use of digital tools in school and at home, and (3) research for a task in school. All focus groups began with the participants being asked to write down three things they had recently searched for. These notes were then used to start the conversation in the groups. During the third theme, the participants were given a scenario of writing a school report on Brazil and a printout of an internet search in order to trigger discussion, see Appendix

2. During my visit to the schools, when recruiting participants, I had noticed that they were working on country reports in one school, which was the reason for choosing that example. We also discussed the example in relation to searching for information about Brazil out of curiosity and not for a school report, for instance in relation to the World Cup in Brazil.

Focus groups allow for conversations to take place that are like those that occur in everyday life but with a greater intensity. They are therefore a suitable method for investigating participants' conceptions. The ratio of participants to researcher, coupled with the fact that the participants know each other, can shift the power balance between participants and researcher and, in doing so, decentre the role of the researcher, giving the participants more ownership of the process (Kamberelis & Dimitriadis, 2011). All focus groups except one took place in the respective schools, and the participating pupils were thus in familiar surroundings during the discussions (Sjöberg, 2010). One of the focus groups was conducted in a group room at my university due to a request from the teacher of the class. The teacher wanted the pupils to have a chance to familiarize themselves with the university as a way of encouraging them towards continued future education. The university location did not seem to have a hindering effect on the discussion. It was the smallest group of them all, consisting of four participants, and perhaps that helped in making it less intimidating to speak.

From the focus group discussions, material was created in the form of transcripts, fieldnotes from the session and the notes in which the participants wrote down their last three searches. The process of transcription will be elaborated on in relation to the presentation of my analytical process, later in the chapter.

Classroom observations and go-alongs

As a next step, I performed some initial classroom observations with go-alongs in May 2015. I also did go-alongs between October of 2015 and June of 2016. In carrying out my observations, I have drawn inspiration from methods such as shadowing (Czarniawska, 2007, 2014) and go-along (Kusenbach, 2003). Barbara Czarniawska (2014) applied shadowing within or-

ganizational settings and finds it suitable for studying ‘the work and life of people who move often and quickly from place to place’ (p. 92). Margarethe Kusenbach (2016) describes go-alongs as ‘a hybrid between participant observation and interviewing’, pointing out that, ‘go-alongs carry certain advantages when it comes to exploring the role of place in everyday lived experience’ (p. 154). I drew inspiration from these descriptions as I was interested in following my participants beyond the classroom situation. Within a school day, my participants change classrooms, sometimes buildings, go outside and so on. Furthermore, my participants do not necessarily stay with the same people all day but might attend math class with one group of people, and social studies with another. Following them beyond the classroom thereby enabled being part of several different social contexts throughout their school day. Thereby, I could also focus attention on how their digital devices moved, or did not move, around with them.

With the approach described above, it is difficult to draw a line between the method of classroom observation and go-alongs. The go-alongs led me to the classroom observations. I did not decide on specific subject areas, such as maths or social studies, but instead followed my participants into and between classes. Kusenbach (2016) highlights that natural go-alongs, meaning outings that people would ordinarily do, are to be preferred. However, there is no way around the fact that being followed around by a researcher is never a completely naturally occurring situation. When go-alongs are done on foot, Kusenbach (2016) refers to them as walk-alongs. Throughout my writing, both terms have been used interchangeably as all go-alongs were done on foot, although on a few occasions I also rode the bus with the participants.

I operationalized these methods by meeting up with one of my participants in the beginning of the school day and then followed them around until the school day was over. This included going to classes together, having lunch, and spending recess together. As the participants in each school go to the same classes as the other participants in that school, the lines of observation between participants were not always firm. During the walk-alongs, I also went with one of the classes on a school outing to a museum. The walk-along method opened up for many informal conversations, such as over lunch. The interviews with my participants were conducted after I

had walked along with them for a day. This meant that the participants and I were somewhat acquainted with one another by the time of the interviews. Having followed them during a school day prior to the interviews also gave me ideas for questions to ask during the interviews. I did walk-alongs with nine of my participants, with some on more than one occasion.

In total, I interviewed ten participants. I thereby did go-alongs with all the participants that I interviewed except for one. The participant that I interviewed, but did not do a walk-along with, had previously participated in a focus group. The reason for not doing a walk-along with the participant was primarily due to that participant not attending the same class as my other participants. This proved harder to schedule as there were other teachers involved than the one that was my contact.

I took field notes during the classroom observations and walk-alongs, which were then used in the analysis, although the analysis in part began during the writing of the notes as decisions were made regarding what to write down (Wolfinger, 2002; Tjora, 2006). I adjusted my notetaking to the surroundings. If the person I was following was on a laptop, then I would take notes on my laptop. At other times, I took notes in a notebook and on occasion also in my smartphone. I opted for taking notes in a way that made me blend in. Writing fieldnotes demands making decisions about what to write down, and not. It is a balancing act between writing down as much as possible, and focusing on details (Hammersley & Atkinson, 2019). Focusing on online search, I made notes about when it was done and not, how, and if the activity blended in or was discussed. Trying to capture as much detail about the situations as possible. I also made notes about the way that devices were used. During my notetaking I would also write down follow up questions so that they could be posed to my participants at a later point, unless possible to do so in the moment.

The observations and walk-alongs thereby also shaped the questions asked during interviews, and it becomes apparent how analysis was an ongoing interpretative process. Anne-Laure Fayard (2017) explains that being in the field 'is not a stand-alone activity that takes place at the beginning of the project; rather, it is through the interpretative process that the scope of the project arises' (p. 150). Being able to follow my participants in this way clearly shaped the scope of my project, as insights from these

occasions pointed my project in certain directions. It also enabled a focus on the absence as well as the presence of online search and mobile devices in various situations.

Altogether, I conducted 15 days of walk-alongs in the schools. During the fieldwork period, I also visited the schools to make arrangements for upcoming walk-alongs. The teachers at both School A and School B were my go-betweens for contact with my participants. This was a consequence of me not wanting to invade my informants' privacy by adding them on a social media platform, in combination with the participants finding it too much work to make plans with me via their school email accounts.

Following my participants around in these ways gave me access to observe them in their role as pupils in the classroom situation as well as outside of it, hence both in front of teachers and out of sight of teachers. This has been particularly fruitful in analysing front- and backstage in relation to teacher as audience. It also made it possible to observe my participants hanging out with friends. In relation to impression management and method, Czarniawska (2007) puts forth that people tend not to risk doing special performances just for the sake of the researcher, as it opens for the risk of being exposed. This is especially so if the researcher is shadowing a person for a longer period of time. Czarniawska furthermore describes that in her experience, the initial curiosity of being shadowed quickly dies off. I would say that I had the same experience. Importantly, she also points out that

Impression management is a methodological problem only under the assumption that deeds and utterances of people under study should correspond one-to-one to a reality hidden behind appearances, to be revealed in the course of research. If this assumption is replaced by the Goffmanian premise that life is a theater, however, then that which is played is of central importance (Czarniawska, 2007, p. 38).

As I described in Chapter 3, my aim is not to uncover any specific or true backstage of my participants. Instead, I am interested in the local realities of my participants and how they are upheld, and subsequently may be disrupted.

Interviews

The interviews took place between April and June of 2016, in Schools A and B, with some additional interviews being conducted in October of 2016, in School A. Interviews were conducted as a complement to the walk-alongs. I conducted 17 interviews in total. All participants were interviewed individually, some repeatedly (one was interviewed three times). I also conducted one pair interview and one group interview, with four participants. Some interviews lasted for an hour while a few were short (15 minutes). The group interview and pair interview were suggested by me after noticing which participants were friends at school. This served a dual purpose. The primary aim was to make the interview situation less intimidating, but it also gave me a chance to hear them discuss topics in a more naturally occurring way than would have been possible in an individual interview. All interviews, were conducted at the schools, either during school hours or after school, according to the preferences and availability of my participants. In one of the schools, they have a cosier room with couches and comfortable chairs where all interviews took place and in the other school it was in a smaller group room. When the interviews took place outside of school hours, I brought something for them to drink and some light snacks. The interviews were recorded with my smartphone and transcribed by me.

The interviews were semi-structured. An interview guide with core topics and questions laid the foundation but allowed for flexibility depending on subjects that might come up during conversation (Davies, 2009), see Appendix 3 for interview guide for the individual interviews, and Appendix 4 for the interview guide for the pair- and group interview. Fayard (2017) points out that an ethnographic stance means ‘being there, being open to surprises, improvising and experimenting in response to hunches that surface in the field, and continuously engaging in the interpretative process’ (p. 148). For me, this openness has led me down roads of inquiry that were not part of any original plan. For example, the question of online traces was something that surfaced naturally during the group interview which led me down that path. In allowing for experimenting and being open for surprises, I have drawn inspiration from digital ethnography and cultural analysis. Describing digital ethnography, Sarah Pink et al. (2016)

argue for ‘situating the digital as part of something wider, rather than situating it at the centre of our work’ (p. 11). In a similar vein, and in relation to online search specifically, Haider and Sundin (2019) note that ‘the situations search is used in are vastly different from each other, and this needs to be accounted for’ (p. 79). Viewing search as part of something wider brought me to investigate online search and mobile devices from different starting points: starting in the activity of online search, starting in everyday habits, and starting in the devices. For example, I would inquire about my participants’ hobbies, how they get to school, and how they eat dinner. Taken together, my aim has been to gain an understanding of several aspects of my participants’ lives, although physically my investigation has taken place in schools.

In lieu of physical access to their home environment, I tried to find other entry points. There was no one-size-fits-all, but rather I adapted to my informants. Before the individual interviews, I asked them to take pictures of their room and count the various screens in their house. Some took photographs, others made drawings. This way I learned, for example, that one participant who was an avid gamer did not have any computer in his own room but instead used the one in the family’s living room, as referred to in Chapter 2. Such insights have proved valuable for my analysis. We also made drawings of their weekly schedule and talked about what they do before and after school. During the interviews, we also talked about their smartphones and looked at what apps they use. Some brought out their search history in order to discuss what they had searched for throughout the day, as searches are easily forgotten and made invisible (Dirndorfer Anderson, 2013; Haider & Sundin, 2019). These decisions were guided by ethical considerations, which I will elaborate on under that heading. As I did not want to use tracking or similar methods, I wanted to find ways to discuss the topics while giving the participants a great degree of influence over what to share with me and what not to share. I adjusted the approach to what worked for the situation and the participant.

Material produced from the interviews were thus transcripts as well as drawings, weekly charts and some pictures.

ICT contracts

In addition to the material produced through the above described methods, material for my analysis was also the ICT contracts that my participants sign to be allowed to use ICT: s in their respective schools. These provide information on what pupils get to know in relation to the devices used in school, which is discussed in Article III.

Reflections on the fieldwork process

Initiating research and consent as an ongoing process

Ethical considerations have been at the forefront when I have made decisions in relation to fieldwork. I have followed the code of conduct as prescribed by the Swedish Research Council, which means that I have sought consent from my participants, sought parental consent, anonymized the schools and used pseudonyms for my participants (Swedish Research Council, 2017). I have explained my project to my participants several times, especially before the focus groups and when they were asked to continue to participate through interviews and walk-along.

Madeline Leonard (2007) illustrates how childhood researchers are immediately confronted with the power imbalance between children and adults, and that the fact that a researcher is an adult has implications for all stages of research. For the initial stages, this becomes evident when viewing the role of gatekeepers, and Leonard contends that ‘the role of the gatekeepers renders children voiceless during the initial stages of the research when access is being negotiated’ (p. 133). I have tried to counteract this by coming to the schools and presenting myself to the pupils and letting them volunteer to participate. It is difficult to completely free oneself of other adults in the planning and negotiating of access, but I actively did not agree to have participants chosen for me. For example, one headmaster asked me ‘what type of pupils do you need and how many?’.

As an answer, I explained my preferred process of recruiting. However, one of the focus groups was put together by a teacher from School A. This teacher had heard about me doing a focus group with another class at her school and wanted some of her pupils to have a chance to visit a university, as described earlier in the chapter. In line with Leonard, I find it important to view consent as an ongoing process rather than something that is done once a letter of consent from parents is signed. I have repeatedly stressed to my participants that participation is voluntary and that they can stop participating whenever they choose. As a researcher, this required being sensitive to signals from participants. Some might not feel able to say no, and thus a balance between asking and listening is required. Sometimes a 'no' comes in the form of silence and avoidance. At least, that was the case for me. One participant who had previously said that he wanted to do an interview with me then avoided me when I came to the school and was also quiet in relation to making plans. I took this to mean that the participant no longer wished to be part of the project.

Throughout fieldwork, there are several decisions to be made in terms of which types of methods are suitable in relation to answering the aim of the thesis. There are also decisions to be made in relation to how to operationalize these methods in an ethically sound way. Ethical considerations are why I have discussed digital footprints with my participants, but I have not looked their digital footprints up. In fact, the research process has focused on the participants showing me aspects of their choosing in terms of online activity, over me looking up their activity online. Questions of integrity have informed both what I ask of them and when and where I chose to research their activity. For example, I have chosen not to take note of my participants' behaviours or actions when they were not aware of my presence, such as if we happened to be riding the same bus from school. In a way, observing them during such an occasion could have given me valuable insights. However, I did not feel comfortable observing them when they were not aware of this. From my standpoint, my observations began as I met up with the participants in school and ended when we said goodbye as I, or they, left the school. Naturally, everyone in the classrooms where I conducted my observations could not always know where my attention was focused, but they did know of my presence in the classroom.

