Chapter 8
Digital Technologies and the Everyday Lives and Learning of Present-Day Adolescents

Abstract This chapter focuses on the manner in which digital technologies affect the lives of adolescents, how the digital technologies are accepted or rejected, and how they are used in daily life and learning. The findings complement and deepen the knowledge presented in the previous chapters. The topic is anchored in several theoretical frameworks presented in the introductory section. We focus on the concept of everydayness; we also explain the concept of the domestication of digital technologies and the concept of learning lives, with consideration for the use of digital technologies in learning both in and out of school. We also present various forms of informal learning, including intergenerational learning.

The chapter presents the results of our qualitatively oriented research. We describe and explain the lives and learning of our respondents, particularly with digital technologies. We present six insights into the lives of Czech adolescents whose lives and learning illustrate the metaphor "ICT is a good servant but a bad master." We conclude the chapter by putting the results into wider contexts.

Keywords Adolescents · Domestication of digital technologies · Everydayness · Learning · Learning lives · Informal learning · Intergenerational learning · Out-of-school environment

8.1 Theoretical Background

Adolescence can be perceived as the bridge between childhood and adulthood (Macek, 2003). In our research, we captured the life of fifteen-year-old students with digital technologies. Through in-depth interviews, we were also able to learn about their childhoods with digital technologies. The results of our research thus provide a detailed and contextually anchored image of the everyday life of present-day teenagers and the role of digital technologies in it.

In the Czech Republic, a large change in the education pathway occurs in adolescence. At the age of fifteen, students are at the end of primary school or in the fourth

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year of an eight-year gymnasium or the second year of a six-year gymnasium. Students of gymnasiums usually continue the same school and class; the students of primary schools end their studies at this point and have to decide whether to continue their studies at a four-year gymnasium, a secondary technical school, or a secondary vocational school (the Czech education system is presented in greater detail in Chap. 2). A transfer to a new school usually brings a number of changes. In addition to new teachers and a different or more difficult subject matter, the students have to deal with a new body of peers and often also a commute. Existing contacts with friends can be broken; at the same time, new friendships can form at the new school. Relationships with friends are especially important at this time of life, because within these relationships, the adolescents learn ways to solve conflicts, they learn compassion and empathy, and they learn to give and receive social feedback (Smetana et al., 2005). During adolescence, mutual trust between friends strengthens. The friendship and peer culture assist in better self-discovery through mutual interactions and reflections.

Pasquier (2008) warned that mobile technologies and the Internet have provided young people with a larger degree of autonomy in peer relationships. Because of digital technologies, adolescents can establish contact with peers outside of the family without being under direct control of their parents. According to Pasquier, adolescents consider face-to-face communication to be the most valuable, but the online space is very important for the expression of their own self, which is in this way constantly in contact with peer groups in which discussions or various sharing of content and information take place. In the online space, these processes are often very dynamic, and, for example, reactions to posts come very quickly. News then spreads at lightning speed within the given group or community.

Digital technologies have become one of the important formative elements of the everyday lives of young Czech people. The *everydayness* is interconnected with historical, social, and economic contexts, but also with the material environment in which the individual lives and that they co-create and propel with their actions and interactions with others and their surroundings (De Certeau, 1988; Macek, 2015; Schutz & Luckmann, 1974). Everyday use of digital technologies leads to the creation of new forms of actions and interactions; it therefore has a significant impact upon the spatial and temporal organization of life and on the formation of social reality, because the spatial distance does not necessarily have to mean a temporal delay (Thompson, 2004).

Consideration of everydayness necessarily involves interest in daily life, in the various routines, rituals, traditions, and myths (Silverstone, 1994), and in the role that digital technologies and the related practices play in daily life and its routines (Macek, 2015). The existing studies suggest that adolescents (and other users) "personalize" digital technologies through their everyday activities. They use digital technologies for their own purposes, often very distant from what their creators presumed. On the other hand, these technologies sometimes alter the structure of everyday life, in which the users, often unknowingly, adapt the structure of their everyday life to digital technologies (Bakardjieva, 2005).

To map the role of digital technologies in the everyday life of adolescents, the question is how to view and theoretically grasp the "effects" that digital technologies have on their daily life. The concept of the *domestication* of digital technologies (Silverstone, 1994) seems applicable in this context. This domestication denotes a process in the course of which the users encounter ICT in various environments and integrate them into their everyday structure, routines, and values and the digital technologies become a part of their environment (for example, a household). If the domestication is successful, the digital technologies are not perceived as problematic or alien; they are useful tools. However, the complete and completed "taming" of ICT is rarely achieved, because the digital technologies themselves and the needs of the users change constantly; re-domestication and de-domestication occurs. This is a constant dynamic process during which people and digital technologies create and transform the environment in which the digital technologies mediate more and more interactions between people as well as interactions with the environment. Importantly, this concerns not only people adapting digital technologies, but also people using domestication to create environments that are increasingly mediated by digital technologies (Berker, 2006).

As digital technologies change and develop, so does the research in this field. The original concept of domestication was connected to the expansion of television into households, but digital (interactive) technologies gradually came to also be viewed through the lens of domestication. A 2012 study by Courtois and his colleagues emphasizing the role of context showed an interesting development of the original concept of domestication. Domesticated digital technologies emerged as contextually anchored elements participating in social relationships. Therefore, digital technologies must be perceived as commodities whose meaning differs in accordance with the existing context. For example, a mobile phone can be used for various practices within a specific social context, and again differently (or identically) within a different social context (Courtois et al., 2012).

Apart from the everydayness itself and the role of digital technologies in the daily life of Czech adolescents, our research considered the specific learning problems of present-day teenagers, which is of course an integral and important part of their everydayness. The main questions concern how digital technologies affect adolescent learning, what role learning with digital technologies plays within the everyday activities of young people, and the ways in which digital technologies are used in various learning contexts, how important the context actually is, how adolescents personalize their devices for various learning situations, and how digital technologies co-create the everydayness of adolescents.

We use our previous considerations as a starting point for holistic thoughts about learning in the lives of young people. Starting with considerations about everydayness and domestication of digital technologies means that the problems with the use of digital technologies in connection to learning cannot be narrowed only to formal learning, meaning to learning in school (see also Chaps. 5 and 6). It is necessary to also focus on learning outside of school in various contexts and environments, both offline and online. We thereby attempt to overcome the frequently limited focus on

ICT only in formal education, sometimes referred to as the "classrooms-as-container" discourse (Leander et al., 2010).

Our research builds on the approach referred to as *learning lives*, which reflects the need "to move beyond traditional conceptions of formal versus informal ways of learning and literacy" (Erstad, 2012, p. 26). This approach was used by Biesta and Tedder within the *Learning Lives: Learning, Identity and Agency in the Life-Course* project (Biesta & Tedder, 2007), in which they tried to capture the learning processes of adults in the course of their lives in various life situations, in the most complex way possible, while using a number of research methods. This project is an important inspiration for the learning lives approach, which understands learning as a part of various daily social contexts that students or young people live in (Erstad, 2013; Erstad et al., 2009).

The learning lives approach helps identify the learning styles of young people within and among the various places in which learning takes place. The learning lives approach also inspires consideration of the role that a person's individual "history," including their experience with digital technologies, plays in the formation of their experiences with learning; this individual history is part of the wider historical and cultural framework. Such an approach leads to an improved knowledge of life and learning including continuities and discontinuities between the school and out-of-school environment (Erstad, 2015). Erstad (2012) explained:

> At home, they use more advanced digital software and tools than in school, more often, and for a broader set of different activities. This does not necessarily mean that technology use inside schools should be like technology use outside school. The objectives are different, but we need to know how this difference is experienced by students and how activities in one context might relate to activities in another context (p. 27–28).

We build on the assumption that formal and informal learning cannot be viewed strictly separately. Formal learning does not occur exclusively in school education, and informal learning does not take place only outside of school. It is important to search for mutual relationships between the processes of formal and informal education in various situations or environments (Colley et al., 2002). For example, in a classroom, typically a site of formal learning, various forms or elements of informal learning take place with digital technologies directly during lessons or outside of lessons, such as during school breaks in conversations with both friends and teachers or within discussions about various technological tools. Similarly, various forms of purely formal learning take place outside of the classroom or school, such as during student preparation for school, including doing homework, preparing for exams, and testing. There are various elements of informal learning, including searching for information in various sources (home library, the Internet), but there is also the option of consulting other members of the household or drawing inspiration from their experiences. Learning methods that are part of school education, such as drills and practice, can also appear within informal learning in some hobbies, such as in sports or household repairs.

In this regard, it is interesting to think about the teacher, who is missing from informal learning. Outside of formal settings, the role of the teacher can be played

by other people who do not have a pedagogical education but are experts on certain topics, or by the digital technologies themselves. The question remains of how, where, and with what goals such learning takes place and in what processes or elements of formal and informal learning the "teacher" is present. This answer can be very important for informal learning with ICT (Sefton-Green, 2004).

In their study, Furlong and Davies (2012) focused on the problems of informal learning at home with ICT. They presented three basic groups of informal learning practices with ICT. The first group is *resources for learning*; it includes various types of digital sources that may support or affect young peoples' learning. It may concern digital resources such as websites of various institutions (televisions, radios, museums) or sources the students have available on their devices that can be sent or shared. The sources include digital resources, and the authors also incorporate social resources into this group, including friends or various on/offline networks. Time is an important but often forgotten source. By this, the authors refer to individuals' ability to control or regulate their time. Especially in younger children, this may concern a certain period of time spent with digital technologies determined by their parents (see also Chap. 6 and parental regulations).

The second group is *ways of learning*, which includes digital technology tools enabling (access to) learning, which differs from the traditional concept of learning based on the written word. This may include various forms of a "game" in which young people "play" with various ICT tools, such as hardware or software, in various ways. The trial and error approach to learning to use digital technologies may represent another example. This group also contains various forms of observation or expert performance modeling. This may concern a simulation of some procedure or repair/production of some item, such as cooking or repairing a computer. However, the copied process may still be somewhat enriched or improved and further shared via social networks (producing, reviewing and re-producing) thanks to the Internet. Into this group, the authors classify various joint activities of individuals based on joint or shared work based on social networks or services allowing sharing of, for example, video (sharing, co-production). Various results of one's own creation or co-created videos as well as new applications, texts on the Internet, and presentations created within various hobbies can be created, shared, or commented on, and peers or family members can participate in the creation.

Skills to support learning is the third group of informal learning practices with ICT in the home that Furlong and Davies wrote about in their study. It includes adoption or use of technical skills in the field of digital technologies, in which the young people manage to use many applications or digital technologies. It also includes the abilities to evaluate the quality of information acquired from digital sources as well as network skills. Many activities take place within social contexts, and young people use these skills in a range of situations. Collaborative skills, which permeate many (learning) activities of young people, represent an important part of informal learning practices. The authors gave the example of playing games, in which a respondent to their research played a game with players from all around the world and thus it was necessary to cooperate with people, only some of whom were friends. People can then use these collaborative skills in other activities as

well, even in traditionally oriented learning (shortened and edited according to Furlong & Davies, 2012).

Intergenerational learning, whose basic distinctive feature in comparison to other types of learning is its focus on participants of learning coming from different generations, can be a specific form of informal learning. This may concern either two consecutive generations or every other generation (Rabušicová et al., 2009). We partially approached this topic in Chap. 6, in which we mentioned especially the parent-child relationship and their mutual learning (Domínguez, 2012).

Intergenerational learning is a traditional part of family life and thus it is not a new phenomenon, but it transformed with the arrival of digital technologies. The traditional learning model, in which the parents or grandparents teach the children, may not apply at all with digital technologies. On the contrary, both grandparents and parents acquire abilities and knowledge about ICT from their offspring (Age Concern, 2009; Tambaum & Normak, 2018).

Learning does not only take place from parents to children, but also from children to parents, and the role of parents therefore need not be nearly as dominant as it was in the past (Kamanová, 2009). With regard to the aging population, this transfer also extends to the generation of grandparents, even when all the generations do not live in a single household. The youngest generation sometimes becomes the family experts on digital technologies (Erstad, 2012), and they can help and give advice to others and teach them.

Various forms of intergenerational learning may contribute to improving relationships between the members of individual generations and lower the barriers created by the very fast development and use of digital technologies. Such learning develops digital literacy in the older members of the household and supports their active aging, learning in other fields, and joy from life. Young people learn to communicate with older people in the course of intergenerational learning, they understand the older generation better, leave intergenerational learning sessions with positive feelings, and also develop their own abilities in the use of digital technologies. This is sometimes referred to as intergenerational solidarity (Azevedo & Ponte, 2020). Intergenerational learning can lead to diminishing the risks of generational conflict (Patrício & Osório, 2016), even in the field of digital technologies, which can be a cause of these disagreements (see Chap. 6).

The theoretical considerations presented in the introduction lead us to the main goal of this chapter, which is the mapping and explanation of how digital technologies affect the lives of the adolescents, how digital technologies are accepted or rejected by them, and how they are used. We aim to capture the manner in which digital technologies are viewed by the adolescents themselves. We also aim to map the various forms of adolescent learning with the support of digital technologies. We asked the following questions:

- What digital technologies do adolescents use in daily life?
- In what ways do adolescents use digital technologies?
- How do adolescents use digital technologies for their learning?

We acquired the answers to our questions using a qualitative analysis of semi-structured interviews with six adolescents. Two interviews were conducted with each adolescent. The introductory interview was aimed at discovering how digital technologies are viewed by the adolescents, what role these technologies play in their lives, and how digital technologies are domesticated. At the end of these interviews, the adolescents were given a "week-long homework" assignment. In as much detail as possible every thirty minutes, the adolescents were to fill into a record sheet of what digital technologies they used and what for over the course of a regular week. The record sheet was the basis for the second interview, the goal of which was to reveal the manners of use of digital technologies in more detail and to learn the specific activities for which the adolescents used the digital technologies. In reality, our respondents commented on their week-long record and the studies asked complementary questions, if necessary. The second interview also included clarifications of topics from the first interview that were unclear to the researchers or that represented new information suitable for more detailed discussion with the respondent.

