Internet and Digital Technology Use among Children and Youth in Serbia

EU Kids Online Survey Results, 2018

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Dr. Tijana Milosevic and Professor Elisabeth Staksrud initiated and established the EU Kids Online project in Serbia with the financial and institutional support from the Department of Media and Communication at the University of Oslo. This project was conducted in cooperation with the research team from the Institute of Psychology, Faculty of Philosophy, University of Belgrade, led by Professor Dragan Popadić, Associate Professor Zoran Pavlović and Assistant Professor Dobrinka Kuzmanović.

Along with the University of Oslo, financial support for the project in Serbia was received from: The Ministry of Education, Science and Technological Development of the Republic of Serbia; The Ministry of Trade, Tourism and Telecommunications of the Republic of Serbia, OSCE Mission to Serbia, and The UNICEF Office in Serbia. We are thankful to all these institutions for their generous financial and institutional support.

We are particularly grateful to school staff who partnered with us to deliver the survey accross the 60 schools in Serbia. Without their generous help and enthusiasm this project would not have been possible. Finally, we remain indebted to our respondents, children and young people, who exercised a great deal of patience in completing the long questionnaires, thus helping us to collect the data. We hope that this project will be helpful and informative not only to the wider academic and research community, but also to policy makers and various stakeholders who work on improving children's rights in digital environments in our country and beyond.

The survey instrument was developed by an international team of *EU Kids Online* researchers, led by Professor Elisabeth Staksrud (University of Oslo, Norway), together with researcher Kjartan Ólafsson (University of Akureyri, Iceland) and Professor David Smahel (Masaryk University, The Czech Republic). For more information, please visit: www.eukidsonline.net.

The project received an ethical approval from the Ethics Committee at the Faculty of Philosophy's Department of Psychology at the University of Belgrade. It had previously been piloted by the *EU Kids Online* Network and all ethics-related principles were developed by the network. For methodology-related details regarding sampling design as well procedure-related queries, please consult the technical report (in English) on the *EU Kids Online* Network website or by email: tijana.milosevic@gmail.com.

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SUMMARY

Internet access

- Most of the surveyed children and teens from Serbia (86%) use the Internet on a daily basis, which is similar to findings from other European countries that participated in this research (e.g. Norway, Italy). Two-thirds (65%) of the youngest respondents from the sample (ages 9-10) and almost all students (98%) in the oldest age group (ages 15-17), according to their own statements, access the Internet daily from a mobile / smart phone.

- Kids begin to use the Internet at a young age, in a personalized way (from their own, mobile devices) without proper parental/caregiver insight into their activities, which has important policy and practice implications.

Time and activities on the Internet

- On average, interviewed students spend more than three hours a day on the Internet, the oldest age group reports up to four and a half hours. More than a fifth of students, according to their own statements, spend up to seven hours a day on weekends, while two-thirds spend between four and seven hours.

- Given the multiple functions that digital devices have in the lives of today's youth, time as such is not necessarily an indicator of problematic use. In fact, rather than the amount of time, the quality of the time, or the type of Internet activity, is much more important. According to the findings of this, as well as several previous studies conducted on a national sample, our students use the Internet mainly for leisure (watching videos and listening to music), communicating with family and friends, playing video games and visiting social networking sites.

- 40% of students use the Internet for school assignments at least once a week; 88% of students say they have never used the Internet to join a campaign or sign a petition, and 79% have never discussed political or social issues online. Nearly two-thirds of children say they never use the Internet for creative purposes, to share content they have created.

- More than two-thirds of children and young people (73%) say they have a profile on some social networking or gaming platform; of these, 42% of 9-10-year olds as well as 72% of 11-12-year olds say they have a profile, although the minimum age set by social networking sites is usually 13 years. In addition to the types of activities undertaken online, we also consider the negative consequences associated with Internet use. Thus, about a third of the surveyed students report to have problems due to the amount of time they spend online or getting into conflicts with family or friends. Slightly less than half of the students say they try yet fail to spend less time on the Internet and neglect socializing and responsibilities (e.g. school assignments), feeling unwell when unable to be on the Internet, while nearly one fifth neglect basic biological needs (e.g. need for food, sleep).

Students' digital skills

- Students from Serbia rate their digital literacy skills as above average. The average score for the five groups of digital skills ranges from 6.7 to 8.6 (on a scale of 1 to 10). The lowest average score is in the field of digital content creation skills (6.7), followed by information and information retrieval skills (7.7), mobile device use skills (8.0), operational skills (8.6), while the highest average score is on social skills (9.2).

- When it comes to information, digital content creation and mobile device skills, gender differences have been identified, with male students being more skilful, according to their self-assessment. Students who spend more time online evaluate their digital skills as more developed.

- About half of the younger and about two-thirds of the older students know how to make a video or music and post it online. Fewer children say they know how to modify content created and uploaded by others (one fifth of younger and less than a half of older students).

- Assessment of one's digital skills correlates positively with age, with one exception, which is the use of a programming language (e.g. Scratch, Python, C ++). This is the only skill in which younger students feel more competent than older ones.

- Approximately half of students ages 9-12 do not know how to change their privacy settings on social networking sites (a similar percentage of these students do not use social networking sites), while more than a third of students of this age do not know how to save a picture they find on the Internet. However, almost all older students, in their own estimation, know how to set up privacy on social networking sites or save a picture they found online.

- While 92% of students, by their own assessment, know how to install an application on a mobile phone, just over half (53%) say they know how to keep track of the cost of using the application.

- 72% of students strongly or partially agree with the statement that it is easy for them to verify if some of the information they have found on the Internet is true; and 68% find it easy to tell if they can trust a piece of information they find on the Internet.

Upsetting experiences and cyberbullying

- Every third student in the sample was bothered by something online in the past year. In such situations, almost a quarter of students did not talk to anyone about their problem, ignored the problem thinking that it would go away by itself, or closed the window or application, and nearly a third blocked the harasser. The number of children who frequently had disturbing experiences was the highest in the age group of 13-14 years.

- 16% of students experienced cyberbullying, while 15% experienced bullying in person. Students are more likely to admit to being victims than to have perpetrated digital bullying themselves. A third of the students surveyed were victims and perpetrators at the same time. Consistently with previous findings on a nationally representative sample about face-to-face bullying and cyberbullying –we find that the two tend to happen hand in hand.

Risky behaviour on the Internet and contacts with strangers

- A number of students (ranging from 13% to 51%, depending on the type of behaviour), engaged in some other type of risky behaviour online. Most often, this involved sharing personal information, adding strangers on social media and otherwise making contact with strangers whom they may later meet offline, or hiding behind a false identity.

- Among the students surveyed, one quarter of them (slightly more boys than girls) met in person someone they had first met online. As one can see from the findings, these behaviours are not necessarily harmful and they can be quite benign, but they constitute risks.

Exposure to sexual content

- In the sample of surveyed students (ages 9-17), every other student encountered sexual content in the past year, significantly more frequently in digital than in print media. Exposure to this type of content is more prevalent among older students, so three-quarters of high school students report to have had this type of experience, compared to one tenth of children of younger school age.

- Most respondents found sexual content in a number of different sources, namely television, magazines or books, and on the Internet.

- Almost a third of the children and young people aged 11-17 visited a pornographic website (adult or X-rated site) over the course of the past year. These websites were accessed by the majority of young people in the age group of 15-17 years (two thirds of male and one quarter of female students, including 43% male and 6% of female students who visited them daily).

Exposure to harmful content on the Internet

- The percentage of students ages 11-17 who were exposed to various types of harmful content on the Internet varied between 30% and 50%. Exposure to harmful content is related to age and gender and is more common in older as well as in female students.

- As many as three-quarters (71%) of students ages 14-17 years and 56% of male students saw images of blood and violence against other persons or animals on the Internet. About 50% of students encountered hate messages online; 59% of female students and 54% of male students aged 14-17 saw self-harming content; 57% of female students and 38% of male students of the same age saw content or discussions about ways to be very thin, or content that encourages anorexic and bulimic behaviours (pro-ana and pro-mia content); 57% of female and 47% of male students saw content showing or discussing someone else's drug use experience. 44% of girls and 36% of boys of the same age have seen the way suicide can be committed online.

Parents'/caregivers' mediation

- The younger the children, the more the adults are expected to mediate their use of digital technology and the Internet. When they mediate, it is primarily aimed at protecting safety and preventing negative behaviour and much less at meaningful use of digital technology.

- Less than half (44%) of the surveyed students (ages 9-17) state that their parents often explain to them how to use the Internet safely, a slightly smaller percentage (41%) of those get help from parents when something bothers them on the Internet, while just over a third (35%) of the students surveyed talk with parents about what they do online. Less than a third of students (29%) say they are often encouraged by their parents to research and learn online, but 30% say they never or rarely do so. Parents are more aware and more likely to mediate girls' than boys' activities.

- Even in the younger age group (9-12), more than half of the students surveyed often help parents when parents are unable to do something on the Internet, while in the older age group (13-17), three quarters of the male students (more often girls than boys) do it.

- Parents in Serbia rarely use technical measures of protection, that is, "parental controls", to ensure the safety of children online (less than a fifth of the students surveyed reports this), much less often than parents in other countries.

Teachers' and peers' mediation

- Judging from students' responses, teachers do not encourage them enough to use the Internet in a meaningful way, the same as in the case of parents. Less than a third of the surveyed students (28%) said that teachers at school often encouraged them to explore and learn using digital devices, 32% said that teachers did this occasionally, and as many as 30% said that teachers at school never or almost never encourage them to use digital technology in this way.

- Generally, a small percentage of teachers often talk to their students about what they do on the Internet (reported by a dozen students), with more than a half saying that teachers never or almost never do so.

- Only 3% of the surveyed students sought support from their teachers after they experienced something upsetting online.

- Only one fifth of the surveyed students are encouraged by peers to research and learn online. The same number of students receive help from their peers when they are troubled by something on the Internet or receive instruction from the peers on how to use the Internet safely (the percentage is higher in the older age group than in the younger age group).

- However, after a negative online experience, almost half of the students say they talk to a friend or girlfriend their age.

INTRODUCTION

Research on children and digital media in Serbia

This report presents the results of the *EU Kids Online* survey in Serbia, collected via school sample in the end of 2018. The main objective of the research was to collect quality scientific data on the use of the Internet and digital technology by children and young people and to expand the scientific base that will serve to empower children and young people in the digital space. This is the first survey on a nationally representative sample in Serbia that covers such a large range of topics in the field of digital media use in children and young people. Previous research has covered some of these areas, but on a smaller sample (Popadić, Pavlović, Petrović, & Kuzmanović, 2016), on a non-representative sample (Popadić & Kuzmanović, 2016), on a sample predominantly involving adults (Golčevski & Milovanović, 2003; Milovanović, Bakić, & Golčevski, 2002) or focused on individual topics such as digital literacy (Kuzmanović, 2017) or cyberbullying (Rančić, 2018). In contrast, the EU Kids Online survey provides insights into the various aspects of the use of the Internet and digital technologies, both positive and negative, on a nationally representative sample of children and young people, ages 9-17.

About the EU Kids Online network

EU Kids Online is the largest research network in Europe that addresses the issues of children and young people on the Internet and their use of digital technologies. The network exists in 33 European countries and it is best known for its survey on nationally representative samples of 9-16-year-old Internet using children and one of their parents or caregivers, conducted in 25 European countries in 2010. This research was financially supported by the European Commission. The questionnaire, which included over 50 questions for younger students and over 100 for the older ones, covered a wide range of topics related to children's use of the Internet and digital technologies — from use of different devices, to risks such as exposure to potentially harmful content, risky behaviours such as cyberbullying or sending sexual messages, or meeting strangers online[1]. Positive aspects of the use of technology and the Internet such as digital skills, learning opportunities (e.g. programming), socialising, growth and development in the digital environments are also covered. Serbia did not participate in the survey in 2010 and this is the first time that the EU Kids Online survey has been conducted in our country. The 2018 questionnaire is actually an updated questionnaire from 2010. Many questions have been adapted to technologies that have been developed in the meantime, as well as new phenomena that need to be studied (such as the Internet of Things). Questionnaires used in the Serbian survey can be found in the end of this report. This new wave of surveys has so far been conducted in 14 other European countries and a report with comparative analyses, including Serbia, will also be published in the near future.

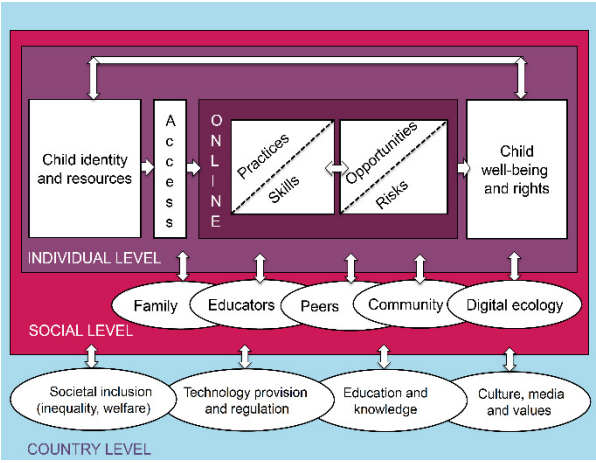
The importance of context for understanding online risks

One of the essential findings of our network's previous research[2] is that we need to be cautious about the risks and negative consequences of Internet use in children and young people (Livingstone et al., 2014; Livingstone, Haddon, Görzig, & Ólafsson, 2011a, 2011b.). Risk does not necessarily result in harm, and some exposure to risk can hardly be avoided if we want children and young people to develop certain digital skills; also, exposure to a certain level of risk can lead to the development of resilience in children. There are

[1] All information on methodology could be found on the network UK Kids Online site.

[2] All our publications and reports can be found on: www.eukidsonline.net

undoubtedly children who, both in their demographic and individual characteristics, are at a greater risk of harm than other children, so it is very important to identify these children and provide them with appropriate means of prevention as well as assistance when negative consequences occur. This is why researchers in our network exercise caution when talking about online risks, especially when certain policies advocate bans on the use of digital technology, or in the face of media panics about new social media platforms, games or cyberbullying cases (Staksrud & Kirksæther, 2013; Milosevic, 2018). We want to emphasise that we do not wish to diminish the importance of risk or negate the seriousness of the consequences that online experiences can have on children, but would merely like to stress the importance of understanding the complexity of the factors that influence whether a negative outcome will occur. In this regard, we have developed a theoretical model (Graph a) showing the interplay of factors at the individual, social and state levels that influence the outcomes of young people's experiences in the digital space (Livingstone, Mascheroni, & Staksrud 2017). We want to point to the danger of simplistic narratives of technological utopianism on the one hand, where technology is declared as universally positive or techno-phobia on the other, whereby digital technologies are proclaimed as universally harmful. The answer is much more complex, and we should bear this in mind when discussing children's use of digital media.



Graph a: The EU Kids Online theoretical model

About the report

Following a methodological review that details the process of data collection, the report presents the prevalence of Internet use by children and young people, such as the number of hours spent online and the devices used by children. We then move on to the use of social networks and digital skills, to represent the realm of risk that children and young people may experience online. Before introducing specific risks and related harms, we ask the following general question: In the past year, has anything ever happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)? We then move on to the specific risks with potentially negative consequences such as cyberbullying, exposure to harmful content, exposure to sexual content, Excessive Internet Use, and finally to parental, teacher, and peer mediation, as well as the social context regarding children's digital media use. We assess the level of harm by asking children how they felt after experiencing a certain risk and (for some questions) how long they felt upset (Livingstone, Haddon, Görzig, & Ólafsson, 2011a, 2011b).

METHODOLOGY

Questionnaires

The data was collected via pen-and-paper survey on a sample collected through schools; and children filled them out individually in their class groups. Two versions of the questionnaire were used: One for younger children (9-10 years) and one for older (11-17 years). The questionnaire for younger students contained 49 questions and the one for older students contained 58 questions. The decision to provide a shorter version of the questionnaire to younger students was based on the findings of a pilot study done in Serbia that indicated that the longer version of the questionnaire had been too demanding for them.

In addition, we used different versions of the questionnaires for boys and girls because of the properties of the Serbian language. Due to distinct gender-specific formulations, using both in one version would have made the questionnaire too long.

Sample

The study was conducted on a random, multi-stage stratified sample of students representative of the school population aged 9-17 (grades 3 through 8 in primary schools and grades 1 through 3 in secondary schools and high schools) and in four major statistical regions in Serbia (Belgrade, Vojvodina, Eastern and Southern Serbia, Sumadija and Western Serbia). The sample is additionally semi-balanced with regard to the size of the municipality in which the school is located (up to 19,999 inhabitants; from 20,000 to 99,999 and over 100,000 inhabitants), and according to the type of school (gymnasium/high school vs. vocational school) in the sample of secondary schools.

The participants were selected through the schools they attended. According to our detailed sampling plan, 60 schools, 40 primary and 20 secondary schools, had been randomly selected from the territory of Serbia, excluding Kosovo and Metohija.[3] In each selected school, we then systematically selected one class of a certain age group to participate in the research.

The sample contained a total of 1,150 students. The unweighted structure of the sample by the most important variables is shown in Table 1.

Table 1: The structure of the unweighted sample by gender, region, municipality size and the school type

	Elementary school		Secondary school		Overall	
Gender	N	%	N	%	N	%
Boys	341	49,6	210	45,5	551	47,9
Girls	347	50,4	252	54,5	599	52,1
Region						
Beograd	147	21,4	115	24,9	262	22,8
Vojvodina	181	26,3	148	32,0	329	28,6
Šumadija and Western Serbia	246	35,8	130	28,1	376	32,7
Southern and Eastern Serbia	114	16,6	69	14,9	183	15,9
Size of settlements						
Small	71	10,3	34	7,4	105	9,1
Middle	349	50,7	221	47,8	570	49,6
Large	268	39,0	207	44,8	475	41,3
Age						
9	114	16,6				
10	120	17,4				
11	113	16,4				
12	124	18,0				
13	115	16,7				
14	91	13,2	26	5.,6		
15	1	.1	157	34,0		
16			161	34,8		
17			107	23,2		
No response	10	1.4	11	2.3		
Type of school						
Grammar			78	16,9		
Vocational			384	83,1		

[3] The sampling frame contains 3562 primary and 510 secondary schools, which covers 94% of all primary and secondary schools in Serbia. The sampling frame did not include private schools, schools for children with special needs and schools providing continuous education for adults.

The deviations of the sample structure from the population parameters were subsequently corrected with weights.

Research process

Prior to establishing contact with randomly selected schools, the project had been approved and supported by the Ministry of Education, Science and Technological Development of the Republic of Serbia. As previously mentioned, the project underwent ethical assessment and received approval from the Ethics Review Panel of the Department of Psychology, Faculty of Philosophy, University of Belgrade. Schools were then contacted and informed about the research. We then reached out to local school psychologists and pedagogists, kindly asking them to assist us in the fieldwork process and to administer the survey to students.

For those who accepted the cooperation, training was organized during which they received all the necessary information about the research itself, instructions on the procedures for administering the questionnaire, guaranteeing the ethics of its realisation, and the subsequent handling of the questionnaires, etc. The research was conducted with the help of 45 school associates (school staff who collaborated with us in executing the fieldwork).

The associate staff then contacted the class who had been selected in each particular school to participate. First, a few days before the survey itself, the children were provided with a brief document with basic information about the research and an invitation to participate. In addition, they were provided with parental consent forms necessary for children's participation in the survey. After the parental consent forms had been gathered and the associate staff made sure that children understood the ethical aspects of the survey (anonymity, confidentiality, the voluntary nature of taking the survey etc.), the survey itself was administered. The questionnaire was filled out only by those students who were at school on the day of the survey, whose parents had given the consent for them to participate and who, by ticking certain options in the questionnaire itself, gave their own consent to participate in the research. The participation of children in the research was, in other words, entirely voluntary and no incentives were used to encourage participation, in the form of material or any other rewards and privileges4.

The associates would distribute the materials to the children, read the instructional sheet, go through the first five questions in the questionnaire together with the children, and then let the children work on the questionnaires independently, observing the whole process during the two school hours. They were there to answer any questions children might have and to provide clarifications. After completing the questionnaires, each child received a debriefing document explaining the purpose and objectives of the research. The document also contained contact information from the relevant services and institutions which children who wished to discuss any negative online experiences could contact and turn to for further psychological, informational or other help.

In general, children responded positively to the research and the questions in the questionnaire. No instances where a child would feel an intense level of upset or inconvenience, provoked by a question or some other aspect of the survey, have been reported to us. The complaints we received

[4]No school that had been selected in the sample declined to participate in the survey. The number of students participating in the survey was, as a rule, smaller than the total number of students in the particular selected class (hypothetically speaking, each child in the particular class received an invitation to participate). Thus, if we compare the number of "contacted" children in all selected (1,508) with the number of children who actually participated in the survey (1,150), a relatively high percentage of children accepted participation in the survey (76%).

were almost exclusively concerned with the length of the questionnaire. The number of questions was relatively large, and answering them was quite demanding, especially for younger students (in some cases, it took students more than the projected 90 minutes to complete the survey). Younger students more frequently requested clarifications regarding some of the terms in the questionnaire or the technical terms (e.g. virtual world, webcam, PIN, campaign, petition, anorexia, etc.). The field work, i.e. data collection, ran from November 20, 2018 to January 25, 2019 (the research had been completed in all schools except for one by December 9, 2018).

RESEARCH RESULTS

Internet access and use

Of all the digital devices they were asked about, students from Serbia most commonly use a mobile / smartphone to access the Internet (Table 2). On a daily basis, approximately 9 out of 10 students (86%) use it. Next in frequency are TVs (45% of children use it), followed by desktop computers, laptops or notebooks (40%), which are used half as frequently as mobile phones. Other devices, such as tablets (14%) or wearable devices, are used far less often (5%), and some, such as toys connected to the Internet ("smart" toys), are hardly used at all.

Considering that the mobile phone can be accessed anytime, anywhere, in a personalized way and without adult supervision, the frequency of their use for this purpose is completely understandable. Similar trends are indicated by some earlier research from our country (Popadić et al., 2016; Popadić and Kuzmanović, 2016).

There are also some differences in the way of accessing the Internet among certain categories of students, especially with regard to age. Thus, for example, the frequency of mobile / smartphone use is far more common among older children, which is potentially due to the fact that older children are more likely to already have their mobile phones. As an example, on a daily basis, two thirds (67%) of the youngest students (9-10 years old) and almost all (98%) of the oldest age group (15-17 years) use the mobile phone to access the Internet.

Older children are also more likely to use desktops and laptops to access the Internet, but age differences are not nearly as pronounced as in the case of mobile phones. On the other hand, the use of some other devices declines with students' age. This is most noticeable regarding the use of tablets and game consoles. The youngest students access the Internet using a tablet almost three times more often than the oldest students (28%: 8%).

Gender differences emerge regarding the use of desktops and game consoles — both are used more often by boys (the console as much as four times more often). On the other hand, TV devices are used by girls a little more frequently.

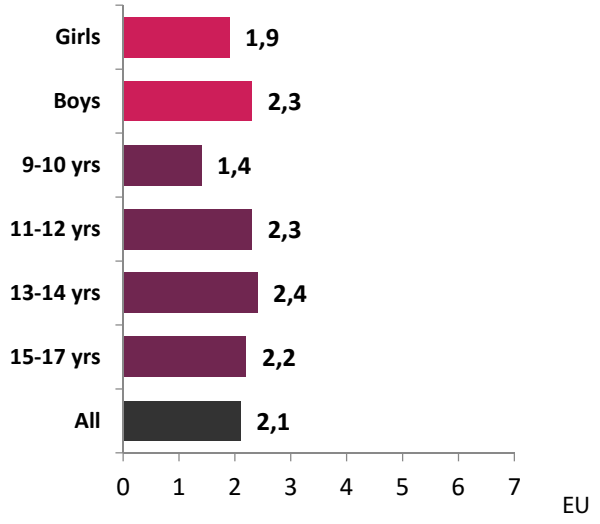
From the data presented, it can be concluded that children usually use multiple devices to access the Internet. About a quarter of students use only one device (24%), just over a third of them have two devices (39%), and one third of the students use three and more devices (31%) (it is important to note that here we are talking about Internet access on a daily basis). On average, the Internet is accessed by two devices and in this respect there are no major differences among the various categories of students (Graph 1).

Table 2: Frequency of daily access to Internet on various devices, by age and gender

%	A mobile phone/smartphone	A desktop computer, laptop or notebook computer	A tablet	A games console	A TV	A toy which is connected to the Internet	A wearable device that is connected to the Internet	Other
Boys	86	51	13	13	43	0	7	10
Girls	86	29	14	3	46	0	4	5
9-10 yrs	65	28	22	-	-	-	-	18
11-12 yrs	84	39	15	13	61	1	9	7
13-14 yrs	93	43	12	11	65	0	8	4
15-17 yrs	98	48	8	8	52	0	5	2
All	86	40	14	8	45	0	5	8

The youngest students (ages 9-10), on average, use slightly fewer devices than older students. This applies to both sexes.

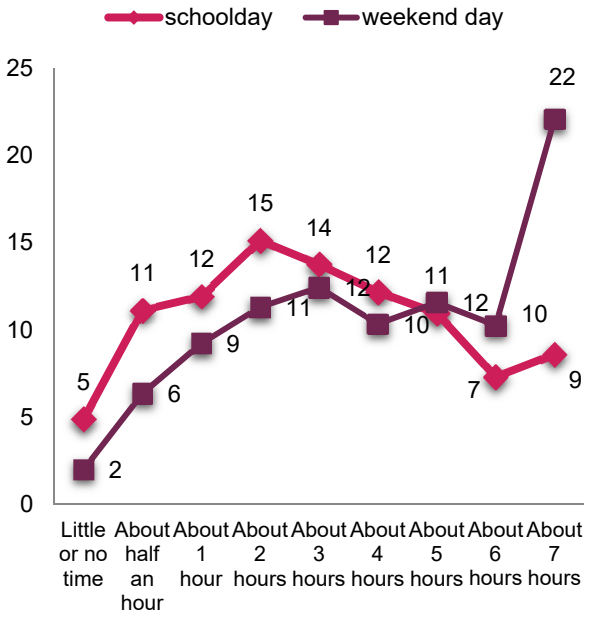
Graph 1: Average number of devices used to go online on a daily basis, by gender and age



Kids Online 2018: QB5a-f: How often do you go online or use the Internet using the following devices?
Base: all students aged 9-17 who use the Internet (N=1,150).

While there are no major differences with respect to the number and type of devices used to access the Internet, important distinctions do appear with respect to how much time is spent on the Internet on average on a daily basis. Children, as expected, report to spend more time on the Internet on the weekends than during the working week (Graph 2). Not a small number of children report to spend a considerable number of hours daily on the Internet. According to their own assessments, almost every tenth child during the working day (9%), or a fifth of them (22%) over the weekend, spends seven or more hours online. Most children (over 50%) spend at least three hours a day on the Internet and four hours a day on the weekends.

Graph 2: Self-reported time spent online during the typical working day and weekend

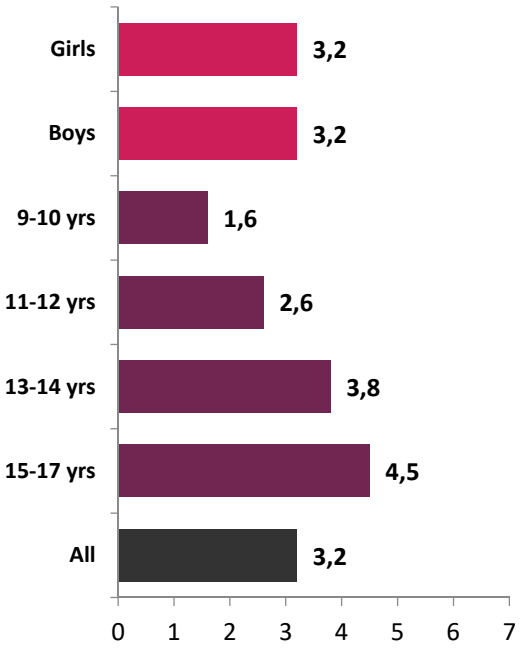


EU Kids Online 2018: c_QB7 / c_QB8: About how long do you spend on the Internet?
Base: all students aged 9-17 who use the Internet (N=1,150).

If we look at the time spent on the Internet in a slightly different way, i.e. in terms of the average number of hours per day (taking into account both working days and weekends), on average, just over three hours per day are spent on the Internet (Graph 3).

However, time spent on the Internet depends largely on age. The older the child, the higher the average number of hours spent online during the day, and age differences are very pronounced in this regard. The youngest children spend about an hour and a half on the Internet daily, while the oldest children spend almost three times as much: four and a half hours. Roughly speaking, each successive age category spends half an hour to an hour more on the Internet than the previous one.

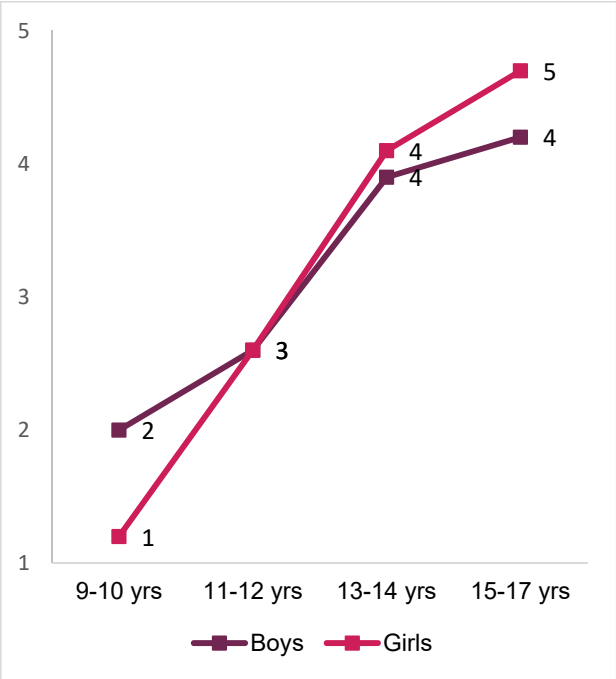
Graph 3: Average number of hours spent online daily, by gender and age



EU Kids Online 2018: c_QB7 / c_QB8: About how long do you spend on the Internet?
Base: all students aged 9-17 who use the Internet (N=1150) who on both questions reported the number of hours spent on the Internet (N=1081).

Overall, both sexes spend an equal number of hours online. However, there is a significant interaction between gender and age, seen in Graph 4. In the youngest group, boys spend significantly more time online than girls. Later, this difference disappears, so that in the oldest group, girls use the Internet significantly longer.

Graph 4: Average number of hours spent online daily, interaction of gender and age



EU Kids Online 2018: c_QB7 / c_QB8: About how long do you spend on the Internet?
Base: all students aged 9-17 who use the Internet who reported their age and on both questions reported the number of hours spent on the Internet (N=1064).