Performing research and research as performance

The theoretical and analytical frame of the thesis has led me to reflect on the role of the researcher. When doing fieldwork in a setting such as a school, roles quickly come to a fore. As an adult, I am greeted as either a parent or a teacher. This resonates with Goffman's (1959) words on how people try to make sense of each other based on available information: 'they [individuals present] can also assume from past experience that only individuals of a particular kind are likely to be found in a given social setting' (p. 14). The initially available information was that I am an adult, thus not a pupil and most likely a teacher or parent. This meant that I, and others on my behalf, continuously needed to explain to others who I was and what I was doing there. For instance, during one walk-along, one of my participants was asked if she had brought her mother to school. It also meant that I needed to create a role for myself. Drawing on Haudrup Christensen, Lundh (2011) worked towards being an 'unusual type of adult' (p. 37). I would say that I worked towards a similar role.

Building on the work of Goffman (1959), Amanda Gengler and Matthew Ezzell (2018) coin the term 'methodological impression management', defined as 'the conscious and intentional attempts researchers make to influence participants' perceptions of a research project, their perceptions of the researcher(s) involved, and their relationship with its eventual results' (p. 808). Given that ethnographic methods are dependent on forming relations and gaining the trust of participants, I would argue that impression management is certainly a crucial part of fieldwork, not only in relation to recruiting participants but also in order to be accepted in a manner that enables the production of rich data. Antonius Robben and Jeffrey Sluka (2007) call attention to the fact that the impression that participants form of a researcher 'will determine the kinds and validity of data to which he will be able to gain access, and hence the degree of success of his work' (p. 162). Indeed, many decisions were made during fieldwork that ultimately relate to impression management, of me as well as of the project. For example, in relation to how I interacted with teachers at the respective schools. In line with my interest in following the young people, I spent all breaks and lunches with my participants and did not spend time

in the faculty lounge. I did not ‘hang out’ with teachers and other adults in the schools in the same way that I did with my participants. This was primarily due to my interest in what my participants were doing during their breaks. It was also a question of impression management. I did not want my participants viewing me as somehow affiliated with the teachers. On numerous occasions I explained the way my material from fieldwork would be used, that it would be anonymized and only shared with my research group, and not my participants’ teachers. Still, I was concerned that if my participants frequently saw me hanging out with their teachers, they would perceive me as somehow in affiliation with them. It was a way of building trust. Doing fieldwork in a school, teachers were often the audience of my participants’ activities, which was one of the reasons for me distancing myself from them. Since I was gaining access to a backstage that built on the absence of teachers, I perceived such a distance as particularly important. Gengler and Ezzell (2018) propose a number of questions that a researcher might ask themselves in preparation of going out to do fieldwork. For example, ‘How do I hope my participants will understand me?’, and ‘How do I hope participants will understand my project?’ (p. 827). While I did not draw on their framework specifically, as their article was published after my fieldwork finished, similar questions guided the way that I interacted with people during fieldwork.

Although I distanced myself from teachers, I was still confronted with having to be an adult, particularly when there were no other adults around. While I chose not to comment when pupils were joking about teachers or being rowdy in a way that I judged as harmless, on some occasions, I felt that I needed to step into the adult role; for example, when one pupil broke a wall socket, and once during recess when some older pupils were playing around with a younger pupil’s bike. None of these scenarios were of a very serious nature but, as an adult, I felt I needed to step in. I simultaneously become more and less of an adult when there were no teachers around.

My position as a researcher was different within the two schools, largely due to the relationships I formed with the participants. One difference which also manifested in how I was received in school A, was that my participants were a group of friends. Or rather, I recruited three friends of one of my informants as they showed an interest in participating. Notably,

gender also seemed to play a role. In both schools, my participants tended to mostly hang out with friends of the same gender. Martyn Hammersley and Paul Atkinson (2019) acknowledge that ‘the researcher cannot escape the implications of gender: no position of genderless neutrality can be achieved, though the implications of gender vary according to setting’ (p. 73). Girls in both schools took more social responsibility for showing me around and keeping me updated of what was going on in school. This was particularly the case in school A in relation to the group of friends. This in turn enabled more open conversations, but it also meant that they wanted to know more about me and what TV series I watch, my favourite subjects when I was in school, and so forth. In relation to the boys, the scenario was different. Although they were happy to have me tag along and show me around, there was still more distance. This distance also had its benefits. In a way, I was more of an adult in relation to them and they did not expect me to know how the gaming apps they use worked, which made it easy to ask ‘stupid’ and basic questions. With the informants who showed a greater interest in me as a person, I had to think more about what I chose to reveal about myself. Children might seem powerless in relation to the negotiation of entry, as discussed above, but meanwhile they are ‘the ultimate gatekeepers to their worlds’ (Leonard, 2007, p. 137). They can be viewed as regaining some power though choosing how they participate in a research project and what they disclose. As such, the different roles that I have formed during fieldwork can be viewed in relation to questions of gender, but also as my participants choosing how to participate in the project.

Google and the challenge of being explorative

As described in the introduction to this chapter, there are several challenges to investigating online search in everyday life. Beyond the ones described above, another challenge I faced during fieldwork was the question of how to speak of search when Google Search, and the term googling, dominates the vocabulary on search, as described in Chapter 1 and 2. This presented me with a challenge since I wanted to be explorative in relation to the use of search engines, and not narrow my investigation to Google Search. How then do you name the activity of online search in a way that makes it mean-

ingful to participants, without limiting their associations? This question has followed me during fieldwork, and I have approached it in different ways, such as by intentionally leaving online search vague, intentionally talking about Google Search and googling, talking about different apps and platforms, asking about YouTube, and not talking about search at all. This is in line with the approach that I described above. However, here I wanted to briefly showcase and reflect on those approaches.

In the focus groups, search was intentionally left undefined so that the participants would be allowed to fill it with the meanings that they assigned to the word. All focus group discussions began with the participants being given some time to write down the last three searches that they had done. The material produced by those notes is also reported in the article that is written with my colleagues (Sundin et al., 2017). Having to write down three searches proved somewhat challenging to my participants. It was challenging as they could not necessarily recall their last three searches, and also as the word searching (in Swedish, *sökning*) was not loaded with a clear meaning. Not being able to recall activity, was also identified by Theresa Dirndorfer Anderson (2013), when asking young people to recount their doings with their mobile phone the previous day. Showing how hard it can be to investigate activities that are part of the flow and routines of everyday life.

Had I asked the participants to write down the last three things the searched for on Google, then maybe it would have been easier for them to grasp. Yet, the variety of searches written down, would have been lost. On Google Search, topics ranged from searching for Twitch, country information, a football team, 'good Christmas presents', and facts about the leaning tower in Pisa, 'arguments against NATO', Wikipedia, various clothing stores, and how to cook sausages, to give some examples. Other platforms that were mentioned include Tumblr, YouTube, Facebook, and Netflix. Although what was searched for on those platforms was not always specified but in relation to YouTube, there were examples of how to bake a cake, and gaming related questions. Furthermore, Google Search was often used as a way of getting to these various other platforms. Still, the notes showcase the way that search happens on other platforms than Google Search, as also evident in my articles (II, III, IV).

I also acknowledge that my participants might have found the task of writing down three searches challenging as they did not know what was expected of them or how broadly, and freely, they could associate search. I began each focus group with describing what would happen in it, pointing out that there are no right and wrong answers, and that I was interested in their point of view. Still, relating back to my theoretical chapter, they most likely did not have much previous experience to draw from in terms of framing (Goffman, 1974), and in responding to ‘what applies here?’ (Persson, 2019, p. 65). In defining the situation and how they should involve themselves in it, my participants most likely drew on the fact that the focus groups were done in school. The questions that my participants asked about the task can be viewed as them trying to figure out how to do the task ‘correctly’. After this initial uncertainty, the discussions got going.

In contrast to leaving search vague, I also intentionally spoke of googling. This was done both as I needed to use a way of speaking, and asking questions, that was understandable for my participants, and as a way of investigating the meanings that my participants attach to the verb, as well as to the search engine. In relation to what language my participants use, the focus groups, and pair- as well as group interview, were useful. For example, this discussion from the group interview:

Researcher: Mm. But what did you say, you use Safari and Safari is the internet?

Participant 1: It’s Google sort of

Participant 2: Yes

Participant 3: Me too.

Participant 1: So we have Safari but she has Google instantly.

Participant 4: Chrome.

Participant 2: Google is a search engine.

Participant 1: Then there’s Chrome plus, Google, Google minus.

Participant 2: But look, Google is a search engine and Chrome is like the entire internet.

Participant 1: What?

Participant 2: Yes!

Participant 3: Let’s not get into all that.

The excerpt above also showcases the importance of re-asking questions, something I have continuously done, in order to explain the way that I understand my participants' statements.

One of the benefits of continuing to do fieldwork in the same schools, and with the same participants, after the focus groups, was the ability to continue discussing topics that had been discussed in the focus groups. Go-alongs and interviews also created opportunities to ask follow-up questions. To sum up, the benefits of multiple starting points in relation to online searching was supported by staying in touch with the same participants over a period of time.

Analysis

Below, I will describe and discuss the analysis of the thesis. As this is a compilation thesis, there are parts, in the form of articles, and then there is the whole, the thesis (including the framing 'kappa' and the articles). Before proceeding to describe the analytical process, I will discuss the process of writing a compilation thesis in combination with doing ethnographic fieldwork.

The parts and the whole, dividing and compiling ethnographic fieldwork

One defining difference between writing a compilation thesis and writing a monograph is the publication of articles. For me, this meant that my first article was written while I was still doing, as well as planning, fieldwork. This shaped the analysis as well as the direction of future fieldwork. Hammersley and Atkinson (2019) put forth that 'fieldwork is a very demanding activity, and the processing of data is equally time-consuming. As a result, engaging in sustained data analysis alongside data collection is very difficult in practice' (p. 160). However, they also stress that some reflection and analysis should be done throughout the fieldwork process. Several authors argue that analysis begins during fieldwork, and that ideally one should engage in a combination of writing, gathering material and analysis (Davies, 2008; Ehn et al., 2016). Davies (2008), for example, maintains

that ‘the process of analysis is intrinsic to all stages of ethnographic research, and not something that begins once data collection is complete’ (p. 231). Nevertheless, the analytical process will go through different stages, and become more focused as it progresses. This can be likened to a funnel structure (Hammersley & Atkinson, 2019). When writing a compilation thesis, the articles create one such funnel structure, or at least, they force the author to decide the focus of each article. There are of course several challenges related to this. One such challenge, for me, was writing and publishing the first article without knowing what the rest of my fieldwork would yield. Another aspect was that the articles must be able to stand on their own but also, when brought together, create a whole. In relation to data and analysis, the writing of articles demands delineating which data should be in focus in each article.

As is common with ethnographic data, I had a large and varied set of material to analyse, including transcripts from interviews and focus groups, fieldnotes from observations and go-alongs, pictures, as well as ICT contracts from Schools A and B. The articles have not been divided along the lines of methods but rather in terms of empirical focus. Thus, the transcripts from the interviews are analysed in Articles II, III and IV, albeit different parts of these transcripts. Different aspects of field notes were part of the analysis of the four articles. To keep track of how the data was spread across the articles, I made tables in an Excel document. While the first article was written earlier in the fieldwork process, the second and third articles were written as I wrapped up fieldwork. I started working on them while in the field. One advantage of this was that I was able to ask some follow-up questions to my participants during the analysis. The fourth article was written upon completion of the fieldwork.

Transcribing

Above, it was sketched how some initial analysis began in the field. The next analytical step was to transcribe the focus groups and the interviews. Through transcribing, decisions are made in relation to how detailed it should be. Mary Bucholtz (2000) points out that transcribing is an act of power, as it deals with interpretation and representation. She argues that

a reflexive transcription practice is needed, ‘one in which the researcher is conscious of her or his effect on the unfolding transcript, and the effect of the transcript on the representation of speakers whose discourse is transcribed’ (p. 1462). I transcribed the focus groups and interviews verbatim. However, I did, on some occasions, make minor adjustments in the transcripts to make them clearer and more readable. For example, in Swedish, the word for computer is ‘dator’ but is sometimes pronounced as ‘data’, which then means the same thing as the English word data. Saying data when referring to a computer does not necessarily sound weird in spoken Swedish, but once written down it can distract from the meaning of the sentence in favour of the pronunciation of a certain word. Using the word data instead of dator, can also contribute to making a person seem uneducated when it really only reflects the difference between spoken and written. Which showcases the interpretative process of transcribing. I therefore made the decision to change this in the transcripts.

Another challenge related to transcribing is that of translating my quotes. All interviews and focus groups were conducted in Swedish. This means that there are two processes of interpretation; first, my transcription, and then, my translation. I have aimed to translate excerpts as closely to my understanding of what was said as possible. However, slang and everyday expressions are sometimes challenging to translate, as alluded to above. I have put a lot of thought into finding the right tone when translating. In the transcriptions, I also noted the presence of laughter and included information that is easier to pick up on while listening to the conversation than while reading the transcripts, such as if someone was being ironic. Irony and jokes can otherwise be hard to pick up in written transcripts. I also wrote down cues, such as long pauses.