After all the interviews were transcribed, we approached two phases of qualitative analysis. First, we inductively coded all the interviews (Charmaz, 2006; Strauss & Corbinová, 1999; Švaříček & Šeďová, 2007) with the goal of discovering all the topics that were revealed as important in the adolescents' lives in connection to the use of digital technologies. On the basis of the similar content of codes created in this manner, five categories were created; the adolescents' varying extents and manners of use of the digital technologies were classified within the framework of these five categories. This concerns *use of digital technologies in connection to family*, *for orientation in the world*, *for school purposes*, *for peers*, and *for oneself.* Since the interviews with our respondents uncovered a bright palette of use of digital technologies and we were not always able to find completely identical categories, we approached the second phase of interview analyses. In this phase, we coded all the interviews again, but this time we used a deductive approach with the steps of summative content analysis of texts (Babbie, 1992; Catanzaro, 1988; Hsieh & Shannon, 2005; Morse & Field, 1995), which allowed us to focus on the process of content interpretation and on independent words or phrases from the recorded interviews and their relationship to the five detected categories rather than on the analysis of data as a whole. The five categories presented above were the starting categories.

In this chapter, we introduce six adolescents' stories and focus on a specific use of digital technologies in connection to the five categories. The data from the record sheets were divided into the five identified categories. They were then processed into tables in the MS Excel program (including the duration of the given activity). These tables were turned into the graphs attached to each of the stories. In this way, we acquired a clear depiction of the duration of the individual activities in the course of a week, which plastically documents the everydayness of the adolescents with digital technologies.

8.2 ICT as Both a Good Servant and a Bad Master in Adolescents' Lives

The results of the interview analyses brought us to a metaphor capturing the presence of digital technologies in the lives of Czech adolescents, which appears in various forms within the everydayness of the adolescents' lives and which has to be taken with a grain of salt at the same time: *a good servant but a bad master.* In the original meaning, the parable refers to fire as a good servant but a bad master. In principle, the parable expresses that anything too powerful is dangerous, even though while it only serves and is fully controlled by people, it can be necessary and advantageous. Digital technologies may be classified among such things. In order to be able to distinguish a "good servant" from a "bad master" in the use of digital technologies, we have to focus on a broader picture, on the context in which the digital technologies are used, on the manners of this use, and on the perceived degree of their use. This chapter aims to achieve a detailed insight into the adolescents' lives with digital technologies and on the basis of the discovered context, the manner of use of ICT or the perceived degree of this use, we identify cases in which digital technologies play the role of a good servant in adolescents' lives (they are fully and intentionally controlled by the adolescents) and when they can be considered a bad master (the adolescents tend to be controlled by digital technologies).

The analyses showed that in each and every one of the presented categories (*use of digital technologies in connection to family*, *for orientation in the world*, *for school purposes*, *for peers*, and *for oneself*), there were identifiable cases in which the digital technologies played the role of a good servant as well as those in which the digital technologies were a bad master. The analyses further suggested that the boundary between these two sides is rather thin. It cannot be said that for some adolescents, the digital technologies are exclusively a good servant and that for others, they are exclusively a bad master. The adolescents often walk a tightrope and balance between the two ill-defined sides. Every adolescent uses digital technologies in a somewhat specific way in their daily life. Our results prove the importance of the context in which the use is affected by the family context or the manner of domestication of ICT in the family as well as the quality of relationships with peers and classmates. The level of difficulty of education at a school and the related demands and expectations connected to adolescent learning can be considered an important context. In the following chapter, we introduce different ways of using digital technologies in the daily lives of six adolescents growing up in varying family contexts, living in various places (village, city), and attending different types of schools.

In addition to the interviews conducted with the adolescents, we used the week-long adolescents' records. These cannot be generalized, and there are clear limitations to this type of data collection, because these records come from respondents with varying approaches, even though the participants were responsible and they completed the records honestly. The records represent another source of data helping to achieve a more detailed insight into the integration of digital technologies into

the everyday activities, routines, or rituals of our respondents. In that way, they represent the depiction of the everydayness of the adolescents and enable the visualization of their activities with digital technologies.

8.2.1 Natalie's Story

Natalie lived in a housing project apartment in a regional capital together with her mother, stepfather, and younger brother. She had a close relationship with her grandmother, who lived one floor above their family. The family was introduced in Chap. 6 within the *deepening the generation gap* type. The text clearly showed that Natalie's relationship with her parents was characterized by frequent conflicts caused by the different views of the use of digital technologies. The parents were convinced that Natalie spent too much time with her mobile phone, which they considered one of the reasons for her worsening grades in her last year of primary school. The parents believed that digital technologies were primarily a bad master for Natalie because she was not able to use digital technologies to what they considered a reasonable degree and she was, in their view, absorbed by them. It was clear from the week-long record sheet that on weekdays, Natalie used her mobile phone to check new messages directly after waking up. However, when she was in school she did not use any digital technologies, neither for her private reasons nor within the lessons. However, she "compensated" for this after school and spent most of her time with her mobile phone. We show the specific purposes of use of the mobile phone in the five following subchapters.

8.2.1.1 Natalie's Use of ICT in Relation to the Family

The research shows that within Natalie's family, the digital technologies represented a tool for strengthening the relationship between the grandmother and Natalie through intergenerational learning. In contrast to Natalie's parents, her grandmother was interested in digital technologies and used them very often. In this regard, Natalie found a shared hobby with her grandmother. Her grandmother wanted to improve her own skills in the use of the Internet and social networks. Because these topics were close to Natalie's heart, she considered her grandmother to be a kindred spirit, and as the following excerpt from her interview proves, she even named her the family expert on digital technologies.

N: Grandmother works with the computer in the office, so she is probably the best in our family in the use of technologies. She doesn't know everything, but especially in the programs, she can work with them. Especially in Excel, Grandma, she likes it the most, she does these tables in it.

I: On the other hand, you are also able to help her with some things, at least with those regarding the mobile phone, does she come to you with anything?

N: Yeah, grandma got a new touchscreen phone, so I taught her how to use it. But she doesn't need a lot. She's happy with making calls, texting, she's also on Facebook, on Messenger, she writes us anywhere she can, but for example, she does not understand mobile Internet and Wi-Fi, I'm helping her with that. And now she can even take a photo of herself, a selfie. She can even take a photo in the mirror without showing her face.

This supports a piece of developmental psychology knowledge that declares that grandparents and grandchildren get along better than parents and children. That is, the grandparents are not afraid to try new and modern things, which makes them younger and "more attractive" than parents in the children's eyes. In contrast to the parents, the grandparents are no longer afraid of endangering their authoritative position (Thorová, 2015; also see Mannheim & Kecskemeti, 1964). This is also proven by Natalie's statement about her parents not asking her for advice regarding the use of ICT despite not being skilled users of digital technologies. They may have considered their lack of knowledge in the field of digital technologies a weakness that they did not want to admit in front of their daughter. In that way, they maintained their status as authoritative "good" parents who know what is best for the child, in contrast to the grandmother who was more "human" and accessible to Natalie because of her approach. Mutual digital technology-supported learning also occurred in the family between Natalie and her younger brother. This did not primarily concern teaching the brother how to use digital technologies, but rather setting rules for sharing one's own photographs or videos on publicly accessible websites. Natalie asked her brother to reflect on which content was suitable or unsuitable for sharing on the Internet to prevent possible mockery, for example of her brother's simple videos.

In relationship to her parents, Natalie mentioned reporting her location or her arrival home to be the most important use of the mobile phone. On one hand, Natalie considered this an advantage that gave her more freedom of movement. For example, she was able to go further away from the house than she could when she did not have the phone. On the other hand, she understood that because of the constant access to the phone, her mother had a constant possibility of control over her. Because of the omnipresent mobile phone and Internet availability, the relationship between Natalie and her mother was characterized by frequent conflicts. Natalie and her mother had different criteria for defining excessive mobile phone use. Natalie believed that she did not differ significantly from her peers in the amount of time spent with digital technologies. Natalie's mother considered Natalie to be addicted to the mobile phone and she tried to limit the time Natalie spent with the mobile phone using various restrictions, as noted in Chap. 6. Natalie perceived her mother's restrictions as inconsistent. In the interview, she made a point about her mother not always carrying out her threats about turning off the wireless Internet, because she knew that she herself needed it, as did the stepfather and the younger brother. Also, Natalie's mother used the Internet (social networks) to give Natalie chores around the house, so she often decided to turn the wireless Internet back on after a while without confiscating Natalie's mobile phone. Natalie believed that at the same time, her mother would have wished for Natalie not to have her own mobile phone at all. "Well, if it was up to her, she would forbid it completely. She would throw the phone

out, throw the laptop out, throw everything out." In connection to her mother's restrictions, Natalie complained about one more thing. The mother did not explain the reasons for forbidding Natalie to spend time with her mobile phone, so Natalie did not understand and it caused confusion:

> She tells me to put the phone away, but she does not tell me why. And often, when she won't let me go outside, I don't have anything to do at home. Well, she tells me: go watch TV. After all, it's the same, it doesn't matter if I'm on the phone or if I watch TV. I am still not doing anything, I am not productive in any way, so why not be on the phone, where I can at least be in touch with someone.

The statement shows that in Natalie's view, the time spent watching television was as unproductive as the time spent with a mobile phone. However, Natalie's mother had reservations primarily about the mobile phone. Natalie explained it as her mother's constant fears about Natalie getting mixed up with a "bad crew." The explanation can also be found in the period in which Natalie's mother grew up. The television was a normal part of her childhood and adolescence, and she did not see any problem with it. On the other hand, mobile phones entered her life only in her adulthood and they were never fully domesticated; she was thus still distrustful of them.

8.2.1.2 Natalie's Use of ICT in Relation to Orientation in the World

In the field of use of digital technologies for orientation in the world, Natalie spoke primarily about searching for public transportation connections on the phone. At the time of the data collection, the family had discussed if they should set up a bank account for Natalie, teach her to use Internet banking, and allow her to shop online. The parents were hesitant about whether Natalie was sufficiently responsible and mature to handle this step toward a more adult life.

Generally, Natalie used the mobile phone the most for communication over social networks and she was therefore warned about the danger of fake accounts or cyberbullying. In this regard, she considered herself careful and cautious, as can be clearly seen:

> For example, I don't text with anyone older who I don't know, but if someone I don't know adds me and I look at their profile and see that they could be the same age as I am and I look at the photos and see that they are there with other people as well and that the photos do not seem fake, I am open to add the person and text with them to a certain degree, unless they want to know things I don't want to tell them.

Even though she was cautious, she was not against communication with strangers and often welcomed it, even though she mentioned that in the offline world, she would not agree to communicate with strangers.

8.2.1.3 Natalie's Use of ICT in Relation to School Purposes Outside of School

Natalie's teachers required only minimum contact with digital technologies from their students, during preparation for lessons or doing homework. Several times a year, Natalie was asked to create a PowerPoint presentation on a set topic, sometimes the students submitted their homework electronically or wrote it on the computer. Natalie did not utilize this option because she did not feel confident when using MS Office so she chose to do her homework by hand almost exclusively.

> I avoid the computer, I don't understand computers at all, so even in school, when we had elective informatics lessons, I did not sign up. It's really kind of … It's not my thing. In only about two subjects, because only for geography, we have this teacher who wants us to do PowerPoint presentations, but other than that, we have teachers who let me do it by hand, so I'd rather write it by hand almost always.

At the same time, Natalie stated that she sometimes uses the Internet in her mobile phone. For example, she used it during her work on a reading diary. Even if she read the book herself, she searched on the Internet to find out what others wrote about it, how the plot of the book was briefly summarized, and so on. She then edited her actual record on the books she read according to this background information. In this regard, digital technologies can simultaneously be seen as a good servant, quickly providing information with minimum effort, but also as a bad master, supporting Natalie's indolence and allowing her to somewhat circumvent or even cheat on the homework she was to do on her own without inspiration from the Internet.

8.2.1.4 Natalie's Use of ICT in Relation to Her Peers Outside of School

Natalie's week-long record sheet in which she marked all contact with digital technologies in detail showed an unambiguous tendency to spend her free time with digital technologies, primarily in relation to peers and to herself (see Fig. 8.1). In the same way, the period of time Natalie spent with digital technologies is worth noticing. The graph shows that on Saturday, she spent barely any time with digital technologies. During the interview, she explained that she was at a birthday party. By contrast, she did not have any other activities planned for Sunday, so she "made up" for the absence of contact with her mobile phone and spent the most time from the entire week with it.

Since Natalie's week-long record contained almost exclusively the "peers" and "herself" categories, we focused on the specific activities within these categories in more detail. As the following graph proves, the activities were not overly varied. The contact with peers concerned written online communication or online videocalls. The "herself" category contained primarily the passive browsing of social networks (Facebook, Instagram) and watching television series or films (see Fig. 8.2).