Thinking about it in terms of days in a week, the data shows that almost half of children (44%) spend more than one day (i.e. more than 24 hours in total) on the Internet during a seven-day week. About one in seven children (14%) spends 40 hours a week online, which is, say, one typical work week. It is clear that the oldest students spend more hours online on a weekly basis, as well as on average daily.

Some online activities are more common than others (Table 3). Most students (daily) use the Internet to do the following: watch videos (78%), listen to music (80%), interact with family and friends (67%), and spend time on social networks (73%). The only additional activity that most

children practice is playing games online (53%). The Internet is therefore primarily used for leisure and communicating with other people.

Table 3: Daily online activities, by gender and age

% of students who answered „almost daily" or more often	9-12		13-17		All
	M	F	M	F	
I listened to music online	64	70	89	95	80
I watched video clips	76	64	88	81	78
I visited a social networking site	55	53	88	92	73
I communicated with family or friends	55	59	70	83	67
I played online games	72	47	67	27	53
I browsed for things to buy or see what things cost	21	13	28	29	23
I used the Internet to talk to people from other countries	18	14	26	24	21
I used the Internet for schoolwork	16	16	15	26	18
I looked for news online	7	4	27	15	14
I participated in an online group where people share my interests or hobbies	7	5	15	8	9
I looked for health information for myself or someone I know	6	6	13	12	9
I created my own video or music and uploaded it to share	5	4	5	5	5
I looked for information about work or study opportunities	4	2	5	3	4
I discussed political or social problems with other people online	2	0	5	2	2
I got involved online in a campaign, protest or I signed a petition online	2	0	1	1	1

EU Kids Online 2018: c_QC3: How often have you done these things ONLINE in the past month?
Base: all students aged 9-17 who use the Internet (N=1,150).

All other activities are practiced to a much lesser extent. For example, only one in seven students (14%) follows the news online, and about one in five students uses it for school activities (18%). At the bottom of the list of activities of the surveyed students are various forms of civic activism that are barely present among children. Nonetheless, 40% of students use the Internet for school assignments at least once a week. However, for the activities at the bottom of the list shown in the table above, it is actually true that by far the largest number of children declare that they never engage in them online. Thus, 88% of respondents have never joined a campaign or signed a petition online, and 79% have never discussed political or social issues online. It is also worth mentioning that 60% of children never use the Internet for creative purposes, to share content they have created.

There are also some differences between children in terms of online activities. At younger ages (9-12 years), gender differences in the frequency of various online activities are generally of low intensity. Although the predominant activities among boys and girls are the same, i.e. both mostly use the Internet for fun and socialisation, girls for example, to a slightly greater extent, use the Internet for listening to music (70%:64%), and boys for watching videos (76%: 64%).

Nonetheless, here we find very pronounced differences between boys and girls with regard to playing games online. Nearly three-quarters of boys (72%) play games online every day, while about half of girls (47%) do so. With boys of this age, it is the second most common activity, whereas for girls it is only in the fifth place judging by the number of those who practice it daily.

It is worth pointing out that half of the children of this age, 55% of boys and 53% of girls spend time on social networks daily, even though they are

actually below the age limit (13 years) set by most social networks for their users.

Generally speaking, older students mostly use the internet for leisure and communication as well, and the gender differences found in younger students are noticeable here as well. Girls listen to music a little more often (95%: 89%), visit social networks (92%: 88%), and interact with people they feel close with (83%: 70%), and boys watch videos more often (88%: 81%). A slightly more pronounced difference also appears with regard to the use of the Internet for schoolwork, which is more characteristic of girls (26%) than of boys (15%). Nevertheless, even at older ages, playing games is the activity that most intensely distinguishes boys and girls - two-thirds of boys (67%) use the Internet daily to play games, while this is true for a quarter of girls (27%). Although this "decline" in the number of those who play games daily in absolute terms in girls is more significant, in relative terms this activity drops in significance far more for boys, as it falls from the second place to the fifth place among those who are active on the Internet in similar way.

Finally, regardless of the possible gender differences, almost all the activities become more frequent with age (i.e. the percentage of those who engage in a certain activity is higher in the older age groups for all activities except for playing games). Furthermore, older respondents engage in a greater variety of activities. The younger age group engages, on average, in four different activities and the older one in five activities on a daily basis; the same applies to boys (five activities on average) compared to girls (four activities on average). Some online activities are significantly "more popular" at older ages. A far greater number of older students spend their daily time online on social networks, listening to music or, say, searching for news. One of the few activities that loses popularity is precisely the one that sets boys and girls apart – playing games. Some other activities, however, are a "constant" in the sense that they are absent from the repertoire of children's Internet practices, at any age and for both sexes, especially with regard to online activism.

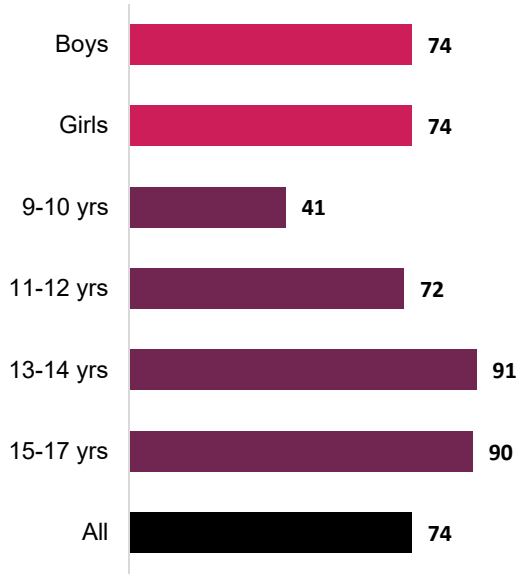
These relative similarities in popularity of different activities between the two age groups (younger and older children) suggest that age differences are at least partly explained by the fact that a greater number of older than younger children uses the Internet; and that older ones also use the Internet more than the younger ones. There is more, so to speak, time available that can be spent in a similar way, or on a greater variety of activities. The analyses indicate that child age is significantly correlated with the frequency of any of these activities - the older the child is, the more frequently he / she performs each of these activities on the Internet, with the exception of playing games, which is less common for older age groups. However, if one considers (i.e. statistically controls for) the average time spent on the Internet on a daily basis, the correlation between age and frequency drops in significance. Age, in other words, influences the intensity and frequency of a limited set of activities, rather than a change in children's priorities (with the exception of playing games online, especially with respect to boys).

The use of social networking sites and video gaming platforms)

Among surveyed students ages 9-17, 74% report having a profile on a social network (social media) or video gaming platform.

Graph 5 shows that the same number of boys and girls (74%) report to have a profile on such a site.

Graph 5. Percentage of respondents with a profile, by age and gender



EU Kids Online 2018: op_QD3: Do you have your own profile on a social networking or social media or gaming site that you currently use?
Base: all students aged 9-17 who use the Internet (N=1,150).

The older the students, the more likely they are to have a profile. According to most social media platforms' Terms of Service (TOS), children under the age of 13 are not allowed to use them. Such rules are largely the result of the 1998 COPPA legislation (The United States Children's Online Privacy Protection Act), which does not allow Internet companies to collect personal information (e.g. name, age, gender, address, photos etc.) from children under the age of 13 without parental/caregiver consent (Milosevic, 2018; Montgomery, 2015). Rather than collecting parental consents which can be difficult, many social media platforms, as well as other companies or sites covered by this regulation, prohibit children under the age of 13 altogether from using their services. This rule has also been incorporated into the Article 8 of the GDPR (The General Data Protection Regulation) regulation of the European Union, the law that entered into force in 2018 (Lievens & Verdoot, 2018; Van der Hof & Lievens, 2018). Member States, however, were allowed to decide for themselves which age limit to enforce in their jurisdiction – within the span of 13 and 16 years of age. Thus, some countries adopted 16 years of age – among them Croatia, Germany and Bulgaria; others adopted 13 such as Great Britain, Denmark, and Sweden; and some 14 or 15 – Italy, Spain, France (Milkaite & Lievens, 2019). However, it is clear that age limitations are difficult to enforce, as can be seen from the large percentage of children in Serbia under the age of 13 who have profiles: 41% of children aged 9-10 and 72% of children aged 11- 12 years.

In order to gain insight into the behaviour of children and young people on social networks that may have consequences for their safety, as well as the implications for socialisation, we asked children ages 11-17 how they respond to calls to become friends or contact different people at social networks. Among the students who answered this question[5], 17% said they generally accepted all requests; 32% accept only if they have mutual friends; 59% accept only if they know them, and 13% accept only if they know them very well. Only 5% say they accept only if the parent or carer says it is okay.

Students' digital skills

'Digital skills' (digital literacy skills or digital competences) are crucial for the successful functioning of today's children and young people, who, from an early age, are surrounded by digital technology in their daily lives. The importance of digital literacy for lifelong learning and life in the information society has been highlighted in numerous international, and in recent years, national strategic education and policy documents. Digital literacy has been recognized globally as one of the priorities of formal education and, accordingly, curricula are being revised to

[5] The question was answered by older students, those who previously answered to have own profile on social networks (N=748). The question (op_QD4_rt): How do you usually react on the demands of others to become friends on the Internet? Circle as many answers as necessary.

include the knowledge and skills needed to navigate the digital environment.

Since 2006, according to the European Key Competence Framework for Lifelong Learning, digital competence is one of the eight key competences in education (European Parliament and the Council, 2006). It is defined as the ability to use technology at work, for leisure and communication in a critical and safe manner. Digital literacy is a cross-curricular competency, which can be acquired through different school subjects, and enables the acquisition of other key educational competences.

As far as Serbia is concerned, research focusing on digital literacy had not been conducted on a nationally representative sample prior to the EU Kids Online project. Hence, this study offers an important contribution to the field.

In the previous section, we learned that, depending on age, students in Serbia spend between an hour and a half and four and a half hours a day (on average) on the Internet, mostly for leisure and in informal contexts. Is the time spent online, as such, enough for them to gain adequate digital skills, or are the quality of time spent on the Internet and the types of activities undertaken more important for building digital competence?

As in most studies assessing respondents' digital skills, students were expected to estimate (on a five-point scale) their own digital device / Internet usage skills. When considering these findings, it should be borne in mind that a more reliable but also more demanding assessment of digital skills involves the application of objective instruments — direct assessment of what students know and / or are able to do on digital devices / the Internet. Thus, the findings tell us more about how students from Serbia evaluate their own digital skills, and they do not necessarily reflect a realistic picture of the current level of their skills. Nevertheless, self-reported self-efficacy is one of the significant predictors of student achievement in the domain of digital literacy (Hatlevik, Ottestad, & Throndsen, 2014).

Eleven statements (listed below) in our "core" questionnaire (i.e the portion of the questionnaire that all participating countries had to adopt and assign to all respondents) measured digital skills, and based on these, we calculated average scores for the five groups/domains of digital skills: **operational, information and navigation skills, social, creative and mobile skills**; and we have done so for two age groups: **younger (9-12 years)** and **older (13-17 years**). We draw the readers' attention to the fact that, for the sake of comparison with other countries participating in the EU Kids Online survey, the average scores have been shown, i.e. transposed into scores/grades on a 10-point scale (students ranked their agreement with the listed statements on a five-point scale).

Operational skills were operationalised through two claims related to basic technical skills. Approximately half of students aged 9-12 do not know how to change their privacy settings on social networking sites (a similar percentage do not use social networks), while more than a third of students this age do not know how to save a picture they find online (Table 4).

Table 4: Operational skills (age 9-17)

% of students who answered „somewhat true of me" or „very true of me"	9-12		13-17		All
	M	F	M	F	
I know how to save a photo that I find online	64	61	92	97	80
I know how to change my privacy settings (e.g., on a social networking site)	55	50	90	95	74
Average score (0-10)	7.6	7.1	9.5	9.7	8.5

EU Kids Online 2018: c_QE1_oy On a scale from 1 to 5 where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you?
Base: all students aged 9-17 who use the Internet (N=1150).

Almost all older students report to possess the aforementioned operational skills (as a reminder, about 90% of students aged 13-17 use social networking sites on a daily basis). Given that these are students' self-assessments (and given the empirically confirmed tendency of respondents to provide socially desirable answers), one might expect that the percentages of those who possess these skills are less than the percentages shown in the tables.

When it comes to the skills of searching and evaluating information on the Internet (Table 5), students in both age groups rate them as less developed than their operational skills. However, a high portion of older students (over 80%) believe that they can easily select keywords when searching the Internet, or evaluate the veracity of information found on the Internet (almost 80%).

Table 5: Information and navigation skills (age 9-17)

% of students who answered „somewhat true of me" or „very true of me"	9-12		13-17		All
	M	Ž	M	Ž	
I find it easy to choose the best keywords for online searches	54	52	84	80	68
I find it easy to check if the information I find online is true	52	42	81	75	64
Average score (0-10)	7.1	6.7	8.6	8.1	7.7

EU Kids Online 2018: c_QE1_oy On a scale from 1 to 5 where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you?
Base: all students aged 9-17 who use the Internet (N=1150).

A large number of studies that assessed children and young people`s digital literacy skills ***directly*** (i.e. ***not*** via self-reporting***)*** paint a different picture. In Serbia, but also elsewhere throughout the world, the skills of evaluating information on the Internet, both in case of school and university-level students, are very weak (Stanford History Education Group, 2016; Van Dijk & Van Deursen, 2014; Kuzmanovic, 2017). Young people rarely evaluate the quality of digital content spontaneously, and when they do, they are generally unsuccessful (Katz, 2007).

Judging by students' self-assessments (especially those of older elementary and high school students), their social skills in the digital context are very well developed (Table 6). Nearly two-thirds of students ages 9-12 and over 90% of ages 13-17 agreed (somewhat or completely) with the claim that they knew what information to share with others on the Internet and what not to share. Students' average social skills scores are the highest (9.2 on a scale of 1 to 10) compared to the other four groups of digital skills.

Table 6: Social skills (age 9-17)

% of students who answered "somewhat true of me" or "very true of me"	9-12		13-17		All
	M	Ž	M	Ž	
I know how to remove people from my contact lists	73	75	96	96	86
I know which information I should and shouldn't share online	72	73	91	94	83
Average score (0-10)	8.7	8.5	9.6	9.7	9.2

EU Kids Online 2018: c_QE1_oy On a scale from 1 to 5 where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you?
Base: all students aged 9-17 who use the Internet (N=1,150).

The students surveyed estimated their own creative skills as the lowest (out of the five digital skills groups listed) (Table 7).

About a half of younger and about two-thirds of older students know how to make video or music and upload it to the Internet. Even smaller are the

percentages of those who are able to modify content created and uploaded by others (one fifth of the younger ones and less than half of the older ones).

Table 7: Creative skills (age 9-17)

% of students who answered „somewhat true of me" or „very true of me"	9-12		13-17		All
	M	Ž	M	Ž	
I know how to create and post online video or music	54	41	79	75	63
I know how to edit or make basic changes to online content that others have created	29	18	58	36	36
Average score (0-10)	6.2	5.0	7.9	7.2	6.7

EU Kids Online 2018: c_QE1_oy On a scale from 1 to 5 where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you?
The base: all students aged 9-17 who use the Internet (N=1,150).

These findings are aligned with numerous earlier domestic and international studies, and they seem to corroborate the claim that young people primarily consume rather than create digital content (Claro et al., 2012; Kuzmanović, 2017; Livingstone, 2014; Logar et al., 2016; Mascheroni & Cuman, 2014; Popadić & Kuzmanović, 2016; Popadić et al., 2016). When it comes to creating digital content, male students feel more competent than female students.

Of all the claims regarding digital skills that were offered to students in the questionnaire, the highest number of respondents agrees with the following: "I know how to install the application on a digital device" - 92% of students know how to do this, even those who do not use a mobile phone and tablet everyday (Table 8).

Table 8: Mobile skills (age 9-17)

% of students who answered „somewhat true of me" or „very true of me"	9-12		13-17		All
	M	Ž	M	Ž	
I know how to install apps on a mobile device (e.g., phone or tablet)	87	88	96	98	92
I know how to keep track of the costs of mobile app use	46	32	73	58	53
I know how to make an in-app purchase	56	37	83	70	62
Average score (0-10)	7.7	6.7	9.0	8.3	8.0

EU Kids Online 2018: c_QE1_oy On a scale from 1 to 5 where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you?
The base: all students aged 9-17 who use the Internet (N=1,150).

As a reminder, mobile or smartphone is the most popular and commonly used digital device among our students of all ages. Although almost all older and most younger students know how to install apps on a mobile phone, significantly fewer students know how to make in-app purchases or keep track of the costs of mobile app use (given that most likely many kids aren't even allowed to buy anything through apps, it is possible that some children thought such ban implied that they could not do this, even though they would actually know how to make these purchases if they were allowed to do so).

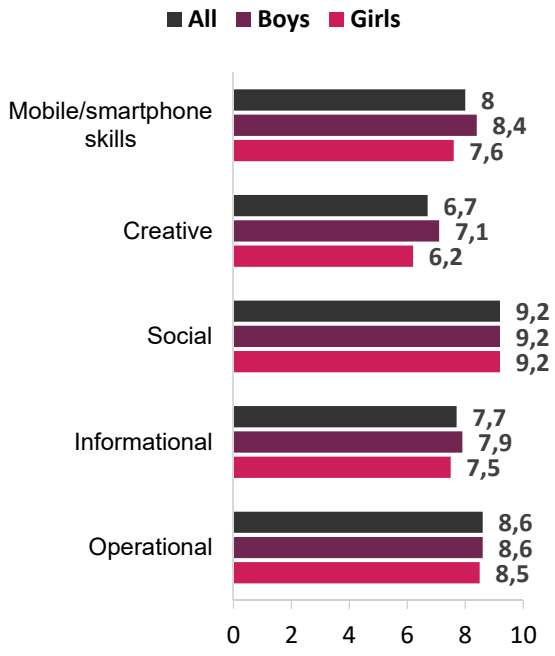
We will now provide an outline of children's average scores in the five previously described domains or groups of digital skills, discussing age and gender differences.

As shown in the chart below (Graph 6), the students assessed their digital skills as follows: the highest average score was on social skills (9.2), followed by operational (8.6), mobile (8.0) and information skills (7.7); while creative skills had the

lowest average score (6.7). This finding applies to both male and female students.

Note that similar findings were observed using direct assessment (e.g. Kuzmanovic, 2017). If we focus on gender differences only, leaving age out of the picture, we find that when it comes to social and operational skills, there is no statistically significant difference between male and female students. For the remaining three skill groups, the t-test results indicate a statistically significant difference in favour of male students: information skills t (1038) = 2.870, p = 0.004, mobile skills t (1039) = 6.140, p = 0.000, and creative skills t (1014) = 5.030, p = 0.000. Gender differences for these groups of digital skills were also found in the Global Kids Online survey conducted in Serbia in 2016 on a smaller sample of 9-17 year-olds (Popadić et al., 2016).

Graph 6: Average score for five groups of digital skills – gender differences

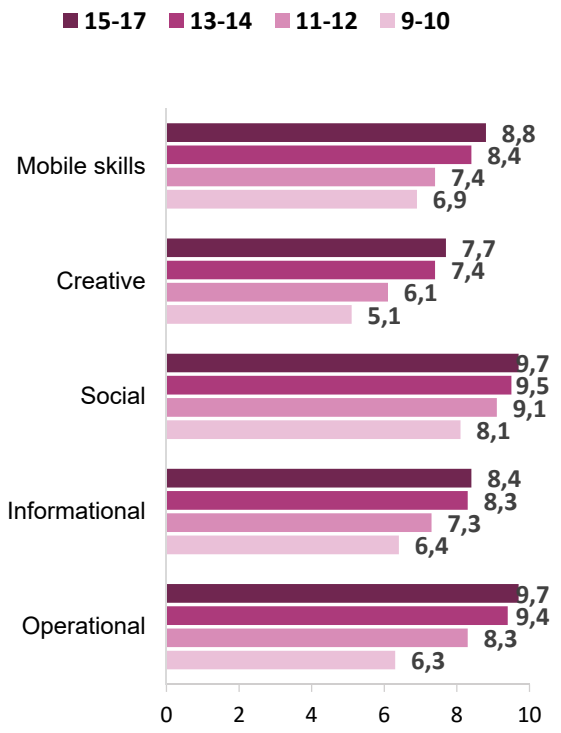


EU Kids Online 2018: c_QE1_oy: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
The base: all students aged 9-17 who use the Internet (N=1150).

In addition to gender, we find clear age differences across the before mentioned domains of digital skills. Older students, in their own estimation, are digitally more competent than younger students, in all five groups of digital skills (Graph 7).

Statistically significant differences among the four age groups were found for almost all domains of digital skills. We did not find significant differences for operational, informational, social and creative skills only between the two older age groups (13-14 years and 15-17 years). The biggest difference between the youngest and oldest is in the domain of operational digital skills; and the smallest is in the domain of mobile skills.

Graph 7: Average score for the five digital skills groups – age differences



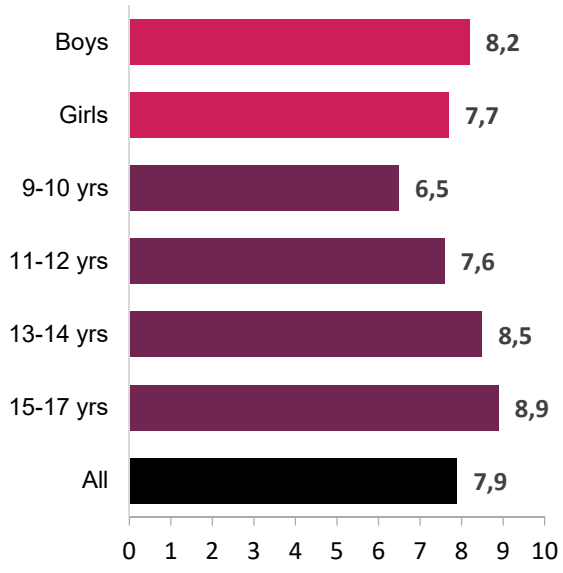
EU Kids Online 2018: c_QE1_oy: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 9-17 who use the Internet (N=1,150). Due to missing answers to individual questions, N ranged from 1,007 do 1,063.

We now turn to gender differences in digital skills within specific age groups. In the younger age group (9-12 years), male students have a higher average score than female students across the five groups or domains of digital skills. For the older age group (13-17 years), female students have a slightly higher average score on operational (9.7 vs. 9.5) and social skills (9.7 vs. 9.6), while the remaining three digital skills groups are dominated by male students. So, we might conclude that gender differences in digital skills are more pronounced at a younger age.

In addition to the average scores within the five domains of digital skills, we also calculated the overall average score on the digital skills, and captured the gender and age differences on this score (Graph 8).

An average score of 7.9 (on a 10-point scale) indicates that students from Serbia estimated their digital skills as above average. Male students have higher scores than female students; older students have higher scores than younger students.

Graph 8: Average digital skills score



EU Kids Online 2018: c_QE1: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 9-17 who use the Internet (N=1,150).

A statistically significant positive correlation was found between the total score on digital skills and the time students spent online, during the work day (*rho* = .37, p = 000) and on the weekends (*rho* = .34, p = .000). The findings obtained are very similar to the findings of the aforementioned Global Kids Online study, when the total average score on digital skills (on a four-point scale) was 3. The correlation between screen time and self-reported digital skills was stronger than in this study (Popadić et al., 2016).

Students who use more digital devices to access the Internet have a higher overall score on digital skills (*rho* = .27, *p* = 000).

As mentioned earlier, the findings above, i.e. indicators of the level of development of different types of digital skills, were obtained on the basis of compulsory ("core") questions answered by students in all age groups. In addition to this question, two (optional) questions related to their digital skills were also posed to students higher grades of elementary school and high school students (aged 11–17).

The following tables show student responses in the two age groups (ages 11-13 and 14-17) and the average scores for the five digital skills groups, calculated based on their answers to the core and optional questions. We consider these findings to be more pertinent than the previous ones, because they were obtained on the basis of a larger number of claims (24 in total); that is, students evaluated a greater number of their digital skills. In addition to basic ones, some of the more complex digital skills are included here (e.g. using programming languages, knowing the different types of licenses that apply to digital content, creating a website).

In this analysis, operational skills were assessed on the basis of six statements, while in the previous one, on the basis of two statements only (Table 9).

If we compare the average scores calculated based on core and optional questions with the scores obtained only on core questions, we can see that

in the first case the younger groups of students (11-13 years) scored higher, while the older groups of students (14-17 years) scored lower. Thus, the age differences in operational skills have decreased in favour of younger students (although the average score for all students surveyed has remained virtually unchanged).

Table 9: Operational skills (age 11-17)

% of students who answered „somewhat true of me" or „very true of me"	11-13		14-17		All
	M	Ž	M	F	
I know how to save a photo that I find online	77	82	94	98	89
I know how to change my privacy settings (e.g., on a social networking site	74	71	93	97	85
I know how to use a programming language (e.g., Scratch, Python, C++)	53	42	45	27	41
I know how to open downloaded files	83	67	91	84	82
I know how to use shortcut keys (e.g., CTRL-C for copy, CTRL-S for save)	72	58	88	80	76
I know how to open a new tab in a browser	65	50	87	88	74
Average score (0-10) (6 items)	**8.3**	**7.6**	**8.9**	**8.5**	**8.4**
Average score (0-10) (2 items)	7.6	7.1	9.5	9.7	8.5

EU Kids Online 2018: c_QE1 & op_QE2 On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

Here, too, we find that older students evaluate their operational skills as better than younger ones, with one exception, which is the use of a programming language (e.g. Scratch, Python, C ++). This is, in fact, the only one of the 24 digital skills in which younger students feel more competent than older ones.

We can interpret these findings in the context of recent curricular changes across primary schools in Serbia. In the 2017/2018 school year the subject Computer Science became obligatory for all students in the fifth grade of elementary school (age 11), whereas it had been optional until then. This subject is currently obligatory for students in grades five and six (ages 11-12), while over the course of the next two school years, it will become compulsory for students in the seventh and eighth grades as well — that is, for all students in higher grades of elementary school.

Within the subject of Computer Science, more specifically, the thematic area of programming (other areas include ICT and digital literacy) students in the fifth grade are meant to be introduced to a visual programming language. In Serbian schools, this is most often Scratch. In the sixth grade, they are to be introduced to a text-based programming language, most commonly Python. Given that our younger respondents (11-13 years), attend Computer Science as a compulsory subject, while this course (subject) was optional for our older respondents (14-17 years), and not all of them had sat in this course in grades five and six as they had not been obliged to — this may explain why younger students feel more competent in this area. The largest number of those who report to know how to use a programming language can be found among sixth grade students (age 12) — 64% of them say this is "somewhat true" or "very true" for them. These are the students who had a compulsory subject in Computer Science in grades 5 and 6 (it should be borne in mind that the research was conducted at the end of the first semester of their 6th grade).

From the perspective of the effectiveness of the pedagogical process, it is not entirely clear, however, if we should be satisfied with these

numbers. Consider that more than a third of 12-year-olds do not consider themselves able to use any programming language, although they should have been learning it at school for two years. Among the older students, these percentages are even higher; according to their own assessments, more than half of the male students and three quarters of the female students do not know to use any programming language.

Having included the above mentioned optional answer choices in the score calculation, information and navigation skills were now evaluated on the basis of the five statements listed in the table below.

Table 10: Information and navigation skills (age 11-17)

% of students who answered „somewhat true of me" or „very true of me"	11-13		14-17		All
	M	F	M	F	
I find it easy to choose the best keywords for online searches	66	58	88	84	75
I find it easy to check if the information I find online is true	64	58	84	76	72
I find it easy to find a website I have visited before	77	68	92	93	84
I find it easy to decide if information online can be trusted	58	55	79	72	67
Sometimes I end up on websites without knowing how I got there	27	29	36	46	35
Average score (0-10) (5 items)	**7.4**	**6.9**	**8.2**	**7.9**	**7.7**
Average score (0-10) (2 items)	7.1	6.7	8.6	8.1	7.7

EU Kids Online 2018: c_QE1 & op_QE2 On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

The trend found with respect to information skills was similar to operational ones: Self-assessing on a greater number of skills resulted in an increase in average scores in the younger age group and a decrease in the older age group, but the overall average score in this domain of digital skills remained the same.

Students from both age groups feel less confident when they need to evaluate the quality of information found on the Internet than when browsing online and trying to find something specific (e.g., a website they have previously visited). Critical skills necessary for evaluating information (both online and offline) are complex cognitive skills that are highly dependent on students' personal experience and knowledge.

Additional claims in the optional question contributed to a decrease in the average score on social skills in both age groups (Table 11).

Table 11: Social skills (age 11-17)

% of students who answered „somewhat true of me" or „very true of me"	11-13		14-17		All
	M	F	M	F	
I know how to remove people from my contact lists	86	85	97	98	92
I know how to remove people from my contact lists	82	84	93	96	89
I know when I should and shouldn't share information online	68	71	86	91	80
I know how to behave according to the situation online	72	75	88	87	81
I know how to change who I share content with (e.g., friends, friends of friends or everyone)	52	38	74	68	60
Average score (0-10) (5 items)	**8.6**	**8.3**	**9.2**	**9.1**	**8.9**
Average score (0-10) (2 items)	8.7	8.5	9.6	9.7	9.2

EU Kids Online 2018: c_QE1 & op_QE2 On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

When it comes to social skills, more than 80% of younger and almost all older students know what information should not be shared with others online. Nonetheless, almost half of the younger ones and as many as 70% of the older ones do not know how to change default settings, such as adjusting who can see the content they share on a social networking site. Less than two-thirds of students know how to do that, despite the fact that three-quarters of them spend time on social networking sites every day.

As the table below shows, additional claims related to more complex digital skills have contributed to the reduction in the overall (average) score for the digital content creation skills as well (Table 12).

Table 12: Creative skills (age 11-17)

% of students who answered „somewhat true of me" or „very true of me"	11-13		14-17		All
	M	F	M	F	
I know how to create and post online video or music	65	54	80	78	70
I know how to edit or make basic changes to online content that others have created	39	26	61	39	42
I know which different types of licences apply to online content	34	20	47	27	32
I know how to create something new from video or music that I found online	43	32	58	38	43
I know how to create a website	29	18	40	29	30
Average score (0-10) (5 items)	**6.4**	**5.3**	**7.2**	**6.2**	**6.4**
Average score (0-10) (2 items)	6.2	5.0	7.9	7.2	6.7

EU Kids Online 2018: c_QE1 & op_QE2: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

Most of our students (70%) are not familiar with the licenses that apply when posting content online (e.g. creative commons etc.). Less than a third of our students say that they know how to create a website; male students report to be more skilled at this than female students, and the older ones feel more skilled than the younger.

Additional claims have contributed to an increase in the average score on digital content creation skills among younger students and a decrease in the average score for older students.

Mobile device use skills were assessed only on the basis of the three claims in the core question (the optional question did not contain additional claims related to this skill group).