Another important dimension when translating and using quotes to illustrate a point, is that of what gets chosen and what gets left out (Sjöberg, 2010). The narratives surrounding children and young people, as outlined in Chapter 2, means that it is easy to take a quote out of context and situate it in line with a certain narrative. I have found it to be important to keep such narratives in mind, not only when writing my articles but also when presenting them, as well as during my ongoing work. In the articles, I have strived towards being clear about my focus in relation to my ex-

cerpts, and to not leave quotes uncommented but to include them in the text and make my interpretation of them explicit. Below, I will illustrate how I have analysed my material.

Applying a dramaturgical analytical lens

All of my articles are analysed by drawing on concepts from Goffman. Yet different phenomena in relation to online search were analysed through this lens, as sketched below:

Table 2. Relations between article, analytical concepts and empirical focus

	Material	Analytical concept	Empirical focus
Article I	Transcripts from 5 focusgroups, fieldnotes from 4 days of go-alongs and classroom observations	Front- and backstage Audience	Legitimization of information activities in school
Article II	Transcripts from 13 interviews (11 individual, 1 pair, 1 group), fieldnotes from 10 days of go-alongs and classroom observations	Framing	Framings of Google
Article III	Transcripts from 13 interviews (11 individual, 1 pair, 1 group), fieldnotes from 10 days of go-alongs and classroom observations	Front- and backstage Audience	Conceptualization of online traces of search and strategies in relation to it
Article IV	Transcripts from 5 focusgroups, transcripts from 17 interviews (15 individual, 1 pair, 1 group), 15 days of go-alongs and classroom observations	Framing	Framings of the smartphone

The common denominator for all articles is an emphasis on context and situation in relation to meaning-making of activities, and the consequences thereof. Performance is particularly in focus in Articles I and III, where the emphasis is on impression management, drawing on the concepts of

front- and backstage and audience. Articles II and IV, on the other hand, revolve around the notion of framing, which in turn guides the way one might act in a situation. I find it important to stress that these analytical foci do not entail an attempt to identify my participants' 'true' backstage, and how something is true or false, as also outlined in Chapter 3, but rather, how a version of reality might be spoiled and what the distinction between front- and back reveals about what is considered appropriate in the different contexts. Focus is on the ways in which social activities sustain local realities, and subsequently how these can be disrupted (Hafermalz et al., 2016). In relation to the dramaturgical perspective, Pushkala Prasad (2017) suggests that 'dramaturgical research comes closer to reaching its full potential when conscious attention is directed to the front- and backstage divide that is so strongly emphasized by Goffman' (p. 50). As explained, such a focus is brought forth in Articles I and III. I will return to a discussion of the dramaturgical approach in my concluding chapter.

In Article II and IV, where framing is in focus, the analysis is targeted towards what framings can be identified and also what these framings entail. As sketched in Chapter 3, framing can be said to correspond to the question, 'what applies here?' (Persson, 2019, p. 65), which is what I tease out in the two articles drawing on frame analysis. In his writing, Goffman does not describe a method for identifying frames. Instead, I have drawn inspiration from previous research that has used the concept of frame analysis to identify frames in relation to information-seeking tactics among children (Sjöberg, 2016), and research on frame analysis in relation to framing of school and within social media (Persson, 2015, 2019). In *Frame Analysis*, the term 'strip' is used to refer to any 'arbitrary slice or cut from the stream of ongoing activity' (Goffman, 1974, p. 10). In Article II, such strips in focus relate to my participants' doings with and descriptions of Google, and in turn, in Article IV strips relate to my participants' doings with and descriptions of smartphones. In my articles, the identified frames are presented separately from each other. However, they do coexist and overlap (Sjöberg, 2018), as I discuss in the articles and will return to in my concluding chapter. All the names of different frames have been coined by me.

Analysing focus groups and coding material

Before proceeding to describe the analysis for each article, a few words are needed about the way that I have worked with analysing my focus group material. David Morgan (1997) discerns a unique feature of analysing focus group discussions as being the unit of analysis in coding, the difference between focusing on the group level or on the individual level. Yet, as individuals make up the group, completely disentangling the two can be challenging. Morgan (1997) states that the three most common ways of coding data from focus group transcripts are:

- (a) all mentions of a given code,
- (b) whether each individual participant mentioned a given code, or
- (c) whether each group's discussion contained a given code (p. 13).

As with the relation between individual and group, these ways of coding are also nested in one another. In relation to my focus groups transcripts, I firstly did a close reading through which certain themes emerged. Based on these themes, I created a code and returned to all transcripts. When going through the transcripts, I shifted between the different levels, a-c, above (Morgan, 1997), identifying if the topic was brought up in all groups but also looking at the individual level to find out if the topic was discussed by more than one participant. To keep track of this, I colour-coded the focus groups by assigning each group with a colour. The analysis of focus groups can focus on the interaction or that which is being said. While it is difficult to separate the two, focus on this part of the analysis was primarily on what was being said, yet this must be understood in relation to the context of the focus group discussion (Halkier, 2010).

An important part of the analysis is the coding of the material. Yet before proceeding to code and analysis, Hammersley and Atkinson (2019) argue for the importance of knowing one's data. This is achieved by repeated and close readings of material, which has been an important part of my analytical process. As the articles were written sequentially, I was quite familiar with the material from the focus groups, after I had written the first article. Hammersley and Atkinson further identify that initially cod-

ing categories might be quite mundane and then progress towards more analytically significant categories. This is the way it has been throughout the analysis of my respective articles. First, I have had a larger number of categories wherein I have then found overarching themes. Below, I will describe such themes in relation to the respective articles.

Analysing information activities in school, Article I

Transcripts from focus groups as well as fieldnotes from go-alongs and classroom observations were analysed in this article. In the initial reading of the focus group transcripts, themes emerged regarding how my participants describe how pupils should deal with information activities, in relation to questions such as critical assessment of sources, not relying on Wikipedia, creating a bibliography, and properly stating sources. Another theme that emerged was that my participants did not always comply with these characteristics that they had explained, although they might present the results of a task as if they have, by only referencing sources that they believe the teacher will like. I thus identified the teacher as an audience to these actions. I then read the transcripts again, extracting excerpts from the transcripts and pasting them into a new document. The colour-coding made it possible to get an overview of how often and how widely topics were discussed and how this was dispersed among the groups.

The observations were analysed in relation to the topics in the focus groups. Analysing the observations gave context to some of the discussions in the focus groups and the teacher being present during the observations added another layer to the analysis (Davies, 2008). I was thereby able to situate what was said during the focus groups, in relation to what I observed during my observations.

Three themes were identified within the article: *Legitimate and non-legitimate information sources*, *Googling: a front- and backstage activity*, and *Technology creating a new backstage in the classroom*.

Analysis of framings of Google Search, Article II

The analysis for the second article was conducted through a repeated reading of fieldnotes and interview transcripts. I identified that my participants connected Google to school and fact-finding, although they used the search engine for other purposes as well. The following questions guided the analysis during the identification of frames:

How do the participants use Google?

How do they describe their use of Google?

What is characteristic for the way that they interact with the search engine?

How do they conceive of Google?

Can any differences be identified and if so, what are they?

These questions worked towards the more theoretically informed questions of: 'How is Google, and the use thereof, framed?' and 'In which ways do the framings organize how the participants act and experience the activity within the frames, as well as how they view the search engine?' Through the analysis, three framings were identified, the names of which were coined by me. *Google and fact-finding* was the first frame to be identified. It was made explicit early both through the interviews as well as during observations. *The Google as a neutral infrastructure* was identified through the way that the participants spoke differently about their use of Google outside of the school context. While the participants explicitly spoke of Google in terms of fact-finding, the term neutral infrastructure was coined by me in order to capture the way that the participants described their use of Google in a neutral and instrumental way. The third frame, *Google as authority*, captures their view of Google more than the activity of googling.

Analysis of online traces of search, Article III

Transcripts from interviews as well as fieldnotes from walk-alongs were analysed in the third article. During the fieldwork, I had identified that my participants talked about the removal of entries from their search logs.

Two primary questions were in focus during the analysis for this article:

Do many of my participants remove traces of online search?

What does removal mean?

Why do my participants remove traces of online search?

How do they remove traces of online search?

Taken together, these questions thereby facilitated an analysis of why and how my participants were removing parts of their search history. The dramaturgical perspective helped tease this out, and my findings showed that my participants were removing content from their search logs in relation to an imagined audience that would otherwise, potentially, gain access to it. The findings were clustered under the following themes: *searching and deleting*; *performing for a non-present audience*; *search logs and presentation of self*; and *dealing with multiple devices*.

Analysis of the framing of the smartphone, Article IV

In my fourth article, framings of the smartphone are in focus. The analysis was guided by the following questions:

When is the smartphone used?

How is the smartphone used?

How do my participants describe their smartphones?

What apps do they have on their smartphones?

What is the role of online search in relation to the smartphones?

As in Article II, sketched above, these questions then led to the more theoretically informed question of how the smartphone is framed, and in which ways the framings organize how the participants act, as well as their view on online search. The analysis progressed from containing many small sub-categories, such as multi-tasking with devices, the smartphone in the classroom, rules at home, laptops in the classroom and so on, to an iden-

tification of larger patterns (Hammersley & Atkinson, 2019). Three framings were identified in relation to smartphones: *the entertainment framing*, *the easy access framing*, and *the challenging co-presence framing*. An identification of the various frames was made possible through the different starting points in my study. As with *the Google and fact-finding* frame (Article II), the smartphone and the *entertainment framing* surfaced first in my analysis. The frame surfaced in relation to discussions on how smartphones are used in everyday life. *The easy access framing*, on the other hand, was identified through talking about online search. *The smartphone as challenging co-presence* framing surfaced when talking about rules in my participants' home lives, as well as through my observations in school, where my participants would sometimes complain about others being attached to their phones during conversations. The identification of frames was thereby made possible through the combination of methods employed.

5. Summary of studies

Article I

The front and backstage: pupils' information activities in secondary school (Information Research, 2017)

This article is based on the initial fieldwork that was conducted in the form of focus group discussions and classroom observations (see Chapter 4). The study starts from the technological changes within the school setting and the way that these are incorporated in information activities. The curriculum for Swedish compulsory schools identifies that pupils should be able to use modern technology as a tool in 'the search for knowledge, communication, creativity and learning' (Lgr11, p. 16). All the while, statistics from the Swedish National Agency for Education (2013) show that although access to computers in schools has increased, the amount of teaching carried out with the help of computers has not. In the study, I examine how information activities unfold in school and how different ways of carrying out school tasks emerge and become legitimized. Drawing on the work of Goffman (1959), legitimate and non-legitimate ways of performing information activities are viewed through the lens of front- and backstage. Legitimate and appropriate ways of doing activities are viewed as that which is brought to the front in the interaction with the audience, while other activities are left backstage. Here, the audience for the performance is defined as the teachers.

Three themes are identified in the analysis: (1) *legitimate and non-legitimate information sources*; (2) *googling: a front- and backstage activity*; and (3) *technology creating a new backstage in the classroom*. The three themes relate to different aspects of how information activities unfold. The first

theme focuses on the way that information sources are dealt with, and that some are considered more legitimate than others. Notably, Wikipedia is considered an important source but also one that is surrounded by uncertainty and not considered fully legitimate. The connection to how school 'should' be carried out and tacit understandings that contribute to maintaining standards comes forth here. The participants explain that they prefer writing out other sources than Wikipedia in their school assignments. Yet, during the focus group discussions, they noted that their teacher had never said that they should not use Wikipedia at all, but rather that they should not use only Wikipedia. The fact that they identified Wikipedia as an uncertain information source did not necessarily make them refrain from using it, but they did work towards double-checking and finding other sources to back it up with. In the second theme, the way that googling is in some cases considered an appropriate way of finding information and solving a task, while in other cases considered inappropriate, is illuminated. The participants tend to attribute the difference to the way that specific teachers give instructions. The way that teachers make use of Google Search in the classroom can sometimes undermine arguments about not using Google, as the pupils consider their teachers to be contradicting themselves. In the third theme, the way that technology creates a new backstage in the classroom is discussed. The presence of smartphones and laptops means that teachers are not always able to see what their pupils are doing behind the screen and in turn, the pupils do not necessarily know what their teachers are doing on their screens. In the article, an example is brought forth in which a teacher uses her smartphone as a dictionary during English class. The technology becomes part of the teacher's performance. Since the smartphone in itself does not show the pupils what is going on, the teacher needs to explain it.

The findings of the study show how tacit understandings can guide the way that information activities are carried out. It also shows that social interaction in the classroom contributes to the pupils' understanding of how information technology should and can be used, regardless of whether the teacher considers it part of the teaching or not. The concept of front- and backstage makes it possible to identify the ways that ways of doing things, googling for example, can shift throughout the day.