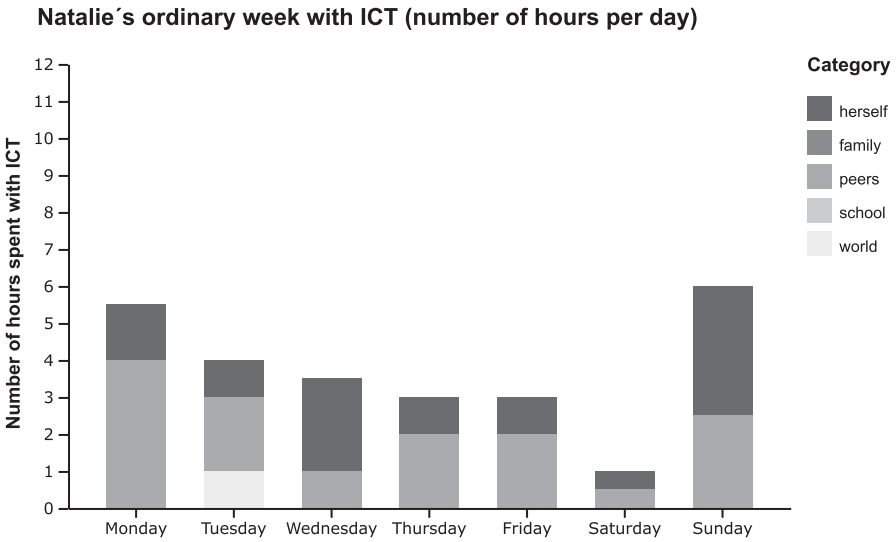

Fig. 8.1 Natalie's ordinary week with ICT according to the purpose of ICT use and the number of hours per day spent with ICT

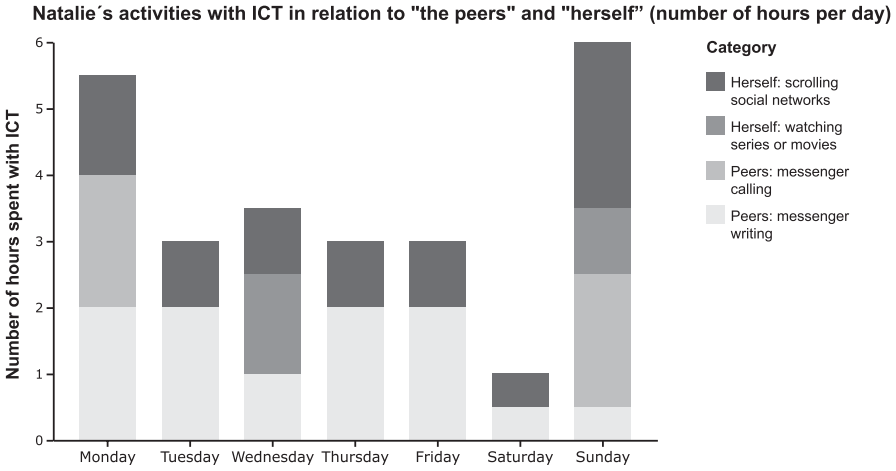

Fig. 8.2 Natalie's ordinary week with ICT in relation to her peers and herself and the number of hours per day

The figure shows that Natalie used social networks very often for communicating with peers. But it cannot be said that she only saw the positive aspects of this type of communication. Several times, Natalie recorded multi-hour videocalls with her friend in the week-long record sheet. In these calls, the girls first dealt with current matters and school-related tasks and other shared duties. Only then did they focus on discussions about their own interests, mutual friends, family, etc. Natalie

feared that if they were unable to call each other, their friendship would not last, because they did not feel the need to see each other often. In this regard, the digital technologies can be definitely viewed as a tool fulfilling Natalie's needs and goals and therefore as a good servant.

In terms of ICT as a good servant, Natalie demonstrated "informal collaborative learning," fully controlling and using the digital technologies for her purposes: "For example, once we recorded ourselves cooking something. That was fun." Natalie and her friend had to study a recipe and prepare the food in precisely the right amounts. The result was that they learned to cook a specific dish. In addition, they strengthened their cooperation competences and collaborative skills, as they had to agree on something to cook and to create the procedure for the activity itself. The development of digital literacy remains rather in the background here, since Natalie did not mention what digital technologies she used and in what way. The goal was important to her and her friend and she used adequate digital technologies to achieve it.

On the other hand, such activities were rather rare in Natalie's life. Much more frequently, she said that "parallel online living" took place, in which she and one of her friends or her brother were in the same place, but all simultaneously focused on activities on their own mobile phones: "Well, both of us were on our phones, we didn't pay attention to each other. We were on Instagram. Every time we find something, we show it to each other. I was also texting with another friend from class. You know, shared texts, such as how are you and so on." Natalie did not much like spending her free time in that way. She wished for people who intentionally came to one place to focus on each other and not on the activities on social networks or on communication with someone who was not there. She expressed a wish to spend less time with her mobile phone, but only if all of her peers did so as well.

> Not like that they would not be on the phones at all. But for example, when there are three of us together in a room, why be on the phone. My friend comes, and wherever she comes, the first thing she does is to log on to the Wi-Fi. And when I ask people why they are on the phones, the answer – what else am I supposed to do – is kind of ridiculous. And I can't just sit and look at them.

Natalie felt forced by her surroundings to use digital technologies in the same way in order to fit in. Natalie often thought about the fact that digital technologies can truly become a bad master for people in this regard. She feared that it made people lazy and indolent, because thanks to the Internet, they had everything within arm's reach with a minimum of effort and energy, even communication with other people. She considered digital technologies to be the reason present-day adolescents do not meet in person so much anymore, but tend to communicate online and have few experiences together, which can lead to estrangement. At the same time, she was afraid of gossip spreading quickly and easily via online communication, and people abusing others using fake accounts. Natalie also criticized people who write anonymous, unfair, and often offensive comments under YouTube videos or over the Tellonym application.

8.2.1.5 Natalie's Use of ICT in Relation to Herself

Natalie's time spent with digital technologies in relation to herself featured almost exclusively the use of her mobile phone, which she used to watch television series, movies, and short videos on YouTube. She looked for inspirations for Christmas gifts and for videos of her favorite actors and singers. When she played floorball competitively, she spent a lot of time watching tutorials for various floorball techniques, on the basis of which she tried to improve her playstyle on her own. When she quit floorball a couple of years before the interview because of an injury, she also stopped this type of learning. At the time of the interviews, she used the Internet as a source of information, because she read the news, which can be considered a form of informal learning, to develop her knowledge of current events, and she also learned to develop critical thinking.

For Natalie, the Internet was primarily a way to entertain herself when she had some free time, whether at home in her room or waiting for a bus, or possibly riding on public transportation. Specifically, she spent this time by scrolling and liking photos and stories on Instagram. In this regard, the mobile phone could be considered a good servant for Natalie, because it helped her overcome boredom or made the time pass more quickly while travelling. At the same time, even in this case there was a thin border, which if crossed could turn ICT into a bad master, leading Natalie to pay less attention to her surroundings and focus exclusively on overcoming her own boredom, which could lead to a lack of focus on other duties.

When Natalie was at home and all of her chores were done and she had more time for herself, she actively used Instagram for her self-presentation. On Instagram, she shared photographs of herself taken exclusively in front of a mirror in the bathroom and she made great efforts with them, putting on nice clothes and applying make-up. She was delighted by the amount of positive feedback her photographs accumulated. In this regard, ICT can be viewed as a tool for the targeted acquisition of positive feedback to her person and to her appearance, which improved Natalie's self-confidence and thus created her own identity.

8.2.2 Alice's Story

Alice lived in a small village near a regional capital together with her adoptive parents, who are also temporary foster parents. An eight-year-old girl also lived with the family at the time of the research. Alice has an older step-sister, who lived separately from the original family, with her husband and two children. Alice did not spend a lot of time with her parents. At the time of the data collection, she was attending the last year of a primary school and her grades were poor. She was not very popular among her classmates and she found barely any friends in school. For several years, she faced her classmates' unflattering comments about her appearance (she had an overbite). This was one of the reasons for Alice's frequent use of social networks, through which she made a good friend who lived in another part of

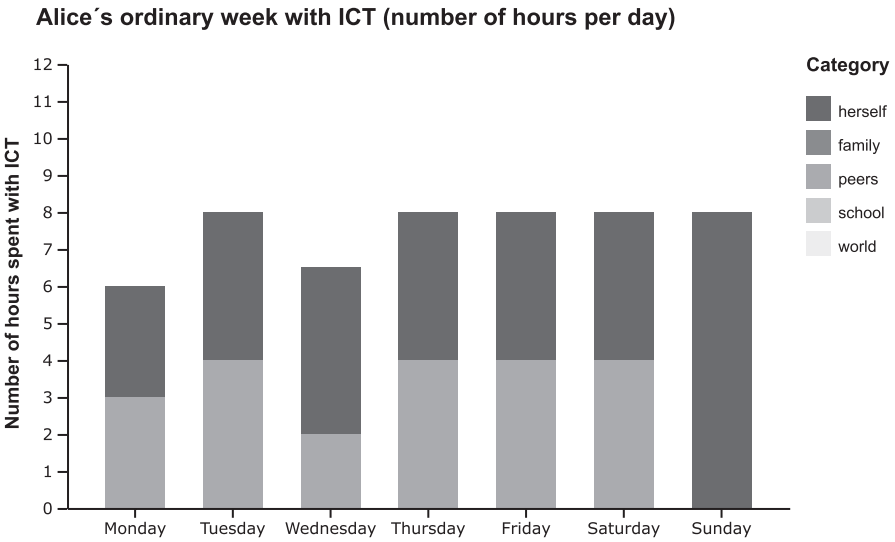

Fig. 8.3 Alice's ordinary week with ICT according to the purpose of ICT use and the number of hours spent with ICT

the Czech Republic, so they were not able to meet regularly. However, she communicated with her friend every day. Alice's record sheet showed that with small breaks, she spent entire days with digital technologies, including during school time. Alice referred to herself as being "addicted" to the mobile phone. She explained this by stating that she spent as much time with it as possible (see the Fig. 8.3). Interestingly, Alice only marked activities in the "for peers" and "for herself" categories. This supports the statement that for her, ICT are primarily tools for replacing offline relationships and for activities aimed at self-development.

8.2.2.1 Alice's Use of ICT in Relation to the Family

The use of digital technologies for family reasons, whether this concerned communication or intergenerational learning, was not reflected in large amounts of data for Alice. Her mother had a generally negative attitude toward digital technologies, though she used digital technologies when needed. Because of her mother's lack of interest, there was no intergenerational learning during which Alice could teach her mother other purposes that digital technologies could be used for or how to use them. By contrast, Alice considered her father to be very skilled in the use of digital technologies as well as knowledgeable in hardware. However, she did not use digital technologies with him for spending time together nor as a tool of intergenerational learning.

Nevertheless, Alice emphasized the advantage of social networks, because thanks to them she was able to stay in contact with her cousin who lived far away.

Alice rarely used digital technologies for the purposes of communication with her parents; if she did, it occurred primarily when she wanted to report that she would come home from school later than usual. For these purposes, she exclusively used regular text messages or calls. Strong parental regulations were already mentioned in Chap. 6. Parental regulations were the reason that Alice rarely used the computer and did not develop her competences in its use in that way. The parents had password-protection on the computer so that Alice would not spend too much time on it. Therefore, she was only able to use the computer if she convinced her parents that she needed to use it to do her homework. In terms of other digital technologies, she only used her mobile phone. For Alice, the question of mutual trust with her parents is interesting. The parents did not trust Alice to use digital technologies responsibly and so they introduced strong regulations. Alice even learned that her mother checked her communications on Messenger, as the following example shows:

> I left the phone alone in the room where my mother was and my mother… You know, when I wanted to gossip with someone about the teacher who was mean to me, well she wanted to take a photo once, so I took a photo and then I sent it to a friend and the friend – she looks like a potato. And then my mother started talking to me about it, why are you texting to Barča that the teacher looks like a potato, what if she learns about it? That's actually how I found that she was looking into my communication.

After this experience, Alice decided that she needed to maintain privacy from her parents and she wanted to have the option of her own autonomy and space where she could safely confide in her friends concerning the things she worried about and which her parents did not understand. However, since Alice participated neither in open conflicts and arguments nor in discussions with her parents, she decided to secure her mobile phone and the individual applications with a password so that her parents could not access them anymore. Simultaneously, she mentioned that her parents often judged her unfairly when they automatically expected that Alice spent time only on her mobile phone when she was out of their reach, even if it was often not so:

> For example, I'm drawing something or doing something other than texting and looking something up in the phone, going to draw something, going for a run outside and so. And then Dad tells me off and says that I've been on the phone the whole day, but it wasn't true, I was doing something completely different.

Despite the unfair judgement, Alice herself expressed a wish to spend less time with her mobile phone, because she believed her father, who often convinced her that ICT are primarily a bad master of people and that they have a negative effect upon their health.

> Yep. Because it's not really good, the amount of time I spend on the phone. It is bad for the eyes and it is not particularly good for the brain. It will dampen the cells in your brain, Daddy says. So I'd like to do some sports more, I would like to lose some weight, because I think I could get in shape a bit.

Therefore, Alice saw the mobile phone as an obstacle for the realization of offline free-time activities. At the time of the interview, her plans were only in the form of ideas, because the options the mobile phone offered represented much greater temptations for ways to spend her free time.

8.2.2.2 Alice's Use of ICT in Relation to Orientation in the World

To the question of the practical use of digital technologies, Alice surprisingly did not mention any practical uses similar to the uses of other adolescents in our sample (searching for public transportation connections or orientation using the maps in the mobile phone). Alice only listed regularly reading news on the mobile phone for better orientation in contemporary social and political events, since she monitored Czech media and the Facebook pages of some Czech and foreign political parties. She also focused on foreign news services, primarily the BBC. For these purposes, she used Twitter, where, in addition to the news, she followed tweets from her favorite bands and often actively responded to these tweets. In this regard, the ICT were a good servant for Alice.

However, Alice told us that she was aware of the dangers that social networks may represent, especially account theft. She independently stated that she was afraid of "having a Facebook account hacked" by another person or a virus. She was careful to use safe passwords and only add people she knew personally as Facebook friends.

8.2.2.3 Alice's Use of ICT in Relation to School Purposes Outside of School

Alice used digital technologies rather rarely for school purposes. When she did, she used the home computer with MS Office upon agreement with her parents. More often, she only needed to find some information for her homework or to verify the correct result of a homework assignment. Her own mobile phone served her well in this regard, because the computer was password-protected.

8.2.2.4 Alice's Use of ICT in Relation to Her Peers Outside of School

In the introduction to Alice's story, we mentioned that she had few school friends. For this reason, she used the mobile phone primarily to compensate for face-to-face contact and face-to-face friendship. In our interview, Alice's story constantly turned toward her "long-distance" friend, who she met online on the basis of a shared interest in the same kind of music. They quickly became friends who confided in one another and talked about their own problems in the offline world. Several times, Alice referred to her friend as the support she lacked from her peers and her family in the off-line world.

In additional to providing mutual support, the girls spent their free time together through ICT. In this free time, both of them had the opportunity for their own development or for joint informal learning. Because of the Internet, it did not matter that they lived far apart. Primarily, Alice mentioned joint music composition. First they wrote the words, then they composed the tune accompanied by a ukulele. Then they sang their compositions together, accompanied by the ukulele, and recorded them

on a mobile phone. No such collaborative learning occurred in Alice's offline world. Her life offline primarily involved "parallel online living." She regularly met at the bus stop with a classmate who took the same route to and from school and they rode the city public transportation together. They walked together, but each of them listened to music played on her own headphones. If some part of a song piqued one's interest, they would offer it to the other one to listen to.