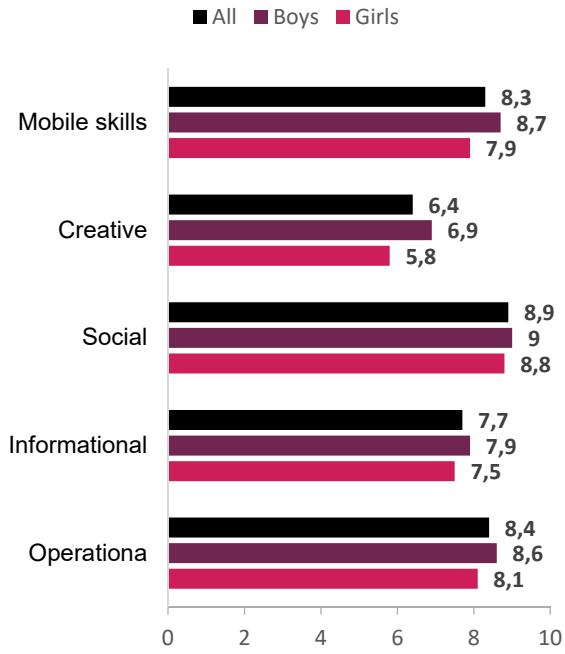
Table 13: Mobile skills (age 11-17)

% of students who answered „somewhat true of me" or „very true of me"	11-13		14-17		All
	M	F	M	F	
I know how to install apps on a mobile device (e.g., phone or tablet)	91	95	96	98	95
I know how to keep track of the costs of mobile app use	58	40	74	60	59
I know how to make an in-app purchase	65	49	86	72	69
Average score (0-10) (3 items)	**8.1**	**7.2**	**9.1**	**8.4**	**8.3**

EU Kids Online 2018: c_QE1: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

Gender differences in terms of the five groups of digital skills are slightly more pronounced in the subsample of students aged 11-17 than they are in the overall sample, also when they are evaluated on the basis of a smaller number of individual skills. Here too, male students feel digitally more competent than female students.

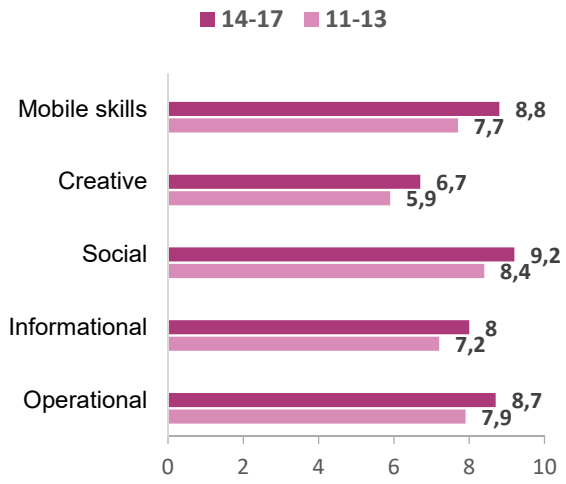
Graph 9: Gender differences for the five groups of digital skills (ages 11-17)



EU Kids Online 2018: c_QE1: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

Age differences in average scores for groups/ domains of digital skills are more pronounced than gender differences (Graph 10).

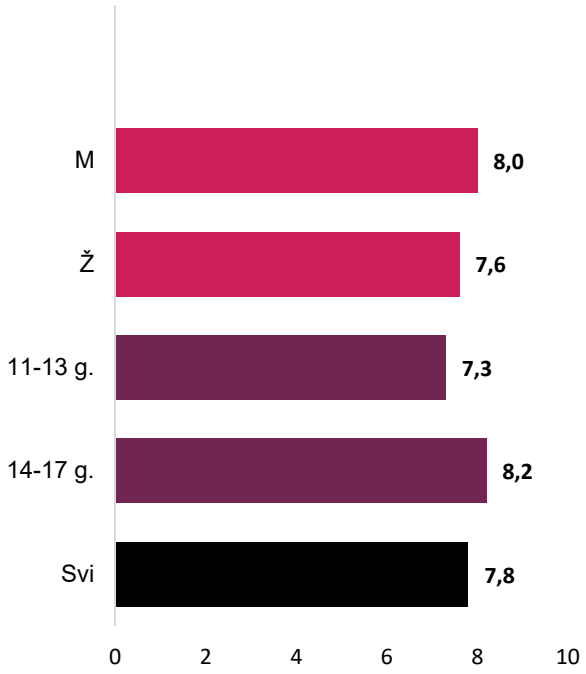
Graph 10: Age differences for the five groups of digital skills (ages 11-17)



EU Kids Online 2018: c_QE1: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

To conclude, if we compare the overall average score for digital skills, male students are ahead of female students and older (ages 14-17) ahead of younger (ages 11-13) (Graph 11).

Graph 11: Age and gender differences across the five digital skills groups (ages 11-17)



EU Kids Online 2018: c_QE1: On a scale from 1 to 5 where 1 means 'Not at all true of me' and 5 'Very true of me', how true are these of you?
Base: all students aged 11-17 who use the Internet (N=863).

Older primary and secondary school students were given another optional question about their digital skills; this time, they were not asked to indicate their degree of agreement with listed statements (as has been the case so far), but to say whether or not they can do specific things on their mobile device (phone or tablet).

The following table shows the percentage of students who said they were able to do the things listed.

Table 14: Smartphone and tablet use skills (age 11-17)

% of students who answered "Yes"	11-13		14-17		All
	M	F	M	F	
Connect to a Wi-Fi network	98	98	100	100	99
Protect a smartphone with a PIN/with a screen pattern or fingerprint	88	92	98	99	96
Deactivate the function showing my geographical position (on Facebook, Google Maps, etc.)	83	86	99	98	93
Block push notifications from different apps	85	83	100	97	93
Update my status on the social networking site I use the most	78	82	95	98	91
Take a picture or a video with my smartphone and post it onto social media	79	83	95	100	91
Find information on how to use smartphones safely	83	87	92	94	90
Compare similar apps to choose the one that is most reliable	76	75	90	90	85
Block pop-ups which promote apps, games or services I have to pay for (unrequested windows that appear during web surfing)	80	66	85	80	79
Have the same documents, contacts or apps on all devices that I use (e.g., smartphone, tablet, PC)	64	60	78	81	73

EU Kids Online 2018: op_QE3 Which of these things do you know how to do on a smartphone or tablet?
Base: all students aged 11-17 who use the Internet (N=863).

As we can see from the table above, Serbian students feel very competent when it comes to their smartphone and tablet use skills (students who said they did not want to answer the question or who said they did not know had been excluded from the analysis — thus, the percentages only reflect students who answered yes or no). This finding is not surprising, given that 98% of students of this age use a smartphone daily.

To conclude, these findings align with previous research in that they indicate that students' digital skills need to be developed within the formal educational system. The development of these skills should start as early as possible, having in mind that children are beginning to use digital devices and the Internet at a young age. In the most recent regulation (Ministry of Education, Science and Technological Development of the Republic of Serbia, 2018), it is envisaged that the acquisition of basic digital skills in Serbia should begin as early as preschool, and continue up to the higher levels of compulsory education.

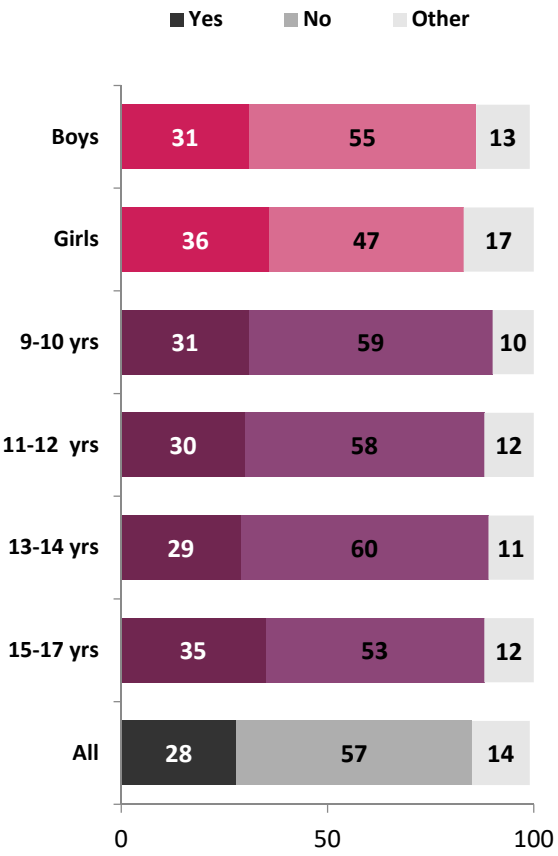
Returning to the question posed in the beginning of the section, we can conclude that the time spent on the Internet (number of hours), as such, does not ensure the acquisition of appropriate digital literacy skills. On the contrary, it is the the quality of the time spent and type of activity undertaken that are crucial for the acquisition of digital skills. Therefore, it is necessary to systematically work on the development of more complex cognitive skills (content creation and assessment of information found on the Internet) and their application in the digital context, i.e. critical digital literacy skills.

Upsetting online experiences

Almost every third student had some disturbing experience online in the past year (Graph 12). In fact, almost every eighth student did not answer yes or no to that question, and the majority of such students reported that they did not know. Among the children who gave a yes or no answer to this question, a slightly higher number of girls (35%)

than boys (28%) says they were bothered by some online content in the previous year. The percentage of students who report being upset by some content on the Internet increases with age but relatively mildly.

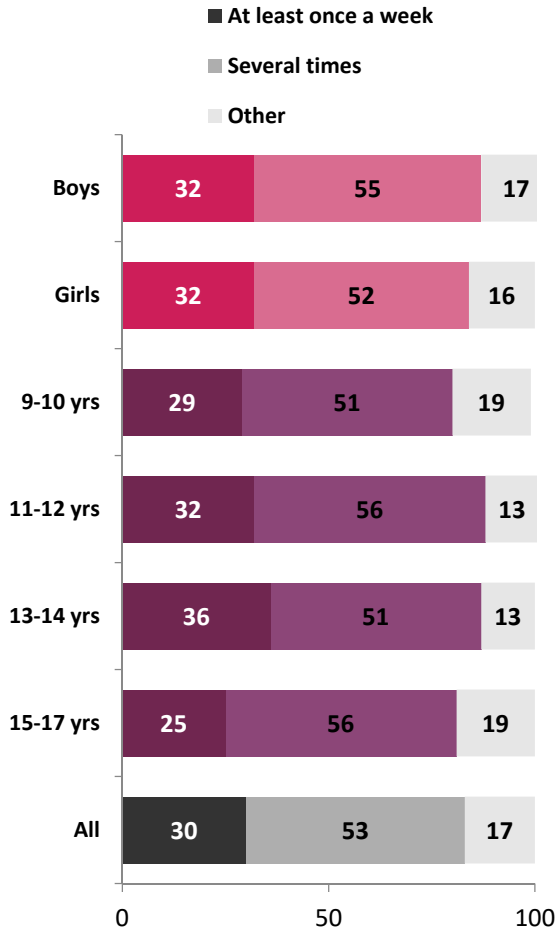
Graph 12: Percentage of students bothered by online content, by gender and age



EU Kids Online 2018: c_QF01: In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)?
Base: all students aged 9-17 who use ihe Internet (n=1,150).

The following chart shows the frequency of such experiences among children who said they were bothered or upset by something online in the previous year, by age and gender.

Graph 13: Frequency of upsetting experiences, by gender and age



Deca Evrope na Internetu, pitanje C_QF02rt: In the PAST YEAR, how often did this happen?
Base: students aged 9-17 who previously responded that in the past year something had happened on the Internet that bothered or upset them (N=361).

Among the third of the sample who said they were bothered by something online, 30% reported that something like that had happened to them at least every month, while about a half said they had had such experience a few times (the answer option "only once" had not been provided).

When considering the entire sample (children age 9-17), almost every tenth child (9%) experienced something upsetting online often (at least once a month), while 17% reported this to be the case sometimes. The number of children who report to

have had negative experiences often is the highest among 13-14 year-old children (12%); followed by 11-12 year-olds (10%); 15-17 year-olds (9%); and 9-10-year-olds (8%). Looking at the entire sample, the incidence of uspetting experiences appears to be approximately the same in boys and girls: 11% of girls and 8% of boys had such experience often; while 18% of girls and 16% of boys, reported this to be the case sometimes.

Support after negative experiences

Do children and young people talk to someone when something upsets them online? One quarter of the respondents who answered this question do not talk to anyone (25%), while the majority of such respondents talk to a male or a female friend of similar age (45%). A very small percentage of these children (3%) spoke with their teachers the last time they had this experience. Just under a third of the children (31%) say they spoke to a parent or carer the last time something bothered them online.

Table 15 shows the answers of the respondents who answered this question, by age and gender.

While among boys, the likelihood that the respondent will talk to parents or carers decreases with age, this is not the case with girls; in fact, a slightly higher percentage of teenage girls age 13 to 17 talk with their parents (37%), compared to girls age 9-12 (33%). Younger girls are more likely to say that they have not spoken to anyone than younger and older boys. Older and younger female respondents talk to friends more often than boys do.

Table 15: Looking for support after an upsetting experience on the Internet

% of students who talked to mentioned people	9-12		13-17		All
	M	F	M	F	
My mother or father (or step/foster mother or father)	42	33	11	37	31
My brother or sister (or step/foster/half sibling)	21	19	9	16	16
A friend around my age	22	36	49	64	45
A teacher	1	4	1	3	3
Someone whose job it is to help children	3	3	1	2	2
Another adult I trust	5	12	2	6	6
Someone else	7	1	9	3	5
I didn't talk to anyone	26	32	28	18	25
I don't know	8	7	6	4	6
Prefer not to say	3	0	1	0	1

EU Kids Online 2018: c_QF04_rt The last time something happened online that bothered or upset you, did you talk to anyone of these people about it?
Base: students aged 9-17 who previously answered that thay have had some disturbing experiences in the past year (N=356).

Children and young people respond differently to negative online experiences (Livingstone, Mascheroni, & Staksrud, 2015). Some are proactive about it and take steps to help themselves, either by talking to someone, reporting the problem to social networks, or blocking the person harassing them; but to many children and young people it is not always clear what they can do to change the situation. Table 16 shows the reactions and behaviours of children and young people following a negative online experience.

Table 16: Responding to upsetting online experiences

% of students who answered	11-13		14-17		All
	M	F	M	F	
I ignored the problem or hoped the problem would go away by itself	30	37	13	18	23
I closed the window or app	19	13	33	31	25
I felt a bit guilty about what went wrong	0	12	6	9	7
I tried to get the other person to leave me alone	11	7	18	10	11
I tried to get back at the other person	3	5	13	4	6
I stopped using the Internet for a while	7	12	4	4	6
I deleted any messages from the other person	17	24	8	11	15
I changed my privacy/contact settings	7	4	12	5	7
I blocked the person from contacting me	24	22	35	40	31
I reported the problem online (e.g., clicked on a 'report abuse' button, contacted an Internet advisor or Internet Service Provider (ISP)	6	9	9	16	10
Something else	16	9	11	15	12
I don't know	14	13	6	5	9
Prefer not to say	8	5	1	3	4

EU Kids Online 2018: c_QF05_rt The last time you had problems with something or someone online that bothered or upset you in some way, did you do any of these things afterwards? (PLEASE TICK AS MANY BOXES AS NEEDED)

Almost one quarter of children and young people (23%) who said they were bothered by something, ignored the problem, which is not considered as a proactive or effective method of addressing the issue (D'Haenens, Vandoninck, & Donoso, 2013). Almost one third of such children (31%) blocked the person from contacting them further, and one in ten children tried to solve the problem by using the option to report content or abuse on the platform or social network i.e. the website where the problem occurred. A small number of respondents (6%) stopped using the Internet for some time, which is a piece of advice that adults tend to give to children in these situations, yet it rarely solves the problem or it is not particularly helpful to the child.

Cyberbullying (digital bullying)

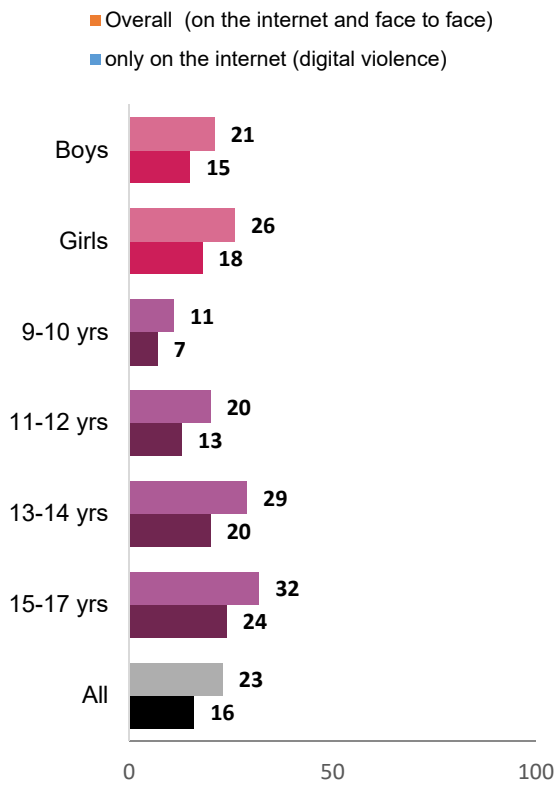
Bullying is a complex problem that has different definitions that researchers themselves and the academic community often disagree with. Even greater disagreements exist about cyberbullying, due to the specificity of digital technology and the application of offline definitions of bullying to the online environments (Olweus, 2012; Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Görzig & Machackova, 2015). The ways in which children are asked about whether they have experienced cyberbullying may vary from survey to survey and researchers rely on different definitions when designing their questionnaires; and thus prevalence rates for cyberbullying can vary from study to study, ranging from 6.5% to 72%. Research also shows that face-to-face (offline) bullying often coincides with cyberbullying, the two types of victimisation tend to do hand in hand (Kowalski et al., 2014; Popadić & Kuzmanović, 2016; Tokunaga, 2010). It is for these reasons that we did not ask children in this study if they had experienced bullying or cyberbullying because children and young people may have different ideas and conceptions about what these terms mean. Rather, we gave them the following description of these behaviours, and asked if they had experienced them in the past year and if so, how often:

"Sometimes children or teenagers say or do hurtful or nasty things to someone and this can often be quite a few times on different days over a period of

time, for example. This can include: teasing someone in a way this person does not like; hitting, kicking or pushing someone around; leaving someone out of things. When people are hurtful or nasty to someone in this way, it can happen: face-to-face (in person), by mobile phones (texts, calls, video clips), on the Internet (e-mail, instant messaging, social networking, chatrooms)".

Almost one quarter of respondents aged 9-17 years (23%) experienced some type of bullying during the previous year, either on the Internet, i.e. via digital technology, or face-to-face. As shown in Graph 14, one-sixth of the respondents (16%) experienced cyberbullying (digital bullying) via mobile phone, Internet, computers or tablets.

Graph 14: Percentage of students who experienced bullying and cyberbullying



EU Kids Online 2018: c_QF20 In the PAST YEAR, has anyone EVER treated you in such a hurtful or nasty way? QF21_rt1a-c In the PAST YEAR, how often did this happen in any of the following ways (b) Via a mobile phone or Internet, computer, tablet, etc.

Base: all students aged 9-11 who use Internet (N=1,150).

The number of respondents who report cyber-bullying victimisation increases with age: under one in ten respondents (7%), aged 9-10 reported such experience; the same is true of 13% of students aged 11-12, one fifth (20%) of respondents aged 13-14, as well as one quarter (24%) of young people aged 15-17 who answered this question. Girls experience cyberbullying victimisation more frequently than boys: Almost one-fifth of girls (18%) reported this vs. 15% of boys and young men.

Among those who report victimisation (either online or offline), digital bullying happens more frequently (22% reported to have had such experience at least once a month), than face-to-face bullying victimisation, which was reported by 16% of such respondents. Another 24% said they had experienced some other form of violence, but we do not know what they meant by "other" (Table 17).

Table 17: Frequency of bullying experiences (cyber/digital and face-to-face)

%	Never	A few times	At least every month	Other
In person face-to-face (a person who is together with you in the same place at the same time)	26	50	17	7
Via a mobile phone or Internet, computer, tablet, etc	23	50	22	5
Some other way	53	15	9	24

EU Kids Online 2018: c_QF21_rt1 In the PAST YEAR, how often did this happen in any of the following ways (In person face-to-face, Via a mobile phone or Internet, computer, tablet, etc.; Some other way)?

Base: students aged 9-17 who previously answered that in the past year somebody had treated them in a hurtful or a nasty way (N=286).

If we calculate the percentages of answers to this question within the context of the overall sample

of children surveyed, we find that 11% of children said they experienced face-to-face victimisation sometimes; and 4% experienced it frequently, while 11% experienced cyberbullying victimisation sometimes and 5% reported it happened to them often.

The number of children experiencing cyberbullying victimisation (16%) was slightly higher than the number of children experiencing face-to-face victimisation (15%). This result does not support earlier findings (e.g., Popadić, Plut, & Pavlović, 2014) where face-to-face bullying was more commonly reported than digital bullying. Although it is possible that cyberbullying has indeed become more prevalent, we tend to assume that the incidence of face-to-face bullying in the current research might be underestimated, primarily because of our approach: The entire questionnaire was focused on the use of digital technologies, and face-to-face bullying was not elaborated on.

We asked children and young people who experienced digital bullying about how these incidents had happened. The second column in Table 18 below shows how many children among those who experienced cyberbullying reported a specific type of cyberbullying incident; and the third column puts these numbers in the context of the total number of children in the sample.

The most common type of digital bullying incident that students reported was receiving nasty or hurtful messages - nearly three quarters of cyberbullying victims experienced it, and every tenth child in the overall sample. Receiving threats was half less frequent than receiving hurtful messages, just like being left out from a group or activity on the Internet.

Table 18: Forms of digital bullying

% of YES answers	Students who experience cyberbullying (N=188)	All (N=1150
Nasty or hurtful messages were sent to you	66	11
Nasty or hurtful messages were passed around or posted where others could see	20	3
You were left out or excluded from a group or activity on the Internet	28	5
You were threatened on the Internet	32	5
You were forced to do something you did not want to do	10	2
Other nasty or hurtful things happened to you on the Internet	20	3

EU Kids Online 2018: c_QF23a-f: Have any of these things happened to you in the last year?

Base: In the first column, students aged 9-17 who previously answered that in the past year they had experienced digital violence (c_QF21b_rt1) (N=188); in the second column, all students aged 9-17 who use the Internet (N=1,150).

Social media platforms such as Facebook, Instagram or Snapchat have developed various tools for helping children with digital bullying and harmful online content. If something bothers them online, children can flag/report such content for removal, or they may block a problematic user from contacting them further. Moreover, social media platforms have also developed so-called Help Centers or Safety Centers. These are special sections of social networking sites where children, young people as well as parents, caregivers, teachers and professionals working with children, can learn about how to help if children experience something unpleasant on these platforms (Milosevic, 2018). However, children and young people are often unaware of such resources, and we wanted to know to what extent children and young people in Serbia are familiar with these tools. Table 19 shows the percentage of children and young people ages 11 to 17 who saw these tools (whether they used them or not).

Table 19: Familiarity with blocking and reporting tools

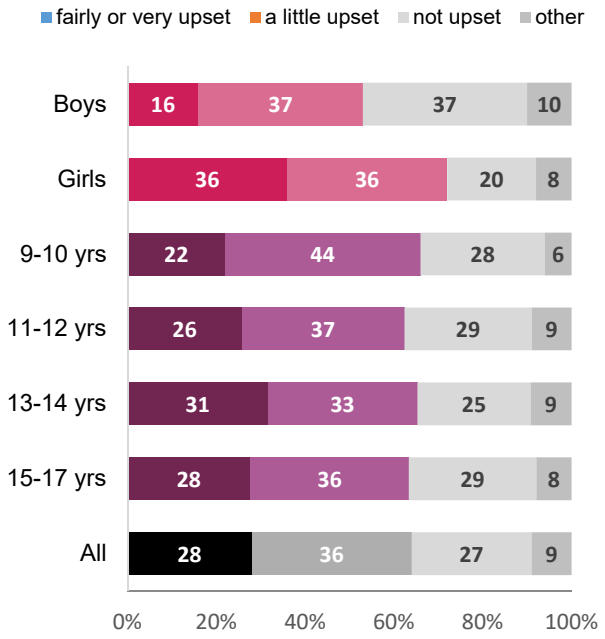
% of students who have seen this:	11-13		14-17		All
	M	F	M	F	
Blocking button (to block contacts)	78	85	92	92	84
Report button (to tell someone if you are being treated badly online)	72	60	88	87	76
Help centre or link to a helpline (to contact someone who can help you)	59	45	74	66	59

EU Kids Online 2018: op_QD5_rt: Thinking about your use of social networking or social media or gaming sites, have you seen any of these online?
Base: students aged 11-17 who previously answered that they had profile on on a social networking or social media or gaming site (N=730).

The vast majority of children are familiar with these tools. Teenagers are more familiar with them than younger children. While the majority of older and at least half of younger children are familiar with blocking tools, and more than a half across all age groups are familiar with reporting tools, the proportions of those who know about Help of Safety Centers are slightly lower. More than a half of children who have their own profile (61%) have used the block button; just over a quarter used the report button (30%) and only 8% used Help or Safety Centers.

Children and teens may react differently to cyberbullying. While some feel very upset, some report that they have not been so upset by such experience. More than a quarter of children who experienced cyberbullying say they were not upset the last time it happened (27%); slightly over a third (36%) say they were a little upset, while over one fourth of such respondents (28%) were quite or very upset (Graph 15). Girls are more likely to report being very or rather upset than boys. More than a third of female respondents who have experienced cyberbullying (36%) say they were very upset the last time it happened, while only 17% of boys reported strong or very strong levels of upset. Also, boys reported more frequently that they were not upset (37%), compared to a fifth of the girls (20%) who experienced cyberbullying and answered this question. Strong or rather strong negative emotional reactions to cyberbullying increase with age, even though more respondents in the age group 13-14 report them (30%), than in the 15-17 age group (28%).

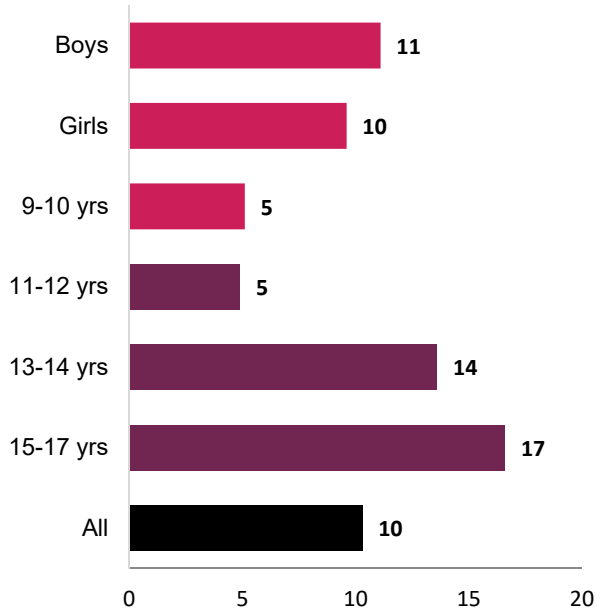
Graph 15: Level of upset after cyberbullying victimisation by age and gender



EU Kids Online 2018: c_QF24 Thinking of the LAST TIME someone treated you in a hurtful or nasty way ONLINE, how did you feel?
Base: all students aged 9-17 who previously (question c_QF21b_rt1) answered that they had been bullied online (N=188).

Finally, we asked children and young people whether they treated someone else in a hurtful or nasty way on the Internet (cyberbullying perpetration). Graph 16 shows the percentages of children who responded that they had treated someone in an abusive way on the Internet in the previous year. The numbers were arrived at by summing the response categories “several times”, “at least once a month”, “at least once a week” and “every day or almost every day”.

Graph 16: Cyberbullying perpetration



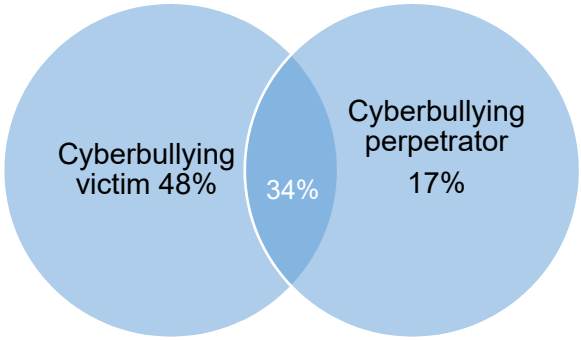
EU Kids Online 2018: cQF29b: In the PAST YEAR, how often have you TREATED someone else in any of the following way: via a mobile phone or Internet, computer, tablet, etc.

Base: all students aged 9-17 who use the Internet (N=1,150).

Every tenth student admitted to cyberbullying perpetration in the course of the previous year, roughly the same portion of boys (11%) as girls (10%). The proportion of children and young people who say they have been cruel to others increases with age - from 5% among children between the ages of 9 and 10; to 17% among students aged 15-17.

Interestingly, studies show that there is often an overlap between cyberbullying perpetration and victimisation. Thus, those who find themselves on the receiving end can later become or are simultaneously perpetrators too, sometimes out of a desire for revenge or the need to protect themselves or provoke someone else (Goerzig & Machachkova, 2015; Popadić, et al., 2014; Völlink et al., 2013). If we zero in on the group of students who were involved in cyberbullying incidents, either as victims or as perpetrators, we can see that one third of that group say they were both. The highest is the number of those who were only "victims" (almost half of the students) and the smallest is the number of those who were only "bullies" (Chart 17).

Graph 17: Overlap in cyberbullying victimisation and perpetration



EU Kids Online 2018: c_QF21b (In the PAST YEAR, how often somebody treated you in a hurtful or nasty way via a mobile phone or Internet, computer, tablet, etc.) & c_QF29b (In the PAST YEAR, how often have you TREATED someone else in any of the following ways: via a mobile phone or Internet, computer, tablet, etc.).

Base: all students who reported having been victimized and bullied others at least once (N=229).

It is not uncommon in research that cyberbullying prevalence is found to be lower when one asks about perpetration rather than victimisation. This is presumed to be related to the fact that not everyone is willing to admit to having abused someone even when they understand that they are answering anonymously — the so-called social desirability bias (Kowalski et al., 2014; Menesini & Nocentini, 2009).

"Sharenting", privacy and data protection

The issue of privacy and data protection online are extremely important topics for children and young people's wellbeing. Children's right to privacy is stipulated in the The UN Convention on the Rights of the Child (Livingstone, Carr, & Byrne, 2015), and there are many ways in which children's privacy can be compromised online. Among other things,

when parents, carers or friends, for example, share information about a child on the Internet that the child may not wish to be shared; when children unwittingly disclose information on the Internet without realizing that others may see it, or that such sharing may have a negative effect on their overall reputation.