Article II

“Google is not fun”: an investigation of how Swedish teenagers frame online searching (Journal of Documentation, 2017)

In this article, as the title indicates, the role of Google Search in relation to online search is explored. The study takes its starting point in the key role that Google Search has in online activities. This key role is evident, for example, in the fact that googling has become a verb synonymous with retrieving information online, and in Google’s dominant position on the Swedish market (Johnson, 2021). Given this scenario, it is assumed that the online activities of the participants are also influenced by Google. The aim of the article was to investigate how Google is used and framed. In the article, the concept of frame refers to Goffman (1974). Framing focuses on the way that people identify and make sense of situations and activities. The framing of an activity or situation also influences people’s involvements in them. Framings are influenced by social structure and institutions (Goffman, 1974). Thus, in a study such as this one, school as an institution is of importance (Bunting & Lindström, 2013). Previous research has identified that pupils adjust the way that information activities are carried out to their understanding of expectations imposed in a school setting, relying on cultural competence (Alexandersson & Limberg, 2012). The study is guided by two research questions: 1) What framings can be identified when teenagers describe their use of Google? and, 2) What do these framings reveal about Google’s role in their online activities?

The study is based on 11 individual interviews, one pair interview, and one group interview, as well as five days of classroom observations, combined with go-alongs with the participants (Kusenbach, 2003). The analysis, and subsequent identification of frames, was conducted through repeated readings of the interview transcripts and fieldnotes. Three framings of Google Search emerge in the analysis:

- Google and fact-finding
- Google as a neutral infrastructure
- Google as an authority

The Google and fact-finding framing connects Google Search to school. The use of Google is associated with doing schoolwork, and for that purpose to search for facts. It is possible to discern a connection between this framing and the factual genre in school, wherein schoolwork is closely associated with facts (Gärdén et al., 2014). For my participants, when doing a school assignment in which they have to search for information, Google Search is their starting point. In the framing, the way that online search is viewed and carried out is influenced by school assignments, such as, the need to find serious and factual content. *The Google as a neutral infrastructure framing*, on the other hand, captures the way that Google is part of my participants' online activities in other ways than through school assignments. At the same time, within this framing, Google is almost invisible. While the search engine enables my participants to navigate online and get to certain websites, it is not viewed in terms of googling. Within this framing, there is no need to find multiple sources to support one's findings, as there might be in relation to school. Rather, Google is referred to in a more instrumental manner, as a way of getting from A to B. Also, they do not spend much time on Google's website. This way of using Google reinforces the notion of a neutral infrastructure, in turn making the search engine invisible.

Thus far, the factfinding framing can be said to situate googling as a school activity, and the neutral infrastructure framing draws attention to the use of the search engine outside of school activities. The third framing, *Google as an authority*, pinpoints my participants' trust in the search engine. This framing echoes arguments put forth by Halavais's (2013), on search engines directing attention towards a few results, which we are then led to believe are the most suitable ones. While my participants, to a large extent, trust the rankings of Google searches and find them useful, they are more critical towards the rankings on image search. Image search seems to make the vastness of the information environment more visible. At the same time, when searching for images, my participants often seem to know what they are looking for and are more critical towards image search when the desired content is not displayed.

The three framings taken together reveal the extent to which Google Search is an important part of my participants' online activities. At the

same time, the search engine is not always brought into focus. Online activities carried out through Google Search are not always framed as googling. This also brings forth methodological challenges in studying online search, and the value of approaching the topic from several starting points.

Article III

Searching and deleting: youth, impression management and online traces of search (Aslib Journal of Information Management, 2019)

This paper starts in the complex online environment in which online search takes place, wherein it is hard to know what happens to traces of search, and who has access to them. There are ways of limiting traces, such as by using incognito mode in Google Chrome. Still, what data becomes stored is difficult to know. For example, while it is described that no cookies are saved when using incognito mode, the following sentence is hard to decipher: ‘Your activity might still be visible for: websites that you visit, your employer or school and your internet service provider’ (Google Chrome, 2019), which opens up for questions concerning who can actually see the online activity. As noted by Pangrazio and Selwyn (2019), ‘as digital data become more ubiquitous to everyday life, it is also becoming increasingly difficult for non-specialists to define and understand’ (p. 420). This study seeks to explore how young people become aware of their online traces of searches, and what strategies they have for managing them. In the paper, I use the term ‘online traces of search’ instead of digital footprint as the focus is not on the participants’ digital footprint as a whole, but specifically on the traces left from using various search engines. Searching on social media is also included in the scope.

The study is based on interviews, combined with go-alongs, as well as classroom observations. During go-alongs (Kusenbach, 2003), I follow my participants during a school day, from beginning to end. This includes having lunch together, spending recess together and that I attend the classes that my participants do. Nine participants were interviewed, some on more than one occasion. Four participants were also interviewed as a group and two as a pair, beyond being interviewed individually. Go-alongs were

carried out with all participants. Five participants went to school A, and four went to school B (see Chapter 4 for further information on the schools). In both schools, the pupils had to sign a contract in order to be allowed to use the various ICTs in school. Those contracts have also been meaningful to the analysis.

In School A, all pupils were provided with their own laptop, which was designated for their sole use as long as they attended the school, and they were allowed to take it home. In School B, pupils had shared laptops that were housed by the school and taken out of a locked room when the pupils needed them for schoolwork. The pupils of School B were not allowed to bring the laptops home.

The analysis is informed by the notions of presentation of self and impression management (Goffman, 1959). The perspective highlights that people present themselves differently depending on the situation and the people involved, i.e., the audience. Backstage represents the area that the audience does not, ideally, gain access to, whereas frontstage is where the actual performance takes place. Who the audience of one's presentation of self is depends on the situation (Goffman, 1959). In relation to this study, audience was often identified as parents and teachers, and sometimes also as friends. It is not static. The notion of audience is complicated in an online setting as one cannot always see who is watching, and thus the audience is obscured (Marwick & boyd, 2014; Tufekci, 2008). Furthermore, through the persistence of online information, 'the audience can now exist in the future' (Tufekci, 2008, p. 22). Four themes were identified in the analysis:

- Searching and deleting;
- Performing for a non-present audience;
- Search logs and presentation of self; and
- Dealing with multiple devices.

The findings show that the participants have an awareness of the fact that online search leaves traces. This is described in relation to searching and deleting, which shows that my participants remove traces of search.

This is connected to the notion of a non-present audience, described in the second theme. The removal of traces is done in relation to the imagined audience (non-present audience), such as teachers, parents or friends. The concept of an imagined audience is enmeshed with the persistence of on-line information (Tufekci, 2008). The removal of traces of online search is done as the participants are worried that the information might pop up in the wrong situation. Through this way of dealing with online traces, the search log can be viewed in light of presentation of self. The way that the search log is handled can be likened to that of a social media profile, but instead of publishing content, it is removed.

In terms of how the participants conceptualized the flow of data, many of them viewed online traces as residing in the devices in use, at least to a certain extent. The conceptualization of traces, as residing in the devices, underpinned the activity of deleting items on their search logs. Since the participants have multiple devices, some tried to create a division of labour between which activities were carried out in which device. At the same time, this easily becomes blurred as the school laptop travels home with them and, in turn, the smartphone is present on most occasions. Their multiple devices sometimes also contributed to an awareness of the connection between devices, and flow of data, such as through using the school Wi-Fi on a private smartphone. The participants were for the most part more concerned with parents, friends and teachers viewing their traces of online activity and less concerned about corporations mining their data.

One consequence of my participants' conceptualization of online traces is that their strategies are based on removing that which they can see, rather than a strategy to act beforehand in regard to certain information. Another consequence is that they might believe that they have been successful in not sharing any data if they cannot see it in their search log.

Article IV

Between enabling and disturbing: smartphones and shifting frames in the everyday life of young people (submitted).

The background to this article is the prominent role of smartphones in society at large, and among young people specifically (Anderson & Jiang, 2018; Davidsson et al., 2018; Stoilova et al., 2020). The smartphone has been described as wearable (Fortunati, 2014a), and as an extension of the body in relation to young people (Stoilova et al., 2020). A defining characteristic of the smartphone is thus the way that it can be carried around, which stems from the physical qualities of the device. The functionality of the smartphone is, to a certain extent, the same as that of a laptop, although with less processing power. Importantly, for the article, the meaning of a smartphone is not fixed, but rather is understood as a cultural object which is constantly assigned meaning and is also interwoven in many practices in everyday life (Lomborg, 2015).

With its internet connectivity, the smartphone makes it possible to search for information at any time and in any place. Still, smartphones are not necessarily used anytime and anyplace, as the device travels with people across settings guided by different norms (Scott, 2009). People might thus refrain from searching due to a social code (Haider, 2017). In relation to young people, research has indicated that the smartphone does not replace other devices but that it instead becomes part of a set of technological devices (Dirndorfer Anderson, 2013; Stoilova et al., 2020). This might indicate that devices are used for different purposes, although how they are used is not evident. In relation to the educational setting, smartphones have caused struggles in the classroom (David et al., 2015; Dinsmore, 2019; Merchant, 2012; Ott et al., 2018).

The role of the smartphone in relation to online search has not been given much attention. It has been suggested that young people prefer to search using a desktop computer (Sundin et al., 2017). Google Search has also been found to be used in more activities than young people might report, as those activities are not necessarily viewed as searching. Findings have also shown that search engines are primarily associated with school-work by young people (Andersson, 2017; Sundin et al., 2017). At the same

time, YouTube has been put forth as the most important search engine for young people (Pires et al., 2019). Considering that YouTube is a very popular app among young people, questions arise regarding the role of smartphones in relation to search.

The aim of the article is to elucidate framings of the smartphone in everyday situations. In so doing, also to contribute with a discussion of what it is that make smartphone use contested in various situations. The article draws on frame analysis (Goffman, 1974). I also draw on a development of frame analysis that considers the framing of objects (Cress, 2015), and also sociomateriality (Cress, 2015; Hafermalz et al., 2016). Frame analysis has been identified as particularly useful for phenomena that are not static in how they are viewed (Persson, 2019). Frame analysis centres on the question of what it is that is going on in a certain situation. This question is usefully divided into three sub-questions by Anders Persson (2019): ‘how do I usually act in such a situation?; what do other people expect from me in this situation?; and how should one act in situations such as this?’ (p. 65). These questions are here directed at the smartphone, and how one interacts (or not) with the smartphone.

The material for the article consists of transcripts from focus groups and interviews, as well as fieldnotes from observations and go-alongs. In total six focus groups have been carried out and 17 interviews. One of the interviews was a pair interview, and one was a group interview consisting of four participants. It is the young people’s own descriptions of how smartphones are used in various situations that are my object of study, in combination with findings from my observations.

Three framings of the smartphone are identified in the analysis: (1) *the entertainment framing*, (2) *the easy access framing*, and (3) *the challenging co-presence framing*. *The entertainment framing* highlights the interrelatedness between the smartphone and many of the entertainment activities that it enables. Within this framing, YouTube and social media sites are used as search engines. However, the smartphone is used for a broader range of activities. It seems to be this framing that causes discussions in classroom. *The easy access framing* identifies the way that the smartphone can conveniently be used as a calculator, for taking pictures of the whiteboard, for online searches, etc. In relation to easy access, the role of Goog-

le and quick lookups (Marchionini, 2006) surface. *The challenging co-presence framing* identifies the negotiations that accompany the wearability of smartphones, making people reachable, as well as able to communicate at any time and in any place. This becomes particularly pertinent in relation to the family meal, wherein the smartphone potentially turns a communal social activity into an individualized one (Cahir & Lloyd, 2015), thereby leading to mobile bans around the dinner table.

The article confirms previous research suggesting that young people prefer searching on laptops. Yet, this preference needs to be viewed in light of the associations between search and school. At the same time, it was identified that young people do search on their smartphones. The software routines of the smartphone make it a preferred choice in some instances as it does not need to be booted up. It appears that the immediacy, and quick ways of searching, on smartphones makes the activity almost invisible (Haider & Sundin, 2019). In the accounts of searching on the smartphone, it comes through as something that has a clear beginning and end, as opposed to watching videos on YouTube, where the participants stay on the website. Furthermore, searching on smartphones comes through as unproblematic and as something that does not demand much reflection.

6. Summarising and concluding

As described in Chapter 1, the overarching aim of this thesis is to advance knowledge about the role of search engines, and online search, in the everyday life of young people (age 13-16). As the role of search engines is viewed as enmeshed with the devices that enable it, the role of mobile digital devices in relation to online search is also explored. The thesis is underpinned by an interest in everyday life. Here, that perspective brings forth a focus on routines, and that which is taken for granted (Ehn et al., 2016; Scott, 2009). My analysis revolves around concepts developed by Erving Goffman (1959, 1974), primarily the notions of self-presentation and impression management (boyd, 2014; Goffman, 1959; Meyrowitz, 1985), as well as frame analysis (Persson, 2019; Sjöberg, 2018). I also draw inspiration from research that has progressed the work of Goffman by bringing forth dimensions such as digital media and devices, which were not so present in his work (Marwick & , 2014; Meyrowitz, 1985; Pinch, 2010; Tufekci, 2008). As I draw on the work of Erving Goffman (1959, 1974), who uses many terms from the world of theatre, and views social acts as performances, my perspective can be labelled dramaturgical. Within such a perspective, the notions of *front-stage* and *backstage*, *roles*, and *audience* are of importance. The focus within this thesis is both on how search engines are used, and the way that young teenagers navigate expectations and rules surrounding the use of search engines and mobile devices in various contexts. The dramaturgical perspective has proved valuable for such an analysis.