Learning English was another good example of ICT being a good servant for Alice in connection to her peers. Alice repeated her dissatisfaction with the teaching of English in her school several times, but at the same time, she liked English and wanted to improve her level of English, so she often used Facebook to communicate with her peers abroad, which helped her to improve her level or English.

For Alice, the digital technologies were recorded as a bad master in only one regard, which was not repeated in the other adolescents. This concerned the perception of a mobile phone as a status marker among her peers. Alice stated that she had owned a push-button phone for a couple of years, then she had a touchscreen phone, but a completely basic one. Alice's mobile phones were lower status than her classmates' mobile phones. For some time, this was one of the reasons (apart from her appearance) her classmates mocked her. Our results suggest that mobile phone type can make a person a target of mockery in a certain environment.

8.2.2.5 Alice's Use of ICT in Relation to Herself

For Alice, the use of ICT for the feeling of personal freedom was the most visible. In the online world, she became a different person, a self-confident person with friends in the online world, a person who was not afraid to comment upon the statuses or tweets of both famous and ordinary people. In this regard, ICT can be considered an excellent servant for Alice. This was proven by the feelings of anxiety, sadness, and loneliness that arose when Alice's parents confiscated her mobile phone. In addition to missing the communication with her virtual friend in times when the phone was confiscated, Alice reported missing the ability to listen to music, which was an important form of relaxation and calming for her when she experienced stress or had a bad day. The following example proves that music also helped Alice to deal with a teacher who was unkind and unsupportive according to Alice:

> Every day, she would yell at me for something or just went and called my parents. She just had to yell at me in front of the entire class, so that everyone would make fun of me, and on top of that, she would be telling me that I couldn't get into art school, that I don't have any talent. She was mean to me and she was really bringing down my self-confidence. I really felt completely down because of her, but somehow, when I was listening to the F.O.B. [a band], that could improve my mood and everything was better. So I miss the music the most, because it can just somehow completely calm me down. And it makes me happier, makes me look at things better than I do when there's nothing but silence around me.

Further, in relation to herself, Alice used digital technologies for her own self-realization, self-presentation, and self-development. The examples included

creating "fan edits," which Alice described in this way: "A fan edit is in fact a cut video, in which you have, you know, your various favorite actors and bands, as a recording, a video cut from other videos. And you can have various effects in the video and even some music or something." At the same time, Alice pointed out that she was not very good at editing videos and that she did not have a sufficiently powerful mobile phone for this, so she tended to just comment under good fan edits on YouTube and draw inspiration from the work of others. Apart from listening to music, Alice herself liked to sing and she stated that she even improved her singing skills thanks to videos on YouTube:

> For example, I learned how to sing thanks to my favorite singer. He does not upload any singing lessons, but according to various videos from shows, I just started singing along with him and I have gradually improved my voice. So I can't sing solo, but I can sing with someone. As a second part.

Alice also spent a lot of time taking pictures of nature. She tried to learn how to take proper and good photographs on the mobile phone from YouTube videos and then she published her photographs on social networks.

The last field in which she was intentionally learning through digital technologies was English. She watched various interviews on YouTube, tried to practice her understanding of spoken English, and developed her vocabulary. She wrote down the words she did not know and translated them using Google Translate. In this way, Alice studied English every day. However, she struggled in English in school because the lessons primarily focused on grammar, which Alice did not find entertaining.

In her free time, Alice irregularly read works on Wattpad. She especially enjoyed fan fiction based on her favorite bands. Because of her goal of exercising more and getting into better shape, Alice tried to exercise regularly. She even used apps that promised weight loss and a fit body for exercising.

In addition to time intentionally spent with her mobile phone, Alice also used the phone to procrastinate. Here, the ICT was a bad master, because she knew she should have focused on preparations for school or on housework, but instead, she reached for the mobile phone and read new posts on Twitter, Facebook, and Tumblr. She also sent pictures of herself to her friends. She enjoyed playing with various filters.

8.2.3 Petra's Story

Petra lived with her parents in a house in a small village. She had an older brother who no longer lived with the family. At the time of data collection, Petra was attending the first year of a four-year gymnasium in a nearby city, to which she commuted by bus. In some subjects, Petra was used to using digital technologies both in school and for school preparation. The gymnasium was more difficult for Petra than primary school had been, and she spent most of her free time preparing for school. The

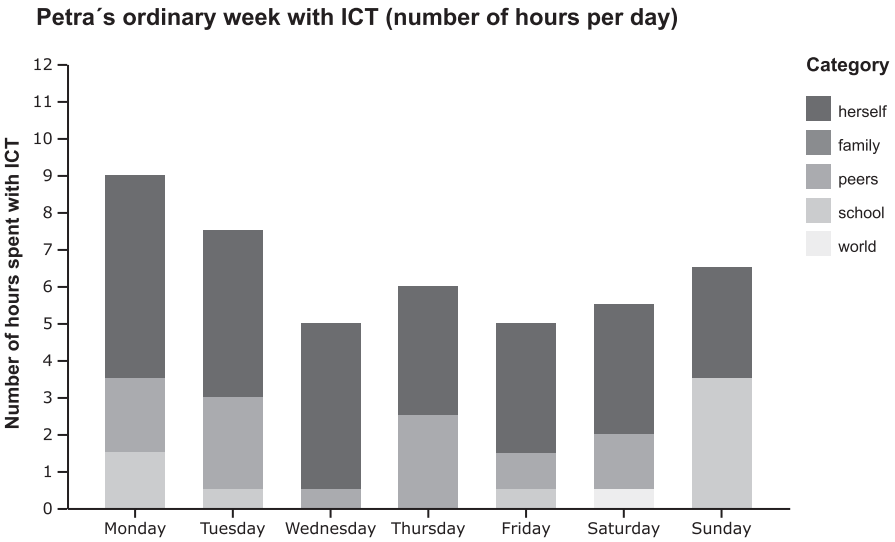

Fig. 8.4 Petra's ordinary week with ICT according to the purpose of ICT use and the number of hours spent with ICT

week-long record sheet shows that Petra used digital technologies immediately after waking up and for preparation for school, during which she listened to music. In that way, Petra used digital technologies continuously throughout the entire day. She stated that she had to limit the time spent with digital technologies because she did not have as much free time as she used to. The Fig. 8.4 created from her record sheet illustrates the use of digital technologies in Petra's ordinary week.

8.2.3.1 Petra's Use of ICT in Relation to the Family

Petra considered her parents technically skilled because both of them used computers in their work. She saw her father as more technically skilled, because he was the first in the family to start using WhatsApp. By contrast, her mother had just a push-button phone for a long time. Petra's mother had owned a smartphone for several years at the time of the interview, but she only used it for practical purposes, such as communicating with colleagues and friends or using an online calendar. Petra stated that there was no mutual learning to control digital technologies in the family, as everyone learned on their own. She listed a single example of intergenerational learning: using mobile phone navigation when the family travelled somewhere by car. She said that it would take her mother a long time and so she preferred to ask Petra for help. Petra considered her older brother to be the family expert on digital technologies. He did not live with the family anymore at the time of the interview, but he helped with choosing new mobile phones and with technical difficulties. Petra had one grandmother who actively used a smartphone primarily to organize

excursions with other seniors. She did not need any help with this. The whole family regularly used digital technologies to watch the "Game of Thrones" television series together, and, less frequently, to watch feature-length films on the weekend. Petra did not confirm any other joint use of digital technologies within the family. The parents did not have a completely positive attitude toward digital technologies and preferred to spend time without them. Petra's parents often reproached her for spending too much time with the mobile phone and thus having less time to study. At the time of data collection, Petra had failed to explain to her parents that when she uses her phone during study times, it was for the purpose of preparation for school. She often searched for information or verified facts on the phone.

8.2.3.2 Petra's Use of ICT in Relation to Orientation in the World

In terms of practical use, digital technologies were Petra's good servant, such as her mention of online clothes shopping. This may have been due to the limited availability of shops in the smaller city near where Petra lived. On the other hand, within the family digital technologies were considered a bad master that had to be used with care. Petra did not have a bank account of her own, but she selected her clothes on her own online and then her mother ordered them for her. Petra emphasized that she was instinctively careful both during the online shopping and in communication on social networks. She was aware of the dangers digital technologies could bring in this regard. The examples she listed were cyberbullying and account theft. She had not experienced any of these dangers herself.

Petra considered digital technologies a good servant for practical use for school. She ordered her lunches on her mobile phone, monitored changes in the school schedule, and tracked her grades in individual subjects.

8.2.3.3 Petra's Use of ICT in Relation to School Purposes Outside of School

In contrast to our previous respondents, Petra often worked on her homework on a laptop. The students often received homework in the form of a group project on which she worked with her classmates and she used Messenger for communication. They used Messenger to agree on the procedure of the work and to distribute tasks. However, for their group work on a presentation, there was no joint work shared in a cloud environment. The members of the group sent all the information to a single classmate who created the presentation alone. Petra mentioned that such homework assignments were not typical for all the subjects taught in school. This only occurred in geography class, which was taught by a young teacher who came to the school shortly after graduating from university and who was fond of digital technologies. The students even had Facebook group with this teacher, and he sent materials for

his lessons to his students and communicated with them there. On rare occasions, Petra also received Russian homework related to digital technologies; the homework mostly concerned completing online grammar exercises.

For school purposes, Petra had to monitor the Škola online (Online school) application every day; the teachers entered grades, attendance, and student evaluations into this app. This application had completely replaced the printed student record book, a replacement that was viewed positively by Petra:

> Well it's good, it's better, because I lost my record book so many times at the primary school and then I didn't have any grades there and I didn't know my grades in any subject and it's so good to have it in this app. It also calculates the average, so I know the current grade I'll get for the term. In addition, we have the school schedule there and they let us know there if we have some lessons switched, if we have a different teacher, if the lesson takes place in a different classroom and so on.

The teachers used this application for communication with both students and parents simultaneously. In this regard, the application completely replaced e-mail communication.

8.2.3.4 Petra's Use of ICT in Relation to Her Peers Outside of School

In communication with peers, Petra appreciated that they could be in constant touch because of social networks, but she also expressed sadness about this very online availability, which made her friends lazy and significantly limited physical contact. She mentioned that she would like to go out with her friends more often, but that many of them preferred online communication. She also considered it unpleasant (similarly to Natalie) when some of her friends constantly had the phone in their hand and kept communicating with others, even though they were outside together and they could have paid attention to each other.

Petra was the only one from our sample who regularly used a laptop in addition to a mobile phone; she used the laptop to connect to social networks, on which she communicated with her peers. According to Petra, most communications contained questions about schoolwork, but she also discussed personal things with her good friends via Messenger. However, Petra saw the constant availability and peer expectations about constant presence online as negative. The messages she received from her friends throughout the day often distracted her from her work. She often turned the wireless connection off or turned the mobile phone off completely for that reason. Her parents supported her in this course of action. Petra also stated that after she turned the mobile phone back on, she immediately received huge numbers of messages asking if she was okay and why she was not responding: "Then I turn the phone on and I get a million messages and calls if I'm alive, why is my phone not ringing and why am I not responding, simply what is going on." Here, Petra warned of the negative side of contemporary adolescents viewing constant availability on social networks as an absolute matter of fact.

8.2.3.5 Petra's Use of ICT in Relation to Herself

Petra did not use digital technologies in her free time within her hobbies or for informal learning very often. In her words, she would "use digital technologies to fill some empty time or use them to procrastinate" when she did not feel like doing her chores. To fill empty time, she listened to music; as with some of our other respondents, this typically occurred on her way to school or when she had to wait somewhere.

Petra listed playing games (The Sims) as an example of a procrastination activity. However, that occurred rarely for her, because she no longer allowed herself to postpone chores or homework and other duties very often. But she said that when she did not feel like studying, she procrastinated with her mobile phone. She scrolled through social networks – Facebook and Instagram – where she looked for new posts by her friends, although she herself was not active on these networks. If she wanted a longer break from studying, she watched a series on her laptop. These examples show the thin line between ICT as a good servant as a tool for resting and as a bad master supporting procrastination.

8.2.4 Matej's Story

Matej lived in a housing project apartment in a regional capital with his mother, father, and two sisters. The entire family were practicing Christians and went to church mass together every Sunday. At the time of the interviews, Matej was attending an eight-year gymnasium and had good grades. For his parents, it was important that the children were not overly stressed from school duties or by the amount of free-time leisure groups. That is one reason that the parents tried to spend free time together with the children playing board games and going on trips to the countryside. However, Matej often experienced boredom because of this parental tendency not to stress their children with many organized activities. It was in these moments of boredom that he reached for the mobile phone. The week-long record sheet shows that Matej was the only one from our sample who listened to classic radio after waking up and who did not spend time with his mobile phone before afternoon (see Fig. 8.5 for detailed description of Matej's week with ICT).

8.2.4.1 Matej's Use of ICT in Relation to the Family

For Matej, intergenerational learning in the field of digital technologies also occurred rather rarely. He stated in the interview that his parents used to help him create PowerPoint presentations when he started receiving them as homework assignments, but that they did not acquire the necessary knowledge and the fundamentals of presentation creation in school. Apart from this example, he reported no intergenerational learning, not even in the direction from Matej toward his

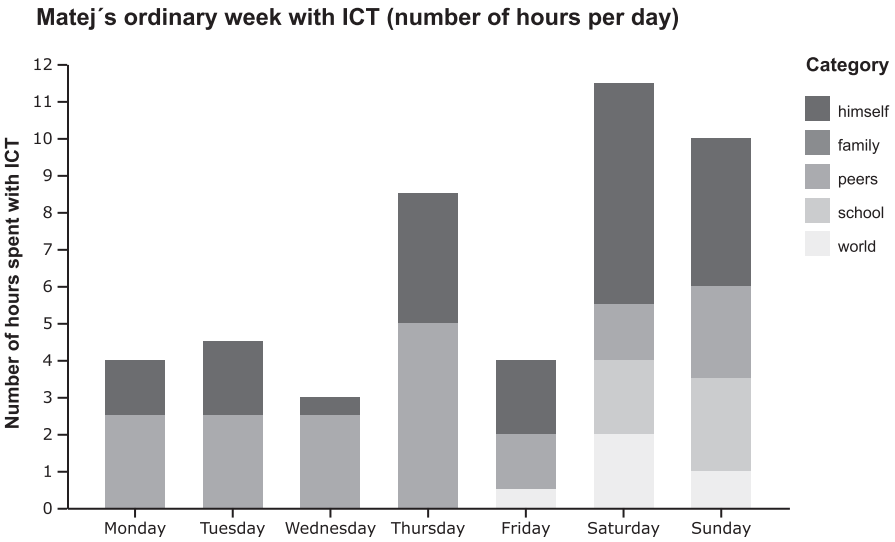

Fig. 8.5 Matej's ordinary week with ICT according to the purpose of ICT use and the number of hours spent with ICT

parents, even though he did not consider them to be very skilled in the use of digital technologies. He considered his father to be the less skilled parent; his father evaluated himself in the same way in the interview with the parents. This may be explained by his age. He was the oldest person in our sample; he had lived both his childhood and adolescence in Communist Czechoslovakia, so he had not had a lot of contact with digital technologies in his childhood or in his adolescence. His father's occupation did not require advanced use of ICT, even though it was a rather difficult occupation. Matej stated that there was no space for mutual learning even with his grandparents. He had one grandmother, who did not own a computer and who had a push button mobile phone, which she used without a problem and with which she did not need any help from the family. Even though Matej has two sisters, he did not exchange experiences connected to the use of digital technologies with them either.