Sharing content online might have consequences for children's safety — in some instances, a stranger could trace the child after their geolocation, when the child broadcasts his or her whereabouts in social media posts. On social media platforms, the geolocation function may be turned on without the child being aware of it.

Privacy can also be compromised through the collection of data for commercial purposes on social media platforms and various apps, or via the increasingly popular Internet of Things (Milosevic et al., 2019; Montgomery, 2015). A certain degree of tension can exist between trying to secure children's safety and data protection on the one hand, and privacy on the other. Consider the use of parental controls and various types of parental monitoring — these may protect the child's data and their overall safety, but parental eaves-dropping may breach the young person's privacy as well.

A phenomenon that may breach young people's privacy and that is becoming more pervasive is the so-called "sharenting", i.e. the tendency for parents or carers to share information (pictures, video, text) on the Internet about their children, even when children and young people may not approve of it (Blum-Ross & Livingstone, 2017; Livingstone, Blum-Ross, & Zhang, 2018). Therefore, we wanted to find out how often children and young people in Serbia had such experiences. An overview by age and gender is provided in Table 20.

Table 20: Sharenting and the sharing of personal information by others

% of students who said it had happened in the past year	9-12		13-17		All
	M	F	M	F	
My friend(s) published information about me on the Internet without asking first if I was OK with it	4	7	26	37	20
My parent/carer published information (such as text, pictures or movies) about me on the Internet without asking first if I was OK with it	12	10	19	26	17
I asked my parent/carer to remove things they had published on the Internet	13	10	19	25	17
I was upset because of information my parents published online	8	7	7	6	7
I received negative or hurtful comments from someone because of something my parent/carer published online	10	2	8	4	6
My teacher(s) published information about me on the Internet without asking first if I was OK with it	1	1	6	3	3

EU Kids Online 2018: c_QF80_oy / ec_QF80_oy In the PAST YEAR, how often has this happened to you? PLEASE TICK ONE BOX ON EVERY LINE. Options: Never, A few times, At least every month, At least every week, Daily or almost daily, I don't know, Prefer not to say.

Base: for rows 2-5 students aged 9-17 (N=1150), for rows 1 & 6 students aged 11-17 (N=863).

Somewhat less than one fifth of respondents (17%) said that their parent or carer had posted some information about them without first asking them if it was okay, and a similar number had asked their parent or carer to remove some information that they had posted about them from the Internet (17%). Less than one-tenth of respondents (7%) say they were upset about some information that their parents or carers had posted on the Internet. Only 3% of respondents said that one of their teachers posted some information about them on the Internet without first asking them if it was okay. A significant portion of respondents, over one-quarter (27%), found themselves in a situation where one of their friends posted something without first asking them if it is okay.

Personal information and data protection issues on the Internet

The ability of children to protect their data and personal information online is an important aspect of digital literacy and a frequent component of e-safety training programmes (Katz, 2012; Chaudron et al., 2018). Although children tend to know that they must not share their passwords with anyone, they often do so, which can result in misuse of their personal information. Children and young people may inadvertently spend too much money on in-app purchases, accidentally compromise their computers with a virus, and the like. The frequency of such experiences is shown in Table 21.

Table 21: Negative experiences with personal data

% of students who said it had happened in the past year	9-12		13-17		All
	M	F	M	F	
The device (e.g., phone, tablet, computer) I use got a virus or spyware	16	9	20	14	15
Somebody used my password to access my information or to pretend to be me	8	5	14	11	10
Somebody used my personal information in a way I didn't like	5	4	7	4	5
I spent too much money on in-app purchases or in online games	5	2	9	1	5
I lost money by being cheated on the Internet	7	1	7	2	4
Somebody created a page or image about me that was hostile or hurtful	5	2	4	4	4
Someone found out where I was because they tracked my phone or device	3	2	3	2	2

EU Kids Online 2018: cQF_60: In the past year, has any of the following happened to you on the Internet? PLEASE TICK ONE BOX ON EVERY LINE. Base: Students age 9-17 (N=1150).

Approximately one in ten children and young people said someone had used their password to pretend to be them, and just under one-fifth reported that their device had been infected with a virus or spyware (17%), while other experiences were slightly less frequent reported by less or not much more than 5% of respondents.

Other risky behaviours

Some children's actions can compromise their personal information and their safety, not only online but offline too.

Table 22 shows the frequency of some behaviours that carry the risk of personal data misuse or risks to child overall safety.

Table 22: Risks to personal information and personal data misuse

% of students who have done at least once some of following:	9-12		13-17		All
	M	F	M	F	
Looked for new friends or contacts on the Internet	32	30	68	70	52
Added people to my friends or contacts I have never met face-to-face	18	13	58	58	38
Sent my personal information (e.g., my full name, address or phone number) to someone I have never met face-to-face	9	4	25	27	17
Pretended to be a different kind of person online from who I really am	15	6	19	11	13
Sent a photo or video of myself to someone I have never met face-to-face	9	5	18	16	12

EU Kids Online 2018: c_QF10a-e: In the PAST YEAR, how often have you done these things online?

Basis: All students aged 11-17 who use the Internet (N=863).

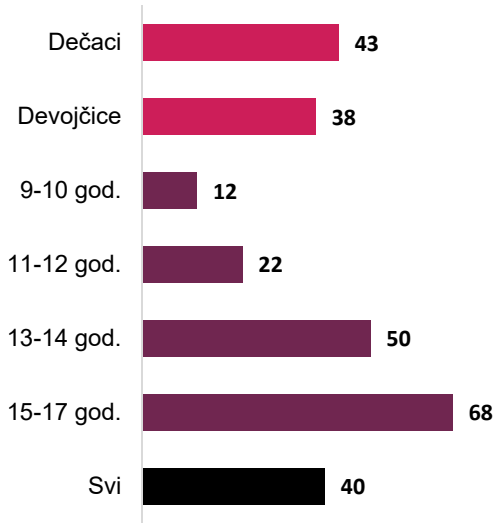
One third of the younger children (9-11) search for new friends and contacts online, while this is the case with two thirds of the older ones (13-17). If they are willing to send their personal information to strangers, add them to friends lists on social media, or send them their photos—such actions may compromise their privacy, data security or even safety. Such risky practices are not uncommon among children, and they become more frequent as they get older, since they are more likely to engage in this type of communication with others.

Contacts with strangers

Getting in touch with strangers online is one type of risk that adults particularly fear. Children are thought to be naïve, imputing good intentions to strangers while misunderstanding their own anonymity online and overestimating their own safety. This might lead to children being manipulated or even violated by strangers who intentionally misrepresent their own identity online. Cases where children were physically abused at the hands of strangers whom they had previously met on the Internet, gather significant media attention and tend to captivate public imagination. This is why research on children's Internet use tends to include questions about meeting people online—the extent to which children engage in such acitivity and exercise caution.

In our survey, slightly less than half of the children reported having communicated online with people they had not previously met in person (Graph 18).

Graph 18: Percentage of children who once had contact online with someone they had never met face-to face



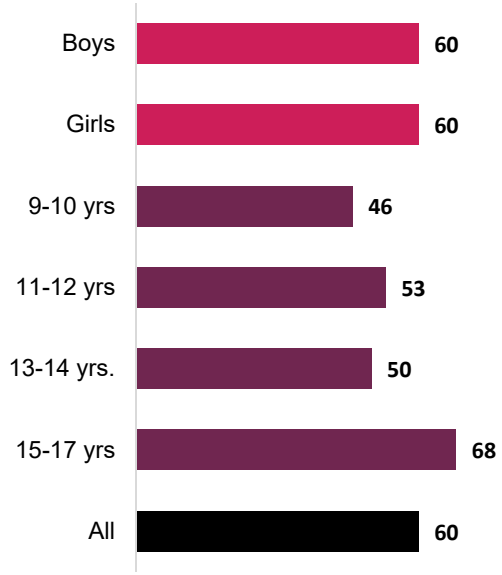
EU Kids Online 2018: c_QF11 Have you EVER had contact on the Internet with someone you have not met face-to-face before?
Base: all students aged 9-17 who use the Internet (N=1,150).

Communication with strangers increases with age. There are no significant differences between the sexes or interactions between gender and age.

What matters here, of course, is who the stranger is. "Someone whom the child has not met face-to-face before" can be a partner in a video game who needs to coordinate the gaming process; or a peer from another class at school. Hence, it is important to emphasise that such contacts can be quite harmless, and research tells us that they often are.

If a child meets a stranger online, they can decide to meet face-to-face. How many children went on to meet face-to-face someone whom they had first met online? Graph 19 shows that more than half of the children who interacted with strangers have had this experience (60%).

Graph 19: Percentage of children who met face-to-face someone they had first met online

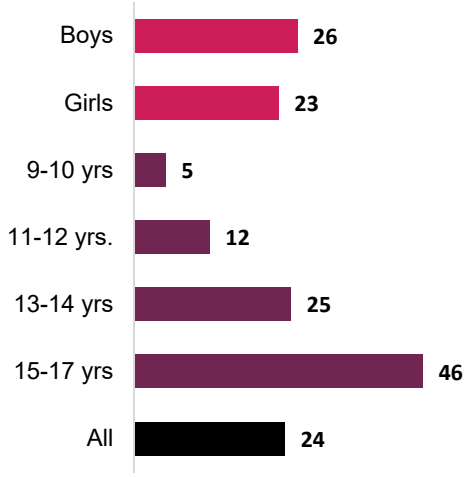


EU Kids Online 2018: c_QF12_rt1 In the PAST YEAR, have you EVER met anyone face-to-face that you first got to know on the Internet?
Base: All 9-17 year olds who told c_QF11 that they once had online contact with someone they had never met in person (N = 466).

Even in the youngest age group, every other child met someone who was once just a stranger on the Internet. We wonder what kinds of contacts these children had in mind when they answered "yes" to this question. We assume that they are mostly peers who are friends or relatives of their friends and friends with whom they communicate face-to-face.

If we interpret these percentages in the context of the entire sample (not only among the children who communicated with strangers online), we find that every fourth child in the sample has had this experience (Graph 20). Such experiences are much more common with older children, but not because older children are more likely to replace online contact with face-to-face contact (in this case, age differences would have also existed in Graph 19) but because the frequency of communication with strangers on the Internet increases with age.

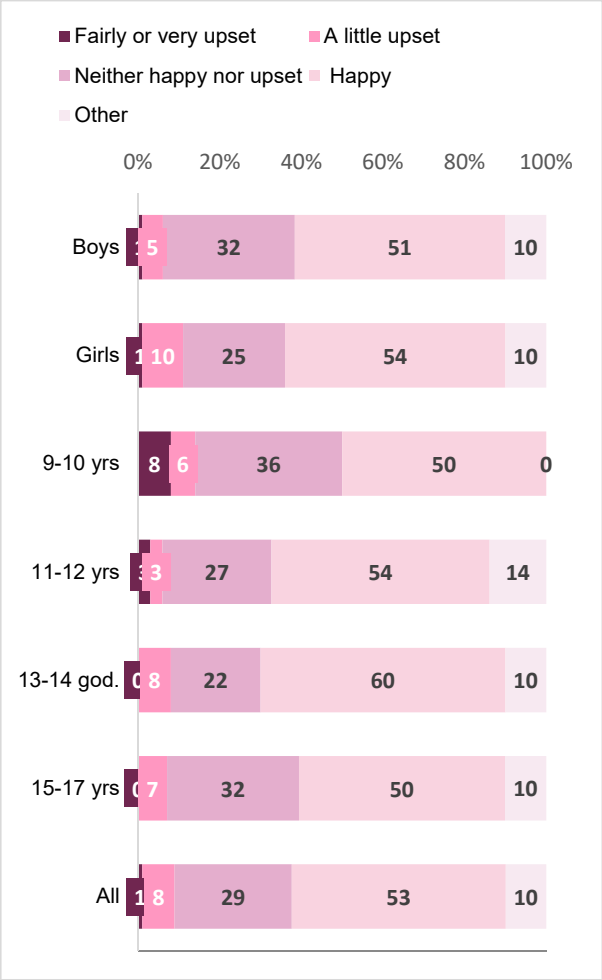
Graph 20: Percentage of children who met face-to-face someone they had first met online (out of all children in the sample)



EU Kids Online 2018: c_QF12_rt1 In the PAST YEAR, have you EVER met anyone face-to-face that you first got to know on the Internet?
Base: all students aged 9-17 who use the Internet (N=1,150).

Meeting face-to-face with a person they previously knew only in the online context was, for the most part, a pleasant experience for children, as shown in Graph 21.

Graph 21: Reactions to meeting face-to-face someone they had first met online



EU Kids Online 2018: c_QF13_rt2: Thinking of the LAST TIME you met anyone face-to-face that you first got to know on the Internet, how did you feel about it?

Base: all students aged 9-17 who previously said that in the past year they had met face to face somebody they first met online (N=466).

We emphasise that children were asked about *the last time* they had such an experience, rather than about the most enjoyable, the most unpleasant or the typical experience with meeting strangers face-to-face whom they previously met online. Most of the children reported that the experience was enjoyable and very few had unpleasant experiences. Calculated relative to the total number of children in the sample, a total of 2% of children (24 out of 1150) felt more or less upset after meeting face-to-face with a person they had previously met online.

Exposure to sexual content

Exposure to pornographic and age-inappropriate sexual content is considered to be a common risk associated with children's Internet use, along with the risk of exposure to aggressive content, propagation of harmful ideas and values, and commercial propaganda (Hasebrink, Livingstone, & Haddon, 2009). Consequences of such exposure, among other things, can be manifested in inadequate attitudes toward sex and sexual partners, in patterns of sexual behaviour, in the construction of one's sexual identity, and in the formation of problematic moral norms and aggressive tendencies (e.g., Flood, 2009; Tsaliki, Chronaki, & Olafsson, 2014).

For this reason, monitoring how much children are exposed to sexual content on the Internet, where they encounter such content and what the consequences of exposure are, is a regular topic in cross-national surveys of children's Internet use such as the *EU Kids Online, Global Kids Online* or *Net Children Go Mobile*.

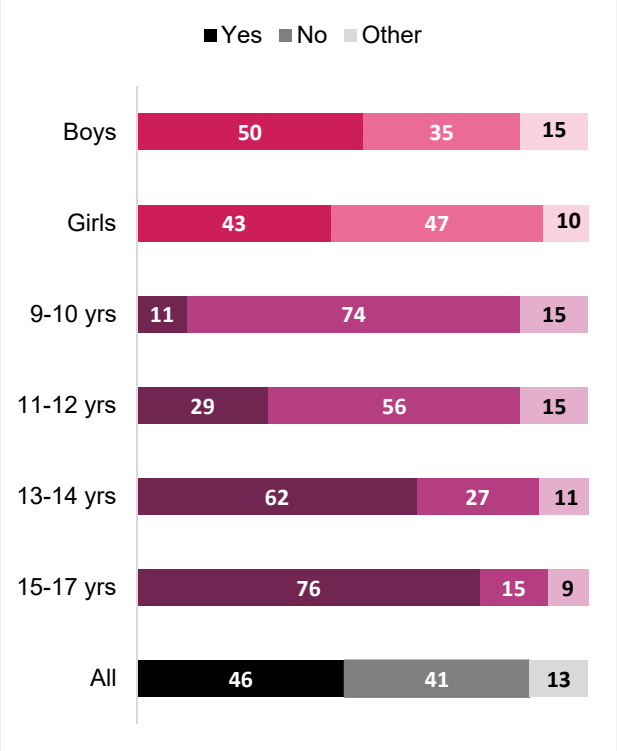
In this survey, children were introduced to the battery of questions about exposure to sexual content online with the following explanation (which was also used in the Global Kids Online pilot study in Serbia): "In the PAST YEAR, you have seen lots of different images – pictures, photos, videos. Sometimes, these images might be obviously sexual, e.g., they may show people naked or people having sex. You might never have seen anything like this, or you may have seen something like this on a mobile phone, in a magazine, on the TV, on a DVD or on the Internet. The next few questions ask you about things like this."

Children were first asked **how often** they had encountered such content during the last year.

Graph 22 shows percentages of those who answered "yes" and "no", while "other" refers to

answers such as "I don't know", "Prefer not to say" and where no answer was provided).

Graph 22: Percentage of children who encountered sexual content



EU Kids Online 2018: c_QF30: In the PAST YEAR, have you EVER SEEN any sexual images?
Base: all students aged 9-17 who use the Internet (N=1,150).

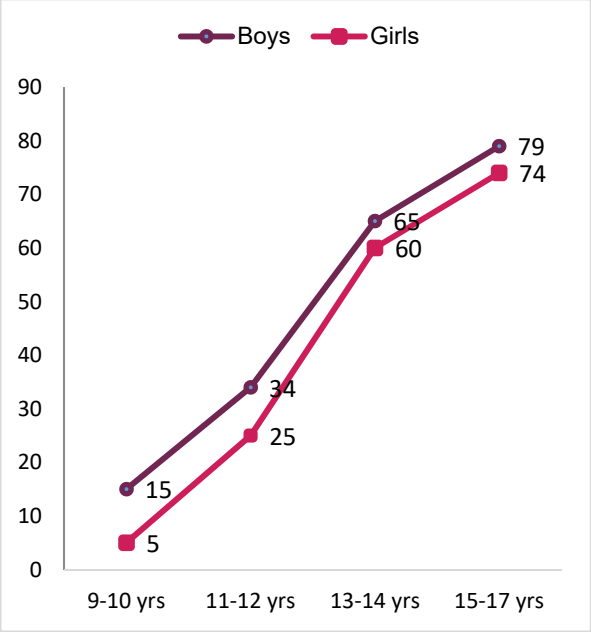
Almost every other child aged 9-17 had been exposed to sexual content at least once during the last year (every eighth child avoided answering the question). Exposure increases sharply with age, so that, at the age of 10-11 years, every tenth child encounters this type of content; the majority of children age 13 have had this experience; and so have three quarters of young people age 15-17.

In an earlier survey, on a much smaller sample of the same age range (N = 197; Popadić et al., 2016), a significantly higher percentage of children (65%) said they had encountered sexual content; 33% among 9-11-year-olds, 62% of 12-14 year-olds and even 90% of young people age 15-17.

The percentages obtained are significantly higher than those found in the EU Kids Online 2010 survey, where Serbia did not participate. According to the final report from that project (Livingstone, Haddon, Gorzig, & Olafsson, 2011), 23% of children ages 9-16 encountered some sexual content online or offline.

Boys are somewhat more often exposed to sexual content than girls. They are slightly more exposed to this content at all ages, and an initial difference of about 10% later decreases to about 5% (Graph 23).

Graph 23: Exposure to sexual content, by gender and age



EU Kids Online 2018: c_QF30: In the PAST YEAR, have you EVER SEEN any sexual images?
Base: all students aged 9-17 who use the Internet (N=1,150).

We asked the children who said they had encountered sexual content **where** they had encountered such content.

The questionnaire for **younger** students lists three possible sources: (a) in a journal or book, (b) on television and film, and (c) via a mobile phone, computer, tablet or other Internet access device.

Responses of children age 9-10 who previously said they had seen such content (28 of 275) are shown in Table 23. Children had the opportunity to say "I do not know" or "Prefer not to say", and these answers, together with avoiding any response whatsoever, are categorized as "Other".[6]

Table 23: Sources of sexual content (ages 9-10)

%	At least every month	A few times	Never	Other
In a magazine or book	12	63	18	7
On TV, film	35	32	19	14
On the Internet	34	43	9	14

EU Kids Online 2018: c_QF31a_rt / c_QF31c_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways?

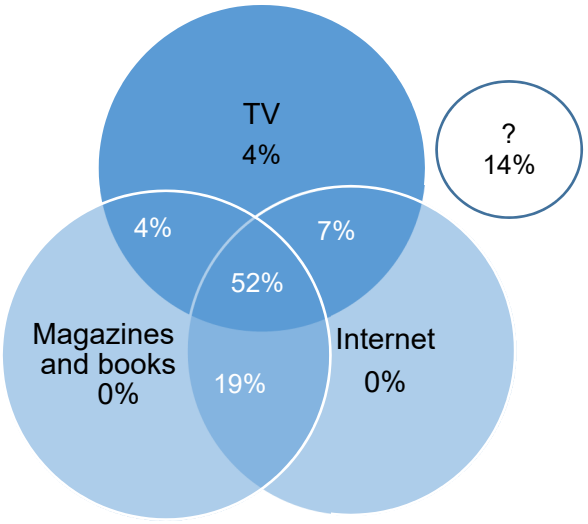
Base: all students aged 9-10 who previously said they had seen sexual images (N=28).

Among the youngest children who encountered this type of content, the most common source is the Internet – only 8% said they had never encountered such content on the Internet.

Because children can find this content in multiple sources, the following graphs show their overlap. Graph 24 shows the percentages among the children age 9-10 who previously stated that they had encountered such content (N=28), while

Graph 25 shows the responses in the context of all children aged 9-10 years.

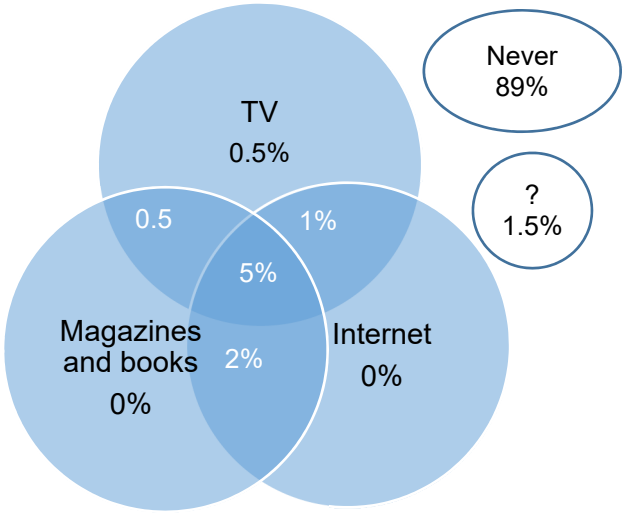
Graph 24: Overlap in sources of exposure to sexual content among children ages 9-10 who had such experience



EU Kids Online 2018: c_QF31a_rt / c_QF31c_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways?

Base: all students aged 9-10 who previously answered that they had seen sexual images (N=28).

Graph 25: Overlap in sources of exposure to sexual content among all children ages 9-10



In the PAST YEAR, how often have you seen images of this kind in any of the following ways?

Base: all students aged 9-10 who use the Internet (N=267).

[6] It is worth noting that this and other questions about the frequency of some event, there was no "Once" option as an answer; there were options as "Never", and "Few times" as the first which follows.

The youngest children encounter sexual content in multiple places; hardly anyone met with sexual content in only one source. Half of the children who encountered such content (6% of children in the overall sample) did so across all the sources.

It can be said that all children who have encountered sexual content have encountered such content on the Internet, but not only on the Internet.

In the EU Kids Online report from the 2010 survey (Livingstone et al., 2011, p. 22) 14% of 9-16-year-old Internet using children met with some sexual content online, 12% on TV or video / DVD, and 7% in magazines or books. These percentages are very close to the findings we obtained now, in 2018, for the youngest children (9-10-year olds).

Older children, ages 11-17, were asked about 14 possible sources of sexual content. For each source, they had to answer about the frequency of seeing sexual content there, ranging from "never" to "every or almost every day" and they were also given the option to say "I do not know" or "Prefer not to say".

Table 24 shows the responses of 495 children (58% of the total number of older children) who previously said they had encountered sexual content.

Every fifth student in this group, i.e. about one in ten students ages 11-17 chose the answer "in some other way". We do not know what students meant by that. That answer may include, *inter alia*, some personal sexual experience or communication with someone about their sexual experience.

Table 24: Sources of exposure to sexual content (ages 11-17)

%	At least every month	A few times	Never	Other
In a magazine or book	15	45	37	4
On television, film	54	39	5	3
Via a mobile phone, computer, tablet or any other online device	60	27	9	4
On an online video sharing platform/site (e.g. YouTube)	29	26	40	6
On an online photo sharing platform (e.g. Instagram, Flickr)	38	33	24	5
On a social networking site (e.g. Facebook, Twitter)	28	30	36	6
In an online game	11	22	61	6
On a pornographic website (adult/X-rated website)	40	12	40	9
By pop-ups on the Internet (unrequested windows that appear during web surfing)	49	33	14	4
By a message sent directly to me via my computer	8	12	73	6
By a message sent directly to me on my mobile phone	9	21	65	5
By e-mail	2	3	92	3
In an online advert	31	43	21	4
Some other way	7	12	58	23

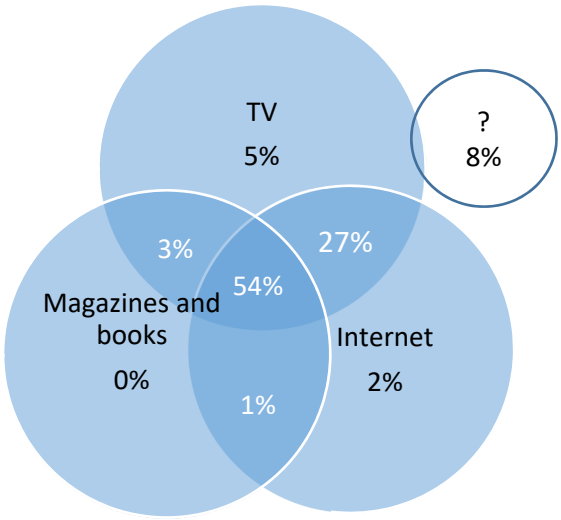
EU Kids Online 2018: c_QF31a_rt / c_QF31n_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways? Base: all students aged 11-17 who previously answered that they had seen sexual images (N=496).

The third answer offered (in the table abbreviated as "via the Internet") was: "Via a mobile phone or the Internet, a computer, tablet or any other online device." Answers 4-13 refer to specific sources on

the Internet. In this regard, anyone who has circled any of the items 4-13 that they have encountered such content should have completed such a response on item 3 as well, which is not the case. About 10% of them said on item 3 that they did not encounter such material on the Internet, but later on (perhaps some recalled later?) they said that they had encountered such material.

Considering that children can encounter this content in multiple sources, the following graphs show their combinations. Graph 26 shows the responses of children who stated that they encountered such content (N=495), while Graph 27 shows these responses among all children aged 11-17 (N=855). In Graphs 26 and 27, the percentage of those who saw the content on the Internet was calculated on the basis of their answers to answer options 3-13: Those who, on at least one of these options, answered that they had at least once seen sexual content there, were categorized as having encountered sexual content online.

Graph 26: Overlap in sources of exposure to sexual content, children 11-17 who had such experience

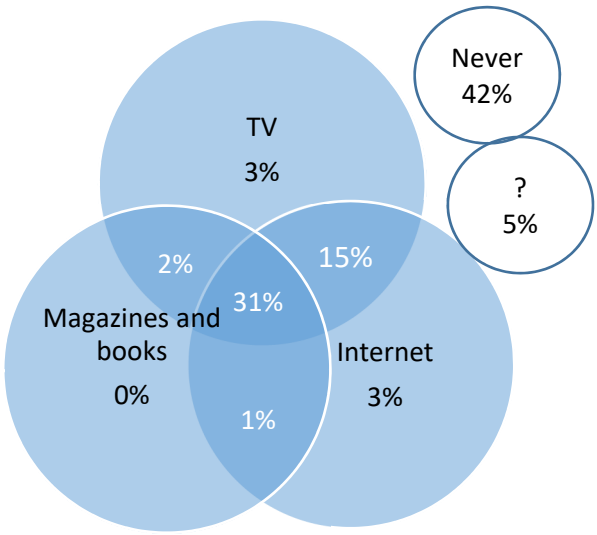


EU Kids Online 2018: c_QF31a_rt / c_QF31n_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways?
Base: all students aged 11-17 who previously answered that they had seen sexual images (N=496).

Among the older students who indicated that they had seen such content, only 38 (8%) did not choose at least one answer option that included the Internet, 4% said that each Internet-related exposure happened at least once a week or more frequently; and 12% said that exposure via each of these Internet-related answer options happened at least once a month or more frequently. There are no respondents who have only seen such content in a book or magazine, and 6 have only seen it on television or film.

Among those who have seen such content, few have seen it via one medium only: rather, they encountered such content across media outlets, and almost everyone had such experience on the Internet.

Graph 27: Overlap in sources of exposure to sexual content, all children ages 11-17



EU Kids Online 2018: c_QF31a_rt / c_QF31n_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways?
Base: all students aged 9-17 who use the Internet (N=867).

If we observe all children between the ages of 11-17, we can say that most children have seen such content. As we noted by showing the results for the youngest age, among children who met with sexual content, almost all of this content was encountered on the Internet, but almost none on the Internet alone. Most of these children have

encountered sexual content on television, in books and on the Internet. The data also show the availability of sexual content in TV programs that are broadcast in times when children could be watching them.

It seems as if there are two large groups of children: those who have never encountered such content and those who have done so repeatedly via different media. The rarest are those who have encountered such content in one medium only.

The Internet, therefore, is not a medium where children encounter sexual content more often than in other media, but there is a greater risk of encountering sexually explicit and pornographic content on the Internet rather than in publicly controlled media.

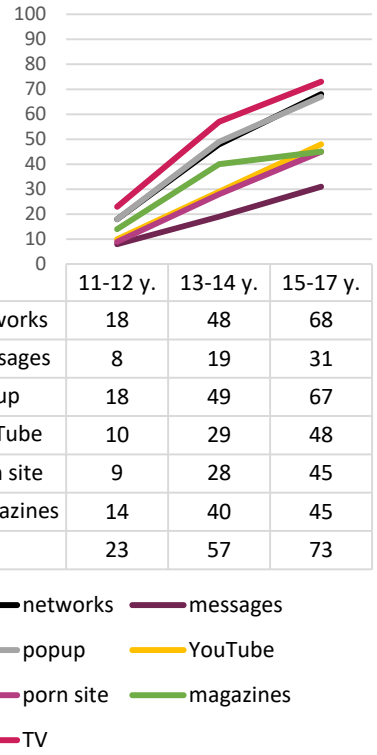
Where do children tend to encounter sexual content? The answers to this question are shown in Graph 28.

The chart 28 shows, first of all, that television content is the most common and seems to be a completely normalised source of sexual content for young people. It is a fact that even in the afternoon and early afternoon, explicit sexual content can be encountered on television channels with national reach, even if one does not intentionally look for them.

As much as 88% children who have seen sexual content or 51% of the older children who have seen such content have encountered it in pop-ups or ads.

It is also evident that sending and receiving messages with sexual content are relatively common, to the extent that this has become an ordinary form of youth communication on social media platforms, online messages and texts. In addition, it is evident that a significant percentage of young people are actively searching for such content by visiting porn sites.

Graph 28: Sources of sexual content by age



	11-12 y.	13-14 y.	15-17 y.
networks	18	48	68
messages	8	19	31
popup	18	49	67
YouTube	10	29	48
porn site	9	28	45
magazines	14	40	45
TV	23	57	73

EU Kids Online 2018: c_QF31a_rt / c_QF31n_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways?
Base: all students aged 11-17 who use the Internet (N=855).