The thesis consists of four articles (I–IV) that, taken together, achieve the aim of this thesis. The following research questions guide the thesis:

1. How is online search done in school, and how is the activity legitimised in a school setting?
2. What framings can be identified when teenagers describe their use of Google Search?
3. How do young people become aware of their online search traces, and what strategies do they have for managing them, if any?
4. What framings of the smartphone can be identified in the way that young people use and describe smartphones, and how do the framings relate to online search?

In this concluding chapter, the questions are addressed along two themes. Research question one and three, are answered in the theme *Impression management and online search*. Research question two and four, are answered in the theme *Framings of Google Search and the smartphone*. This chapter will proceed by firstly presenting the findings of the research questions, and then go on to a discussion of my findings and some concluding remarks.

Findings of the four studies

Impression management and online search

Impression management is in focus within Article I and III. The findings of my first study point to the ways that using a search engine are a routine part of ‘doing school’ (Selwyn et al., 2017, p. 306). Google Search, is used in a number of ways by teachers and pupils alike, from quicker fact-checking to more explorative work on research assignments. Online search is done in planned ways within specific assignments, and spontaneously. My findings point in the same direction as those of Sophie Rutter (2017), who identified that search engines are used in broader ways than previously reflected in research, where the focus has been on independent research assignments. At the same time, through the dramaturgical lens, it is possible to identify that the ways that search engines are used may not be straightforward, but rather be moving between being a legitimate way of finding information (frontstage), to something that is done ‘behind the scenes’ (backstage). In some situations my participants are deterred from

using Google Search by teachers, for example, during math class (Article I), while in other situations, they are encouraged to make use of the search engine. Such usage includes being encouraged to search for quick facts in order to proceed with their work, as well as using the search engine for finding information in relation to written assignments (Article I).

What becomes evident through the perspective taken within this thesis, is the way that my participants can be said to be *performing the role of an information literate pupil*, where information literacy is defined by the school. In the focus group discussions, my participants use vocabulary that they have learned in school, in relation to critical assessment of sources for example. A recurring theme is the need to back up sources. This backing up typically involves using top ranking results on Google Search to support findings from Wikipedia, although of course Wikipedia is not always their starting point. Using Wikipedia is constructed as a backstage activity, something everyone does but no one wants to showcase. I view this performance as reflecting what my participants take to be legitimate ways of doing information searching in the school setting. For the performance to be credible, the boundary between front- and backstage needs to be maintained. It thus follows that it works best when teachers have not seen the pupils working with Wikipedia. An example of when this boundary is not maintained is brought forth within the study (Article I). The credibility most likely also hinges on how other tasks have been carried out by specific pupils, as reflected by, for example, grading. In article IV, my participants, for instance, describe the way that someone who does well in school is more likely to get away with playing games on their smartphone in the classroom. This resonates with the implicit power perspective (Persson, 2019), as described in Chapter 3. It refers to power in relation to influence. Here, it is about being able to influence the teacher into believing the performance. The fact that *performance of an information literate pupil* connects to the school setting becomes more evident when considering how Wikipedia is not considered problematic, or in need of backing up in other social contexts, such as when searching for information during discussions in the family (article II, IV).

In terms of credibility, my findings also point to the ways that *teacher's performances* are not always considered credible, here focused on the use of

search engines. When teachers are found to be googling in the classroom, for example on their smartphones, it undermines, according to my participants, arguments presented by teachers about the need to learn things by heart. As this border is hard to maintain, arguments have been put forth for viewing frontstage and backstage as a continuum (Mullany, 2011). When viewing online search in relation to such a continuum, it becomes evident that online search ends up in different ranges of the continuum depending on context, indicating that all forms of online search neither can be meaningfully grouped together, nor viewed as a stand-alone activity.

Another finding of the study is the notion of a *new backstage in the classroom*, made possible by the presence of laptops, tablets and smartphones. This refers to the way in which it is difficult, from afar, to see what people are doing on their screens. Such a challenge is also present without technology; take, for example, the difference between someone drawing in their notebook instead of writing something down. From far away, it can be difficult to discern the difference and people can pretend to be working when they are not. The contrast between such a scenario and the one here, with mobile digital devices, lies in the internet connectivity enabled by devices. The devices can be used for a wide range of things, from gaming to searching for information. This lack of insight does not only implicate the way that teachers might have issues with the pupils' use of smartphones (Dinsmore, 2019), as discussed in Article IV, but also means that when teachers are googling in the classroom, the pupils do not necessarily gain access to how this googling is done.

Above, performances were identified in relation to how my participants, as well as teachers, search for information online. In my third article, online search was investigated from another angle, in relation to the traces of online search. In doing so, I identified that my participants *perform for a non-present audience*. The performance of an information literate pupil revolved around showcasing certain ways of working. Performance in relation to online traces is instead done by removing traces so that they never surface in front of the wrong audience. Removing online traces of search is a way of securing the boundary between frontstage and backstage, and avoiding context collapse, i.e. the intermingling of various social contexts (boyd, 2014). My participants' descriptions of removing online trac-

es point towards the many ways that search engines are used in everyday life, from searching on Google when doing homework or for silly jokes with friends, to searching for friends and celebrities on YouTube. My participants' ways of dealing with their online traces correspond with the ways that they perform different roles throughout their everyday life. For example, *the role of a pupil*, *the role of a child* in a household, and *the role of a friend*. Different aspects of their search logs are of importance in relation to the roles, which shows the way that teens, like people in general, have a need for multiple stories about themselves (van Dijck, 2013).

Based on the findings from my first article, I have argued that the presence of mobile digital devices creates a new backstage in the classroom. When considering those findings in light of the findings of my third study, I would say that the concept of backstage in relation to mobile devices can be extended. It is not just a backstage within the classroom that is created, but a backstage in the pupils' everyday lives in general. Within that backstage, my participants can search for any topic. Yet to minimize the risk of their online backstage leaking out in relation to the wrong frontstage, my participants delete parts, or all, of their online traces of search. This is done based on an awareness of the persistence of online information (Hargittai, 2020; Tufekci, 2008). Yet, they deal with it under the assumption that if they cannot see the entries anymore, then they do not exist. This finding draws attention to the fact that place is not what defines a back- and front region, but how information flows (Meyrowitz, 1985). In Article III, I refer to this way of dealing with online traces as *searching and deleting*. My participants are thereby making their search logs presentable, not much different from the way that a social media profile is (van Dijck, 2013). In my material, concerns regarding online traces are more focused on their local social realities than, for example, institutions or corporations mining their data. This is in line with previous research (Hargittai & Marwick, 2016). Still, it should be noted that a few of my participants do put forth concerns about surveillance and are mindful of their online traces beyond leakage to family members, teachers, and friends.

Furthermore, the role of mobile digital devices is brought forth in relation to online traces of search, in various ways. The devices are what creates the scenario of someone gaining access to the young person's search log.

To a certain extent, my participants describe online traces as residing in the devices that they use. As the same devices are used in a number of social contexts, the worry is that something would unexpectedly appear or be located by someone else when the device is in use. Additionally, all devices are not viewed the same, and my participants do not necessarily have the same knowledge of how to remove traces from the different devices, which sometimes also seems to shape their preferences for which device to use when searching. For example, several participants described that it was easier to remove traces from their laptops than their smartphones (Article III). Using multiple devices also creates an awareness of the fact that information flows, such as when things searched for on the smartphone show up on the laptop. In Chapter 3, I describe the way that Goffman (1959), in relation to self-presentation, makes a distinction between giving, i.e. that which we share about ourselves voluntarily in interactions, and giving off, as in that which we share unintentionally. In relation to social media, José van Dijck (2013) identifies a tension in relation to self-presentation, created by the fact that platform owners collect behavioural data for the benefit of marketers. The conscious giving of information, intersects with the unconscious giving off. Within this thesis, I would say that this reasoning can be extended to the use of search engines. The fact that my participants search about all kinds of things, means that search engines have access to behavioural data related to different aspects of their self-expression. This makes concepts such as data literacy (Lomborg & Kapsch, 2019), data awareness (Bowler et al., 2017; Hargittai, 2020), and infrastructural meaning making (Haider and Sundin, 2019), of interest in relation to being able to control one's self-presentation. As described in Chapter 2, such research places an emphasis on the invisible workings of algorithms, and their importance for many online activities in everyday life. Such a perspective moves beyond a focus on evaluation of information once it is found, and pays attention to how, why and what information is found.

Framings of Google Search and the smartphone

In Article II, framings of Google Search are investigated, and in Article IV, framings of the smartphone, as well as the relation between the framings and online search are investigated. Three framings are identified in my second article: *Google and fact-finding*, *Google as a neutral infrastructure*, and *Google as an authority*. Although the framings are identified in the second article, these ways of referring to Google are recurring in my material. The fact-finding framing identifies the way that my participants relate online search to locating facts, which, in turn, is associated with schoolwork, although not limited to it (Article IV). The connections made between online search and school also surface in the article written with my colleagues (Sundin et al., 2017). Referring to online search in terms of fact-finding is not only done by my participants, but also teachers (Article I, IV). Previous research has proposed that search engines are optimized for acquiring factual knowledge, and that the way that search engines present results contribute to the results seeming factual (Haider & Sundin, 2019; Huvila, 2016; Noble, 2018; Rieh et al., 2016). Furthermore, the way that pupils experience information seeking in school as fact-finding has also been identified (Limberg, 1999; Todd, 2006). Beyond the category of fact-finding, Louise Limberg (1999), identified that information seeking was experienced as ‘balancing information in order to choose right’, and as ‘scrutinizing and analysing’ (p. 5f.). It has also been noted that the term ‘facts’ is used by pupils and teachers alike in a school setting, and can be said to be part of Swedish school culture (Gärdén et al., 2014). Taken together, it is not surprising that my participants frame searching as fact-finding, and in turn view using Google Search as a way of acquiring facts. As was noted above, in relation to impression management, this does not mean that my participants only use the search engine to search for facts. Still, Google Search is framed as a tool for fact-finding.

Arguments put forth by Soo Young Rieh et al. (2016) on search engines favouring factual knowledge, resonate with findings here. In my material there are examples of my participants taking explorative tasks and turning them into fact-finding tasks (Article I). In turn, there are examples of when my participants struggle with carrying out explorative tasks on Google Search, as the search engine is described as only providing facts (Article II).

It is important to note that all activities perceived as searching for facts do not look the same, nor are they done in the same way. Rather, the phrase fact-finding is used as a way of referring to searching.

Mikael Alexandersson and Louise Limberg (2012) identify two types of facts in relation to learning: type I, which refers to right and wrong, and type II, that focuses on connecting facts and creating an imagined whole. The second type thus demands more work in terms of analysing facts that are found and bringing them together. In relation to learning, Alexandersson and Limberg (2012) argue that 'students tend to lose meaningful knowledge content if they search for type I facts rather than for understanding a particular issue or topic. This has important consequences for their learning as regards purposeful ways of engaging with information to construct knowledge' (p. 140). While this thesis is not about learning, the above research is meaningful in relation to my findings. Previous research highlights that the term 'facts' functions on many levels, which is also evident in my material. My participants search for both types of facts. Yet, as using search engines is the primary way of searching for information, all kinds of questions, from complex to simple, must be turned into something searchable. The reference to Google Search and fact-finding is therefore best understood in relation to the prominent position of search engines when it comes to locating information, in combination with the ways that the term 'facts' is used in school (Gårdén et al., 2014). The fact-finding framing goes hand in hand with the search-ification of everyday life, as described by my colleagues and I (Sundin et al., 2017). When search engines are described as favouring factual knowledge, as is done above, I understand it in terms of complex questions, type II facts, being reduced to simpler questions to be made searchable, type I facts.

The *neutral infrastructure framing*, on the other hand, identifies the way that the use of Google Search is made invisible (Haider & Sundin, 2019). It refers to ways of using the search engine that are not considered as searching by my participants, such as locating known websites or shopping by using the search engine. This framing points to the ways that online search is done within a number of activities in everyday life. Google Search is thus being used, but it is not reflected upon, and not viewed in terms of searching. One reason for this could be that the need to back up sources, as described in my

first study, is absent within the neutral infrastructure framing. In discussions on searching, Google Search is contrasted against social media sites and YouTube, and in such a comparison, Google Search is not described as fun. Yet, my participants do use the search engine for searching for things that could be considered fun, such as personal interests, but then they do not necessarily refer to it as googling (Article IV). Unlike social media, Google Search is described as a site that my participants do not stay on. Furthermore, Google Search is primarily associated with school. This also acknowledges the role of Google in a school setting. In contrast with the use of social media sites, Google Search fits into my participants' framing of school, which resonates with previous research (Bunting & Lindström, 2013; Rantala, 2010). However, social media sites, and YouTube, are also used for educational purposes.