Probably because of his family background, in which digital technologies played but a minor role, Matej had never (even as a child) desired to have a mobile phone as much as many of his peers did. He said that he got a mobile phone from his parents primarily so that he would be constantly within their reach and so that they could call him (and so he could call them) at any time. Matej did not consider this reason negative in any way. Joint time spent with digital technologies occurred only when watching television, which was almost exclusively news and sports broadcasts.

8.2.4.2 Matej's Use of ICT in Relation to Orientation in the World

For practical purposes, Matej used digital technologies primarily for watching news, for which he used his mobile phone as well as television; he also read the news. Matej himself emphasized that he was careful about getting information from "reliable sources." If he was not sure about the accuracy or truthfulness of some information, he verified it through multiple sources. As a matter of principle, he avoided tabloids and focused on more reader-demanding and journalistically better sources, even though he did not discuss this matter in school or with his family.

Matej also praised an app that monitored the current locations of the city public transportation vehicles. If there was a delayed connection, he was able to react immediately and change the planned route or delay leaving the house so as not to wait too long at the bus stop. In the field of transportation or travelling, Matej also uses maps in his mobile phone for orientation in the city rather frequently. However, he uses the map on his mobile phone the most often on his regular bike trips. "Mapy.cz is a good app, contrary to Google maps, they even have forest paths in the maps and so. Marked, I mean. Google maps are better used in the city. When I ride my bike, I tend to use forest paths rather than roads, so Mapy.cz is useful." At the same time, he stated that he searches for tracks he considers interesting in the maps at home in advance and that he plans every trip using a map in advance.

8.2.4.3 Matej's Use of ICT in Relation to School Purposes Outside of School

Matej did not use digital technologies for school purposes, for example for doing his homework on a PC, very often. He stated that on rare occasions, the students were asked to create a PowerPoint presentation on a given topic for some subjects. However, digital technologies played an important role in Matej's life in communicating with classmates for mutual help, primarily in mathematics. Matej mentioned that every two weeks, his mathematics teacher sent his class a total of thirty problems that the students were to calculate independently and that were then used in a graded test. For these purposes, Matej and his classmates had a group created on Messenger in which they worked together to calculate difficult problems and they tried to find the solutions together.

The last use of digital technologies for school purposes listed by Matej was the electronic attendance book and record book that had already replaced their printed ancestors completely. Matej verified the homework specifications, the planned school events, and the study materials from the teachers in the electronic attendance book or the record book. Matej appreciated the transition to an electronic format, even though his parents also had access to the electronic record book. In addition, he stated that unlike some of his classmates' parents, his own parents did not check the record book regularly and did not concern themselves with any bad grades he received, which happened rather rarely, so he was not stressed when he got a bad grade.

8.2.4.4 Matej's Use of ICT in Relation to His Peers Outside of School

In contrast to the stories presented so far, Matej did not use digital technologies primarily for "chatting" with his classmates. In this regard, he appreciated the digital technologies primarily because he could use social networks to arrange the logistics and organization of sports tournaments he participated in, because he played table hockey competitively. He travelled outside his home city with his team for league matches almost every week and the organization via social networks was crucial for him. "When we have some group matches coming up, we arrange who travels with whom, at what time we should meet and so on, because we don't see each other in person." In this regard, the mobile phone was unequivocally Matej's good servant, allowing coordination of the team without the need for face-to-face contact.

He much preferred spending time outside with his friends. Because of the digital technologies, it was easier to organize meetings. Matej observed that digital technologies greatly simplified the organization, because it was possible to quickly find out who was free and when and where they should meet. He remembered the times when they did not have mobile phones and it was harder to find free time together and arrange a meeting.

> It used to be like this, I told a friend that we would go on a trip in three days and he lives somewhere outside the city, so we have to meet, we have to meet at the agreed location and if I came down with something, for example, that could've been a big problem, and now it's completely okay, I text him and everything is arranged and we don't have to do anything the hard way and travel there and so on. And, especially, we can write each other to meet outside in ten minutes.

At the same time, Matej stated that digital technologies could cause laziness and estrangement among people. He mentioned that most of his peers preferred to spend time alone with their mobile phone and communicate over social networks rather than to go outside. However, Matej saw face-to-face meetings as better in terms of quality for maintaining long-term friendships.

8.2.4.5 Matej's Use of ICT in Relation to Himself

Social networks played an important role in Matej's life. But he was a rather passive user. He would "kill" time on social networks browsing through his friends' posts on Facebook and Instagram. But he did not post any statuses on Facebook himself, nor did he participate actively in discussions on social networks. He was only active if he managed to take a nice photo of good quality. This was what he shared on his profile. Even though it did not seem like Matej spent most of his day with digital technologies, he expressed the wish to do more activities without digital technologies. He considered spending time without purpose on social networks an unnecessary waste. However, as he said, he often did not have anything better to do. This can be related to what we noted at the beginning of this story, that Matej's parents emphasized not stressing their children too much with leisure groups and chores.

Browsing social networks was a regular ritual for Matej, as was shown in his record sheet. Every day, he prepared a snack after coming home from school, and at that time he regularly checked his friends' activity on social networks.

Apart from social networks, Matej used his mobile phone to play games. However, he did not play long-term strategic games; he preferred knowledge games. He would somewhat "forgive" himself for spending time with the mobile phone in this way. By playing knowledge games, in which he learned something, he would "lighten the load" on his conscience, which was frequently bad because of his monitoring of social networks. He also stated that he played games only when he was bored. This means that in his case, we cannot speak of a planned or targeted playing of games on the mobile phone. Matej chose games that he considered developmental, and used this tactic, on an imaginary scale, to add weight to the side on which the digital technologies are a good servant subjected to Matej's needs and decisions.

Matej was the only one in our sample who did not listen to music; he did not use the mobile phone for this purpose either. He used YouTube, but he searched for instructional videos to various sports tricks (tricks with a ball, card magic, etc.). At home, Matej also regularly exercised with videos published on YouTube.

8.2.5 Renata's Story

Renata lived in a small city near a regional capital in a rather wealthy family with her parents, an older sister and a younger brother. At the time of these interviews, she was attending the last year of a private primary school. Outside of her education, she went to several leisure groups and spent time with friends and family. Digital technologies were often used within the family time together. The week-long record sheet shows that Renata (with some exceptions) used digital technologies only in the afternoon after returning from school or from leisure groups (see Fig. 8.6).

8.2.5.1 Renata's Use of ICT in Relation to the Family

Renata's narrative indicated that because of her skills in the use of ICT, she was the family expert on digital technologies in some aspects, as the following excerpt from her interview shows:

> I am really well-versed in our car. I just can turn on, there's this screen, you know, and it controls the entire car, not even Mom can do that, so that's what they need me for. For example, how to turn on the lights in the car, air conditioning, or multimedia, what phone is connected to it. If we listen to some music, it has to be done from the front seat, but I mostly navigate them from the back seat and when I'm sitting in the front, I'm doing it.

This interview excerpt shows a certain feeling of indispensability, which her skills in the use of ICT provided to Renata in certain aspects within the family. If Renata was unsure about a specific way to use digital technologies (primarily the

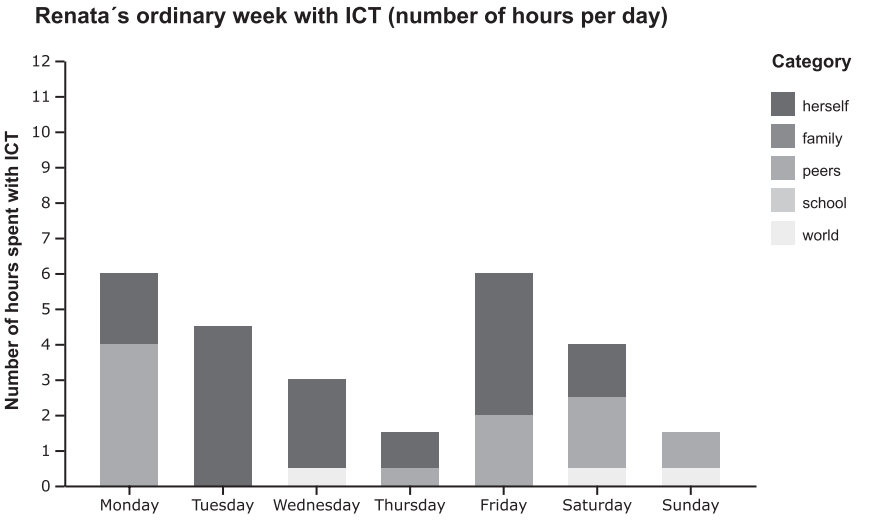

Fig. 8.6 Renata's ordinary week with ICT according to the purpose of ICT use and the number of hours spent with ICT

options of uses of social networks), she asked her older sister, who was a more experienced user of social networks than Renata. However, even for Renata's family, there was no significant intergenerational learning; as with the other respondents, it was more of a sporadic phenomenon.

However, the family spent time together watching politically focused programs that were broadcast only on the Internet (DVTV,[1] Stream[2]), which supported Renata's critical thinking about the contemporary political situation and about social events in the Czech Republic and abroad. Usually, the family would mirror videos on these topics from a tablet to a smart TV. The programs focused on content that did not get sufficient coverage by the traditional national Czech television media, or the programs were specific in some other ways. The family would also mirror from a tablet to the television to show family photos from trips to their grandmother and comment on them.

There were no hard regulations on Renata's mobile phone use. The mobile phone was not a tool of constant control for her parents. She stated that, in contrast to most of her peers, she did not have to use her mobile phone to report to her parents after returning from school or if she was delayed somewhere. Renata really appreciated this freedom: "A lot of my friends from school do that, they have to constantly report to their parents, and it just surprises me a lot, because their parents really do have to have control over everything. We don't do it that way and I really wouldn't

[1] DVTV is an audiovisual news and journalism project in the Czech Republic.

[2] Stream.cz is a company producing video content (programs and series) for the Televize Seznam television platform. In the past, it was a full-fledged server with its own content, which was complemented by downloaded TV shows and videos uploaded by users.

like it." Renata mentioned that there were some family rules, but as long as they were adhered to, she had freedom in the use of ICT. These rules include a "one digital technology at a time" rule, because the mother did not like it when the adolescents watched television and used a tablet or a mobile phone at the same time. The adolescents respected the "one digital technology at a time" rule.

8.2.5.2 Renata's Use of ICT in Relation to Orientation in the World

As regards the use of digital technologies for practical purposes, Renata mentioned barely anything. She confirmed that she did not have a lot of applications installed in her mobile phone or on her PC. The only practical purpose that can be mentioned is the regular monitoring of the weather forecast, according to which Renata regularly chose which clothes to wear. She used a mobile application, but when she was in a hurry, she asked Siri. She was the only one of our respondents who used an iPhone. In the question about Internet banking, Renata responded that she did not know what this was. She did not yet have an account of her own, and so she did not use Internet banking and she was not interested in this subject.

8.2.5.3 Renata's Use of ICT in Relation to School Purposes Outside of School

Renata used digital technologies for school purposes only rarely. Generally, she did not get any homework and she thus did not have to focus on preparation for school very much. To a large degree, this might have been due to the curriculum of the private school Renata attended. The school curricula was largely based on student autonomy and on group projects. Renata mentioned that she was not very good in the use of MS Office, because she did not have a reason to learn it. However, at the same time, she mentioned that they use MS Word in school.

8.2.5.4 Renata's Use of ICT in Relation to Her Peers Outside of School

Renata considered digital technologies a good servant in communication with peers. She was especially grateful for social networks. She considered these platforms where her peers could relax and where one could discuss personal questions better and more honestly than in person, where the communication could be affected by shyness or nervousness. Renata viewed social networks as a tool thanks to which one could get to know their peers better than in regular face-to-face contact.

According to Renata, the social network environment was more suitable for getting to know one another because of the omnipresent feeling of anonymity. As an example, she spoke of her classmate who did not talk very much with others in school and did not participate in anything, and who could be downright unpleasant. However, in communication with Renata over social networks, he manifested

somber (for example, he tried to reflect on the behavior of his classmates, even though in school it appeared as if he did not perceive or participate in any activities), and he felt like sharing his life story and his thoughts with her in great detail and with great intensity.

In addition to using digital technologies for communication, Renata used digital technologies in face-to-face meetings with her friends. For example, they used their phones for joint shooting of mini-movies:

> Me and my friends, we started shooting movies on a regular camera with a tripod during the holidays (laughter) about three years ago. And mostly it ended up very badly, because we had the wrong programs for recording and cutting, and stuff even got lost and so on. But we liked it, so we found ourselves, we wanted to do the cutting on our own, because the girls did it on their computer. And so we recorded something in the garden, speeded up jumping on the trampoline, or some silly things like that. And then we tried modifying the color and so on.