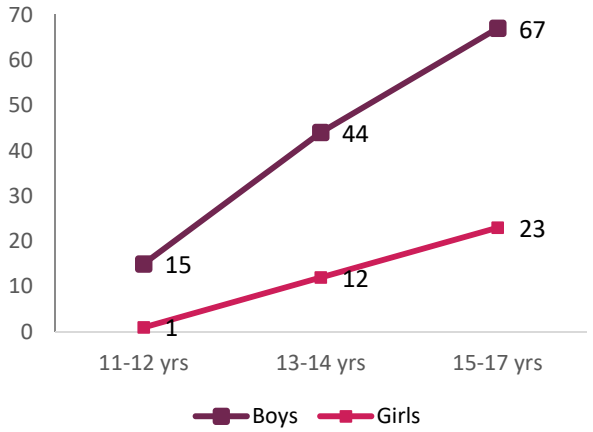
Access to porn sites

While the exposure to sexual content through advertisements is most likely unintentional and unexpected, access to porn sites is intentional and content is far more explicit. A total of 29% of children ages 11-17 have accessed a porn site. Among them, 14% access it every day or almost every day (7% said that in the last year, they have accessed a porn site several times, 3% at least once a month, and 5% at least once per week).

In the previously mentioned study (Popadić et al., 2016), the percentages found were half as low — 15% stated that they found sexual content on "adult sites".

Access to porn sites is significantly associated with gender and age (Graph 29).

Graph 29: Access to porn sites by gender and age



EU Kids Online 2018: c_QF31h_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways (On a pornographic website (adult/X-rated website))?
Base: all students aged 11-17 who use the Internet (N=863).

It is significantly more common among boys than among girls. As many as two-thirds of boys ages 15-17 have visited these sites and so have a quarter of girls. Already at the youngest age 9% (15% boys and 1% girls) accessed a porn site.

Among the oldest boys, as many as 43% access the porn sites every or almost every day (only 6% girls) and 6% never.

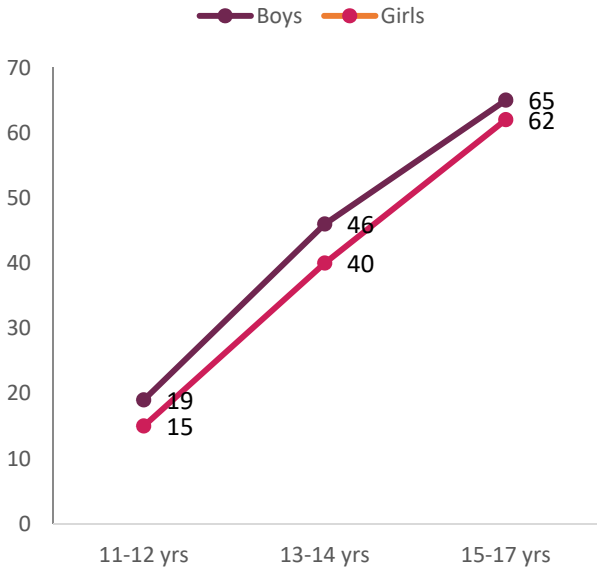
The conclusion from the *EU Kids Online* report that the otherwise widespread belief that "everyone views pornography online" is just a "myth" (Livingstone, Haddon, Gorzig & Olafsson, 2011, p. 42) applies in principle to our research too, but here such a "myth" is much less distant from the real state of affairs. The fact is that 30% of children age 11 to 17, as well as two thirds of children age 15-17, are not "everyone", but they are not a negligible minority either, especially considering the percentage of children, boys in particular, who visit such sites almost daily. Such finding is the result of, on the one hand, easy accessibility of these sites in unsupervised conditions; and children's developmental process on the other, as sex becomes a strong interest during puberty and adolescence. Pornographic material thus becomes a form of sexual self-education for children, albeit a "bad and dangerous" one, as Flood points out (Flood, 2009, p. 384).

Sexual content on social networks and platforms

Viewing sexual content on social media platforms (Instagram, Flickr, Facebook, Twitter) differs from seeing it on TV, print media and porn sites in a sense that in this case such material is exchanged in mutual communication.

Out of the total number of children aged 11-17, 46% of them have at least once found such material on social networks. The graph below shows the break down by age group and gender.

Graph 30: Sexual content on social networking sites, by gender and age



EU Kids Online 2018: c_QF31e_rt i c_F31f_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways: (e) On an online photo sharing platform (e.g. Instagram, Flickr) (f) On a social networking site (e.g. Facebook, Twitter?
Base: all students aged 11-17 who use the Internet (N=863).

Except for age differences, there are no gender differences in the accessibility of this content on social networks. Even at the age of 11-12, almost every fifth student found such material on social

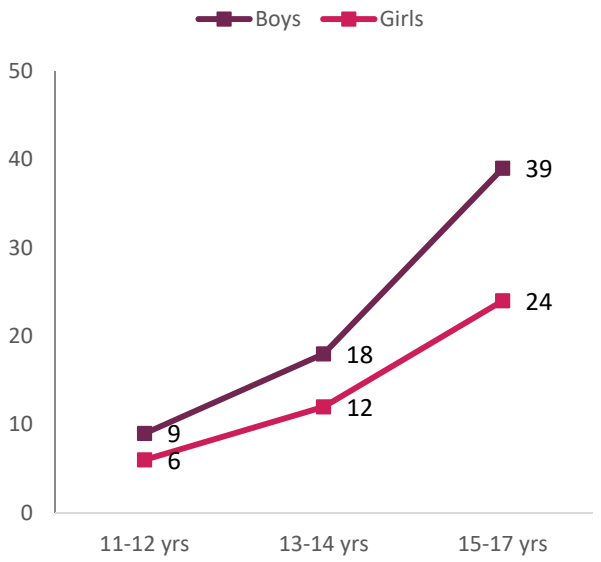
networks and platforms, while at older age such content was accessible to most young people.

Sexual content in online or text messages

The three answer options offered referred to receiving sexual content in messages sent directly on a computer (it was not specified what type of message was meant by this), a mobile phone or via email. 12% found sexual content in a message on a computer, 17% on a mobile phone, and 3% in an email. One in five students (20%) saw sexual content through at least one of these three types of messages.

Graph 31 shows the percentages of those who received sexual content in at least one of the three ways mentioned above.

Graph 31: Receiving sexual messages, depending on gender and age



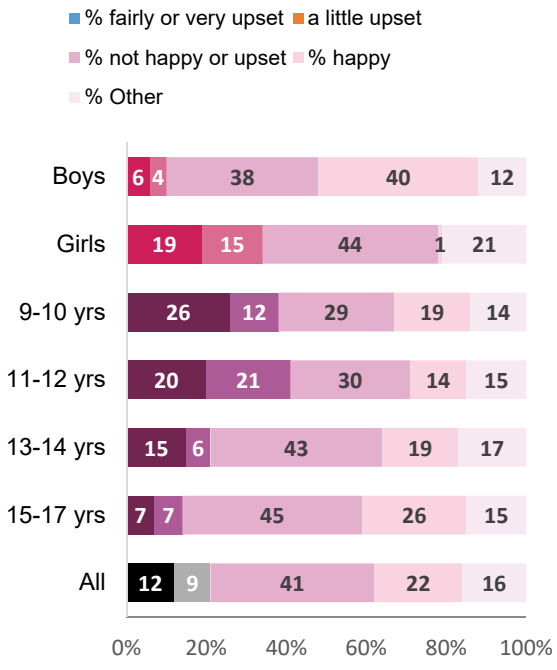
EU Kids Online 2018: c_QF31j_rt i c_F31k_rt: In the PAST YEAR, how often have you seen images of this kind in any of the following ways: (j) by a message sent directly to me via my computer; (k) by a message sent directly to me on my mobile phone; (l) by e-mail?
Base: all students aged 11-17 who use the Internet (N=863).

In messages that are received or exchanged over the Internet and mobile, sexual content is less frequent than it is on social networks. The differences between boys and girls gradually increase (boys start to receive more such messages). There are marked age differences here as well. While just fewer than 10% of children ages 11-12 received sexual content in messages, about one-third of children ages 15-17 received messages containing sexual content.

How did those who saw the sexual content feel?

It is understandable that sexual content can cause diametrically different reactions in those who see such content. We asked children who said they had seen such content about how they felt the last time they saw it. Responses in percentages are shown relative to the total number of those who saw such material.

Graph 32: Reactions to sexual content



EU Kids Online 2018: c_QF32_rt: Thinking of the LAST TIME you have seen images of this kind, how did you feel about it?
Base: all students aged 9-17 who previously answered that they had seen sexual messages (N=533).

In the overall sample, there were 5% of those who were quite or very upset when they (last) saw sexual content. On the other hand, there were as many who were happy to see such material. There is a greater risk that sexual material will cause discomfort to girls than to boys, to younger than to older children. We assume that greater

agitation indicates that this material appeared unexpectedly or that they did not wish to see it.

Receiving and sending sexual messages ("sexting")

Receiving and sending explicit sexual messages via mobile or Internet (sexting) is partially covered by alternatives in the question about the ways of obtaining sexual content; but a separate battery of questions in the questionnaire covers this practice, and we detail the results here.

The reason why sexting is the subject of particular attention is not necessarily that it is seen as a form of indecent content for children or inappropriate communication, but because there is a risk that such communication is partly coercive and manipulative and may lead to psychological abuse. Modern technology enables children to produce and send this kind of messages easily, quickly and impulsively, without thinking about the possible consequences (Bond, 2014).

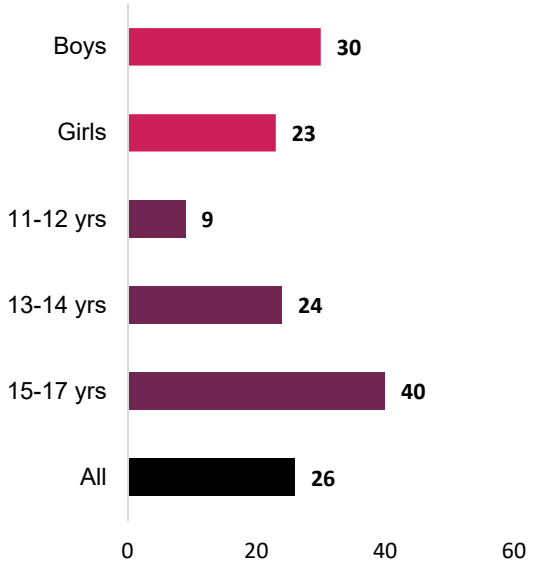
The introductory text that preceded the questions in our questionnaire about sending and receiving sexual messages and pictures was the following: "People do all kinds of things on the Internet. Sometimes they may send sexual messages or images. By this we mean talk about having sex or images of people naked or images of people having sex."

Only older students (11-17 years old) were asked to answer this group of questions.

Have they received any sexual message in the last year?

Graph 33 shows the percentage of YES responses relative to the total number of students who were asked this question. This means that the answers "I don't know" and "Prefer not to say" were not treated as missing data. There were 8% of these students who did not respond or who said that they did not know.

Graph 33: Percentage of students who received a sexual message in the past year



EU Kids Online 2018: c_QF40_oy: In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos?
Base: all students aged 11-17 who use the Internet (N=863).

A quarter of students received such a message. Boys received these messages somewhat more frequently than girls (the difference is not large, 7%).

If we compare the answers to this question (Graph 33) to the answers to a similar one, which also refers to receiving sexual messages via computer, mobile phone or email (c_QF30j-l), and which are shown in Table 24, we find similar trends: Age-related differences are more conspicuous than gender-related ones.

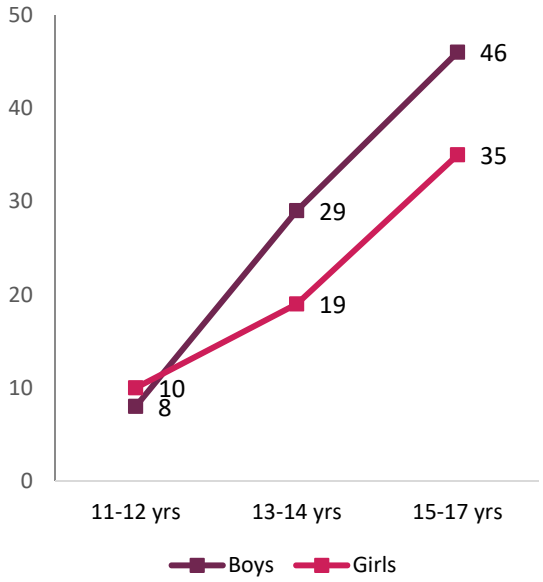
The EU Kids Online report (Livingstone et al., 2011) states that 15% of children in Europe aged 11-16 received some sexual message. In our study, this percentage was 11% higher. It is possible that the main reason for this increase lies in the advancement of mobile technology that enables

children to produce and distribute sexual content in the form of text or images. It should also be kept in mind that the age range in this study is broader (we included seventeen-year-olds), which certainly had an impact.

Receiving these messages increases significantly with age. Every tenth child in the 11-12 age group reports to have received such a message. In the oldest age group (15-17), such messages were received by 40% of children (Graph 34).

Only at the youngest age were these messages equally received by boys and girls. In older age groups, boys received such messages more often (by about 10%) than girls.

Graph 34: Receiving a sexual message in the last year, depending on gender and age

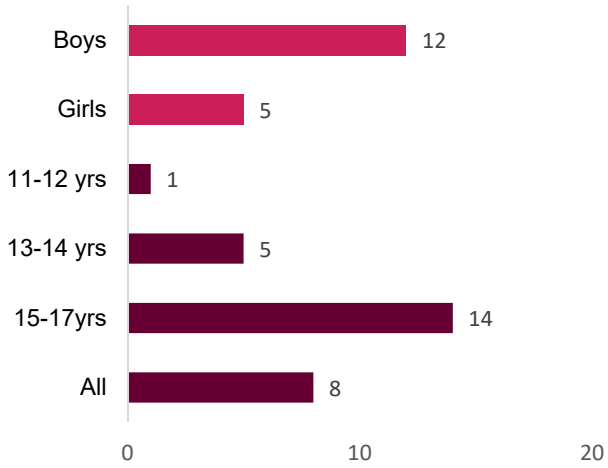


EU Kids Online 2018: c_QF40_oy: In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos?
Base: all students aged 11-17 who use the Internet (N=863).

Children who sent or posted sexual messages

Only 69 (8%) answered in the affirmative. The percentage of YES responses is relative to the total number of students who were asked the question; the answers "I don't know" and "Prefer not to say" were not treated as missing data. Those who did not respond or said they did not know amounted to 8% (Graph 35).

Graph 35: Sending or posting sexual messages

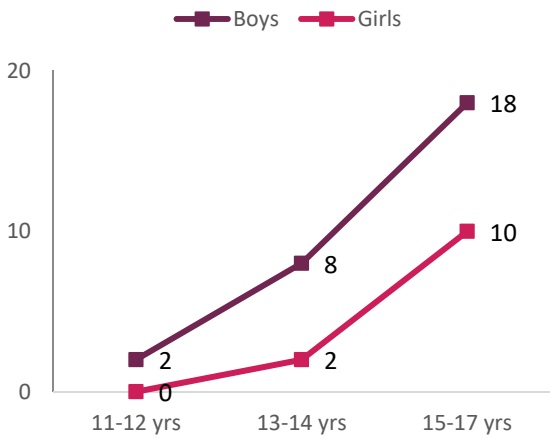


EU Kids Online 2018: c_QF45_oy: In the PAST YEAR, have you EVER SENT or POSTED any sexual messages? This could be words, pictures or videos about you or someone else.

Base: all students aged 11-17 who use the Internet (N=863).

As with receiving sexual messages, the frequency of sending sexual messages increases with age, and at older ages becomes more characteristic of boys than of girls (Graph 36).

Graph 36: Sending or posting sexual messages in the past year, depending on gender and age



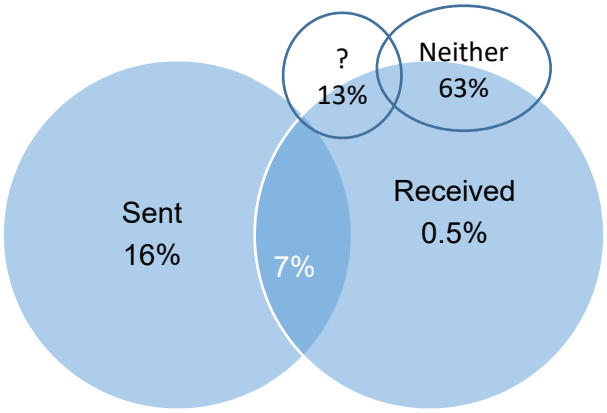
EU Kids Online 2018: c_QF45_oy: In the PAST YEAR, have you EVER SENT or POSTED any sexual messages? This could be words, pictures or videos about you or someone else.

Base: all students aged 11-17 who use the Internet (N=863).

Relationship between sending and receiving sexual messages

Graph 37 shows the overlap in sending and receiving sexual messages.

Graph 37: Relationship between sending and receiving sexual messages



EU Kids Online 2018: c_QF40_oy In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos? & c_QF45_oy: In the PAST YEAR, have you EVER SENT or POSTED any sexual messages? This could be words, pictures or videos about you or someone else.

Base: all students aged 11-17 who use the Internet (N=863).

Almost everyone who sent a sexual message also received one (there is a small percentage of those who sent the message without receiving it). Few respondents who did not receive a message actually sent one. Thus we could speculate that sending a message is the most frequent response to receiving one.

How did they send the sexual message?

The answers in Table 25 refer to 69 older students who said they had sent a sexual message.

Among those who sent / posted sexual content, almost all did so by sending a sexual message to someone. Half of them asked for sexual information, while only a quarter posted such content on the Internet.

Table 25: Sexting behaviours among children who sent or posted sexual messages

%	At least every month	A few times	Never	Other
Sent a sexual message	46	47	5	2
Posted a sexual message where other people could see it on the Internet	18	8	74	3
Asked someone on the Internet for sexual information about him or herself	28	20	52	11

EU Kids Online 2018: c_QF46_0y: In the PAST YEAR, how often, if ever, have you SENT or POSTED any sexual MESSAGES (words, pictures or videos) in the following ways?
Base: all students aged 11-17 who previously answered that they had sent sexual message (N=69).

Table 26 shows these percentages in the context of the total number of older students (863 of them).

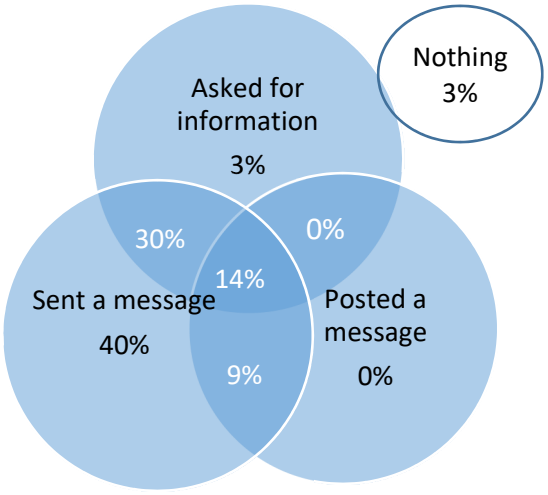
Table 26: Sexting behaviours among all older children in the sample

%	At least every month	A few times	Never	Other
Sent a sexual message	3	4	93	0
Posted a sexual message where other people could see it on the Internet	1	1	97	1
Asked someone on the Internet for sexual information about him or herself	2	1	96	1

EU Kids Online 2018: c_QF46_0y: In the PAST YEAR, how often, if ever, have you SENT or POSTED any sexual MESSAGES (words, pictures or videos) in the following ways?
Base: all students aged 11-17 who use the Internet (N=863).

Among children aged 11-17, 7% sent some sexual message (39 boys and 21 girls) in the last year; 2% posted some sexual content online (14 boys and 7 girls) on the Internet, and 3% requested sexual information (22 boys and 5 girls). In this case, too, we can see how these three ways of sending sexual messages overlap (Graph 38).

Graph 38: Overlap in sexting behaviours



EU Kids Online 2018: c_QF46_0y, a-c: In the PAST YEAR, how often, if ever, have you SENT or POSTED any sexual MESSAGES (words, pictures or videos) in the following ways?

Base: all students aged 11-17 who previously answered that they had sent a sexual message and who answered on all three items in the question (N=61).

The graph shows the responses of 61 of them who answered for each of the three sending methods whether or not they had done it.

Looking for sexual information and uploading sexual material online is almost never an isolated process, as the graph above shows; both always go hand in hand with sending sexual messages. Those who sent sexual messages mostly did not stop there but either searched for sexual information or uploaded some content online as well.

Have they been asked for sexual information?

We worded this question in the following way: In the PAST YEAR, how often, if ever, have you been asked by someone on the Internet for sexual information (words, pictures or videos) about yourself (like what your body looks like without clothes on or sexual things you have done) when you did not want to answer such questions?

Note here that children are asked to recall only those cases where they did not want to answer such questions, and that "once" was not an available answer option.

Only older students answered the question and the answers are shown in Table 27.

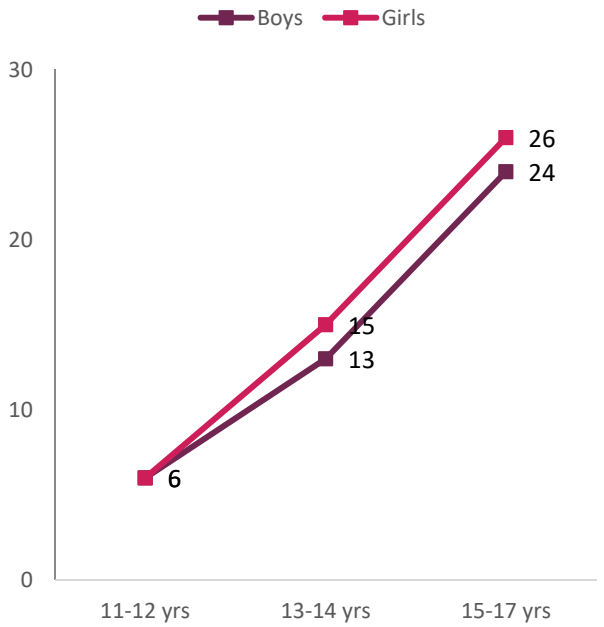
Table 27: Frequency of being asked for sexual information

%	At least every month	A few times	Never	Other
Asked by someone on the Internet for sexual information	3	13	76	8

EU Kids Online 2018: c_QF47_oy In the PAST YEAR, how often, if ever, have you been asked by someone on the Internet for sexual information (words, pictures or videos) about yourself (like what your body looks like without clothes on or sexual things you have done) when you did not want to answer such questions?
Base: all students aged 11-17 who use the Internet (N=863).

This phenomenon, as well as others related to sexual behaviour that have been discussed, is more common at older ages. One in five students ages 11-17 says that they have been asked for sexual information without wanting to disclose it in the past year. At all ages, the percentage of boys and girls who say so is the same (Graph 39).

Graph 39: Children requesting sexual information from others, by gender and age



EU Kids Online 2018: c_QF47_oy: In the PAST YEAR, how often, if ever, have you been asked by someone on the Internet for sexual information (words, pictures or videos) about yourself (like what your body looks like without clothes on or sexual things you have done) when you did not want to answer such questions?

Base: all students aged 11-17 who use the Internet (N=863).

Exposure to harmful content

We asked older elementary school students and high school students (ages 11-17) whether they had been exposed to the harmful content listed in Table 28 in the past year (whether people were talking about it or showing it).

Half of the students surveyed – twice as many in the 14-17 age group as in the 11-13 age group – saw on the Internet images of blood and violence for example people injuring each other or injuring animals. Almost three quarters (71%) of girls aged 14-17 have encountered such content.

Table 28: Exposure to harmful content

% of students who have seen on the Internet:	11-13		14-17		All
	M	F	M	F	
Gory or violent images, for example of people hurting other people or animals	28	32	56	71	49
Ways of physically harming or hurting themselves	36	34	54	59	47
Hate messages that attack certain groups or individuals (e.g., people of different colour, religion, nationality, or sexuality)	24	29	59	61	45
Ways to be very thin (such as being anorexic or bulimic, or "thinspiration")	18	33	38	57	38
Their experiences of taking drugs	14	18	45	57	35
Ways of committing suicide	19	21	36	44	31

EU Kids Online 2018: c_QF50: In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things?
Base: all students aged 11-17 who use the Internet (N=863).

A bit less than a half of the surveyed students (47%) saw self-harming content on the Internet, and one-third (31%) saw ways one could commit suicide.

In the younger, and especially in the older age groups, it is evidently girls who are more often exposed to almost all the types of harmful content listed. Older girls are particularly prone to searching the Internet for ways to become thin, which can be attributed to age characteristics, but they are also exposed to information about others' experiences with drug use (as many as 57% of girls have seen it).

It is discouraging to find that almost half of the students surveyed (45%) saw hate messages targeting certain national, racial or sexual identities.

Excessive Internet Use (EIU)

One of the risks associated with the use of the Internet is not necessarily related to any type of Internet content but concerns the very use of the Internet. Here we refer to the phenomenon that had first been characterized as "Internet addiction" and later by terms such as: "problematic Internet use", "pathological Internet use", "compulsive Internet use", etc. Over time, as the term "Internet addiction" gained traction in everyday life, it gradually lost its popularity as a useful scientific concept (see: Hinic, 2014; Starcevic & Aboujaoude, 2016).

The problem that these terms cover is related to a set of issues: excessive time spent at the computer (Internet), compulsive need to be online that is difficult to control, problems in communication with the environment, etc.

We will use the term Excessive Internet Use (EIU) here (Griffiths, 2000; Smahel & Blinka, 2012), implying a diminished ability to control Internet use and consequently problems in communication with the environment. This term, therefore, does not necessarily refer to psychopathology and addiction, but to an unsuccessful self-regulation of behaviour that only in rare and extreme cases (and in those with extremely high scores on a scale that measure this phenomenon) can indicate psychopathology. Excessive Internet use is not the same as time-consuming Internet use.

Excessive Internet use (EIU) was examined via the 7 indicators listed in Table 29, which shows percentages of students' responses to individual statements. The questionnaire contained seven indicators for older children and six for younger children (the last indicator was an optional question for younger students and was therefore not asked).

Table 29: Prevalence of indicators of Excessive Internet Use (EIU)

%	Never	A few times	At least every month	Other
I have gone without eating or sleeping because of the Internet	82	11	4	3
I have felt bothered when I cannot be on the Internet	53	31	11.5	5
I have caught myself using the Internet although I'm not really interested	56	22	13	9
I have spent less time than I should with either family, friends or doing schoolwork because of the time I spent on the Internet	50	24	20	6
I have tried unsuccessfully to spend less time on the Internet	50	27	15	9
I have experienced conflicts with family or friends because of the time I spent on the Internet	64	19	11.5	5
I think the amount of time I spend on the Internet causes problems for me	62	15	15	8

EU Kids Online 2018: c_QF70a / c_QF70g: In the PAST YEAR, how often have these things happened to you?

Base: all students aged 9-17 who use the Internet (N=1,150) and for the last item all students aged 11-17 who use the Internet (N=863).

With the exception of sleep and eating disorders, all other indicators (symptoms) of EIU were relatively widespread; they occur in at least a third and most often in half of the students (note again that "once" did not exist as an answer option). The most common problems were those related to time spent online.

For each of the individual EIU indicators, a two-factor analysis of variance was performed, where the factors were gender and age (four age categories were included, except for the last claim, where there were three age categories).

The significance of age and gender differences is shown in Table 30.

Table 30: Relationship of EIU indicators with gender and age

MANOVA	Gender	Age
I have gone without eating or sleeping because of the Internet	n.z.	**
I have felt bothered when I cannot be on the Internet	n.z.	**
I have caught myself using the Internet although I'm not really interested	F>M *	**
I have spent less time than I should with either family, friends or doing schoolwork because of the time I spent on the Internet	F>M **	**
I have tried unsuccessfully to spend less time on the Internet	n.z.	**
I have experienced conflicts with family or friends because of the time I spent on the Internet	n.z.	**
I think the amount of time I spend on the Internet causes problems for me	n.z.	**

EU Kids Online 2018: c_QF70a / c_QF70g: In the PAST YEAR, how often have these things happened to you? Factors: Gender and Age (4 categories).

Base: all students aged 9-17 who use the Internet (N=1,150).

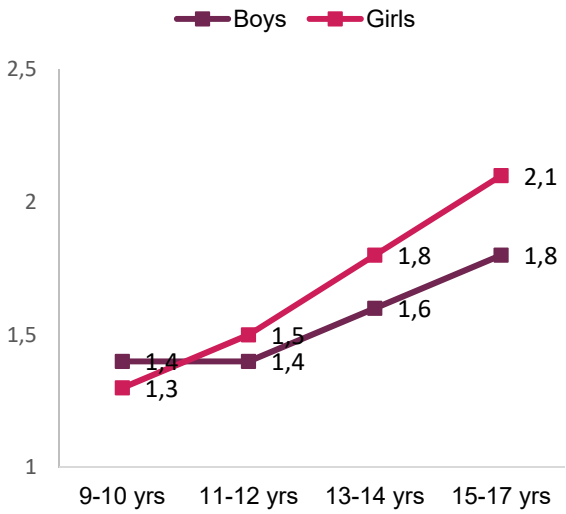
Significant age differences were found on all statements, and in the same direction: the older the age, the indicators of excessive Internet use were more pronounced. Gender differences were not pronounced and existed for only two statements, and in both cases the symptoms of EIU were more pronounced in girls.

An index of excessive Internet use was calculated from this group of questions. The scale consisted of 6 common statements; for older students it had a high level of homogeneity (Alpha = 0.82) and for younger students a relatively low but essentially satisfactory level of homogeneity (Alpha = 0.67)[7].

The average score for excessive Internet use was not particularly large: M = 1.64 on a scale of 1 to 5. A quarter of children answered "never" on all statements and had a score of 1, but 20% of children had a score of 2 and above (as if they said that they experienced each of the symptoms "a few times").

The association of EIU scores with gender and age, determined through the analysis of variance, is shown in Graph 40.

Graph 40: Dependance of the EIU index on gender and age



EU Kids Online 2018: Score computed from answers to questions c_QF70a-f.
Base: all students aged 9-17 who use the Internet (N=1,150).

The EIU score was dependant on gender ($F(1,1157) = 4.41$, $p = 0.036$) but above all on age ($F(3,1157) = 54.43$, $p = 0.000$). Older children compared to younger hildren, as well as girls compared to boys, had higher EIU scores. There was also a significant interaction of gender and age ($F(3,1157) = 5.23$, $p = 0.001$): the growth rate of EIU increased significantly more rapidly in girls than in boys; so although at EIU was higher in boys than in girls for the youngest age group, at the ages of 13-14 years and 15-17 years, girls demonstrated significantly higher scores.