Whereas the two framings described above paint different pictures regarding the ways that Google Search is used, underpinning both framings is the authority attributed to the search engine. My participants attribute a high level of trust to Google Search, and the rankings provided, across both framings. Many had never contemplated the way the rankings work. Still, it seems that my participants primarily draw on concepts such as critical assessment of sources in relation to the fact-finding frame rather than the neutral infrastructure one, which is most likely explained by the association between school and the fact-finding frame. This relates to the discussion brought forth in Chapter 2, about the gap identified within previous research regarding literacies within and outside the context of school. For example, Jutta Haider and Olof Sundin (2020) note that evaluative criteria that are taught and used in the educational setting might work reasonably well there but are not of the same use in other areas of life: 'The practices learnt at school do not always appear meaningful outside school or adapting them proves difficult' (p.8). When searching for information on how to sew a dress, or about when a specific event took place (Article II, IV), the same assessment is not necessarily viewed as relevant as when searching for consequences of a conflict in the world for a research assignment (Article II). Interestingly, my participants are more critical of the way that Google ranks results on image search and describe it as messy and random, in contrast with textual search which they describe in terms of everything being where it should be (Article II).

In my fourth article I investigate the framings of the smartphone among my participants. Three framings are identified: the *smartphone and entertainment framing*, the *easy access framing*, and the *challenging co-presence framing*. *The smartphone and entertainment* is a framing that surfaces quickly. When discussing everyday routines, it is evident that the smartphone is almost omnipresent. The entertainment framing highlights the way that my participants use the smartphone to access various social media apps and gaming. Within the framing, sites such as YouTube, Tumblr, and Instagram are used as search engines. Those sites are described as providing access to certain genres that Google Search is not suitable for. However, YouTube is also used for finding math tutorials and documentaries.

The *easy access framing*, on the other hand, identifies the fact that the smartphone is part of many different situations. Whereas searching on social media sites was in focus in *the entertainment framing*, searching on Google, and for facts, surfaces in relation to *the easy access framing*. Therefore, the *easy access framing* intersects with the *Google and fact-finding framing*, as well as the *neutral infrastructure* framing, described above. Focus is on the ability to look something up quickly, anytime and anywhere. At the same time, it is not necessarily reflected upon. Examples range from searching for quick facts in the classroom, searching for images of food, to settling discussions around the dinner table (Article IV). The framing also overlaps with the easy access framing identified by Ulrika Sjöberg (2018), in relation to young people's online information seeking tactics, as described in Chapter 2. Her easy access framing identifies young people's expectation of instant availability of information, while my framing shows the way that the smartphone provides the physical opportunity. The software of the smartphone, which is designed to start up quickly, makes it the preferred choice over a laptop for doing a quick search. This also extends to tablets. The smartphone is contrasted against other devices and a preference for searching on laptops is present in my material, as well as evident in the article written with my colleagues (Sundin et al., 2017). The preference for searching on a laptop is put forth in relation to screen size, and to laptops and desktop computers having proper keyboards. In part, this preference also stems from the participants' association to writing school assignments in conjunction with searching. Also, the young people who

have computer driven interests, notably gaming, show a preference for using laptops or desktop computers for searching. At the same time, my material shows that searching is done quite extensively on smartphones, especially when including all forms of searching, from YouTube, to Tumblr, and Google Search. *The easy access framing* can be said to show how online search becomes part of so many practices in everyday life.

The *challenging co-presence* framing also points to the omnipresence of smartphones. With that follows negotiations on how and when the smartphone may be used. For example, many of my participants describe having mobile bans around the dinner table. My findings show that when the smartphone is used in an individualized manner (Cahir & Lloyd, 2015), within a practice that is considered communal, such as watching TV or having dinner, smartphone use becomes contested. Also, when hanging out with friends in school, it is considered rude to be too caught up in using a smartphone. Previous research has shown that the smartphone creates tensions in the classroom as it blurs local and remote contexts (Dinsmore, 2019). In my material, it is instead the boundedness of the home that becomes challenged. At the same time, my findings also show that mobile bans are not completely upheld. For example, a smartphone might be brought out to settle discussions around the dinner table, showing how online search becomes immersed into the family meal.

Discussion

In many ways the findings of my thesis point to the ways that online search is taken for granted in everyday life among young people – both related to the expectation of being able to search almost anytime and anywhere, but also in terms of the expectations of being able to find information through search engines (article I, II, IV). Moreover, it is apparent in the ways that online search is done without much reflection; it is just a routine activity among others. At the same time, my findings point to my participants' awareness of the norms and expectations of various social contexts, which also influence how they deal with search engines, mobile devices and the online traces of search (Article I, III, IV). This shows how their cultural knowledge guides how they deal with online search, which resonates with

previous research that has identified the importance of a cultural knowledge in being able to carry out assignments in school (Alexandersson & Limberg, 2012; Rantala, 2010).

The dramaturgical perspective draws attention to reflection in relation to actions (Shulman, 2017). This has been of importance to my work. Not least, it allows for showing that young people do not use mobile devices or search engines haphazardly and unthinkingly. With that being said, as online search has become taken for granted; it is not always reflected upon. There is therefore a tension present in my material, between awareness of online search in relation to social context on the one hand, and the routine use of search engines which allows it to fade into the background, on the other hand. The complexity of search engines, as sketched in Chapter 1 and 2, is consequently not thought about by the young people in my study. Importantly, my findings need to be considered in light of the prominent role of search engines in contemporary society (Hillis et al., 2013). When my participants omit to reflect on search, or the workings of search engines, it mirrors the contemporary society in which they live; a society that is characterized by a culture of search, and one in which Google Search has a prominent position (Hillis, 2013). This is an important backdrop to acknowledge, relating back to the statement in the introductory chapter on people's perceptions being viewed as cultural products, and the way that routine ways of doing things can become invisible (Ehn et al., 2016). This also becomes evident in my participants' descriptions of teachers' and parents' use of search engines and mobile devices. As online search is viewed as learned and shaped in interaction with people, society, and search system, the way that the adult world, among other communities, deals with them is of importance. The credibility of parents and teachers is called into question when they do not live up to standards imposed on young people. My perspective thus turns attention to how specific activities involving search are done, as well as connecting these to the broader picture of an everyday life shaped by a contemporary culture of search (Hillis et al., 2013). Notably, as outlined above, the use of search engines moves between being a legitimate way of looking for information, and not; between appropriate frontstage behaviour, and something reserved for backstage.

Among my participants, search engines are used for a range of activities, from quicker references to more in-depth explorative searches. In my introduction, I referred to a description from danah boyd (2014) about reality being messy and nuanced. In trying to sum up my findings, this is brought to the fore. While it is tempting to categorise online search in relation to platforms, for example, it is not that simple. It is not possible to draw a line between the searching that occurs on Google Search, and label it as search for facts, and searching on social media sites, categorising that as searching for entertainment. It is much messier than that in everyday life. Facts can be sought after on YouTube (Article IV), and topics that are not considered facts can be sought after on Google Search (Article II). Instead, my findings highlight the way that searching is framed (Goffman, 1974) in relation to the situation and social context in which it occurs. The findings resonate with a description from Billy Ehn et al. (2016) who note that ‘Well established forms of multitasking slowly blend into one activity and are no longer seen as a combination of tasks’ (p.78). They have the example of ironing while watching TV or keeping the radio on as background noise. As the activity of searching is taken up in a wide array of other practices, it is not necessarily viewed in terms of searching.

Annika Lantz-Andersson (2009) identifies the value of not only looking to what is included within a framing, but also what is excluded. When looking at the framings identified in relation to Google Search, what is absent, is a problematisation of the workings of the search engine. The framings identify the expectation of finding facts when searching, the way that using Google Search is made invisible, and the authority ascribed to the search engine. Thus, the rankings are not necessarily questioned, and the complex workings of the search engine remain concealed. This is not upheld by my participants alone. These ways of framing the search engine come through in the various ways that it is used in the classroom, and the way that my participants describe parents searching during dinner. Also, there is usually no need to question the search engine, as it provides results that allow people to proceed with what they are doing. Much research highlights the need for developing literacies in relation to the workings of search engines, as they are such important infrastructures in online activities in everyday life (Bowler et al., 2017; Haider & Sundin, 2019; Hargit-

tai, 2020; Lomborg & Kapsch, 2019; Pangrazio & Selwyn, 2019). Yet, it seems that the reasons that make it important, overlap with the reasons why online search becomes invisible: the flow of everyday life. This is not to say that my participants do not make any evaluations of the information that they come across; they do, as described above. Furthermore, my findings suggest that they have an awareness of when facts need to be double checked, and when it is reasonable to trust the Google Search knowledge graph, for example when searching for the capital of a country (Sundin et al., 2017). However, it seems that such ways of reasoning are not so applicable to other types of searches. In relation to the framings of the smartphone, a similar conclusion can be drawn: online search is largely made invisible, even though it is frequently done. Once again, the workings of search engines are thus left unproblematised. The way that the framings make the activity of online search invisible also contributes to making it challenging to research, a topic I will now turn to.

Implications and concluding remarks

Through the ethnographic approach taken within this thesis, the nuances of how young people navigate the use of search engines, and mobile devices, in everyday life are explored and illuminated. This ethnographic approach was underpinned by the perspective of everyday life, and this framing, is a methodological contribution to research focused on everyday life in general, and to research on online search in particular. With such an approach, certain aspects are drawn to the fore. I have taken it upon myself to investigate that which is taken for granted; rituals of bedtime, eating, doing school assignments, and worked towards making the familiar strange, posing questions like ‘What is the meaning of a smartphone?’ In doing so, I have been guided by an attempt to go ‘beyond the surface of what is immediately observable’ (Scott, 2009, p. 5). This way of approaching the topic is also why I maintain that my focus is on online search in everyday life. This approach has been instrumental to capturing the framings and performances described above, and has entailed working in the tension between what people say that they do and looking at what

they actually do; ‘recognizing that talk and action may not match’ (Livingstone & Sefton-Green, 2016, p. 45). For example, while initially several participants explained that they did not search on their smartphone or only associated Google Search with school, such accounts were nuanced through my continued fieldwork. My ethnographic stance has led me to several salient methodological starting points, such as starting in the activity of online search, in everyday habits, as well as in devices. In relation to online search specifically, my methods demonstrate the way that concepts such as search engines are not necessarily part of young people’s vocabulary. It is therefore important to find ways of approaching these questions in other ways, as discussed in Chapter 4. I can conclude that the ways in which search engines are used, and how they permeate many aspects of online activities, are not always readily available topics when asking about search. The different methods have been valuable in finding ways of speaking of search that resonates with participants, and in capturing routines. The method of go-along enabled my participants to get to know me in a public setting, and in a more relaxed manner than in the formal interview situation.

Empirical contributions are also made within this thesis, and these were made possible through the approach described above. The thesis contributes empirically through the exploration of online search in everyday routines. Not least, the empirical contribution stems from unboxing the question of traces of online search: a topic area that has not been in focus within previous research, and that has proved valuable in gaining insights about how young people reflect on how information flows. Another empirical contribution is derived from the focus on the relation between online search and mobile devices, a connection that had previously been identified as being of relevance for future research (Foss et al., 2013). The thesis is thereby a starting point for addressing that gap. A related topic is that of other forms of searching than textual. My findings, as well as previous research (Borlund, 2016; Pires et al., 2019), indicate that image and video searching are important in young people’s everyday life. This topic is something I touch upon, but it would benefit from further exploration. The focus on traces of online search also contributes theoretically, by extending dramaturgical theory beyond social media. Through that theoret-

ical contribution, the way in which context is not necessarily bound to location, but can refer to an imagined audience, is also brought forth in relation to online search.

The implications of this thesis extends beyond the research context of information studies, as will now be discussed. Above, the role of devices was brought forth. The role of devices also comes through in the way that my participants are provided with laptops and tablets by schools; something that, when done in conjunction with the use of *Google Apps for Education*, further seems to contribute to making the workings of Google Search invisible (Carlsson, 2021; Lindh et al., 2016; Lindh & Nolin, 2016). Importantly, my findings highlight the way that school owned laptops are used within other contexts than learning (Article III). When providing young people with such devices, my findings suggest that there is a need for a dialogue between teachers and pupils that go beyond rules and obligations. More needs to be said in relation to how the pupils use those devices. Such a dialogue should, in my opinion, ideally consider the amount of information that young people give away about themselves when using the devices. This is imperative, not least considering that schools are relying on commercial actors. Children have a right to privacy, as is enshrined into Swedish law through the implementation of the Convention on the Rights of the Child. To exercise that right in a digital environment, children need the tools to do so. Given that young people already seem to be conceptualising audiences in relation to social media (Marwick & boyd, 2014), and, as here, in relation to online search, such a discussion might benefit from the audience perspective. With the adaptations of teaching that have occurred in response to the covid-19 pandemic, these questions are of even greater importance. That being said, discussions on the workings of search engines and algorithms are not clear-cut since the workings of search engines are not transparent, as discussed in Chapter 2.

My findings point in the same direction as is indicated by a quantity of current research on various forms of literacies (Bowler et al., 2017; Haider & Sundin, 2019; Hargittai, 2020; Lomborg & Kapsch, 2019; Pangrazio & Selwyn, 2019): towards the need for explicitly scrutinising the workings of search engines and algorithms in everyday life. My findings highlight that young people derive their understanding of how search

engines can, and should, be used, from interactions with their social environment. Within most of these interactions, as has been described, using a search engine is a routine part of everyday life, and therefore does not merit much discussion. This seems especially true in relation to searching on smartphones.