Even though Renata was not always satisfied with the end results of the joint movies, she always had a lot of fun with her friends and learned new things together, specifically editing and splicing videos. This is an example of collaborative learning (skills) between friends. In contrast to the other girls, Renata did not mention "parallel online living." She either communicated with her peers online from home, or, when she was with them in person, she neither communicated online with other people nor listened to music on her own. She spent time with the person with whom she was physically at the given moment.

8.2.5.5 Renata's Use of ICT in Relation to Herself

Renata's use of ICT for her own purposes was characterized by procrastination and informal learning. She mentioned that when she did not feel like doing chores or schoolwork or when she was supposed to work on some homework, she regularly reached for her mobile phone and watched videos on YouTube. Renata mentioned that in this regard, digital technologies were a bad master for adolescents. "Because, for example, I watch YouTube for a long time and I even watch meaningless stuff and I don't have to do that. And in school, it is one of the main topics, the distraction it represents for us. Well and even for myself, I have seen a lot of things proving it, so…I could study instead of this, because that would be good. But I just don't feel like it." In this regard, the attraction to digital technologies lies in the fact that they provide immediate entertainment with minimum effort. The example also proves that ICT gained control over Renata when she let herself be lured by videos she did not even want to watch, but she could not resist the offer.

Even though Renata did not use digital technologies for learning for school, she used them very often within her informal learning. For example, she regularly browsed Facebook or YouTube in search of recipes and guides how to bake something or prepare some dish. She then tried to cook along with these videos, either alone or with her sister. She searched the Internet for videos focused on cosmetics, make-up, and care for her appearance. She tried to use the advice and

recommendations from these videos to care for herself. In addition to these videos, Renata frequently used Pinterest, on which she searched for inspiration for creating decorative items for the household. She liked to paint and sought both inspirations for what to paint and new drawing techniques. It was important for Renata to have interests and to develop them, which was one of the reasons she mentioned the following: "I also have a file there containing only the items that captivate me. Painting and decorations, but I also have stuff about fashion there and so on, everything." This is creating and strengthening her identity as an artist, and the digital technologies help her in this regard.

The last item mentioned by Renata was the frequent use of the Sketchup and Fusion programs, in which she could again use her creativity, and she entertained herself by designing houses, rooms, and gardens. Renata considered her free-time activities with ICT to be entertainment, but simultaneously a pragmatic way to spend time with digital technologies, because she wanted to study at a secondary art school. Skills such as painting, designing, and spatial imagination would be important prerequisites for her acceptance and for other reasons. The activities she enjoyed could develop her in this direction.

8.2.6 Jiri's Story

Jiri lived in a regional capital in a single-family house in a wealthy family and he had a younger sister. At the time of the interviews, he was attending the fifth year of an eight-year gymnasium that was considered one of the best in the city. Jiri was thus occupied with preparation for school as well as free-time activities and he also had some temporary jobs. He had a good relationship with his parents; they spent time together in several ways, including actively using digital technologies. The week-long record sheet showed that Jiri used digital technologies every morning to listen to music while preparing to travel to school. Jiri did not use digital technologies while at school; he returned to them only after his arrival home (see Fig. 8.7).

Since Jiri's activities were more diverse than those of our other interviewees, and he was the only one from our sample to mark activities in all of the determined categories, we present them in more detail for the purposes of illustration in the Fig. 8.8 as well.

8.2.6.1 Jiri's Use of ICT in Relation to the Family

Jiri's father was well-versed in the use of digital technologies and Jiri considered him an advanced user. Jiri's father taught him how to use his first mobile phone. Jiri talked about his mother in diametrically different words. She had to use a computer at work and she learned to use MS Office and the programs necessary for her work. However, according to Jiri, it cannot be said that digital technologies were a hobby of hers or that she enjoyed their presence. This was also shown by Jiri's statement

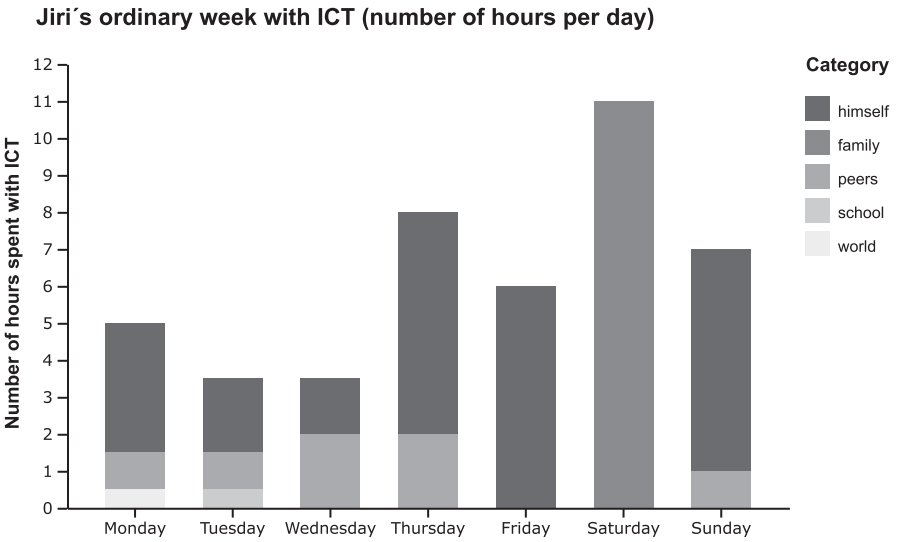

Fig. 8.7 Jiri's ordinary week with ICT according to the purpose of ICT use and the number of hours spent with ICT

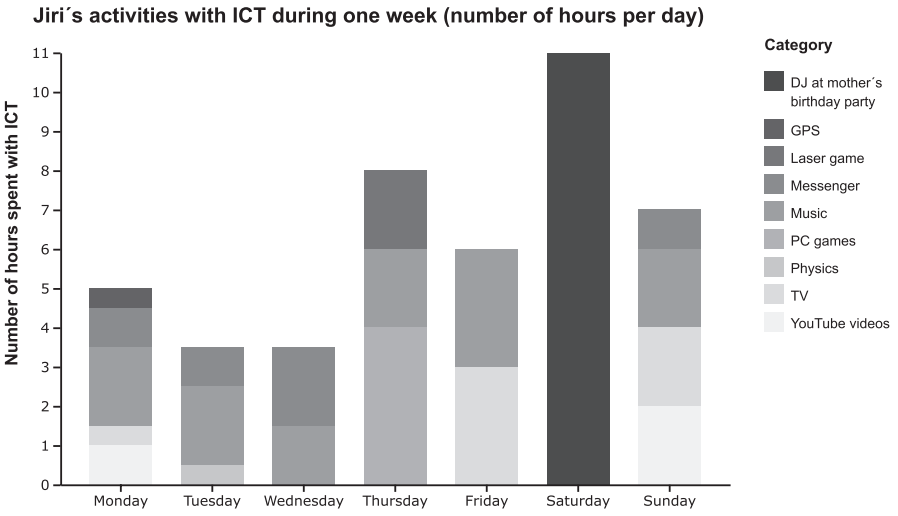

Fig. 8.8 Jiri's activities with ICT during one week

that she referred to all digital technologies as computers and that she did not have an idea about the prices of digital technologies. "For example, we recently discussed my purchasing a computer with better performance and she asked me for example, that she expected, that it would cost like 80 USD or so. There it was clearly visible that she kind of lacks the general knowledge about the field. That for example she knows how it works because she needs it for her work, but not like she's knowledgeable in the field." She did try to accommodate Jiri and she listened to his arguments about the importance of purchasing newer and more expensive digital technology. Jiri's mother also often comes to him for advice on the use of social networks. According to Jiri, "she only has them [social networks] for the sake of appearance, and when she decides to log in and use them, she mostly asks me for help even when she just wants to write to someone. She is not really well-versed in it."

Joint use of ICT for the purpose of spending family time together was rather passive – watching television. Jiri and his father also played some games together from time to time or they tried to create a short movie using a mobile phone app. Jiri mentioned his role as a DJ at his mother's birthday party, when she tasked him with the entire music section including background music.

Jiri also expressed his satisfaction regarding parental regulations. He did hear from his parents that he spent too much time with digital technologies, but he did not care about this very much because, as he said, "That's the typical parental speech, which is everywhere, or at least very often for boys, that you are on it all the time." Jiri himself raised the question of gender in the approach to digital technologies. He says that girls did not spend as much time with digital technologies playing games as boys commonly do. And so, according to Jiri, neither his parents nor his sister understood that it was not possible to immediately quit every game and for example go to dinner:

> The game mostly cannot be paused, that's what the parents still don't understand (laughter) so they just call you downstairs or call you to come to see them, but you really can't leave at that moment and you should finish it. Well you can tell your friends that you will have to leave soon, but I need to finish this, so perhaps I can talk the parents into it. Sometimes they can be persuaded, mostly it needs an agreement – then I'll do it another time. But it is not really frequent that I tell them "just a moment."

At the same time, Jiri confirmed that he was not being regulated very strongly by his parents and therefore he had a lot of freedom in ICT use if he fulfilled his home and school duties. With Jiri, strong parental regulations and (strict) limitations of time spent with digital technologies were not an issue. On the contrary, Jiri reflected a rather successful domestication of digital technologies within the family. This showed ICT being used as a good servant; digital technologies helped strengthen the relationship between Jiri and his father in their joint activities.

8.2.6.2 Jiri's Use of ICT in Relation to Orientation in the World

In terms of practical uses, Jiri, like Matej, primarily used the application monitoring the current condition of public transportation and he searched for bus departure times on his mobile phone. He used it primarily on his way to school. The bus Jiri

rode was often delayed. If the application showed that the delay was significant, it was worth it for Jiri to walk at least part of the way and not to waste time waiting at the bus stop. Digital technologies were a good servant for Jiri in this regard. Jiri was careful in his use of ICT and frequently thought about security when visiting websites. In his words, he was trying to avoid viruses and similar threats that could infect his computer or mobile phone. On social networks, he participated in conversations with people he did not know personally with a similar degree of caution. He had experienced phishing; Jiri's friend's account was copied and someone had tried to cheat him out of some money:

> It was this girl from school and we only texted each other for a short time. And then she wanted to add me as a friend again. And it was kind of weird, but I thought, well, something could have happened and she could have deleted her account. So I added her and she said hi, so I said hi. Then it went typically, how are you and then it moved to if I could send her something. And I just went –hey, not really, I can't. And then it was weird for a moment, so I checked the Facebook and found out that there were two accounts. One with diacritical marks,[3] and the second one without them. I hadn't noticed it at all and so I immediately wrote her, the girl, I mean, that someone created a fake account and it was deleted in like two minutes, completely gone, and the conversation was deleted as well.

Jiri was the only person from our sample to mention that he had his own bank account and tried to manage his pocket money. He also earned money from temporary jobs. Therefore, he was the only person from our sample to use Internet banking and online shopping without parental surveillance. His father taught him to use Internet banking; he viewed it as part of financial literacy. This again proves the successful domestication of digital technologies within the family and the effort to use them as a good servant.

Jiri was very careful so that none of his social accounts nor his bank account could be hacked. He improved his chance of resisting possible attacks by regularly changing his passwords and by using a different password for each account, even though he had to evolve into this decision.

> Yeah, when I was younger, I used to have the same password everywhere, but I recently started changing it up. And once I needed a friend to do something for me in one game, there was a task which you have to complete continuously and you get these huge rewards. And I was on vacation and didn't want to look like an addict, so I asked him to do it for me. And I know that I used to give him my password, I trusted him completely, and I was giving him the password from the game and the one from email.

At the time of the interview, Jiri had become much more careful and also cautious in accepting information available on the Internet and coming from various sources. He was very critical of people who did not verify information and trusted the first alarming news appearing on the Internet.

> Should I really talk about our presidential elections (laughter)? Well if I do that, the matter was, for example, that it was really built on that campaign, but the second thing is that a lot

[3] Breves and acutes are diacritical marks used in the Czech language: ˇ Breve, for example Č, ě (softening); ´ acute, for example Á, é (lengthening); ° ring, ů (originally "uo").

> of people I saw in the Internet polls, for example they did not vote for Drahoš,[4] because he expressed positive opinions on the questions of migrants. But it really was not that straightforward. And that's exactly the thing about verifying one's information, which we discussed at the beginning, it is important in this case. Because there is a problem on one hand that certain information spreads only because people are stupid and then there is the other thing that people are indolent, lazy, they don't feel like verifying the information at the moment and they believe the first thing they see written.

Jiri was actively trying to develop his critical thinking, verifying information, and collecting pro and con arguments on the basis of which he then decided his position on the matter. He was aware of the thin line between using ICT as a good servant and ICT becoming a bad master. Jiri also noted that digital technologies could be a bad master by diverting people's attention from their immediate surroundings. He did not use a mobile phone or listen to music when walking around the city in order to stay focused on the traffic.

8.2.6.3 Jiri's Use of ICT in Relation to School Purposes Outside of School

Like the other adolescents from our sample, Jiri confirmed that digital technologies were often not necessary for school preparation. From time to time, they were asked to prepare a presentation or to write an essay on the computer for homework. However, Jiri used the Internet very often while studying and preparing school, because he searched for information on history, such as complementary resources and articles about the discussed topic, from his own initiative to learn more.

In the course of school preparations, ICT were a good servant for Jiri, especially social networks, which allowed him to get notes from school lessons if he was absent from school or if he forgot his notebook at school. When he contacted his classmates, they quickly took some photos and sent some of their own notes, which were as functional for Jiri as his own would be.

He was the only one of our respondents to mention the advantage of ICT in cheating on tests. For physics, he used the computer to print out formulas in a small font and he used them directly in the course of the test. As the following excerpt from his interview shows, this was not Jiri's habit, but rather an extraordinary situation in which he wanted to make sure that he got a good grade.

> So I know, that it was a week ago, we had a test, not a week, two months ago, we had a test from physics and the test was practically easy and it was focused on formulas. Well actually. We did some momentum and work. And there were some of the more complicated formulas and I had a lot of other tests to study for on the same day. So I fired up Word, put the font size to, some, four and wrote a crib sheet for myself. That happened for the first time in my life, I think. And it was a bit weird, because when you write a crib sheet, it should be handwritten.