The correlation between excessive Internet use and a number of other variables[8] is shown in Table

7 The score is calculated by the COMPUTE command dependency = MEAN.5 (c_QF70a_oy, c_QF70b_oy, c_QF70c_oy, c_QF70d_oy, c_QF70e_oy, c_QF70f_oy), which means that it is calculated as the average of at least 5 of the six statements. The respondent who did not answer one claim was allowed to receive the score. This reduced the percentage of missing scores from 18% to 7%.

8 The variables were counted as the sum of the answers to the following statements: aggressiveness: QA10a-e, caring: QA11a-e, poor concentration: QA12a-e, perceived discrimination: QA16a-j, sensation seeking: QA18a-b, self-confidence: QA21a-i, life satisfaction: QH1, family support: QI2a-c, school support QI1a-e, economic standard QA9.

31. The correlation was calculated separately for the youngest and for the older age groups, and the score for older students (11-17 years) was calculated based on 7 statements. Correlations were computed specifically for two age groups for a number of reasons. First, the factors on which EIU depends may change with age. Second, the scores were calculated from various questions, including the EIU score and the scores for aggression, caring, self-confidence, concentration (because the scales for older children had additional items).

Table 31: Correlations between EIU and personal factors for younger and older age groups

	9-10 yrs	11-17 yrs
Aggressiveness	.39**	.43**
Anxiety	.40**	.43**
Sensation seeking	.33**	.31**
Self-confidence	-.09	.05
Impulsivity	.26**	.38**
Digital skills	.20**	.18**
Mobile skills	.18*	.15**
Time spent on the Internet	.32**	.43**
Family support	-.02	-.12**
School support	-.18*	- 13**
SES	.05	-.01
Life satisfaction	.00	-.11**
Perceived discrimination	/	.36**

EU Kids Online 2018:

Base: for the first column, all students aged 9-10 who use the Internet (N=267), and for the second column all students aged 11-17 who use the Internet (N=863).

Both among younger and older children, higher scores on the scale of Excessive Internet Use are shown by children who also have higher scores on the scale for aggression, anxiety, sensasion seeking, and children with more pronounced concentration problems. Such children are more likely to experience being discriminated (this relationship has only been examined in older children). It should be borne in mind that these are just correlations (zero-order correlations), so it is unclear what is the cause and what is the consequence here. Only partial correlations or regression analyses would show how much each variable contributes to the total score. For example, compulsively spending time online may lead to increased anxiety, weak concentration, and aggression, but perhaps it works the other way around—children with more anxiety, lower concentration, and greater aggression may have a more pronounced need to spend time online.

Kids with higher scores on EIU, however, also show more developed digital and mobile skills. Family support and support at school, as well as higher economic standard, are poorly (if at all) linked to the EIU. In older age groups, young people tend to be more dependent on the Internet and more dissatisfied with their own lives, but this relationship is very weak, and it does not exist among younger children.

Intensive Internet Use

In the early research on problematic Internet use, the initial view was that time-consuming Internet use is itself a form of Internet use disorder, or at least a major symptom of the disorder. Later on, there was a recognition that the two phenomena should be clearly distinguished. Internet use disorder (or problematic, compulsive, excessive use – these terms are sometimes used synonymously and sometimes not) refers primarily to compulsivity and failed self-regulation. This disorder is often accompanied by intense Internet use, although such intense use is not a necessary precondition for there to be a disorder. On the other hand, intensive, time-consuming Internet use does not have to have elements of compulsiveness and inability to control one's Internet use. Such intense use is considered problematic only to the extent that the person's time spent on the Internet is at the expense of other activities that are necessary for person's normal psychophysical development.

In our study, EIU is related to time spent on the Internet in both age groups, but this connection is by no means strong enough to be considered as the sole or main indicator of disrupted online behaviour. More importantly, Excessive Internet Use and Internet overuse show distinct associations with the same set of variables, suggesting the need to distinguish between these two phenomena. If we compare the correlations in Table 31 with those in Table 32, we will see striking differences, especially at a younger age.

Table 32: Correlations between time spent online and personal factors for younger and older age groups

	9-10 yrs	11-17 yrs
Aggressiveness	.10	.37**
Anxiety	-.01	.18**
Sensation seeking	.22**	.29**
Self-efficacy	-.02	.05
Impulsivity	.08	.25**
Digital skills	.30**	.39**
Mobile skills	.25**	.30**
Time spent on the Internet	-.03	-.10**
Family support	-.10	.07*
School support	.06	.02
SES	.01	-.04
Life satisfaction	/	.16**
Perceived discrimination	.10	.37**

EU Kids Online 2018:
Base: for the first column, all students aged 9-10 who use the Internet (N=267), and for the second column all students aged 11-17 who use the Internet (N=863).

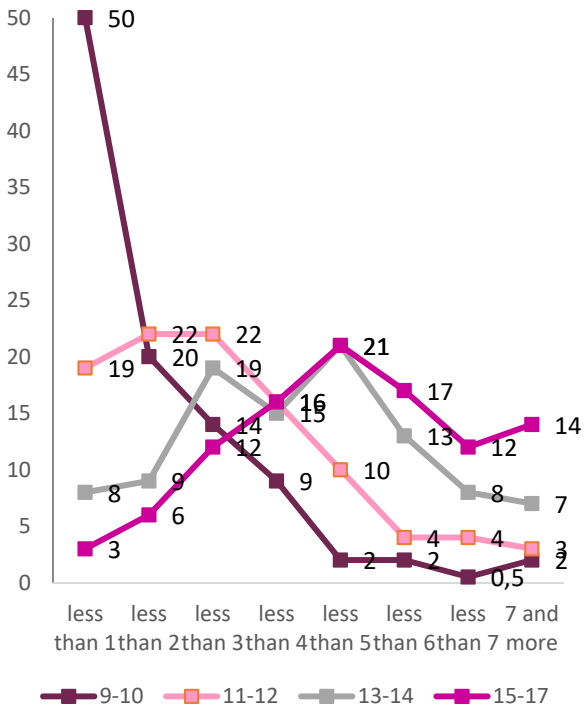
Children who spend a lot of time on the Internet are not in and of itself more anxious, aggressive, with a greater sense of being discriminated; and in older age groups, where such correlations exist, they are smaller than the correlations with Internet use disorders. Also, digital and mobile skills are more correlated with time spent online than with EIU.

Hence, not every score on the EIU can be considered to be indiciative of a particular Internet use-related disorder. Nonetheless, it is not clear what the cut-off score for considering something to be a disorder (as a diagnostic category) actually is; as well as how these cut-offs should vary by child's age. Likewise, it remains a matter of discussion as to what amount of time, at different ages, should be considered as Internet overuse.

How much time online is "average", "normal" or "too much" keeps changing dramatically with an ever greater use of ICTs in the lives of children and adults. In the Hinic study (Hinic, 2014), in the clinical group (those seeking professional help because of their Internet addiction), 59% used the Internet for 30 hours a week or more; and the author observed that there were those in the control group who used the Internet for 30 hours a week and more (albeit only 2 %).

Graph 41 shows the distributions of time spent on the Internet (categories on the X axis show the average number of hours spent on the Internet daily) for the four age groups in our study.

Graph 41: Relationship between time spent online and age



EU Kids Online 2018:

Base: all students aged 9-17 who reported their age and on both questions reported the number of hours spent on the Internet (N=1,064).

In one of the first surveys about Internet use in our country (Milovanović, Bakić, & Golčevski, 2002), conducted on a sample of 279 young people from Belgrade age 18 to 30, only 4% spent more than 20 hours a week on the Internet (which is 3 and more hours per day). In that questionnaire, three hours or more per day was the most extreme category offered. In our study, as early as the age of 9-10, there are 14% of children who spend as much time online, and at the age of 15-17 this number jumps to 80%. If we compare our findings to Hinic's (2014) study and the time-related categories set there, we find that 37% of children now use the Internet 4 hours a day and more.

As mentioned earlier, the criterion for what should be considered as too much Internet use is relative and continuously changing (one reason being that what it means to be online is also evolving). But if we were to say that six hours or more per day is too much Internet use for a child—then 2.5% of 9-10-year-olds are using the Internet too much; and so are 7% of 11-12 year-olds; 16% of 13-14 year-olds; and 26% of 15-17-year-olds. The sharp increase in time spent on the Internet, and a shift in the criteria of what would be considered as overuse, is also due to the increasing number of activities performed on the Internet - from communication and news watching to listening to music and playing games. Moreover, one does not have to sit next to a desktop computer to be online. The Internet is accessible in virtually any situation thanks to smart phones and increasingly the Internet of Things.

Parental mediation

The term "parental mediation"[9] refers to the different ways in which parents / carers try to influence how and for what purposes their children use digital media (Blum-Ross & Livingstone, 2016). Considering the fact that children are beginning to use digital devices and the Internet at an ever younger age, experts are increasingly pointing to the importance of active parental mediation, as well as the new role of parents in the digital age – the role of "digital mentors" for children.

Multiple forms of parental mediation are discussed in the literature as well as their effectiveness in preventing risky behaviour of children and young people online. As research shows, parents differ as to whether and how they balance between the mediation in **social** (active participation and setting rules of use) and **technical** form (supervision, monitoring and parental control); or whether they aim primarily to **enable or limit** a child's use of digital technology (Blum-Ross & Livingstone, 2016).

Tables 33 and 34 list the different ways parents can actively mediate their child's use of digital devices, as reported by children. Given that younger students (ages 9-10) completed the shorter version of the questionnaire, we first present the answers to the four statements which were given to all respodnents (Table 33); in the following table, we show the responses of older students (ages 11-17) on all 11 statements (Table 34).

[9] The term "parent" is used more broadly to refer not only to the mother and father, but also to other adult family members who participate in the socialization and upbringing of children.

Table 33: Active mediation by parents / carers (ages 9-17)

% of students who answered "often" or "very often"	9-12		13-17		All
	M	F	M	F	
Suggests ways to use the Internet safely et	48	63	28	40	44
Helps me when something bothers me on the Internet	44	60	26	39	41
Talks to me about what I do on the Internet	38	47	26	31	35
Encourages me to explore and learn things on the Internet	27	28	26	33	29

EU Kids Online 2018: c_QI4 7 op_QI4: When you use the Internet, how often does your parent/carer do any of these things?

Base: all students aged 9-17 who use the Internet (N=1,150).

The first thing to notice is that younger children and girls report more often about almost all forms of parental mediation than older children and boys. This finding has been confirmed in other studies.

Parents most often mediate by explaining to their children how to use the Internet safely (44% of surveyed students say that parents do this often or very often). An almost identical finding was found in the *Global Kids Online* survey (Popadić et al., 2016) when 42% of children responded that their parents often or very often point to ways how to use the Internet safely. Half of young students (9-12 years old) and one third older ones (13-17 years old) are often helped by parents when something bothers them online. Fewer children (29%) report that parents often encourage them to use the Internet in a constructive way, for research and learning.

We now turn to the older elementary and high school students' reports about the forms of active parental mediation (Table 34).

Table 34: Active mediation by parents / carers (ages 11-17)

% of students who answered „often" or „very often"	11-13		14-17		All
	M	F	M	F	
Suggests ways to use the Internet safely	49	56	21	38	40
Helps me when something bothers me on the Internet	47	55	20	37	39
Helps me when something is difficult to do or find on the Internet	45	57	24	34	39
Explains why some online content is good or bad	41	57	21	37	38
Talks to me about what I do on the Internet	39	38	22	33	32
Talks to me about what to do if something online bothers or upsets me	37	51	15	30	32
Encourages me to explore and learn things on the Internet	27	29	25	34	29
Talks to me about the commercial activities I am exposed to online (for instance when someone tries to sell me something)	33	32	13	21	24
Does shared activities together with me on the Internet	11	12	8	8	10
Stays nearby when I use the Internet	10	10	5	6	7
Sits with me while I use the Internet	5	8	3	6	5

EU Kids Online 2018: c_QI4: When you use the Internet, how often does your parent/carer do any of these things?

Base: all students aged 11-17 who use the Internet (N=855).

Based on the data presented in the table above, it can be concluded that the older the children, the less parents mediate their use of digital devices. And when they mediate, it is mainly aimed at protecting security and preventing negative behaviour on the Internet.

Only a quarter of the students surveyed students (24%) report that parents often talk to them about the advertisements they are exposed to while using the Internet, although advertisements and various commercial content have "flooded" digital media, including digital content aimed at the youngest. According to a recent survey (Marisa et al., 2019), advertising is present not only in free apps, but also in apps that are purchased, and even in those that are labelled as "educational" and are downloadable through the Google Play app (which is most commonly used on mobile devices).

Frequent joint activities between parents and school age children that include digital media use are very rare, even in the case of younger students. Only 10% of our students do different things on the Internet with their parents.

For the next question, too, we will first show the answers to those statements that were given to all students in the sample.

Table 35: Enabling mediation (ages 9-17)

% of students who answered „often" or „very often"	9-12		13-17		All
	M	F	M	F	
Helped my parent/carer to do something they found difficult on the Internet	54	58	68	76	65
Told my parent/carer about things that bother or upset me on the Internet	29	36	14	25	26
Asked for my parent's/carer's help with a situation on the Internet that I could not handle	20	31	7	12	17

EU Kids Online 2018: c_QI5: Have you EVER done any of these things?

Base: all students aged 9-17 who use the Internet (N=1,150).

Based on the data presented in Table 35, we can conclude that Serbian students are more likely to assist their parents when they are unable to do something online (more than half of the younger and almost two-thirds of the older students report this); rather than to initiate a conversation with their parents about their own activities on the Internet or to ask their parents for help or advice. This finding could indirectly indicate that, from the perspective of the surveyed students, there is still a "digital gap" between children and parents regarding their digital skills.

Students from both age groups are approximately equal in helping their parents, with this being somewhat more prevalent in older girls.

Table 36: Enabling (ages 11-17)

% of students who answered „often" or „very often"	11-13		14-17		All
	M	F	M	F	
Helped my parent/carer to do something they found difficult on the Internet	63	68	69	77	70
Told my parent/carer about things that bother or upset me on the Internet	29	34	13	24	24
Asked for my parent's/carer's help with a situation on the Internet that I could not handle	16	22	5	12	13
Started a discussion with my parent/carer about what I do on the Internet	16	28	11	16	17
Asked for my parent's/carer's advice on how I should act online	19	32	8	12	17
Asked my parent/carer for something that I have seen advertised online	14	19	12	16	15

EU Kids Online 2018: c_QI5: Have you EVER done any of these things?

Base: all students aged 11-17 who use the Internet (N=863).

In a survey conducted in late 2012 on a representative sample of students from Serbia (Popadić & Kuzmanović, 2016), half of older elementary students (11-14 years) and three-quarters of high school students (15-18 years) assessed their parents' computer and Internet use skills as less developed than their own. If such is

young people's perception of parental digital skills, then it is hardly surprising that they rarely seek advice and support from parents or caregivers when it comes to digital media use. Of course, this is not the only reason, especially given the age of the surveyed students and the fact that in a certain period of life, the peer group is a more important agent of socialization than the family.

Judging by the findings (Table 37), parents rarely restrict children's use of social networks, video platforms, apps and video chat, as well as online activities, regardless of their age.

Table 37: Restrictive mediation (ages 9-17)

% of students who answerd that they were not allowed to	9-12		13-17		All
	M	F	M	F	
Use a web or phone camera (e.g., for Skype or video chat)	12	16	2	2	8
Use a social networking site (e.g., Facebook,Snapchat, Instagram, Twitter)	19	13	2	1	8
Download music or films	9	9	1	0	5

EU Kids Online 2018: c_QI6: Does your parent/carer allow you to do the following things on the Internet and if so, do you need their permission to do them?

Base: all students aged 9-17 who use the Internet (N=1,150).

Over 90% of the students surveyed report that their parents allow them to use social networks (although we have seen that they are used by about half in the younger age group) and a video chat camera. The data in the following table (Table 38) shows older age groups. Parents' efforts to restrict certain online activities (e.g., playing video games, sharing photos, videos or music with others, spending time in virtual games, etc.) are reported more frequently by younger students, and more often by girls than by boys.

Table 38: Restrictive mediation (ages 11-17)

% of students who answerd that they were not allowed to	11-13		14-17		All
	M	F	M	F	
Use a web or phone camera (e.g., for Skype or video chat)	7	11	2	1	5
Use a social networking site (e.g., Facebook,Snapchat, Instagram, Twitter)	7	6	2	0	4
Play games with other people online	7	20	2	4	7
Share photos, videos or music online with others	12	18	4	3	8
Download music or films	5	4	1	0	2
Read/watch news online	8	10	3	1	5
Spend time in a virtual world (e.g. Minecraft)	4	15	2	3	6
Use the Internet for school work	3	5	3	0	3
Watch video clips (e.g., on YouTube)	1	2	1	0	1

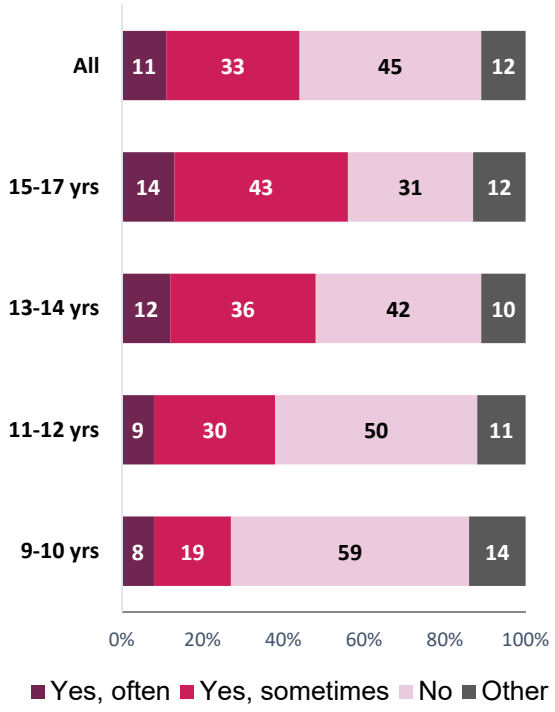
EU Kids Online 2018: c_QI6: Does your parent/carer allow you to do the following things on the Internet and if so, do you need their permission to do them?
Base: all students aged 11-17 who use the Internet (N=863).

We draw attention to the finding that most students (approximately three quarters) aged 9 to 12 are allowed to use social networks such as Facebook, Snapchat Instagram, Twitter. As discussed before, the typical limit for accessing these services is 13 years of age (unless otherwise specified in the specific country or by a given platform). Therefore, children under 13 are usually considered as under age users.

A small percentage of students (2%) say that their parents restrict their use of the Internet for schoolwork, and only 1% say they are not allowed to watch videos (e.g. on YouTube, the most popular video sharing platform).

Students of all ages were asked if they sometimes disregard what their parents / carers have to say about how to use the Internet. Their answers are shown in the following graph.

Graph 42: Ignoring parental advice regarding Internet use



EU Kids Online 2018: c_QI13: Do you ever ignore what your parent/carer tells you about how and when you can use the Internet?
Base: all students aged 9-17 who use the Internet (N=1,150).

As one might guess, the older the students are, the more often they ignore parental advice regarding Internet use. There are twice as many students in the oldest age group as in the youngest group who behave in this way.

Parental controls

"Parental controls" refer to the digital tools (applications, services, programs) that allow the supervision and monitoring of a child's activities while using the Internet (Zaman & Nouwen, 2016). It is a form of parental mediation that involves the application of technical protection measures.

Nowadays, a growing number of parental control tools are available on the market, while some of them can be downloaded for free from the Internet. Although they have a number of different features, they are most commonly used to limit the amount of time a child spends on using digital devices; prevent access to age-inappropriate websites, apps and video games (including app and in-app purchases); and monitor activity when a child is on the Internet; disable contacts with certain persons, block advertisements, locate the child in physical space, etc.

Judging by the responses of students in our sample, parents in Serbia rarely apply technical safeguards to ensure the safety of their children online.

Table 39: Parental controls (ages 9-17)

% of students whose parents use:	9-12		13-17		All
	M	F	M	F	
Parental controls or other means of keeping track of the Internet content I look at or apps I use	26	26	10	10	17
Technology to track where I am (such as GPS)	25	20	17	10	17
Parental controls or other means of blocking or filtering some types of content	22	19	11	8	15

EU Kids Online 2018: c_QI7: Does your parent/carer make use of any of the following?
Base: all students aged 9-17 who use the Internet (N=1,150).

A type of social mediation that is also used to regulate digital media use involes setting time limitations—the amount of time that children can spend online and time frames when children can use the Internet—i.e. various forms of restrictive mediation practices. Even these are reported by less than one-fifth of the surveyed students (slightly more students from younger than from older age group).

Table 40: Parental controls (ages 11-17)

% of students whose parents use:	11-13		14-17		All
	M	F	M	F	
Rules about how long or when you are allowed to go online	30	31	22	12	23
Parental controls or other means of keeping track of the Internet content you look at or apps you use	19	20	9	11	14
Technology to track where you are (such as GPS)	21	19	18	9	16
Parental controls or other means of blocking or filtering some types of content	17	13	9	8	11
Parental controls that alert your parent/carer when you want to buy content (in-app purchase)	24	21	20	13	19
Programs that block advertising (ad blocking)	18	19	20	8	16
Parental controls that filter the apps you can download	16	22	5	7	12
A service or contract that limits the time you spend on the Internet	14	12	8	5	10
Software that limits the people you can be in touch with through voice calls and messages	11	9	8	3	7

EU Kids Online 2018: c_QI7: Does your parent/carer make use of any of the following?
Base: all students aged 11-17 who use the Internet (N=863).

In the before mentioned survey conducted at the end of 2012 (Popadić & Kuzmanović, 2016), approximately one-third of parents from Serbia used technical safeguards, while in the EU Kids Online survey, three-quarters of parents from European countries who participated in this survey applied such measures (Livingstone et al., 2011).

Parental controls are just one of the ways adults can mediate their child's use of digital technology and the Internet. Given that two thirds of children and young people in Serbia say that they teach their own parents or caregivers how to use digital devices (this primarily refers to operational, technical skills), and they do so often or very often —the question arises whether parents possess the digital skills necessary to properly select and make meaningful use of parental control tools.

It should be borne in mind that technical measures as such do not provide complete protection of children on the Internet; they are not effective in and of themselves, although they may prevent certain risks (Duerager & Livingstone, 2012).

Application of parental controls makes more sense when it comes to young children, as well as when applied together with other forms of parental mediation. Technical protection is an opportunity to talk to children about their online activities, even in the youngest age group.

Parental control tools are not designed to "replace" a parent or "free" him or her from active participation in the digital lives of children. This type of control only makes sense if parents apply different forms of social mediation at the same time (talk to children about opportunities and risks on the Internet, jointly create family agreements on how to use technology, participate in joint activities on the Internet, etc.). Finally, it should be remembered that by restricting access to digital technology, we are limiting the many opportunities it provides (for learning, development, social engagement), but also the rights of the child in the digital age.

If we now look at the results just presented regarding the forms of parental mediation, we can conclude that most parents in Serbia do not apply restrictive measures (social and technical), that is, a very small percentage of parents restrict children from using digital devices and access to digital content (even when they might be inappropriate for children and their developmental needs). On the other hand, parents rarely participate in children's online activities and do not sufficiently encourage the constructive use of digital technology by their children (we remind the

reader that the largest percentage of our students use the Internet for fun and communication—primarily to consume rather than produce content). So, not only is there hardly any balance between an active and a restrictive approach (setting boundaries while leaving room for personal development), it could be argued that most parents are under-involved in the digital lives of their school-age children (9-17 years old). In the literature, this form of parental mediation is called passive mediation (Helsper et al., 2013).

Therefore, it is very important to take appropriate measures to empower parents to take on the role of digital mentors who actively mediate the activities of children and young people online. This implies systematic support for the development of parents' and caregivers' digital skills because, as research shows, their level of skill influences how they mediate as well as the effects of their mediation strategies. The more advanced parents' digital competencies are, the more they are able to combine active and restrictive approaches that are associated with more positive outcomes (Byrne et al., 2016; Livingstone et al., 2015; Paus-Hasebrink, 2012).

We also emphasise that in order to actively mediate children's activities on the Internet, it is not necessary for the parent to be a "technology expert", but it is necessary to build a relationship of trust with the child, to know the child and his or her needs well.

Teachers' and peers' mediation

In addition to parental mediation, students were also asked in this research how and how often their teachers and peers mediated their use of digital technology / the Internet. The answers regarding teachers' mediation are presented in Tables 41 (whole sample) and 42 (older students only).

Table 41: Mediation by teachers (ages 9-17)

% of students who answered „often" or „very often"	9-12		13-17		All
	M	F	M	F	
Encouraged you to explore and learn things on the Internet	24	28	26	34	28
Suggested ways to use the Internet safely	31	32	22	23	27
Made rules about what you can do on the Internet at school	22	26	20	20	22
Helped you in the past when something has bothered you on the Internet	19	20	12	5	14

EU Kids Online 2018: c_QJ2: Have any teachers at your school done these things? Base: all students aged 9-17 who use the Internet (N=1,150).

Just over a quarter of the surveyed students (28%) are encouraged by teachers to use the Internet in a constructive way – for research and learning, which is nearly the same percentage as in the case of parents (29%) who encourage children in this direction. Therefore, children (of all ages) in Serbia are, unfortunately, not sufficiently encouraged by adults, both in the family and at school, for constructive use of the Internet. In addition to the potential risks that international research focuses on, the Internet has numerous benefits, and its meaningful use can open up significant opportunities for children to learn and develop. Of course, meaningful and safe use of the Internet, as emphasized earlier, requires requisite digital competences, which seem to be missing in parents and teachers (there is a negligible amount of research in Serbia assessing digital competences of teachers at all educational levels). In a 2017 survey, teachers who taught in the final grade of primary school rated their students' digital skills with a higher average grade (6.5 on a scale of 1 to 10) than their own digital skills (5.7) (Kuzmanovic, 2017).

Only slightly over a quarter of students (27%) report to be supported by their teachers in using the Internet safely, and even fewer (14%) say that teachers help them when something bothers them online. Only one fifth of the teachers set rules about what students can do online in a school context. No significant differences were observed between younger and older students. In the previously mentioned 2012 survey, 60% of the surveyed teachers from primary and secondary schools in Serbia felt that the school should ban the use of mobile phones in the school environment (Popadić & Kuzmanović, 2016). In the *Global Kids Online* survey, very similar results were obtained in other countries (Byrne et al., 2016).

The older age group (11-17 years old) was offered a greater number of answer choices about the ways in which teachers could mediate their use of digital technology / the Internet (Table 42).

There is almost no difference in teachers' mediation even when younger students are excluded from the sample. Generally, a small percentage of teachers (less than a fifth of students report this) often talk to students about what they do on the Internet, explain why some content is not good, provide help when they are bothered or unable to do something on their own.

Table 42: Mediation by teachers (ages 11-17)

% of students who answered „often" or „very often"	11-13		14-17		All
	M	F	M	F	
Encouraged you to explore and learn things on the Internet	24	29	27	34	29
Suggested ways to use the Internet safely	30	29	21	22	25
Made rules about what you can do on the Internet at school	22	21	20	23	21
Helped you when you found something difficult to do or find on the Internet	23	25	13	17	19
Explained why some online content is good or bad	24	26	15	13	19
Suggested ways to behave towards other people online	18	22	15	12	16
In general, talked to you about what you would do if something on the Internet ever bothered you	22	17	14	9	15
Talked to you about what you do on the Internet	13	13	10	7	11
Helped you in the past when something has bothered you on the Internet	16	14	12	5	11

EU Kids Online 2018: c_QJ2: Have any teachers at your school done these things?
Base: all students aged 11-17 who use the Internet (N=863).

Considering the finding that students enter the digital world unequipped with appropriate digital skills and thus, due to their age characteristics, are prone to careless communication, accessing age-inappropriate content and other forms of inappropriate behaviour in the digital environment, it is a great responsibility for adults, and especially teachers, not only to guide them to safe Internet use, or to minimize potential risks, but also to support them to make the most of the good sides of the Internet.

We will now turn to mediation by peers, or friends. When we asked students who they turn to for help when something is upsetting them online, the largest percentage, almost half (45%), stated that they turn to their peers (male or female friend). However, when we asked them how often one of their friends did some of the things listed in Table 43, the percentage of those who said that their friends helped them when something bothered them online was cut in half (20%).

Table 43: Peer mediation (ages 9-17)

% of students who answered „often" or „very often"	9-12		13-17		All
	M	F	M	F	
Encouraged you to explore and learn things on the Internet	26	21	16	18	20
Helped you in the past when something has bothered you on the Internet	21	23	17	21	20
Suggested ways to use the Internet safely	23	22	13	12	17

EU Kids Online 2018: c_QK2 / op_QK2 Have any of your friends done these things?
Base: all students aged 9-17 who use the Internet (N=1,150).

If we compare the data given in Tables 43 and 44, we will see that age differences are not pronounced. When they do not know how to do something online the surveyed students are primarily supported by their peers, i.e. friends (36%). One quarter often talk to their friends about online activities, which is twice as much as with teachers. Children talk more often with their parents about what they do on the Internet (40% of ages 11-13 and 25% of ages 14-17) than with peers, although they often turn to peers after negative experiences.

Table 44: Peer mediation (ages 11-17)

% of students who answered „often" or „very often"	11-13		14-17		All
	M	F	M	F	
Helped you when you found something difficult to do or find on the Internet	31	38	33	39	35
Talked to you about what you do on the Internet	25	25	24	24	24
Encouraged you to explore and learn things on the Internet	27	20	14	16	19
Helped you in the past when something has bothered you on the Internet	19	23	16	19	19
In general, talked to you about what you would do if something on the Internet ever bothered you	22	22	13	21	19
Suggested ways to use the Internet safely	22	17	12	12	16
Explained why some online content is good or bad	17	17	11	14	15
Suggested ways to behave towards other people online	18	16	10	13	14

EU Kids Online 2018: c_QK2 / op_QK2 Have any of your friends done these things?
Base: all students aged 11-17 who use the Internet (N=863).

Judging by the findings, when it comes to Internet use, children from Serbia are largely left to themselves, older students more often than younger. In the next section, we will learn how interviewed students perceive the role of family in other aspects of personal functioning, beyond the digital environment.

Family environment and parental support

Judging by their self-reports, children grow up in a safe and supportive family context (Table 45). Three-quarters (74%) say the family tries to help them, and over four-fifths (83%) feel safe at home. Somewhat fewer children (44%) reported that family members were willing to listen to them.

Table 45: Assessment of family environment, by gender and age

% of students who answered „very true"	9-12		13-17		All
	M	F	M	F	
When I speak someone listens to what I say	41	51	39	44	44
My family really tries to help me	70	77	77	72	74
I feel safe at home	75	85	88	85	83

EU Kids Online 2018: c_QI2 How true are the following things about your family and home?

Base: all students aged 9-17 who use the Internet (N=1,150).