I did not set out to write a thesis about Google Search, but given its prominent position, I find it unavoidable to comment as I summarise my findings and look ahead. Within my thesis, as well as in previous research (Bowler et al., 2017; Haider & Sundin, 2019; Hargittai, 2020; Lomborg & Kapsch, 2019; Pangrazio & Selwyn, 2019), the lack of reflection on the workings of algorithms and search engines is implicitly and explicitly referred to as a problem. It is constructed as a problem in relation to the lack of transparency regarding the workings of search engines, at the same time as people rely on those background processes when locating information. Moreover, as has been described, those workings are not neutral (nor can they be). Drawing on a non-dualist reading of the dramaturgical perspective, it might be possible to say that we never get to encounter the backstage of Google Search when searching. We are merely interacting with its neatly presented front. Meanwhile, Google Search gains a lot of information about people's backstage activity. Is the search engine considered to be credible because its backstage behaviour never leaks out in the front? Not necessarily. Personalised adds based on previous searches could be considered a form of slippage (Mullany, 2011). They indicate that something is going on in the background which is not shown in the front. Still, the search engine is considered credible enough. Search engines are used because of the perceived benefits, as they make it simple to locate relevant and seemingly accurate information. In the *Presentation of Self in Everyday Life*, Goffman (1959) puts forth:

For if the individual's activity is to become significant to others, he must mobilize his activity so that it will express during the interaction what he wishes to convey. In fact, the performer may be required not only to express his claimed capacities during the interaction but also to do so during a split second in the interaction (p. 40).

This split-second performance is what Google Search manages to give. This also means that there is little time to reflect on how search results are produced (Huvila, 2016). The role of the search engine becomes particularly problematic when viewed through the lens of everyday life, as it becomes evident what an important role it plays. In relation to investigations of everyday life, Billy Ehn et al. (2016), note that ‘seemingly trivial routines may hide important conflicts or carry strong moral messages’ (p. 1). I would say that the way that search engines are used but not reflected upon, is one such important conflict.

Consideration of how Google Search reproduces certain norms and values (Carlsson, 2021; Haider & Sundin, 2019; Noble, 2018), combined with the way that it is used by young people in everyday life, opens for a number of questions, for example: What is at stake when young people believe that Google Search places everything where it should be? What is at stake when *Google for Education* is brought into the classroom, when Google Search is already such a big part of young people’s everyday life? What is at stake when young people rely on Google Search to reformulate their questions? These are not mere rhetorical questions. These are questions that demand to be addressed. This, however, will need to be done within future research. It is perhaps enough that I set the scene by acknowledging that there may not be so much at stake when young people quickly search for the capital city of Spain, or how to bake a cake, without further reflection. However, these are not the only questions being asked. The stakes are clearly higher when young people rely on Google Search to provide them with answers to questions pertaining to societal issues, identity construction, health, and illnesses, to give a few examples. Getting to grips with this will be an important task for future research.

Svensk sammanfattning

Sök för galleriet: Sökmotorer och digitala redskap i unga människors vardagsliv

I denna avhandling undersöks sökmotorers och mobila redskaps betydelse i unga människors vardagsliv. Studien har genomförts i en svensk kontext med deltagare i åldern 13–16 år. Avhandlingen tar avstamp i den utbredda tillgången till sökmotorer vilken möjliggörs genom smarta mobiler, laptops, surfplattor och datorer. Detta scenario innebär att det är möjligt att söka information om nästan vadsomhelst, närsomhelst och varsomhelst. Att använda sökmotorer har kommit att bli en del av vardagen i dagens samhälle. Sökmotorer används inte enbart för att söka utan utgör i många fall även en startpunkt för aktiviteter på internet och kan därigenom anses vara en grundläggande informationsinfrastruktur (Haider & Sundin, 2019).

I avhandlingen har jag ett explorativt förhållningssätt till sökmotorer och inkluderar även sökning på social media, samt YouTube, som kan anses vara en kombination av social media och sökmotor. Även med ett explorativt förhållningssätt så finns det anledning att dröja sig kvar vid Google, då deras sökmotor dominerar marknaden (Hillis, 2013). Det är därmed närmast omöjligt att diskutera sökning utan att även diskutera Google Sök. Inte minst då googla har kommit att bli ett verb som används utbytbart mot att söka efter information på internet. Tidigare forskning pekar på att den breda användningen av sökmotorer i samhället inte speglas i undervisningen i skolan, där kritiska perspektiv främst riktas mot utvärdering av källor och medias roll i samhället. Detta samtidigt som Google gjort ett inträde i skolan, inte enbart som sökmotor utan även i form av Google for Education som används i många svenska skolor (Carlsson, 2021; Davies,

2018; Grönlund, 2014; Grönlund et al., 2014; Lindh et al., 2016).

Mot denna bakgrund utforskar avhandlingen hur tonåringar använder sig av, samt förhåller sig till, sökmotorer och mobila redskap i sin vardag. Vardagslivet (Ehn et al., 2016; Scott, 2009) är därmed en genomgående infallsvinkel. Min analys bygger på Erving Goffmans teorier om självpresentation och intrycksstyrning (1959), samt hans ramverksteori (1974). Inom hans teoribygge så betraktas sociala handlingar som framträdanden (performances). Goffman drar även många paralleller till teaterns värld och därför benämns hans perspektiv ofta som dramaturgiskt. I teorierna så är viktiga begrepp publik, roll, främre och bakre region (frontstage och backstage). Fokus ligger på att människor, i interaktion med andra människor, framhäver vissa egenskaper och undanhåller andra. Detta för att göra ett gott intryck. Vilket intryck en person vill göra anses relaterar till normerna som råder inom den kontext där interaktionen sker. Ramverksteorin (Frame Analysis) sätter definitionen av situationen i fokus. Goffman (1974) menar att vi implicit i vardagslivet ställer oss frågan om vad som pågår. Definitionen av situation anses vara ramen. Denna ram är ingen individuell konstruktion utan skapas i samklang med det omgivande samhället och dess kultur. Inramningen av situation guidar hur personer ser på sin roll och aktivitet inom situationen.

Avhandlingen är en sammanläggningsavhandling som består av fyra artiklar. För att uppnå syftet med avhandlingen så utforskas sökning, mobila redskap och sökmotorer från olika perspektiv i de fyra artiklarna. Följande forskningsfrågor formuleras i avhandlingen:

1. Hur genomförs sökning på internet i skolan, och hur legitimeras aktiviteten i en skolkontext?
2. Vilka inramningar går att identifiera i relation till hur tonåringar beskriver samt använder Google Sök?
3. Hur blir unga människor medvetna om spåren efter sina sökningar på internet, samt vilka strategier har de för att hantera spåren, om några?
4. Vilka inramningar av den smarta mobilen går att identifiera utifrån sättet som redskapet används och beskrivs av unga människor, samt hur relaterar dessa inramningar till sökning på internet?

Varje forskningsfråga hänvisar till varsin artikel. Mindre justeringar av frågeställningarna är dock gjorda jämfört med hur frågorna är formulerade i artiklarna. Ovan presenteras frågeställningarna i samma kronologi som de rapporteras i avhandlingen. Avhandlingen kan sägas följa två spår, ett som utforskar sökmotorer och sökningar på internet i relation till intrycksstyrning, i relation till sökning i skolan (Artikel I) och i relation till spår av sökning (Artikel III). Inom det andra spåret utforskas inramningar av Google Sök (Artikel II), samt av smarta telefoner (Artikel IV).

Forskningsfrågorna i avhandlingen har undersökts genom en explorativ och etnografisk ansats. Fältarbete har genomförts på tre högstadieskolor. Att gå i skolan betraktas i avhandlingen som en del av rytmen i vardagen (Scott, 2009) för unga människor. Metoderna som har använts är fokusgrupper, intervjuer, go-alongs och klassrumsobservationer. Metoden go-along (Kusenbach, 2016) innebär här att jag har följt mina deltagare under en skoldag, i klassrummet såväl som på rasten.

Slutsatserna från den första artikeln visar på hur Google Sök används på olika sätt i skolan och att ibland är det ett legitimt sätt att söka efter information medan vid andra tillfällen anses det mindre legitimt. Att googla rör sig mellan att vara en aktivitet mest lämpad för den bakre regionen och en som är lämplig i den främre regionen. I studien framgår att användningen av Wikipedia är särskilt omgärdad med osäkerhet. Att använda sig av Wikipedia som en källa anses inte vara helt legitimt, snarast något som görs i bakre snarare än främre regionen. Detta har som följd att eleverna hellre visar upp andra källor än Wikipedia i sin referenslista även om Wikipedia också har använts. Vidare visar studien att närvaron av digitala redskap, i kombination med internetuppkoppling, öppnar för en ny bakre region i klassrummet. I den nya bakre regionen kan information sökas men det går även att spela spel exempelvis. På avstånd är det dock svårt att avgöra vilket som pågår.

Den andra artikeln utforskar hur deltagarna ramar in Google Sök. Tre inramningar identifieras, Google Sök och faktaletande, Google Sök som en neutral infrastruktur, samt Google Sök som en auktoritet. Inramningen i relation till faktaletande visar på associationen mellan Google Sök och fakta, samt hur sökning kopplas till skola. Inramningen neutral infrastruktur pekar på hur Google Sök utgör en viktig infrastruktur i många aktivi-

teter på internet utan att det nödvändigtvis ramas in som sökning. Inramningen av Google Sök som en auktoritet understödjer de andra två inramningar. Den visar på hur deltagarna har en hög tilltro till sökmotorn och hur sökträffarna struktureras.

I den tredje studien så undersöks hur deltagarna reflekterar över spåren som sökningar på internet lämnar kvar. Det visar sig att de flesta deltagare är medvetna om spåren på olika sätt och har olika strategier för att hantera dem. Deras strategier, i relation till spåren efter sökning, består främst av att redigera och ta bort delar av sin sökhistorik. Spåren ses främst som att de existerar i de digitala redskap som används och anses därför vara undanröjda när spåren inte längre syns. Dessa strategier kan liknas vid att deltagarna framträder för en imaginär publik (Marwick & boyd, 2011). De redigerar sin sökhistorik nästan som en social mediaprofil. Detta görs utifrån samma antaganden som i relation till social media, för att undvika kontextkollaps. Kontextkollaps är en situation där till synes skilda sociala kontexter plötsligt överlappar (Marwick & boyd, 2011). Exempelvis så vill deltagarna inte att lärarna ska se vissa sökningar som gjorts i den sociala kontexten väner emellan.

Den fjärde och sista artikeln undersöker inramningar av den smarta mobilen. Tre inramningar identifieras: den smarta mobilen som underhållning, den smarta mobilen och enkel tillgång, samt den smarta mobilen som något som stör den fysiska sociala interaktionen. Artikeln visar på hur den smarta mobilen är en del av unga människors vardag och den följer de mer eller mindre överallt. Den smarta mobilen ses som ett redskap för underhållning, av mina deltagare såväl som lärare. Inom underhållningsramen så används sidor som YouTube och Tumblr som sökmotorer. Det är dock inte enbart underhållning som söks på dessa plattformar utan även undervisningsmaterial. I skolan så hänvisas den smarta mobilen främst till som ett underhållningsredskap men på grund av den enkla tillgången till mobilen så används den även som miniräknare och för sökningar. I relation till sökning och enkel tillgång så framträder Google Sök och ett fokus på fakta. Inramningen av den smarta mobilen som något som stör den fysiska sociala interaktionen kan ses i ljuset av mobilens konstanta närvaro. Därigenom väcks frågor kring när och hur den bör användas. Exempelvis anses den särskilt störande vid aktiviteter som anses vara gemensamma, så

som att äta middag eller vid gemensamt TV-tittande. Användningen av den smarta mobilen i dessa sammanhang anses störande då mobilanvändande kan ses som en individualisering (Cahir & Lloyd, 2015) av en kollektiv, eller gemensam, sysselsättning.

Sammantaget så visar resultaten på den viktiga roll som sökning spelar i unga människors vardag. Mina studier visar på att unga människor inte använder mobila redskap slumpmässigt eller ogenomtänkt. Istället framträder en medvetenhet om normer som präglar olika sociala kontexter. Samtidigt pekar resultaten på hur osynliggjort sökning är i vardagen vilket medföljer att aktiviteten inte alltid reflekteras över. Det går därmed att identifiera en spänning i mitt material mellan en medvetenhet om social kontext och ett förgivettagande av sökning i vardagen. Detta förgivettagande underbyggs även av sättet som vuxenvärlden, lärare och föräldrar, använder sig av sökmotorer och mobila redskap i vardagen. Mina resultat bör betraktas i ljuset av ett rådande samhälle som präglas av vad jag, tillsammans med kollegor, hänvisar till som en sök-ifiering av vardagen och en vardag-ifiering av sökning (Sundin et al., 2017). Likaså pekar rådande forskning på ett sökmotorsamhälle (Halavais, 2018) och rollen som just Google Sök spelar i det samhället (Hillis et al., 2013). Förgivettagandet av sökning kan anses vara problematiskt då sättet som information struktureras och presenteras inte ifrågasätts. Sökmotorer anses framställa resultat på ett sådant sätt så att de framstår som fakta (Haider & Sundin, 2019; Noble, 2018; Rieh et al., 2016), något som även framgår av mina resultat. Mina resultat pekar därmed i samma riktning som forskning som lyfter behovet av att synliggöra de bakomliggande processerna som styr sökmotorer (Bowler et al., 2017; Haider & Sundin, 2019; Hargittai, 2020; Lomborg & Kapsch, 2019). Detta blir synnerligen viktigt då skolor tar in aktören Google for Education i klassrummen, då detta kan anses ytterligare understödja ett förgivettagande av sökmotorn.