Jiri also stated that he printed more of these crib sheets and that his classmates were very eager for them. This is an example of the use of ICT as a good servant, as

[4] One of the presidential candidates in the 2018 elections.

it helped Jiri and his classmates achieve success in school testing. However, we can also say that it was a bad master, because it enabled cheating. On the other hand, the cheating took place in the context of multiple tests in a single day, and so even a good student like Jiri was forced to resort to this unauthorized aid.

8.2.6.4 Jiri's Use of ICT in Relation to His Peers Outside of School

In contrast to the expressed fears, in Jiri's case, positives predominated in the evaluation of digital technologies. He considered them a good helper in daily life and especially in contact with his peers and especially in situations when he was bored. Thanks to social networks, he did not have to be alone with his boredom and there was always someone with whom he could spend time, at least online, even though he preferred personal contact. However, this did not occur very often because of his work and his friends' schedules, as can be seen in the following quote:

> Well, there's not enough time and you can do it via Messenger at any time. In the evening, you write with each other, you take a shower, you go to bed and write with each other. And you cannot really sacrifice fifteen minutes by travelling, going somewhere in the evening, then talk for like half an hour and then travel fifteen minutes back. You know, this is a half an hour of travelling for half an hour of talking, which simply is not worth it, when you have a school week, during which you study a lot.

For Jiri, the relationship of his peers to ICT was characterized primarily by joint playing of games; he and a couple of his school friends would agree on a specific time and play together. In these games, the players also had a video connection or used chat and agreed on game tactics, discussed the game's progress, and made observations. This supported Jiri in developing networking skills and collaborative skills, so ICT was a good servant in this regard.

In Jiri's circle of friends, it was popular to tag others for fun on social networks. Jiri considered this very entertaining and also a way to get to know each other better and to work more on shared laughs and experiences. The following interview excerpt gives an example of this:

> For example – tag someone who should bake you a cake. And you tag someone who can't cook at all. So, I tag people as a joke, cause I know that we will pause over it and have fun, or that we have an experience we shared together and this reminds us of it, that's what we have, so it's fun to tag them and they will remember and we will have a laugh. And we also had this period, when me and my friend, we were making fun of each other, so we were tagging each other almost everywhere. So you would turn on Facebook and you would have thirty notifications. That was funny.

Jiri was aware of the dangers posed by fake accounts and unverified information, but he also cared that the tagging game was fun for everyone participating in it. He was aware of the dangers and negative consequences of cyberbullying, even though he had never experienced it himself.

8.2.7 Jiri's Use of ICT in Relation to Himself

In ICT use for one's own purposes, two tendencies to use digital technologies were identified in the interviews with Jiri. On one hand, there was spending free time without purpose and procrastinating; on the other hand, there was spending free time deliberately with digital technologies. These two tendencies can be perceived as examples of the metaphor of ICT as a bad master and a good servant in the everydayness of adolescents.

In the first case, Jiri listened to music and browsed social networks or videos on YouTube while waiting for a bus or his next out-of-school activity (leisure group, part-time job, dinner, etc.) or while he was on the bus. Time passed faster for him that way; he did not like to wait: "There are these waits, when you ride somewhere by car, then you wait somewhere, for example in a waiting room, and you know that you don't want to stare at the walls, so you turn on your phone and like do something on it for five minutes. The trick is to make the time run faster when you're waiting for something." However, Jiri also found himself in situations in which he was not waiting for anything, when there was a clear plan, such as to study for school, but he did not feel like it and he let himself be lured away by social networks or by playing his favorite game on the computer:

> Then there is the other thing, when you really don't feel like doing the work, so you just jump to Facebook and browse… Complete procrastination. So that's an everyday thing. If you want a number, it may be an hour, or hour and a half, I can't say for sure. It can be anything from one to three hours a day.

Jiri stated that actually all of his free time spent with digital technologies was the consequence of his tendencies to procrastinate, because he always had something to do, whether it was homework or housework: "For example, I realize and remember all the homework we have for school, because in school, they are kind of pushing it on to you, the teachers remind you…and then I will plan to play a game anyway." All the same, he mentioned that the time intentionally spent with ICT often concerned "more productive and more developmental activities." Among these activities, Jiri mentioned exercising, during which he uses applications for running and body building in his mobile phone. Even though these applications allowed sharing of performances with friends, which could lead to various sports challenges, Jiri used them exclusively for his own purposes and for a summary of his physical activity. He also used the mobile phone as a reader, since he was not overly fond of printed books, but he did read on his mobile phone. However, he probably spent the most time playing an online game, which he described in the following way:

> Well, it is a card game, but it is actually not a card game at all. Those cards have certain effects. And the effect can for example be, that, we are getting kind of deep into it, but… You summon an avatar with a certain number of lives and a certain attack. And then you combine it with other cards, so that it is not just a card game. It is a strategy of some sort and it is actually set in a card game, that's what I would say.

His parents approved of this game; they believed it had potential to develop Jiri's strategic thinking. Generally, Jiri avoided games with violent subtexts; he tended to

look for knowledge games, quizzes, and similar games. Jiri liked to do the activities with digital technologies that gave him at least some feeling that it was not just wasted time, but that the activities also contributed something positive to his own development or learning.

8.3 What Do Adolescents' Stories and Their Lives with ICT Tell Us?

The insight into the lives of six Czech adolescents has shown us a wide palette of ways that digital technologies are used. Of the available ICT, primarily the mobile phone represented a necessary and self-evident part of the everyday lives of the adolescents. For some of them, it was a tool for self-realization and the creation of identity during their adolescence; for others, it was primarily a tool for relieving boredom, or, on the contrary, a learning aid; for still others, it was an environment in which they found understanding and support of their peers. The entire chapter was accompanied more or less explicitly by the metaphor comparing digital technologies to either a good servant or a bad master. The investigation uncovered five important categories within which the adolescents used digital technologies (use of ICT *in relation to the family*, *to orientation in the world*, *to school purposes*, *to peers*, and *to oneself).* In each of these categories, digital technologies could be identified as both a good servant and a bad master. Here, we use the metaphor to answer the research questions asked in the introduction to this chapter. At the same time, we note the most important findings of the investigation confirming the used metaphor. A summary of our findings is listed in the Table 8.1 presenting all identified examples of the use of digital technologies within the metaphor regarding ICT as a good servant but a bad master.

With the first question, we tried to find *what digital technologies were being used in the daily lives of adolescents.* The investigation revealed that adolescents from our sample used the mobile phone almost exclusively from the entire spectrum of the available digital technologies. The reason they used just the mobile phone can be found primarily in the fact that in comparison to other digital technologies, the mobile phone was exclusively in their ownership and they did not have to share it with anyone, unlike a personal computer that may have been owned by parents or shared by the entire family. The adolescents had their mobile phones permanently within reach and it was a completely common part of daily life for them. It accompanied the adolescents with small breaks from the moment they woke up to the moment they went to sleep. The adolescents themselves viewed the mobile phone unequivocally as a good servant and an aide serving primarily their needs. With some exaggeration, it can be said that this single small device (often not very powerful) served the adolescents very well and thus "facilitated" their lives.

In the second question, we asked *in what way digital technologies were being used in the daily life of adolescents.* A more detailed insight into the data uncovered

Table 8.1 Summary of findings: ICT as a good servant and bad master in adolescents' lives

ICT as a good servant in relation to…		**ICT as a bad master in relation to…**	
…the family:			
Identified categories	**Specific examples or notes**	**Identified categories**	**Specific examples or notes**
Intergenerational learning (work with ICT)	Learning (from) siblings'/parents' ICT usage	*Conflicts with parents regarding the perception of ICT*	Parental belief that adolescents spend too much time with the mobile phone (see more in Chap. 6)
	Teaching grandparents to use ICT		
Communication with extended family	Keeping in touch with cousins	*Constant reach thanks to ICT*	Adolescents are constantly within the reach of parents thanks to ICT: Positive for parents, unwanted by adolescents
Joint activities with parents and ICT	Watching movies, viewing photos	*Undesirable parental regulations*	Time limitation of the use of ICT (see more in Chap. 6)
	Playing games		
	Shooting movies		Content restrictions on the use of ICT (see more in Chap. 6)
… orientation in the world:			
Identified categories	**Specific examples or notes**	**Identified categories**	**Specific examples or notes**
Practical functioning in the world	Public transportation: time schedule	*Possibility of hacked accounts*	Awareness from parents and school
	Maps	*Danger of spam*	
	Money management		
	Online shopping		
	Critical evaluation of information		
Autonomy	Acquiring digital skills	*Restrictions*	No Internet banking
	Ability to use them practically		Parental control of adolescents' communications
… school purposes outside of school:			
Identified categories	**Specific examples or notes**	**Identified categories**	**Specific examples or notes**
Easily accessible sources	Internet	*Getting information too easily (laziness)*	Internet instead of books

Easy sharing of notes	Social networks	*Possibility to cheat*	Copying from the Internet
Easy to get help from peers			
Group work			
MS Office	Self-acquired knowledge		
… peers outside of school:			
Identified categories	**Specific examples or notes**	**Identified categories**	**Specific examples or notes**
Substitution of face-to-face contact	Constantly available contact with peers	*Limited face-to-face contact*	Social networks and apps
Easier to get friends	Through hobbies (groups on social networks)	*Easier spread of gossip*	
Constant support of friends	Deeper relationships	*Danger of anonymity on social networks*	
	No boundaries		
"Collaborative learning"	Making, editing videos and music	*Danger of cyberbullying*	
"Parallel online living"	Parallel surfing, checking social networks	*Mobile phone as a social status*	Bullying because of an old mobile phone
…oneself:			
Identified categories	**Specific examples or notes**	**Identified categories**	**Specific examples or notes**
Personal freedom (no matter the place)	Internet: immediate availability of music, friends, family, information, etc.	*Personal lack of freedom*	Internet: loss of privacy
			Mobile phone: constant availability
Targeted free time with ICT	Games	*Procrastination with ICT*	Games
	Reading		Reading
	Music		Music
Filling empty time	Informal learning		Social networks
Self-presentation and self-realization	Social media		
	YouTube videos		

some ways that the mobile phone was used outside of school by "our" adolescents, including activities proving a certain loss of control over this use. In this regard, the use of mobile phone by adolescents outside of school thus shows characteristics of a bad master. This occurred primarily in one of the detected categories, which we refer to as *family* in this text. The adolescents' parents understandably had a key influence upon the lives of the adolescents. The parents primarily tended to incline toward the strategy we could describe, with some exaggeration, as: "Just to be sure, one can expect nothing but the worst from digital technologies and that is the attitude one must have toward them." The adolescents were being raised to believe that digital technologies are primarily a bad master fully in control of the adolescents, but that it is often "masked" as a good servant. However, in many aspects, the parental approach and their upbringing had a positive influence on the behavior of the adolescents, who were cautious about using the digital technologies. They were especially aware of the possible negative impacts of ICT abuse, and especially so about their prolonged use. However, because of this, they sometimes found themselves in unpleasant states and situations, in which they reproached themselves for spending too much time with the mobile phone and they kept searching through the remaining categories identified by us for "the right" degree of use of digital technologies that would satisfy both them and their parents. They often failed to find such a level, because it is a highly subjective characteristic. The question therefore is whether such a solution, satisfying all participants, can even be found. In our research, it appeared to be very difficult or even impossible. One explanation can be found in the fact that the context for digital technology use perceived as suitable by the adolescents often diametrically differed from the viewpoint of the parents. The adolescents "hid" in their rooms with their mobile phones to prevent their parents from seeing them and thus to prevent avoidable conflicts.

If we focus on the specific activities reported by our respondents with ICT, the most significant feature permeating all of the presented stories emerges: the sometimes almost compulsive need of the adolescents to spend time on social networks, primarily in online conversations with their peers. It can be said that each of the respondents viewed social networks as a good servant, because it replaced or duplicated face-to-face contacts and relationships. However, they revealed the thin line where the perceived good servant becomes a bad master, where they let the social networks control them and spent time using them instead of fulfilling their duties from school or home. However, the adolescents' need for online contact with their peers was often too attractive to resist. In other words, (conscious) procrastination on social networks was present in all of our respondents and it seemed to be an important motivation in ICT use apart from intentional online communication with peers.

The Fig. 8.9 gives a better idea of the activities for which our respondents use ICT. In connection to the adolescents' efforts to spend less time with ICT, the graph also provides a more specific idea of the degree of use of ICT by the adolescents. The adolescents themselves filled out the record sheets, so although they were instructed to fill out the sheets in detail, there may be some distortion between the time stated and the truly spent with ICT.

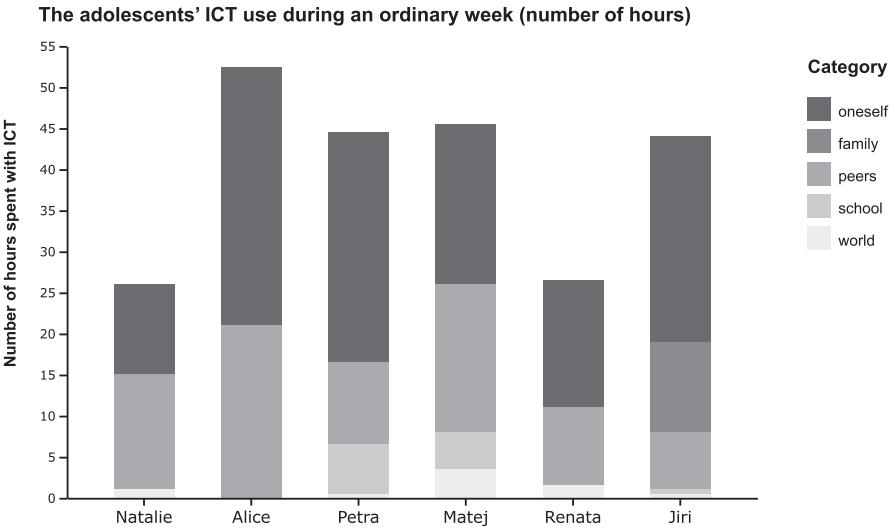

Fig. 8.9 The adolescents' (from our sample) number of hours spent on the five defined categories within one week

As the graph shows, the adolescents from our sample spent from 26 to 51 hours a week with ICT. Everyone spent the most time with ICT in the *for peers* and *for oneself* categories. With regard to the relationship to peers, this concerns primarily the online communication over social networks, specifically written communication via Messenger the most often, but communicating with peers online via videocalls or by sharing photographs were also frequent. The data also contained joint activities for which our respondents used digital technologies (joint shooting videos, composing music, etc.). The *for oneself* category then constituted primarily watching television series or videos, in which the adolescents used ICT primarily as a tool for rest and relaxation. Listening to music or passively browsing posts on social networks were also registered often. The use of ICT in the other monitored categories (*to school*, *to the world*, *to the family*) in the regular days of our adolescents represented more of a peripheral and infrequent activity. Our respondents registered such use rarely or never. This was true even though they spoke of those categories as ones in which digital technologies played a significant role as a good servant (for example orientation in the city, online shopping, searching for information on the Internet in the course of school preparation, etc.). The adolescents tended not to use ICT for school needs, which confirms the findings from Chap. 3.