There are no significant age differences in this regard, while there are differences between boys and girls which actually interact with age. Among the younger children (ages 9-12), girls are those who report greater "comfort" in the family and greater family care and understanding. The differences are not too pronounced, but they do exist. On the other hand, the situation in the older age group is somewhat reversed. The differences are actually minimal, but boys at this age report more about family support and a sense of security.

Children's responses regarding some of the characteristics of their parents' educational styles are consistent with this (Table 46). These trends could be characterised as "a lot of praise, and few bans and rules." The vast majority of children report that parents reward them with praise, when they are good (80%) or when they do something well (62%).

In contrast, a minority say that parents/ carers set some rules for in-home (36%) and even fewer for out-of-home behaviour (28%).

Table 46: Assessment of parental support, by gender and age

% of students who answered „very true"	9-12		13-17		All
	M	F	M	F	
My parent/carer praises me for behaving well	76	84	78	82	80
My parent/carer sets rules about what I can do at home	39	42	32	33	32
My parent/carer sets rules about what I can do outside the home	20	26	30	36	28
My parent/carer tells me when I am doing something well	37	41	80	84	62

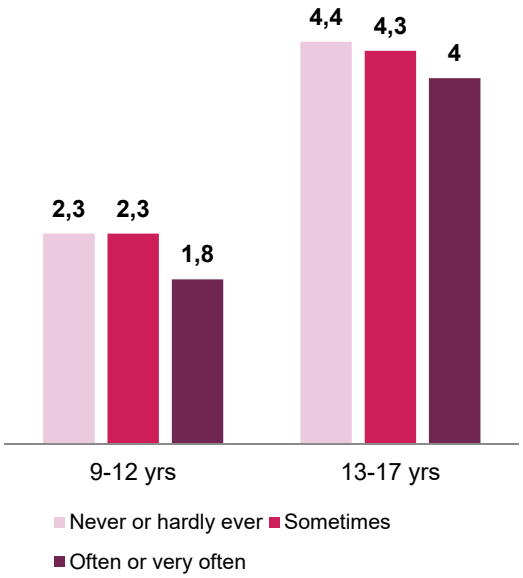
EU Kids Online 2018: c_QI3 / op_QI3 How often do the following things apply to you?
Base: all students aged 9-17 who use the Internet (N=1,150).

Girls report more frequently about the praise they receive from their parents, but also about the existence of rules of conduct outside the home. There are also some noticeable age differences. Older children are far more likely to report being praised by their parents when doing something right. In addition, it is noticeable that in the older age group there are fewer rules of behaviour in the home, but more for outside the home behaviour, and this applies to both boys and girls.

Setting rules and bans is related to how much time is spent online. Children who report that parents frequently set the house rules spend less time on the Internet on a daily basis (*rho* = -.16, p <.001). This relationship is negative and significant in the sample of younger (*rho* = –.15, p <.001) and older students (*rho* = –.10, p <.01), although the association in the case of older students is almost negligible. The graph below shows the average daily number of hours spent on the Internet, given the frequency with which parents set the rules of conduct at home. Differences in time spent on the

Internet, neither at the level of correlations, nor shown in this way, are too pronounced. Nonetheless, the difference between setting these rules frequently vs. rarely translates into about half an hour less online in case of the former, and half an hour more online in case of the latter, for both age groups.

Graph 43: Average number of hours spent online in the context of rules of conduct at home



EU Kids Online 2018: c_QI3 / op_QI3: How often do the following things apply to you?
Base: all students aged 9-17 who use the Internet (N=1,150).

Older students experience reduced monitoring, as well as fewer bans and limitations at home than younger students, hence it is possible that these factors are partly responsible for the amount of time that older children spend on the Internet.

In addition, there is a particularly illustrative relationship between the existence of rules of conduct at home and how children spend time online—the activities they engage in. The more prevalent the rules are in the family, the more frequently is the Internet used for schoolwork (rho = .08, p <.01) and the less frequently for social networking (rho = -.09, p <.01), although these associations are generally of low intensity.

Relationships with peers and friends

Judging by the data presented in Table 47, the majority of the sampled students have a good network of social relationships with friends and peers. Nearly three-quarters (72%) can rely on their friends in difficult situations (as much as on family), while more than two-thirds (67%) think that friends are trying to help them and may talk to them about their problems. This is more often reported by older students.

Table 47: Relationships with peer and friends (ages 9-17)

% of students who answered „"fairly true" or „very true"	9-12		13-17		All
	M	F	M	F	
I can count on my friends when things go wrong	67	74	74	75	72
My friends really try to help me	64	70	66	68	67
I can talk about my problems with my friends	57	66	72	74	68

EU Kids Online 2018: c_QK1 How true are the following things for you?

Base: all students aged 9-17 who use the Internet (N=1,150).

School experiences

Most of the students surveyed (71%) feel safe at school (Table 48). Still, almost a third think otherwise.

The children, one would say, are more reliant on their friends than on schoolmates. A little over half (56%) agreed with the statement that other students were nice and wanted to help them (two thirds of students agreed with a similar statement concerning friends).

Table 48: School experiences (ages 9-17)

% of students who answered „ fairly true“ or „very true“	9-12		13-17		All
	M	F	M	F	
I feel safe at school	70	76	68	70	71
I feel like I belong in my school	72	78	67	65	70
There is at least one teacher I can go to if I have a problem	64	69	65	61	65
Other students are kind and helpful	55	62	57	50	56
Teachers care about me as a person	51	57	50	57	54

EU Kids Online 2018: c_QJ1: Here are some statements about your school and the students and teachers in your school. Please say how much you agree or disagree with each one.
Base: all students aged 9-17 who use the Internet (N=1,150).

About two-thirds of students of all ages have at least one teacher at school who they can turn to when they have a problem. Yet, slightly more than a half of the students (54%) felt that teachers respected them as a person.

Younger students feel more secure at school than older students and have a more pronounced sense of belonging to the school.

RECOMMENDATIONS

Based on the findings of the *EU Kids Online* research, recommendations have been formulated for different target groups: decision makers working on digital policies, child rights institutions and organizations, web content creators, educational institutions and education professionals, parents and caregivers.

The recommendations were formulated in accordance with the thematic structure of the report itself. First, the most important conclusions of the research are briefly presented and then the practical implications that arise from them.

Frequency and ways to access the Internet

Most of the surveyed children and teens from Serbia (86%) use the Internet on a daily basis, which is similar to findings from other European countries that participated in this research (e.g. Norway, Italy). Two-thirds (65%) of the youngest respondents from the sample (ages 9-10) and almost all students (98%) in the oldest age group (ages 15-17), according to their own statements, access the Internet daily from a mobile/smart phone.

Kids begin to use the Internet at a young age, in a personalized way (from their own, mobile devices) without proper parental / caregiver insight into their activities, which has important policy and practice implications.

- **With regards to awareness-raising campaigns focusing on the importance of safe and constructive use of digital devices and the Internet, we recommend that the age span should be expanded to target not only older but younger children as well.**

- **Ensure that adults (parents / carers, especially education workers) acquire the appropriate digital skills so that they are able to prepare their children to "enter" the digital world in a timely and developmentally appropriate manner.**

- **It is the responsibility of adults and policy makers at the national and international levels, to ensure not only access to the Internet and digital technology, but also the protection of children in the digital realm; as well as to enable them to enjoy their rights in the digital environment and beyond.**

- **It is necessary to systematically support students (of all ages) in acquiring digital skills that will enable them, as standalone users of digital devices, to protect themselves against potential risks (including technical safeguards), with an emphasis on self-regulation and personal responsibility for one's behaviour in an online environment**.

Time and activities on the Internet

On average, interviewed students spend more than three hours a day on the Internet, the oldest age group reports up to four and a half hours. More than a fifth of students, according to their own statements, spend up to seven hours a day on weekends, while two-thirds spend between four and seven hours.

Given the multiple functions that digital devices have in the lives of today's youth, time as such is not necessarily an indicator of problematic use. In fact, rather than the amount of time, the quality of the time, or the type of Internet activity, is much more important. According to the findings of this, as well as several previous studies conducted on a national sample, our students use the Internet mainly for leisure (watching videos and listening to music), communicating with family and friends,

playing video games and visiting social networking sites.

40% of students use the Internet for school assignments at least once a week; 88% of students say they have never used the Internet to join a campaign or sign a petition, and 79% have never discussed political or social issues online. Nearly two-thirds of children say they never use the Internet for creative purposes, to share content they have created.

More than two-thirds of children and young people (73%) say they have a profile on some social networking or gaming platform; of these, 42% of 9-10-year olds as well as 72% of 11-12-year olds say they have a profile, although the minimum age set by social networking sites is usually 13 years.

In addition to the types of activities undertaken online, we also consider the negative consequences associated with Internet use. Thus, about a third of the surveyed students report to have problems due to the amount of time they spend online or getting into conflicts with family or friends. Slightly less than half of the students say they try yet fail to spend less time on the Internet and neglect socializing and responsibilities (e.g. school assignments), feeling unwell when unable to be on the Internet, while nearly one fifth neglect basic biological needs (e.g. need for food, sleep).

- **Although among the surveyed students we find a certain number of those who use it perhaps too much, sometimes with problematic outcomes, it should be borne in mind that a ban on Internet use is not a recommended measure, for a number of reasons: First, under the United Nations Convention on the Rights of the Child, children have the right to access developmentally appropriate media content, which applies, in principle, to the Internet as well; by denying them access to the Internet, they are denied the many opportunities that the Internet, as an extremely powerful information and cognitive tool, provides; in addition, they are denied the opportunity to acquire the skills that are crucial for successful functioning in a digitized society, potentially making them less competitive later in life in various aspects of personal and social functioning (e.g., continuing education, the job market, etc.); if they do not use the Internet, young people can miss the opportunity to become digitally resilient (able to cope with the potential risks in the digital environment they will inevitably face, if not in a family, then in an out-of-family context).**

- **When it comes to the optimal amount of time in front of the screen, globally, there is no consensus among experts. The American Academy of Pediatrics was the first (in 1999) to publish guidelines that children 2 years and older should not spend more than 2 hours a day in front of a screen. However, in 2016, these guidelines were redefined so that, for school-age children (over 6 years of age), the amount of time in front of the screen is not strictly prescribed, but the recommendation is to create (in collaboration with the child) an individual plan for using digital devices and the Internet which will ensure that time in front of the screen does not replace the social, cognitive and physical activities (e.g. sleep, physical activity and outdoor play, communication with peers and family members, non-Internet hobbies, etc.) that are important for the smooth psychophysical development of the child .**

- **There are no strict guidelines in Europe regarding the recommended number of hours in front of the screen at different ages. In early 2019, the Royal College of Pediatrics and Child Health of London**

released guidelines for clinicians and parents regarding optimal screen time. In this paper, the authors state that existing empirical findings do not provide a reliable basis for formulating universal guidelines and, instead, advise parents to negotiate time constraints with their children, while respecting the child's individual needs and interests, usage, activities, in digital environment and beyond. The most important thing is to strike a good balance between your child's online and offline activities.

- Recommendation for adults is that their main focus is not on the amount of time a child spends in front of the screen, but on the quality of that time, that is, the content of the activity and the context of use.

- Even when it comes to older children, parents are expected to set clear rules regarding time spent in front of the screen, with these rules being formulated in a participatory way, with due regard for the personal autonomy and needs of the child.

- Interviewed students, as a rule, tend to primarily consume rather than create online content and they use the Internet for a very narrow range of activities. It is very important to provide children and young people with access to quality sources of information and educational resources on the Internet, i.e. to teach them how to find, select and evaluate the quality and resources of available information.

- Students should be supported, from an early age, first in the family context and then in the school context, not to use the Internet exclusively for fun, as most do, but also for a variety of other meaningful and useful activities (acquiring different skills, finding useful information, school assignments, creative activities etc.).

- Children and young people who are prone to spending significant amounts of time online, to the detriment of other activities and their own needs, should be supported in developing personal capacities of self-control, as well as strategies for self-regulation of their own behaviour.

- Considering the personal attributes that are associated with problematic use of the Internet (anxiety, impulsiveness, caring, life satisfaction, feeling of being discriminated), we conclude that the mental health and general well-being of the child have a lot to do with the way they use the Internet. Therefore, it is necessary to pay special attention to psychologically more vulnerable children, i.e. to enable them to develop strategies for overcoming stress in daily life, which will also contribute to a more constructive use of the Internet.

- For most social networks and online services (e.g. Facebook, Snapchat, Twitter, Instagram, Skype, etc.), the age limit to access the service is typically 13 years (or higher). It follows that a large percentage of children from Serbia are underage users (which means that when they opened the profile they stated a false age); first, they violate the existing rules, and second, they expose themselves to different risks (e.g. sharing personal data and privacy, access to harmful and inappropriate content, contacts with unknown or malicious people, and even the loss of certain privileges regarding online privacy, deleting profiles, and inability to reopen even when they reach the prescribed age). Underage use is not necessarily or universally harmful but it is of utmost importance that children receive the

necessary education on how to stay safe on social media.

Students' digital skills

Students from Serbia rate their digital literacy skills as above average. The average score for the five groups of digital skills ranges from 6.7 to 8.6 (on a scale of 1 to 10). The lowest average score is in the field of digital content creation skills (6.7), followed by information and information retrieval skills (7.7), mobile device use skills (8.0), operational skills (8.6), while the highest average score is on social skills (9.2).

When it comes to information, digital content creation and mobile device skills, gender differences have been identified, with male students being more skilful, according to their self-assessment. Students who spend more time online evaluate their digital skills as more developed.

About half of the younger and about two-thirds of the older students know how to make a video or music and post it online. Fewer children say they know how to modify content created and uploaded by others (one fifth of younger and less than a half of older students).

Assessment of one's digital skills correlates positively with age, with one exception, which is the use of a programming language (e.g. Scratch, Python, C ++). This is the only skill in which younger students feel more competent than older ones.

Approximately half of students ages 9-12 do not know how to change their privacy settings on social networking sites (a similar percentage of these students do not use social networking sites), while more than a third of students of this age do not know how to save a picture they find on the Internet. However, almost all older students, in their own estimation, know how to set up privacy on social networking sites or save a picture they found online.

While 92% of students, by their own assessment, know how to install an application on a mobile phone, just over half (53%) say they know how to keep track of the cost of using the application.

72% of students strongly or partially agree with the statement that it is easy for them to verify if some of the information they have found on the Internet is true; and 68% find it easy to tell if they can trust a piece of information they find on the Internet.

- **Although most surveyed students believe they have well-developed digital skills, we must bear in mind that self-assessment, as such, is not a reliable indicator of the current level of digital skills development.**

- **Students find information assessment skills to be the least developed (relative to the remaining four groups of digital skills), which is in line with previous research findings (international and domestic) that directly evaluated students' digital skills. From this it follows that further work is needed to strengthen students' competencies for finding, selecting and evaluating information on the Internet, and generally for developing critical thinking skills (not just in the digital context). These skills can be acquired within different school subjects.**

- **Much more work is needed on digital content creation skills, which is one aspect of digital literacy.**

- **Particularly noteworthy is the finding that there are gender differences in the self-assessment of digital skills that are more pronounced at younger ages (also found in other countries, such as Norway). Although, on average, they spend the same number of hours on the Internet (except that at younger ages boys spend more time online, and in older ages - girls), boys feel digitally more competent. This raises the question of**

the type of activity on the Internet (girls use social networks more often, boys play video games more often), but also of traditional gender differences, in the sense that boys feel superior in everything related to technology and technical sciences, which can later influence the choice of profession.

- **Learning to programme in a school context has made students feel more competent in this aspect of digital literacy. The finding applies to students who attend Computer Science as a compulsory subject in grades 5 and 6 of primary school. This indicates to us that digital literacy skills are not necessarily acquired spontaneously, by their own use, but need to be taught in compulsory education.**

- **Teaching digital literacy skills (in a formal context) must be carried out from the beginning and throughout the compulsory education cycle, not only within the compulsory subject of ICT and Computer Science, but also within other school subjects (since this is a cross-curricular competence)**.

Upsetting experiences and cyberbullying

Every third student in the sample was bothered by something online in the past year. In such situations, almost a quarter of students did not talk to anyone about their problem, ignored the problem thinking that it would go away by itself, or closed the window or application, and nearly a third blocked the harasser. The number of children who frequently had disturbing experiences was the highest in the age group of 13-14 years.

16% of students experienced cyberbullying, while 15% experienced bullying in person. Students are more likely to admit to being victims than to have perpetrated digital bullying themselves. A third of the students surveyed were victims and perpetrators at the same time.

Consistently with previous findings on a nationally representative sample about face-to-face bullying and cyberbullying – we find that the two tend to happen hand in hand.

- **In situations where they experience something negative or disturbing on the Internet, a number of students do not act proactively, but ignore the problem. The rationale for such passive reactions remains unclear, but children need to be informed about whom they can turn to and what they should do in such situations. This finding primarily refers to children who experienced cyberbullying. Nonetheless, it is quite likely that even among those who have not experienced cyberbullying, or who have not reported to have experienced cyberbullying, there are many children who do not know what proactive behaviour and problem solving are.**

- **According to the results of this, as well as earlier studies (e.g. Popadić & Kuzmanović, 2016), students in grades 7 and 8 are the most at risk, which is related to age characteristics and needs at that age. Accordingly, it would make sense to set up more intense preventative measures specifically designed for this age group.**

- **When discussing cyberbullying victimisation and its consequences, it is of utmost importance to carry out awareness-raising campaigns about the negative effects of digital bullying.**

- **Given the finding that the "victims" of digital violence most often seek help from their peers, we believe it would be helpful to conduct peer education at school. It would also be useful to organize peer**

support groups online or online counseling for young people who have experienced digital violence.

- **It is not good for young people to remain silent about the negative experiences they have on the Internet, as in some cases this can have serious consequences on their mental health and psychophysical functioning. It is therefore necessary to encourage them to seek help and support from adults, trusted relatives, professionals working with children and school teachers in these situations.**

- **Our findings suggest that policies need to target various contexts—school, extracurricular activities, the media, in order to make sure that a climate of non-violence is sustained throughout these venues and that children acquire constructive conflict resolution skills and strategies of nonviolent communication.**

Risky behaviour on the Internet and contacts with strangers

A number of students (ranging from 13% to 51%, depending on the type of behaviour), engaged in some other type of risky behaviour online. Most often, this involved sharing personal information, adding strangers on social media and otherwise making contact with strangers whom they may later meet offline, or hiding behind a false identity.

Among the students surveyed, one quarter of them (slightly more boys than girls) met in person someone they had first met online. As one can see from the findings, these behaviours are not necessarily harmful and they can be quite benign, but they constitute risks.

- **Based on their developmental stage (the so-called identity crisis), it is not surprising that teens and young people should be more inclined than other age groups to explore the unknown, try new and illicit things, test their own limits and capacities etc. Hence their interest in meeting new people online. They thus need to be acquainted with the potential risks of such behaviour, as well as the ways in which risks can be prevented.**

- **It is very important to develop awareness in young people of the digital traces they leave behind when using the Internet; and how a reckless action at one time can have consequences later in life, via reputational damage by sharing some personal information, for example. Young people are often unaware of the possible long-term consequences on their personal and professional lives.**

- **Parents are also inclined to share information about their children, even when their children do not approve of it (a phenomenon known as "sharenting"). Therefore, it would be necessary to develop awareness in adults of the harmfulness of such behaviour, not only when it comes to exposing children to risks, but also as a form of endangering their right to privacy.**

- **When it comes to the protection of personal data, privacy and the digital identity of children, it is imperative that all those collecting personal data on children, and numerous actors do so, apply appropriate safeguards in accordance with international standards and domestic legislation (the recently adopted Law on the Protection of Personal Data is in line with the European General Data Protection Regulation hereinafter GDPR)10.**

[10] http://www.privacy-regulation.eu/en/1.htm

- **All Internet services (digital tools, platforms, applications) used by children and young people should be designed to provide maximum protection for the privacy of children. In addition, simple and easily accessible reporting mechanisms should be provided for privacy violations.**

- **Internet service providers, social network owners in cooperation with security authorities, should take steps to prevent child abuse by malicious persons (so-called Internet predators), as well as any type of criminal activity online.**

Exposure to sexual content

In the sample of surveyed students (ages 9-17), every other student encountered sexual content in the past year, significantly more frequently in digital than in print media. Exposure to this type of content is more prevalent among older students, so three-quarters of high school students report to have had this type of experience, compared to one tenth of children of younger school age.

Most respondents found sexual content in a number of different sources, namely television, magazines or books, and on the Internet.

Almost a third of the children and young people aged 11-17 visited a pornographic website (adult or X-rated site) over the course of the past year. These websites were accessed by the majority of young people in the age group of 15-17 years (two thirds of male and one quarter of female students, including 43% male and 6% of female students who visited them daily).

- **These findings provide important implications for those who manage the media and regulate media space at the national level. Although the behaviour of media service providers regarding the compliance of program content with the rules on the protection of minors is regulated by law, additional measures need to be taken to increase the protection of children and young people (especially when it comes to television programs).**

- **When it comes to explicit sexual and pornographic content, parents / carers as well as educational institutions should use tools to filter and block children from accessing this type of content. For example, there is a Family link app on Google that allows parents to restrict their children from accessing inappropriate content as well as to gain insight into its activities on the Internet. In addition, there are platforms, services, search engines and websites that are specifically tailored to children and their needs. Existing web browsers have built-in free spam filtering options.**

- **The most important measure is to talk to the child about the potentially harmful consequences, which involves establishing a relationship of mutual trust and a willingness on the part of the children to turn to family members they feel close to for help when needed.**

- **Formal education plays an important role in this. In compulsory school subjects, students should be taught topics that are of particular interest (especially when it comes to teenagers).**

Exposure to harmful content on the Internet

The percentage of students ages 11-17 who were exposed to various types of harmful content on the Internet varied between 30% and 50%. Exposure to harmful content is related to age and gender and is more common in older as well as in female students.

As many as three-quarters (71%) of students ages 14-17 years and 56% of male students saw images of blood and violence against other persons or animals on the Internet. About 50% of students encountered hate messages online; 59% of female students and 54% of male students aged 14-17 saw self-harming content; 57% of female students and 38% of male students of the same age saw content or discussions about ways to be very thin, or content that encourages anorexic and bulimic behaviours (pro-ana and pro-mia content); 57% of female and 47% of male students saw content showing or discussing someone else's drug use experience. 44% of girls and 36% of boys of the same age have seen the way suicide can be committed online..

- **Findings on young people's exposure to harmful content on the Internet are far from encouraging. Children and young people should be taught, also in the formal school context, what harmful content is, and what the negative consequences of exposure to this type of content are, as well as how to react when they encounter such content through digital media.**

- **It is also necessary to provide them with information to whom and how they can report any type of harmful content on the Internet (educate about various Helpline services).**

- **Since the harmful content encountered by our students is not always available on the Internet unless they actively search for it, it is necessary to better protect children from accessing such content.**

- **It is necessary to familiarise adults with current systems for classifying age-appropriate content. E.g. Europe uses the PEGI system (Pan-European Game Information) enabling them to make informed decisions when purchasing video games that are appropriate for the child's age.**

Parents'/caregivers' mediation

The younger the children, the more the adults are expected to mediate their use of digital technology and the Internet. When they mediate, it is primarily aimed at protecting safety and preventing negative behaviour and much less at meaningful use of digital technology.

Less than half (44%) of the surveyed students (ages 9-17) state that their parents often explain to them how to use the Internet safely, a slightly smaller percentage (41%) of those get help from parents when something bothers them on the Internet, while just over a third (35%) of the students surveyed talk with parents about what they do online. Less than a third of students (29%) say they are often encouraged by their parents to research and learn online, but 30% say they never or rarely do so. Parents are more aware and more likely to mediate girls' than boys' activities.

Even in the younger age group (9-12), more than half of the students surveyed often help parents when parents are unable to do something on the Internet, while in the older age group (13-17), three quarters of the male students (more often girls than boys) do it.

Parents in Serbia rarely use technical measures of protection, that is, "parental controls," to ensure the safety of children online (less than a fifth of the students surveyed reports this), much less often than parents in other countries.

- **According to experts, adults need to be digitally competent to effectively mediate their children's activities on the Internet. Parental mediation is considered to be a necessity for all age groups, especially when it comes to young children. According to the guidelines of the American Academy of Paediatrics, in 2016, preschool children**

are allowed to use digital devices exclusively with the active involvement of adults. This, of course, does not mean that parents should not be involved in the "digital life" of school-age children.

- **It follows from the findings presented that parents should be able to mediate much more in the activities of children on the Internet than has been the case so far. We mean, above all, the active mediation, which involves not only preventing negative behaviour on the Internet, but also encouraging constructive use, research and learning (e.g., solving problems in the digital environment, critically evaluating information from the Internet, creating content in digital format), joint activities with children in order to acquire the skills necessary for the safe and meaningful use of digital technology, discussions with children about their activities online.**

- **From a student perspective, parents are not aware what content their children have access to (and, as we said earlier, a large percentage have access to inappropriate and harmful content on the Internet, but also in other media), what websites they visit and what applications they use. It is very important for parents to have an insight into children's activities online, of course, while respecting their right to privacy.**

- **According to the students' answers, parents are not sufficiently aware of the negative experiences of their children on the Internet (only a third of those who have had such experiences have talked to their parents). This is another finding that points to the need for greater parental involvement in children's online activities.**

- **Based on the results of this research, as well as several previous ones, it follows that one of the main priorities is to support adults in acquiring digital competencies, but also in recognizing the importance of their own participation in children's online activities.**

- **The fact that children are more technically adept (which does not mean that they are digitally more literate) in using digital devices does not disqualify parents as "digital mentors" of their children. It is not necessary for parents to be digital experts in order to be involved in children's online activities. Likewise, mutual exchange is desirable; it is okay for parents to learn from their own children if they are more adept at using digital devices.**

- **One of the priorities is to establish a relationship of mutual trust between parents and children, which is especially important in situations where children experience negative or disturbing experiences on the Internet and when they need support from close adults (which in our case is missing).**

Parents in Serbia rarely use technical safeguards, i.e. "parental controls" to ensure the safety of children online (less than a fifth of surveyed students reported that), which is significantly less often than in other countries.

- **Technical safeguards, by themselves, do not provide full protection for a child in a digital environment, but they can be one of the protective factors, especially when it comes to young children.**

- **The application of technical protection does not "discharge" parents from participating in the "digital life" of children; on the contrary, it is an occasion to discuss with their children even more about their**

activities and the use of digital devices, the ways in which they affect the child's "offline" life, their health and general well-being.

- **Software development companies, as well as those providing Internet services, should offer parents a wider range of simple and practical tools (e.g. age verification, content filtering, etc.) to create a secure online environment appropriate for children (especially of younger age).**

- **Given the finding that a relatively small percentage of parents create family rules regarding Internet use (time and type of activity), parents are advised, in collaboration with their children, to create an individual plan for using digital devices, taking into account the needs of the child and the context, or to formulate clear rules and adhere to them consistently.**

- **The finding that only a small percentage of parents from Serbia apply restrictive measures, that is, prohibit their children from using digital devices is relatively encouraging. However, due to the absence of active mediation, parental mediation is mostly passive, where parents are excluded, which is certainly not a desirable behaviour.**

Teachers' and peers' mediation

Judging from students' responses, teachers do not encourage them enough to use the Internet in a meaningful way, the same as in the case of parents. Less than a third of the surveyed students (28%) said that teachers at school often encouraged them to explore and learn using digital devices, 32% said that teachers did this occasionally, and as many as 30% said that teachers at school never or almost never encourage them to use digital technology in this way.

Generally, a small percentage of teachers often talk to their students about what they do on the Internet (reported by a dozen students), with more than a half saying that teachers never or almost never do so.

Only 3% of the surveyed students sought support from their teachers after they experienced something upsetting online.

Only one fifth of the surveyed students are encouraged by peers to research and learn online. The same number of students receive help from their peers when they are troubled by something on the Internet or receive instruction from the peers on how to use the Internet safely (the percentage is higher in the older age group than in the younger age group).

However, after a negative online experience, almost half of the students say they talk to a friend or girlfriend their age.

- **Based on the findings obtained in this research, we conclude that the importance of the school and its role in the digital sphere (which occupies a significant part in the lives of today's youth) has not been sufficiently recognized.**

- **Systematic measures need to be taken to strengthen the capacity of educational institutions to assume a key role in the development of students' digital competencies, ranging from infrastructure support to schools, to teacher training, curriculum innovation.**

- **It is recommended that rules be established at school level on how to use the Internet (only a fifth of the surveyed students report the existence of such rules).**

- **Use digital devices (which students bring to school) to improve the quality of the teaching process.**

- **Teachers are expected to significantly encourage students to use the Internet to gain knowledge, research, solve problems, work on school assignments, learn for school, etc.**

- **In addition to enhancing the competences of education staff, students should be encouraged to seek help from their teachers and / or school associates who are an important source of support, even when they are perceived as not sufficiently digitally competent.**

- **Given that peers, in the digital realm, are the main source of support for interviewed students, whether it be psychological support (in the case of negative online experiences) or technical (when they are unable to do something), it would make sense to additionally empower them in this role.**

- **Given that a small percentage of students seek adult support when they are unable to do something or find it online, one would expect a more extensive consulting with their peers (which is only a third of the students surveyed).**

- **To conclude, although most children and young people surveyed consider themselves to be growing up in a safe and supportive family and school environment, the research results show that today's children and young people, are largely left to themselves in the realm of the digital. It is therefore very important to empower adults to actively mediate the development of students' digital skills that they need for a responsible, secure and meaningful use of the Internet and digital technology.**

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APPENDIX 1: QUESTIONNAIRE

EU Kids Online 2017

Questions for children and young people

How to fill in this survey

Please read each question and take your time to answer.

You do not need to answer all of the questions. If you see a question that you cannot answer, or you are unhappy about answering, please tick "I don't know", "Prefer not to say", or move onto the next question.

"WORDS WRITTEN LIKE THIS" are instructions to tell you how many answers you need to give for each question.

Please make sure you read the bits written in grey boxes, these are important in helping you to understand the questions.

Many of the questions are about the internet. Children and young people use the internet in lots of different ways and for lots of different reasons. When thinking about what you do, keep in mind all the technologies (e.g. laptop or mobile) and places (e.g. at home or somewhere else) where you may use the internet.

When we talk about 'face to face' we mean talking to someone in person at the same location rather than through the internet, over the telephone or through a webcam.

This is not a test and there are no right or wrong answers. This survey is all about you so it is important to the researchers that you are as honest as possible.