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Appendix 1

Fokusgrupp

Inledning

1. Presentationsrunda
2. Beskriv mitt projekt och hur en fokusgrupp går till.
3. Beskriv vad innehållet ska vara i denna fokusgrupp och hur vi kommer gå tillväga. Kommer börja med att brett diskutera sökning för att sedan gå in på olika teman.

Introduktionsuppgift/lappar

Om ni tänker tillbaka på vad ni gjort det senaste dygnet, vad har ni gjort för slags sökningar av olika slag, vad använde ni för att hitta det ni behövde? Ni kan fundera i några minuter. Lista tre exempel och vänd på pappret när ni känner er klara.

Tema 1, Sökning på ett mer generellt vis:

- När sökte ni senast och vad gjorde ni?
- När och vad söker du inte, eller när går det inte att söka?

Syfte med temafrågan: Hur resonerar de kring vad som är sökning. De olika redskap de använder, när, var och hur de söker? Hur bedömer de

resultaten av vad de får fram? Vad litar man på eller vilka aspekter finns kring vad som inger förtroende och tilldelning av tillit? Var går gränserna för hur man definierar sökning.

Katalysatorfrågor:

- Varför använder ni Google eller andra sökredskap?
- Vilken typ av sökning misslyckades ni med senast och hur hanterade ni det?
- Vad förväntar ni er att Google ska kunna hjälpa er med?
- Hur hanterar ni det som Google (alternativa sökredskap) förser er med?
- Varför söker ni?
- När blir ni frustrerade över att inte kunna söka?
- Vad sökte ni inte?
- Vad gör ni annars om ni inte söker?
- Har ert sätt att söka förändrats över tid?
- Lyckas ni med era sökningar?

Tema 2, Digitala redskap

Syfte med tema: inventera vilka digitala redskap de använder sig av i vardagen samt hur de används.

Frågor:

- Vilka digitala redskap används i i skolan och på fritiden?
- Har ni internet hemma? Dator?
- Har ni smartphone?
- Används datorer i skolan? Ipads? Telefoner?

Tema 3, Källkritik och läxor, scenario Brasilien

Syfte med temat: Få fram hur de resonerar kring källkritik och Googles rankings. Hur och om de pratar om ämnet i skolan.

Beskriv scenario: Ni har fått i uppgift att skriva ett arbete om Brasilien och behöver arbeta lite med det hemma. Ni får själv bestämma vad ni ska skriva om. Ni börjar med att söka på Brasilien och får denna lista. Hur går ni sen vidare?

- Vad är källkritik?
- Vad är skillnaden på att söka efter information och källkritik?
- Brukar ni få läxor? Var gör man i så fall läxorna? Vilka digitala redskap används till läxor?
- Finns det något ni skulle vilja veta mer om i skolan som inte diskuteras?
- Hur vet ni att ni kan lita på ett påstående på Internet? Hur vet ni att ni kan lita på ett påstående i en bok?
- Hur väljer man vilken länk man ska gå vidare med i Googles lista?
- Används Wikipedia? I skolan/på fritiden?
- Skrivs egna arbeten?
- Märkt av personifiering? Att man får olika sökresultat. Får man alltid samma träffar?
- Hur används referenser i arbeten.
- Hur skulle ni göra ifall ni sökte om Brasilien på fritiden bara för ni var nyfikna? Exempelvis kring fotbolls-VM.

Appendix 2

A Google search used to trigger conversation

Google brasilien Cecilia

Alt Bilder Kartor Nyheter Video Fler Sökverktyg


Ungefär 77 500 000 resultat (0,44 sekunder)



Brasilien - Wikipedia
https://sv.wikipedia.org/wiki/**Brasilien** -
Brasilien, formellt Förbundsrepubliken Brasilien, (portugisiska: República Federativa do Brasil, lyssna (info)), är den både till ytan och befolkningen största ...
Brasiliens historia - Brasiliens herrlandslag i fotboll - Brasiliens flagga - Brasilien

Brasilien - fakta och statistik i Landguiden
https://www.landguiden.se/Lander/Sydamerika/**Brasilien** -
Brasilien är en jätte både geografiskt och ekonomiskt. Det omfattar större delen av Amazonas och rymmer hälften av Sydamerikas befolkning. Landet är det ...

Brasilien - Landguiden
https://www.landguiden.se/Lander/Sydamerika/**Brasilien**?p=1 -
Brasilien täcker i det närmaste halva Sydamerika och sträcker sig över tre tidszoner. Det är till ytan nästan lika stort som Europa från Atlanten till Uralbergen och ...

Bilder på brasilien Rapportera bilder





Brasilien
Land i Sydamerika

Brasilien, formellt Förbundsrepubliken Brasilien, är den både till ytan och befolkningen största staten i Sydamerika och den till ytan femte största staten i världen, Wikipedia

Huvudstad: Brasília

Valuta: Real

Befolkning: 200,4 miljoner (2013) Världsbanken

President: Dilma Rousseff

Grannländer: Peru, Argentina, Venezuela, Bolivia, Colombia, Uruguay,

Appendix 3

Interview guide

Inled med bilderna. Vad har du tagit bilder på? Om det finns bilder på olika delar i huset. Be om guidning. Annars rita huset eller viktigt rum.

Inledning: Kan du guida mig genom hur du använder din mobil och övrig teknik under en vanlig dag dag? Gå igenom hur tekniken används, vid vilka tillfällen och inte. Vilka program

- Har du eget rum?
- Egen dator?
- Vilka olika sorters teknik hemma?

Hur ser en vanlig dag ut? Rita en veckoskiss för att kunna diskutera utifrån.

- Hur vaknar du? Ställer larm eller blir väckt av någon?
- Matrutiner hemma?
- Regler kring telefon- och teknikanvändning
- Hur ser kvällsrutiner ut?
- Fritidsintressen?
- Helgerna- hur ser de ut?

Hur används mobilen?

- Används mest appar eller google på telefonen för att ta sig till platser?

APPENDIX 3

- Vilka funktioner används i skolan och hur används den hemma?
- Hur mycket används google?
- Medveten om sökhistorik? Förhållningssätt?

Skoldatorn: hur används den?

Hur tänker du att Google rangordnar listan som man får vid en sökning?

Hörlurar i skolan- använder du det? Hur och varför?

Appendix 4

Interview guide

Tema 1: Teknik i vardag

Syfte med tema: inventera vilka program de använder i sin vardag i telefonen och på datorn. Går det att urskilja någon skillnad mellan skola och fritid genom vilka program som används?

- Vilka program har ni på er telefon?
- Vilka använder ni oftast? Hur och när?
- Vilka program använder ni på skolans dator?
- Använder ni dator hemma? Ipad? Vilka program använder ni hemma?
- Diskuterar ni teknikanvändning hemma? Hur och vad ge upphov till diskussion?
- Pratar ni om vad ni gör på er telefon eller liknande?
- Vad ger upphov till diskussion i skolan?
- Vad har ni för teknik hemma? Har ni egen eller delar gemensamt med familjen?
- Har era föräldrar rätt att kolla igenom era telefoner/datorer?

Tema 2: sökning, reflektioner kring ranking etc.

Syfte med tema: Få fram deras tankar kring sökning. Vad säger spåren som sökning lämnar om företeelsen sök? Vad har de för relation till sin sökhistorik? Reflekterar de kring hur Googles rankning genomförs?

- Hur ofta söker ni efter saker via Google i skolan? På fritiden?
- Hur tänker ni kring Googles rankning?
- Vem tänker ni att det är som skapar de här listorna och hur?
- Sökhistorik på Google, medvetna om den? Något förhållningssätt?

Tema 3: åldersgräns på social media

”Sverige kommer att få en åldersgräns för sociala medier. Det är beskedet från regeringen. Barn måste be föräldrar om lov för att få använda till exempel Facebook, Snapchat och Instagram. Åldersgränsen kan komma att bli så hög som 16 år”.

Syftet med temat: reflektera kring deras ställning som ungdomar i en digital värld. Hur anser de att frågan borde hanteras. Indirekt kopplat till sökning då social media är ett utbrett användningsområde av telefoner.

- Hur tänker ni kring åldersgräns på social media?
- Borde det finnas en gräns? Var borde den dras?
- Vilka fördelar/nackdelar finns det?

Appendix 5

Letter of consent



HUMANISTISKA
OCH TEOLOGISKA
FAKULTETERNA

Information till föräldrar med elever i årskurs 7 till 9 på [REDACTED].

Under höstterminen 2014 så genomförs ett forskningsprojekt vid [REDACTED]. Projektet ingår i ett större projekt vid Lunds universitet vid namn Kunskap i en digital värld (www.kdw.lu.se). Min del av projektet heter Sökning i en digital vardag där jag är intresserad av hur ungdomar i årskurs 7-9 använder sökmotorer i skolan och på fritiden. Ungdomar är själva experter på sin digitala vardag. Därför kommer jag under hösten att tillfråga elever om att delta i gruppdiskussioner om ämnet. Det kommer även bli aktuellt att jag genomföra observationer på skolan och individuella intervjuer med en del elever. Detta har diskuterats och godkänts av rektor.

Det insamlade materialet kommer att användas i artiklar och i min avhandling. Uppgifter om såväl barn som verksamhet kommer att behandlas enligt gällande regler om anonymitet och sekretess. Det innebär att varken barnets namn eller namnet på skolan kommer att framgå i några rapporter eller sammanställningar och att inhämtat material enbart kommer att ses av de forskare som är inblandade i projektet.

Jag vill med detta brev informera alla föräldrar och vårdnadshavare om undersökningen. Om du/ni har några frågor om undersökningen är det bara att kontakta mig (Cecilia Andersson). Eftersom eleverna i klassen ännu inte fyllt 18 år finns ett formulär som jag vore tacksam om du/ni ville fylla i, där du/ni antingen fyller i att det går bra att ditt/ert barn deltar i studien eller att du/ni inte ger ert tillstånd till detta.

Med vänliga hälsningar,
Cecilia Andersson,
doktorand i biblioteks- och informationsvetenskap
vid Lunds universitet
cecilia.andersson@kultur.lu.se 0736-908087

Forskningsledare och handledare
Olof Sundin,
professor i biblioteks- och informationsvetenskap
vid Lunds universitet
olof.sundin@kultur.lu.se

JA, jag/vi TILLÅTER att mitt/vårt barn

.....
(Barnets namn)

Deltar i studien genom fokusgrupper, observation och intervjuer.

.....
Datum

..... Tel:
(Målsmans/målsmäns underskrift)

Appendix 6

Letter of consent, follow up



HUMANISTISKA
OCH TEOLOGISKA
FAKULTETERNA

Information till föräldrar med elever på [REDACTED]

Ert barn deltog under våren 2015 i ett forskningsprojekt på [REDACTED]. Projektet ingår i ett större projekt vid Lunds universitet vid namn Kunskap i en digital värld (www.kdw.lu.se). Min del av projektet heter Sökning i en digital vardag där jag är intresserad av hur ungdomar i årskurs 7-9 använder sökmotorer (så som Google) i skolan och på fritiden. Ungdomar är själva experter på sin digitala vardag. Därför kommer jag tillfråga elever att delta i gruppdiskussioner och intervjuer (såväl i skolan som utanför skoltid). Jag kommer även att genomföra observationer på skolan. Min förhoppning är att följa samma ungdomar under en längre tid och hoppas därför att ert barn kan fortsätta delta i projektet framöver (förutsatt att de vill), under hösten 2015 och även under vår- och hösttermin 2016.

Det insamlade materialet kommer att användas i artiklar och i min avhandling. Uppgifter om såväl barn som verksamhet kommer att behandlas enligt gällande regler om anonymitet och sekretess. Det innebär att varken barnets namn eller namnet på skolan kommer att framgå i några rapporter eller sammanställningar och att inhämtat material enbart kommer att ses av de forskare som är inblandade i projektet.

Jag vill med detta brev informera alla föräldrar och vårdnadshavare om

undersökningen. Om du/ni har några frågor om undersökningen är det bara att kontakta mig, Cecilia Andersson. Eftersom eleverna i klassen ännu inte fyllt 18 år finns ett formulär som jag vore tacksam om du/ni ville fylla i för att bekräfta ifall ert barn får lov att delta i studien. Inga elever kommer att intervjuas utan målsmans godkännande.

Med vänliga hälsningar,
Cecilia Andersson,
doktorand i biblioteks- och informationsvetenskap
vid Lunds universitet
cecilia.andersson@kultur.lu.se
0736-908087

Forskningsledare och handledare
Olof Sundin,
professor i biblioteks- och informationsvetenskap
vid Lunds universitet
olof.sundin@kultur.lu.se

JA, jag/vi TILLÅTER att mitt/vårt barn fortsätter att delta i studien

.....
(Barnets namn)

Deltar i studien genom fokusgrupper, observation och intervjuer.

.....
Datum

..... Tel:
(Målsmans/målsmäns underskrift)

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