On the basis of our data, adolescents chose such ICT activities that alone could be considered using digital technologies as a good servant (useful for their development, for strengthening relationships with peers, etc.). However, a problem arises when we focus on the suitability of the timing of these activities or on the context in which the adolescents performed such activities within their everyday life. If the adolescents truly had free time, meaning they did not have any other duties, then

ICT was a good servant. However, when the adolescents used ICT for their free-time activities at times when they should have been focusing on their duties (or in contexts designed for purposes other than primarily the use of ICT), whether toward family or toward school, the digital technologies often became a bad master. This applies because they distracted the adolescents from their duties and from their intended focus. In response to their irresistible allures, such as notifications from social networks or the idea of taking a turn in a favorite game, the adolescents were very often compelled to neglect their sense of duty for the easy and comfortable time spent with a mobile phone in the comfort of their room.

In the third research question, we asked *how adolescents used digital technologies in their learning.* In the answer to this question, the metaphor of a good servant and a bad master can be used as well. If we first look at digital technologies in learning as a good servant it is necessary to emphasize the most significant element of our research: informal learning. Adopting new skills or knowledge within one's hobbies were typical examples of ICT and learning in our sample, whether it concerned painting, photography, music, foreign languages, or sports. We consider the following finding interesting: In the course of preparation for school, digital technologies could be considered a good servant, serving the purposes of the adolescents, practically only in cases in which the adolescents themselves wanted to verify information acquired in school or to expand this knowledge with detailed information from the Internet. Of course, searching on the Internet itself for the purposes of learning can simultaneously be considered both a good servant and a bad master in the adolescents' lives. The Internet is definitely a good servant in terms of information being immediately available. Therefore, adolescents do not have to (for example) visit libraries. This immediate availability of information also has a negative side. The adolescents often referred to themselves as indolent, they rarely worked with books and they relied completely on the Internet. On the Internet, the adolescents were often swamped with large amounts of information from various sources and they were forced to consider their credibility. If they spent time considering the available sources and their credibility, then ICT was a good servant helping them to develop critical thinking, However, if they became only passive recipients and consumers of the most easily available information, ICT can be considered quite a bad master, because the adolescents were under the influence of unconfirmed information of dubious quality.

ICT can be viewed in a similar manner when the adolescents were supposed to create a PowerPoint presentation for teacher-assigned homework. The adolescents were forced to know and use PowerPoint presentations, even though they were never taught this skill in school. They had to learn these skills on their own at home, but they mostly lacked motivation, because they did not see any larger practical benefit or usefulness in the creation of presentations. As a result, the creation of presentations often created conflicts with the parents in situations in which the adolescents were forced to use the family computer to a larger degree during their work on school assignments. In this regard, ICT could be viewed as a bad master causing disagreements in the family on the basis of the lack of knowledge of the use of PowerPoint presentations and the pressure of the school for their use. At the same

time, this could be considered a certain paradox, because it could be expected for the adolescents to learn the basics of using computers in school in order to be able to fulfil the assignments at home without the need for assistance or interaction with their parents. Overall, as regards the question of digital technology-supported learning, the adolescents were learning to use digital technologies on their own, almost randomly, without more significant support from the family, peers, or teachers.

Teaching within families was the last category to surface in the topic of adolescent learning; the topic of intergenerational learning presented interesting results. It was revealed (as in the Chap. 6) that for the adolescents whose parents built their position on authority, there was no intergenerational learning whatsoever, because the parents would have seen the lecturing from their children as an attack on their authority. By contrast, in the families in which the adolescents had a larger degree of freedom and space for autonomy and the parents were not so attached to the obedience of their children and they did not see their parenthood from a perspective of enforced authority, intergenerational learning occurs naturally. In these families, the parents had their children regularly advise them in the use and function of digital technologies and the adolescents were often in the position of a family expert. The research showed that in the families in which the adolescents had more freedom, ICT was used more often for practical purposes such as online shopping, applications for orientation in the city, and news. This very use of ICT presumably developed the adolescents in both financial and digital literacy, in independence, and also in critical thinking.

8.4 Conclusion

In this chapter, we tried to gain insight into the daily lives of some Czech adolescents. In our research, we were not able to capture the development or transformation of adolescents in the long-term horizon, but some characteristic features of this developmental period appeared nevertheless.

One of these features was the relationship with the parents, which the adolescents from our sample perceived and experienced differently, and they were affected by digital technologies in necessarily varying ways. We described the parental views of digital technologies in their lives or in the lives of the entire families in Chap. 6. In this chapter, we add the perspectives of the children, from which we cannot completely exclude the family context. Even though we were interested primarily in digital technologies and we used a different methodology in our deliberations, the results of the research by Nosál (2002, 2004) that mapped the concept of childhood in socialism and post-socialism cannot be disregarded. Some of our results indicated a meeting between socialist or early post-socialist parental experiences and purely post-socialist childhoods in which digital technologies play an important role. And, in compliance with Macek and his colleagues (Macek et al., 2013), it should be noted that digital technologies have brought greater diversity to adolescent lifestyles and to their openness to new influences, which is reflected in

our sample by the range of activities and interests of the adolescents. This may be one of the main reasons for the varying views of children and parents on digital technologies in general and on digital technologies in learning.

Adolescents do not spend as much time with their parents as the previous "generation" of adolescents did (Macek et al., 2013). Nevertheless, the parents still have a significant influence upon the life of their children, even in the families in our research. However, in our sample, we saw various examples of everydayness in the families, and the digital technology was not necessarily the sole cause of the family spending less time together. Preparation for school and out-of-school leisure groups and hobbies may be rather time-consuming for some adolescents as well.

The need for privacy and a certain autonomy within the family is one of the important aspects of adolescence. The need to be in contact with one's peers is natural. Digital technologies play an important role in this, because they expand the options of communication among adolescents. This changes the perception of "being at home" (see the bedroom culture described in Chap. 6; Livingstone & Sefton-Green, 2016) and "being with peers." Geographical borders lose their importance in the online world, and the horizon of "being with peers" expands significantly as do the life experiences of young people. Thanks to digital technologies, adolescents are able to be in contact with peers from other countries and their experiences thereby acquire international and intercultural dimensions. In our sample, we found few examples of contact with peers from other countries, but it is important that this option exists and that it is natural for adolescents. This reflects a significant difference between the experiences of the adolescents in our sample and their parents, who have no such experiences from their own childhood and adolescence. This can apply both because when they were young, digital (online) technologies were not so widespread and because they grew up under late socialism, when communication beyond the national borders of the socialist bloc was not possible. Therefore, the use of digital technologies truly was one of the determining activities for the organization of the spacetime of our respondents to a significant degree (Thompson, 2004).

In our sample, it was revealed rather predictably that the opinions, friendship, and support of peers were important for the adolescents and that social networks represented a very suitable communication platform on which they spent rather a lot of time. The adolescents from our sample considered online communication to be a facilitation of communication across large distances, but also often an easier way to communicate and deal with sensitive topics than face-to-face communication. At the same time, some of them said that they would prefer to meet in person more. They explained that this did not occur because that their friends were not interested in meeting in person, so some of the adolescents in our sample were "forced" to spend more time online than they would have liked. They were afraid to be excluded from the peer culture and thus lose the contacts that were so important for them. The "exclusion" seems to be worse than being online against one's will for a longer period of time. Therefore, we reached findings similar to those of Pasquier (2008). In our research, the expression of one's self was also very important and it occurred in various ways in our respondents. Some used comments on YouTube, others would

regularly post selfies on Instagram or create videos. All of this goes hand-in-hand with the formation of one's self, and it is once again easier for some adolescents to express themselves online rather than in the offline world.

In Chap. 7, we showed that young people are starting to use digital technologies at early age, which may affect the perception of one's competence and autonomy in the use of digital technologies. Digital technologies are now undoubtedly an integral part of adolescent lives. Here, it is important to realize two important points. Our respondents were born between 2002 and 2003; when some of them started school, around 2009, neither mobile technologies nor social networks on the Internet were widespread in the Czech Republic. This may explain why their first phone, if they had one, was a push-button phone (with very limited functions), and why some of our respondents did not even feel a need to own such a phone. The second point is that if we view digital technologies in terms of everydayness, they represent an important tool, but not the only tool the adolescents use and that co-creates their everydayness. Digital technologies were a part of many different activities and contexts of the daily life of the adolescents we interviewed, with roles of various importance attributed to them, but they were nowhere near to being a part of all their activities. The importance of digital technologies in the lives of these young people should not be overestimated. Digital technologies are not a passion or a hobby of all young people, as was shown in our sample. Therefore, we cannot expect adolescents to automatically be "experts" on digital technologies, whether speaking of purely technical fields or of the use of digital technologies in various fields of life. This is in part due to their age, but it is also important to take into consideration their limited experiences with ICT in school (see Chap. 3) and in the home as well. Of course, this does not mean that they lacked the knowledge of many different applications or that they could not be advanced users. The adolescents' assessments tended to be based on their previous knowledge, skills, and abilities, which varied and which were acquired in many ways.

The mobile phone, which everyone in our research had domesticated and integrated into their daily routine, making it a part of their values, is unequivocally an integral part of the life of present-day adolescents. Its domestication was clearly and visibly successful. However, as we showed in Chap. 6, the mobile phone was not perceived as a non-problematical element of the everydayness. The 2012 study by Courtois and his colleagues emphasized the role of context. A mobile phone can be understood as a contextually anchored element participating in social relationships, and both its importance and use varies according to the current context. Using our metaphor, a mobile phone can be both a good servant and a bad master, both in the same and in different social situations and contexts.

The use of a program for creating presentations (in our research, this was exclusively MS PowerPoint) as mentioned by our adolescents, was yet another example of domestication. It was used quite frequently by the teachers in school and sometimes also by students in their homework. Full domestication did not take place for our respondents, because they used the program rather randomly without previous acquaintance with basic knowledge and user skills for this program either in school or at home. It therefore did not become a useful tool. With some exaggeration, it was

"forcibly" domesticated by teachers into our respondents' learning without clear connections to the (out-of-school) everydayness of the adolescents.

This brings us to the topic of digital technologies in our respondents' learning in more detail. In Chap. 3, we mapped the problems of ICT in the life of schools and in the work (teaching) of Czech teachers. We discovered that schools were equipped with digital technologies and that the infrastructure kept improving, especially in mobile phones and wireless connection. ICT were nothing new for the teachers, but the teacher-centered approach still predominated in education as did the use of digital technologies within the transmissive teaching style. In schools, the students experienced a very limited use of digital technologies by teachers. For example, in the interviews, we registered few mentions of ICT being used in project-based learning. Online services or social networks were used rarely and the use of mobile technologies was limited.

For example, the adolescents themselves did not evaluate their skills and knowledge in the use of ICT (digital literacy) as particularly advanced; they explained this by stating that they did not use the digital technologies necessary for learning in school very often and they did not know how to use them. However, they did reveal that they were capable of using some applications for learning outside of school and for resolving situations in daily life.

If we look at our research through the lens of the research by Furlong and Davies (2012), the adolescents in our sample used primarily YouTube, Pinterest, Google, and Duolingo as *resources for learning*. They used the Internet to develop their hobbies and interests (music, painting, exercising, taking photographs). In the category of *ways of learning*, we discovered primarily playing games (strategic, knowledge) and making of videos, but also informal learning using video, which filled the role of a teacher or an example of dealing with a given topic. We also discovered learning to use various tools, or how to control digital technologies, which was motivated by individual interest, which was close to fiddling with various settings and options. The adolescents also used the trial and error method. For the final category (*skills to support learning*), our sample showed primarily collaborative skills, when the adolescents made videos or composed music with friends.

Intergenerational learning in the field of digital technologies can also be classified in the group of informal learning, in which the adolescents could assume the new role of experts who "teach" the other members of the household. In this way, they acquired new skills, and not only in the field of digital technologies, but also those related to how to teach something to someone. That way, they moved into the role of "teacher," an experience completely different from the one they experienced in school. In our sample, we identified such learning, which for example contributed to a good relationship between granddaughter and grandmother (Natalie's story). In other examples, the grandparents were "self-sufficient," because they only used digital technologies in a limited way and their devices were "rather simple" (Matej's story). On the other hand, it was more typical in our research to find limited or no intergenerational learning in the field of digital technologies (especially children-parents). Therefore, in some cases, intergenerational learning cannot diminish the

risk of generational conflict (Patrício & Osório, 2016), and may even lead to explicit rejection.

Understandably, the ways in which the adolescents use digital technologies in school and outside of school varied (Erstad, 2012). Nevertheless, the school should not represent a "container" (Leander et al., 2010) separated from the life outside of it. Therefore, if we look on the use of ICT by adolescents in and outside of Czech schools, it is difficult to find common elements which would interconnect the life with ICT in and outside of school. We tend to think about two different worlds of learning and maybe even different lives with digital technologies that only exist side by side and intersect only rarely. In other times, they collide with each other like two balls and once again increase their mutual distance. The everyday practice of adolescents with digital technologies in and outside of school predominantly represent two discontinuous environments. We can use the mobile phone as an example: It is successfully domesticated in the out-of-school environment, while in the school environment, the domestication is being de facto intentionally prevented (by limitations or prohibitions of the use of mobile phones in lessons). Therefore, it is practically impossible for the mutual transfer of knowledge and skills in the use of this device between the different environments to take place, regardless of formal or informal learning or entertainment. The individual personal life experience with digital technologies thus contains gaps which are very hard to bridge.

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