We thank you for your participation in this study,

The EU Kids Online team

Section A1

1. **c_QA1 What would you say is your sex/gender?**

   0 A boy

   1 A girl

   -98 I don't know

   -97 Prefer not to say

2. **c_QA2a / c_QA2b In what MONTH and YEAR were you born? PLEASE TICK ONE BOX IN EVERY COLUMN OR WRITE AN ANSWER IN THE BOX**

a) MONTH OF BIRTH	b) YEAR OF BIRTH
1 January	2000 2000
2 February	2001 2001
3 March	2002 2002
4 April	2003 2003
5 May	2004 2004
6 June	2005 2005
7 July	2006 2006
8 August	2007 2007
9 September	2008 2008
10 October	2009 2009
11 November	☐ Other, please specify:
12 December	
-98 I don't know	-98 I don't know
-97 Prefer not to say	-97 Prefer not to say

3. **c_QA3 Thinking about the home where you live all or most of the time, do any of these people live there? If you live an equal amount of time on several places, please think about the home where you will be sleeping tonight.**
   PLEASE TICK AS MANY BOXES AS NEEDED

   a) Mother(s)

   b) Father(s)

   c) Stepfather/Partner of my mother

   d) Stepmother/Partner of my father

   e) Grandparent(s) or other relatives

   f) Siblings (including half, step or foster siblings)

   g) Other people

   h) I live alone

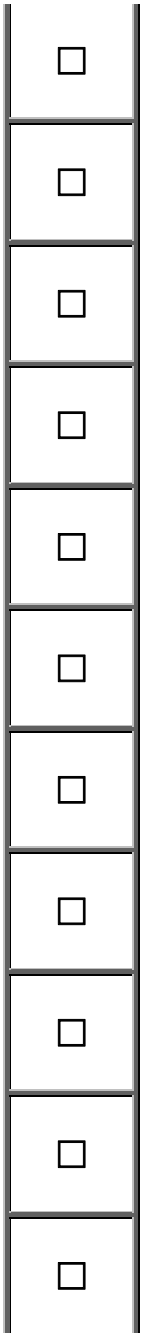
   i) I don't know

   j) Prefer not to say

ROUTING: If "yes" to question QA3 to "Siblings (including half, step or foster siblings)", ask the question below (else skip to optional question QA5 or QA6, if used, or to the core question QA9):

4. **c_QA9 Here is a picture of a ladder. Think of this ladder as representing where people stand in your country. PLEASE TICK THE BOX WHERE YOU THINK YOU AND YOUR FAMILY ARE.**

At the top of the ladder are the people who are the best off – those who have the most money, the most education and the most respected jobs



☐	10	**Top**
☐	9	
☐	8	
☐	7	
☐	6	
☐	5	
☐	4	
☐	3	
☐	2	
☐	1	
☐	0	**Bottom**

At the bottom are the people who are the worst off – who have the least money, the least education, and the least respected jobs or no job

-98 I don't know

-97 Prefer not to say

Section B

PLEASE READ:

People use the internet and mobile phones differently. The next questions are about how you use it. Remember that when we talk about 'the internet' or 'online', please think how you use any device in any place. This could include your cell phone, tablet, or computer or gaming device to send or receive messages, emails, browse, or to chat with friends and family, uploading or downloading, having a profile, posting pictures or anything else that you usually do online

5. **c_QB5 / ec_QB5 How often do you go online or use the internet using the following devices?**

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	At least every month	At least every week	Daily or almost daily	Several times each day	Almost all the time	I don't know	Prefer not to say
A mobile phone/smartphone	1	2	3	4	5	6	7	-98	-97
A desktop computer, laptop or notebook computer	1	2	3	4	5	6	7	-98	-97
A tablet	1	2	3	4	5	6	7	-98	-97
A games console	1	2	3	4	5	6	7	-98	-97
A TV	1	2	3	4	5	6	7	-98	-97
A toy which is connected to the internet [ADD EXAMPLE]	1	2	3	4	5	6	7	-98	-97
A wearable device (such as a watch or a training tracker) that is connected to the internet	1	2	3	4	5	6	7	-98	-97
Other	1	2	3	4	5	6	7	-98	-97

ROUTING: If "Never" to ALL items asked in QB5 (i.e., never for each option "a" to "h") skip to section A2 (that means that non users of the internet will skip to section A2). Note: this routing is again applied in the section I.

6. c_QB7 / c_QB8 About how long do you spend on the internet?

PLEASE TICK ONE BOX FOR WEEKDAYS AND ONE FOR WEEKENDS

a) During a regular weekday (schoolday):	During a regular weekend-day:
1 Little or no time	1 Little or no time
2 About half an hour	2 About half an hour
3 About 1 hour	3 About 1 hour
4 About 2 hour	4 About 2 hour
5 About 3 hour	5 About 3 hour
6 About 4 hour	6 About 4 hour
7 About 5 hour	7 About 5 hour
8 About 6 hour	8 About 6 hour
9 About 7 hours or more	9 About 7 hours or more
-98 I don't know	-98 I don't know
-97 Prefer not to say	-97 Prefer not to say

Section C

PLEASE READ:

Now we will ask about what things you may or may not do on the internet. When we say 'the internet' or 'online', please think how you use any device in any place. This could include your mobile phone, tablet, gaming device or computer to send or receive messages, emails, browse or to communicate with friends and family, uploading or downloading, or anything else that you usually do online.

7. c_QC3 How often have you done these things ONLINE in the past month?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	At least every week	Daily or almost daily	Several times each day	Almost all the time	I don't know	Prefer not to say
I looked for information about work or study opportunities	1	2	3	4	5	6	-98	-97
I used the internet for schoolwork	1	2	3	4	5	6	-98	-97
I used the Internet to talk to people from other countries	1	2	3	4	5	6	-98	-97
I looked for news online	1	2	3	4	5	6	-98	-97
I got involved online in a campaign, protest or I signed a petition online	1	2	3	4	5	6	-98	-97
I discussed political or social problems with other people online	1	2	3	4	5	6	-98	-97
I created my own video or music and uploaded it to share	1	2	3	4	5	6	-98	-97
I visited a social networking site	1	2	3	4	5	6	-98	-97
I communicated with family or friends	1	2	3	4	5	6	-98	-97
I played online games	1	2	3	4	5	6	-98	-97
I watched video clips	1	2	3	4	5	6	-98	-97
I listened to music online	1	2	3	4	5	6	-98	-97
) I participated in an online group where people share my interests or hobbies	1	2	3	4	5	6	-98	-97
I looked for health information for myself or someone I know	1	2	3	4	5	6	-98	-97
I browsed for things to buy or see what things cost	1	2	3	4	5	6	-98	-97

Section F1

8. **c_QF01 In the PAST YEAR, has anything EVER happened online that bothered or upset you in some way (e.g., made you feel upset, uncomfortable, scared or that you shouldn't have seen it)?**

   0 No

   1 Yes

   -98 I don't know

   -97 Prefer not to say

   ROUTING: If "yes" to question QF01, ask the questions below (else skip to optional question QF07, if used, or to the core question QD2):

9. **c_QF02_rt In the PAST YEAR, how often did this happen?**

   1 A few times

   2 At least every month

   3 At least every week

   4 Daily or almost daily

   -98 I don't know

   -97 Prefer not to say

10. **c_QF04_rt The last time something happened online that bothered or upset you, did you talk to anyone of these people about it? PLEASE TICK AS MANY BOXES AS NEEDED**

    a) My mother or father (or step/foster mother or father)

    b) My brother or sister (or step/foster/half sibling)

    c) A friend around my age

    d) A teacher

    e) Someone whose job it is to help children

    f) Another adult I trust

    g) Someone else

    h) I didn't talk to anyone

    i) I don't know

    j) Prefer not to say

11. **c_QF05_rt The last time you had problems with something or someone online that bothered or upset you in some way, did you do any of these things afterwards? (PLEASE TICK AS MANY BOXES AS NEEDED)**

a) **I ignored the problem or hoped the problem would go away by itself**

b) **I closed the window or app**

c) **I felt a bit guilty about what went wrong**

d) **I tried to get the other person to leave me alone**

e) **I tried to get back at the other person**

f) **I stopped using the internet for a while**

g) **I deleted any messages from the other person**

h) **I changed my privacy/contact settings**

i) **I blocked the person from contacting me**

j) **I reported the problem online (e.g., clicked on a 'report abuse' button, contacted an internet advisor or Internet Service Provider (ISP)**

k) **Something else**

l) **I don't know**

m) **Prefer not to say**

ROUTING: Ask for each 'yes' response in QF05:

Section D

12. c_QD2 How often does the following apply to you?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Some-times	Often	Always	I don't know	Prefer not to say
I feel safe on the internet	1	2	3	4	-98	-97
I find other people are kind and helpful on the internet	1	2	3	4	-98	-97
I know what to do if someone acts online in a way I don't like	1	2	3	4	-98	-97
I find it easier to be myself online than when I am with people face-to-face	1	2	3	4	-98	-97
I talk about different things online than I do when speaking to people face-to-face	1	2	3	4	-98	-97
I talk about personal things online which I do not talk about with people face-to-face	1	2	3	4	-98	-97

PLEASE READ:

Now we would like to ask you about social networking. By this we mean sites like [add country relevant examples, e.g., Facebook or Instagram] where you can have a profile (i.e., a page or place where you put things about yourself that others see) and where you can keep in touch with people and share things with them.

13. **op_QD3 Do you have your own profile on a social networking or social media or gaming site that you currently use?**

    0 No

    1 Yes

    -98 I don't know

    -97 Prefer not to say

ROUTING: If "yes" to question QD9, ask the questions below (else skip to core question QE1a):

14. **op_QD4_rt How do you usually respond to requests from people to become your 'friends' online? PLEASE TICK AS MANY BOXES AS NEEDED**

    a) I usually accept all requests

    b) I accept only if we have friends in common

    c) I accept only if I know them

    d) I accept only if I know them very well

    e) I only accept them if my parents/carer says it is ok

    f) I don't know

    g) Prefer not to say

15. **op_QD5_rt Thinking about your use of social networking or social media or gaming sites, have you seen any of these online?**

PLEASE TICK ONE BOX ON EVERY LINE

	I don't know what it is	No, I haven't seen it	Yes, I have seen it, but have not used it	Yes, I have used it	I don't know	Prefer not to say
Blocking button (to block contacts)	1	2	3	4	-98	-97
Report button (to tell someone if you are being treated badly online)	1	2	3	4	-98	-97
Help centre or link to a helpline (to contact someone who can help you)	1	2	3	4	-98	-97

Section E

PLEASE READ:

Please indicate how true the following things are of you when thinking about how you use technologies such as mobile phones and the internet. If you don't understand what the question is referring to, choose the option 'I don't know'. If you have never done this then think of how much this would apply to you if you had to do this now.

16. c_QE1_oy On a scale from 1 to 5 where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you? PLEASE TICK ONE BOX ON EVERY LINE

	Not true of me (1)	Somewhat not true of me (2)	Neither true nor not true of me (3)	Somewhat true of me (4)	Very true of me (5)	I don't know (6)	Prefer not to say (7)
I know how to save a photo that I find online	1	2	3	4	5	-98	-97
I know how to change my privacy settings (e.g., on a social networking site)	1	2	3	4	5	-98	-97
I find it easy to check if the information I find online is true	1	2	3	4	5	-98	-97
I find it easy to choose the best keywords for online searches	1	2	3	4	5	-98	-97
I know which information I should and shouldn't share online	1	2	3	4	5	-98	-97
I know how to remove people from my contact lists	1	2	3	4	5	-98	-97
I know how to create and post online video or music	1	2	3	4	5	-98	-97
I know how to edit or make basic changes to online content that others have created	1	2	3	4	5	-98	-97
I know how to install apps on a mobile device (e.g., phone or tablet)	1	2	3	4	5	-98	-97
I know how to keep track of the costs of mobile app use	1	2	3	4	5	-98	-97
I know how to make an in-app purchase	1	2	3	4	5	-98	-97

17. op_QE2 On a scale from 1 to 5 where 1 is 'Not at all true of me' and 5 is 'Very true of me', how true are these of you? PLEASE TICK ONE BOX ON EVERY LINE

	Not true of me (1)	Somewhat not true of me (2)	Neither true nor not true of me (3)	Somewhat true of me (4)	Very true of me (5)	I don't know (6)	Prefer not to say (7)
I know how to use a programming language (e.g., Python, C++)	1	2	3	4	5	-98	-97
I know how to open downloaded files	1	2	3	4	5	-98	-97
I know how to use shortcut keys (e.g., CTRL-C for copy, CTRL-S for save)	1	2	3	4	5	-98	-97
I know how to open a new tab in a browser	1	2	3	4	5	-98	-97
I find it easy to find a website I have visited before	1	2	3	4	5	-98	-97
I find it easy to decide if information online can be trusted	1	2	3	4	5	-98	-97
Sometimes I end up on websites without knowing how I got there	1	2	3	4	5	-98	-97
I know when I should and shouldn't share information online	1	2	3	4	5	-98	-97
I know how to behave according to the situation online	1	2	3	4	5	-98	-97
I know how to change who I share content with (e.g., friends, friends of friends or everyone)	1	2	3	4	5	-98	-97
I know which different types of licences apply to online content	1	2	3	4	5	-98	-97
I know how to create something new from video or music that I found online	1	2	3	4	5	-98	-97
) I know how to create a website	1	2	3	4	5	-98	-97

18. op_QE3 Which of these things do you know how to do on a smartphone or tablet?

PLEASE TICK ONE BOX ON EVERY LINE

	Yes	No	I don't know	Prefer not to say
Deactivate the function showing my geographical position (on Facebook, Google Maps, etc.)	1	0	-98	-97
Connect to a Wi-Fi network	1	0	-98	-97
Block push notifications from different apps	1	0	-98	-97
Have the same documents, contacts or apps on all devices that I use (e.g., smartphone, tablet, PC)	1	0	-98	-97
Block pop-ups which promote apps, games or services I have to pay for (unrequested windows that appear during web surfing)	1	0	-98	-97
Protect a smartphone with a PIN/with a screen pattern or fingerprint	1	0	-98	-97
Update my status on the social networking site I use the most	1	0	-98	-97
Find information on how to use smartphones safely	1	0	-98	-97
Compare similar apps to choose the one that is most reliable	1	0	-98	-97
Take a picture or a video with my smartphone and post it onto social media	1	0	-98	-97

Section F2

PLEASE READ:

There are lots of great things to do on the internet that many children and young people enjoy, but there are also some things on the internet that are not always good. Some children can find some of these upsetting, while others might not get upset. We want to learn about the things that can upset children online so we can help children avoid these things or deal with them better.

19. c_QF10 In the PAST YEAR, how often have you done these things online?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	I don't know	Prefer not to say
Looked for new friends or contacts on the internet	1	2	3	4	5	-98	-97
Sent my personal information (e.g., my full name, address or phone number) to someone I have never met face-to-face	1	2	3	4	5	-98	-97
Added people to my friends or contacts I have never met face-to-face	1	2	3	4	5	-98	-97
Pretended to be a different kind of person online from who I really am	1	2	3	4	5	-98	-97
Sent a photo or video of myself to someone I have never met face-to-face	1	2	3	4	5	-98	-97

20. c_QF11 Have you EVER had contact on the internet with someone you have not met face-to-face before?

0 No

1 Yes

-98 I don't know

-97 Prefer not to say

ROUTING: If "yes" to question QF11, ask the questions below (else skip to question QF20):

21. **c_QF12_rt1 In the PAST YEAR, have you EVER met anyone face-to-face that you first got to know on the internet?**

0 No

1 Yes

-98 I don't know

-97 Prefer not to say

ROUTING: If "yes" to question QF12, ask the questions below (else skip to question QF20):

22. **c_QF13_rt2 Thinking of the LAST TIME you met anyone face-to-face that you first got to know on the internet, how did you feel about it?**

1 I was happy

2 I was not happy or upset

3 I was a little upset

4 I was fairly upset

5 I was very upset

-98 I don't know

-97 Prefer not to say

ROUTING: If selected any option EXCEPT "Prefer not to say" or "I don't know" to question QF13, ask the question below (else skip to optional question QF15, if used, or core question QF20):

PLEASE READ:

Sometimes children or teenagers say or do hurtful or nasty things to someone and this can often be quite a few times on different days over a period of time, for example. This can include:
- teasing someone in a way this person does not like
- hitting, kicking or pushing someone around
- leaving someone out of things

When people are hurtful or nasty to someone in this way, it can happen:
- face to face (in person)
- by mobile phones (texts, calls, video clips)
- on the internet (e-mail, instant messaging, social networking, chatrooms)

23. c_QF20 In the PAST YEAR, has anyone EVER treated you in such a hurtful or nasty way?

0 No

1 Yes

-98 I don't know

-97 Prefer not to say

ROUTING: If "yes" to question QF20, ask the questions below (else skip to question QF28):

24. c_QF21_rt1 In the PAST YEAR, how often did this happen in any of the following ways? PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	I don't know	Prefer not to say
In person face-to-face (a person who is together with you in the same place at the same time)	1	2	3	4	5	-98	-97
Via a mobile phone or internet, computer, tablet, etc.	1	2	3	4	5	-98	-97
Some other way	1	2	3	4	5	-98	-97

ROUTING: If "yes" (="A few times", "At least every month", "At least every week", "Daily or almost daily to question") to option QF21-b, ask the questions below (else skip to question QF28):

25. c_QF23_rt2 Have any of these things happened to you in the last year?

PLEASE TICK ONE BOX ON EVERY LINE

	No	Yes	I don't know	Prefer not to say
Nasty or hurtful messages were sent to me	0	1	-98	-97
Nasty or hurtful messages were passed around or posted where others could see	0	1	-98	-97
I was left out or excluded from a group or activity on the internet	0	1	-98	-97
I was threatened on the internet	0	1	-98	-97
I was forced to do something I did not want to do	0	1	-98	-97
Other nasty or hurtful things happened to me on the internet	0	1	-98	-97

26. c_QF24_rt2 Thinking of the LAST TIME someone treated you in a hurtful or nasty way ONLINE, how did you feel?

1 I was not upset

2 I was a little upset

3 I was fairly upset

4 I was very upset

-98 I don't know

-97 Prefer not to say

ROUTING: If selected any option EXCEPT "Prefer not to say" or "I don't know" to question QF24, ask the question below (else skip to optional question QF26, if used, or core question QF28):

27. c_QF28 In the PAST YEAR, have you EVER TREATED someone else in a hurtful or nasty way?

0 No

1 Yes

-98 I don't know

-97 Prefer not to say

ROUTING: If "yes" to question QF28, ask the questions below (else skip to question QF30):

28. c_QF29_rt In the PAST YEAR, how often have you TREATED someone else in any of the following ways?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	I don't know	Prefer not to say
In person face-to-face (a person who is together with you in the same place at the same time)	**1**	**2**	**3**	**4**	**5**	**-98**	**-97**
Via a mobile phone or Internet, computer, tablet, etc.	**1**	**2**	**3**	**4**	**5**	**-98**	**-97**
Some other way	**1**	**2**	**3**	**4**	**5**	**-98**	**-97**

If you use the **Cyberbullying bystander MODULE**, please add the module here.

PLEASE READ:

In the PAST YEAR, you have seen lots of different images – pictures, photos, videos. Sometimes, these images might be obviously sexual, e.g., they may show people naked or people having sex. You might never have seen anything like this, or you may have seen something like this on a mobile phone, in a magazine, on the TV, on a DVD or on the internet. The next few questions ask you about things like this.

29. c_QF30 In the PAST YEAR, have you EVER SEEN any sexual images?

0 No

1 Yes

-98 I don't know

-97 Prefer not to say

ROUTING: If "yes" to question QF30, ask the questions below (else skip to question QF40):

30. c_QF31_rt / op_QF31_rt In the PAST YEAR, how often have you seen images of this kind in any of the following ways? PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	I don't know	Prefer not to say
In a magazine or book	1	2	3	4	5	-98	-97
On television, film	1	2	3	4	5	-98	-97
Via a mobile phone, computer, tablet or any other online device	1	2	3	4	5	-98	-97
On an online video sharing platform/site (e.g. YouTube)	1	2	3	4	5	-98	-97
On an online photo sharing platform (e.g. Instagram, Flickr)	1	2	3	4	5	-98	-97
On a social networking site (e.g. Facebook, Twitter)	1	2	3	4	5	-98	-97
In an online game	1	2	3	4	5	-98	-97
On a pornographic website (adult/X-rated website)	1	2	3	4	5	-98	-97
By pop-ups on the internet (unrequested windows that appear during web surfing)	1	2	3	4	5	-98	-97
By a message sent directly to me via my computer	1	2	3	4	5	-98	-97
By a message sent directly to me on my mobile phone	1	2	3	4	5	-98	-97
By e-mail	1	2	3	4	5	-98	-97
In an online advert	1	2	3	4	5	-98	-97
Some other way	1	2	3	4	5	-98	-97

31. c_QF32_rt Thinking of the LAST TIME you have seen images of this kind, how did you feel about it?

1 I was happy

2 I was not happy or upset

3 I was a little upset

4 I was fairly upset

5 I was very upset

-98 I don't know

-97 Prefer not to say

PLEASE READ:

People do all kinds of things on the internet. Sometimes they may send sexual messages or images. By this we mean talk about having sex or images of people naked or images of people having sex. The next few questions ask you about things like this.

32. c_QF40_oy In the PAST YEAR, have you EVER RECEIVED any sexual messages? This could be words, pictures or videos?

0 No

1 Yes

-98 I don't know

-97 Prefer not to say

ROUTING: If "yes" to question QF40, ask the questions below (else skip to question QF45):

33. **c_QF45_oy In the PAST YEAR, have you EVER SENT or POSTED any sexual messages? This could be words, pictures or videos about you or someone else.**

0 No

1 Yes

-98 I don't know

-97 Prefer not to say

ROUTING: If "yes" to question QF45, ask the questions below (else skip to question QF47):

34. c_QF46_oy In the PAST YEAR, how often, if ever, have you SENT or POSTED any sexual MESSAGES (words, pictures or videos) in the following ways?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	I don't know	Prefer not to say
I have sent someone a sexual message (e.g., words, pictures or video)	1	2	3	4	5	-98	-97
I have posted a sexual message (e.g., words, pictures or video) where other people could see it on the internet	1	2	3	4	5	-98	-97
I have asked someone on the internet for sexual information about him or herself (like what his or her body looks like without clothes on or sexual things he or she has done)	1	2	3	4	5	-98	-97

35. c_QF47_oy In the PAST YEAR, how often, if ever, have you been asked by someone on the internet for sexual information (words, pictures or videos) about yourself (like what your body looks like without clothes on or sexual things you have done) when you did not want to answer such questions?

1 Never

2 A few times

3 At least every month

4 At least every week

5 Daily or almost daily

-98 I don't know

-97 Prefer not to say

PLEASE READ:

On the internet, people discuss things that may not be good for you. Here are some questions about these kinds of things.

36. c_QF50_oy In the PAST YEAR, have you seen online content or online discussions where people talk about or show any of these things?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	I don't know	Prefer not to say
Ways of physically harming or hurting themselves	1	2	3	4	5	-98	-97
Ways of committing suicide	1	2	3	4	5	-98	-97
Ways to be very thin (such as being anorexic or bulimic, or "thinspiration")	1	2	3	4	5	-98	-97
Hate messages that attack certain groups or individuals (e.g., people of different colour, religion, nationality, or sexuality)	1	2	3	4	5	-98	-97
Their experiences of taking drugs	1	2	3	4	5	-98	-97
Gory or violent images, for example of people hurting other people or animals?	1	2	3	4	5	-98	-97

ROUTING: If 'yes' (="A few times", "At least every month", "At least every week", "Daily or almost daily to question") to QF50a–f above, ask QF51 for each (or skip to question QF60).

37. c_QF60 In the PAST YEAR, has any of the following happened to you on the internet?

PLEASE TICK ONE BOX ON EVERY LINE

	No	Yes	I don't know	Prefer not to say
Somebody used my personal information in a way I didn't like	0	1	-98	-97
The device (e.g., phone, tablet, computer) I use got a virus or spyware	0	1	-98	-97
I lost money by being cheated on the internet	0	1	-98	-97
Somebody used my password to access my information or to pretend to be me	0	1	-98	-97
Somebody created a page or image about me that was hostile or hurtful	0	1	-98	-97
I spent too much money on in-app purchases or in online games	0	1	-98	-97
Someone found out where I was because they tracked my phone or device	0	1	-98	-97

38. c_QF70_oy / op_QF70_oy In the PAST YEAR, how often have these things happened to you?
PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	Don't know	Prefer not to say
I have gone without eating or sleeping because of the internet	1	2	3	4	5	-98	-97
I have felt bothered when I cannot be on the internet	1	2	3	4	5	-98	-97
I have caught myself using the Internet although I'm not really interested	1	2	3	4	5	-98	-97
I have spent less time than I should with either family, friends or doing schoolwork because of the time I spent on the internet	1	2	3	4	5	-98	-97
I have tried unsuccessfully to spend less time on the internet	1	2	3	4	5	-98	-97
I have experienced conflicts with family or friends because of the time I spent on the internet	1	2	3	4	5	-98	-97
I think the amount of time I spend on the internet causes problems for me	1	2	3	4	5	-98	-97

39. c_QF80_oy / ec_QF80_oy In the PAST YEAR, how often has this happened to you?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	A few times	At least every month	At least every week	Daily or almost daily	I don't know	Prefer not to say
My parent/carer published information (such as text, pictures or movies) about me on the internet without asking first if I was OK with it	1	2	3	4	5	-98	-97
I received negative or hurtful comments from someone because of something my parent/carer published online	1	2	3	4	5	-98	-97
I asked my parent/carer to remove things they had published on the internet	1	2	3	4	5	-98	-97
I was upset because of information my parents published online	1	2	3	4	5	-98	-97
My teacher(s) published information about me on the internet without asking first if I was OK with it	1	2	3	4	5	-98	-97
My friend(s) published information about me on the internet without asking first if I was OK with it	1	2	3	4	5	-98	-97

Section A2

PLEASE READ:

Children are all different and their lives are different too. Here are some questions about you and how you feel.

40. c_QA10 / op_QA10 How true are these things of you? PLEASE TICK ONE BOX ON EVERY LINE

	Not true for me	A bit true for me	Fairly true for me	Very true for me	I don't know	Prefer not to say
I get very angry and often lose my temper	1	2	3	4	-98	-97
I usually do as I am told	1	2	3	4	-98	-97
I fight a lot, I can make other people do what I want	1	2	3	4	-98	-97
I am often accused of lying or cheating	1	2	3	4	-98	-97
I take things that are not mine from home, school or elsewhere	1	2	3	4	-98	-97

41. c_QA11 / op_QA11 How true are these things of you? PLEASE TICK ONE BOX ON EVERY

	Not true for me	A bit true for me	Fairly true for me	Very true for me	I don't know	Prefer not to say
I worry a lot	1	2	3	4	-98	-97
I am nervous in certain new situations, I easily lose confidence	1	2	3	4	-98	-97
I get a lot of headaches, stomach aches or sickness	1	2	3	4	-98	-97
I am often unhappy, sad or tearful	1	2	3	4	-98	-97
I have many fears and I am easily scared	1	2	3	4	-98	-97

42. c_QA12 / c_QA12 How true are these things of you? PLEASE TICK ONE BOX ON EVERY LINE

	Not true for me	A bit true for me	Fairly true for me	Very true for me	I don't know	Prefer not to say
I am restless, I cannot stay still for long	1	2	3	4	-98	-97
I finish the work I'm doing, my attention is good	1	2	3	4	-98	-97
I am constantly fidgeting or squirming	1	2	3	4	-98	-97
I am easily distracted and find it difficult to concentrate	1	2	3	4	-98	-97
I think before I do things	1	2	3	4	-98	-97

43. c_QA16_oy Do you sometimes feel that you are treated badly because of the following?
PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	Some-times	Often	Very often	I don't know	Prefer not to say
Because of where my family is from	1	2	3	4	5	-98	-97
Because of my skin colour	1	2	3	4	5	-98	-97
Because of my religion	1	2	3	4	5	-98	-97
Because of my height or weight	1	2	3	4	5	-98	-97
Because of a disability	1	2	3	4	5	-98	-97
Because of not having enough money	1	2	3	4	5	-98	-97
Because of the type of people I fall in love with	1	2	3	4	5	-98	-97
Because of how I look or behave	1	2	3	4	5	-98	-97
Because of my opinions or beliefs	1	2	3	4	5	-98	-97
For some other reason	1	2	3	4	5	-98	-97

44. c_QA18 How true are these things of you? PLEASE TICK ONE BOX ON EACH LINE

	Not true	A bit true	Fairly true	Very true	I don't know	Prefer not to say
I do dangerous things for fun	1	2	3	4	-98	-97

I do exciting things, even if they are dangerous	1	2	3	4	-98	-97

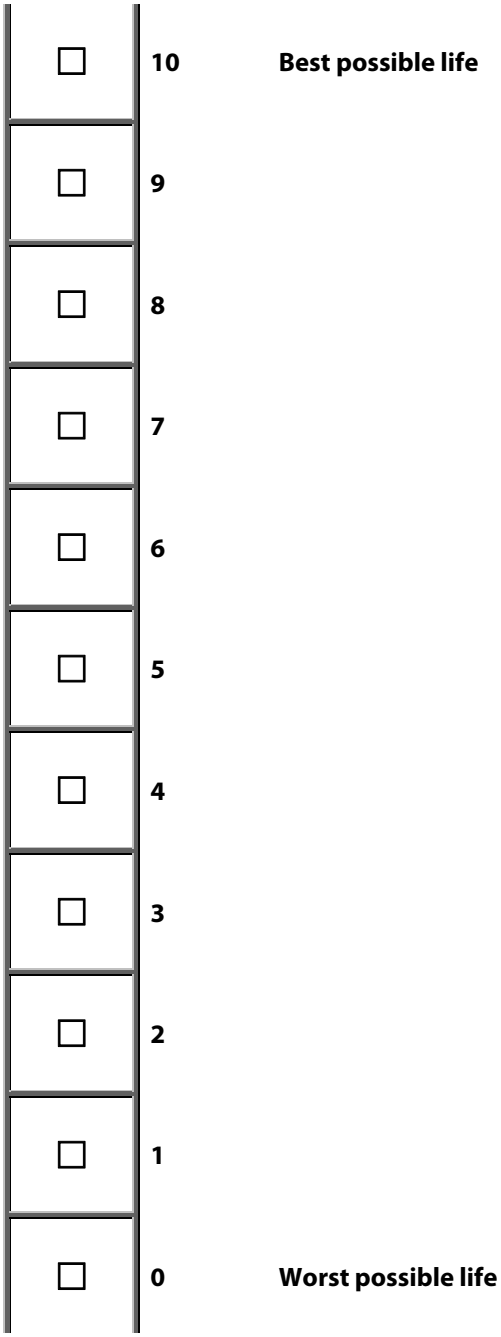
45. c_QA21 / op_QA21 How true are these things of you?

PLEASE TICK ONE BOX ON EVERY LINE

	Not true	A bit true	Fairly true	Very true	I don't know	Prefer not to say
I can solve difficult problems if I try hard enough	1	2	3	4	-98	-97
If someone opposes me, I can find ways to get what I want	1	2	3	4	-98	-97
It's easy for me to stick to my aims and achieve my goals	1	2	3	4	-98	-97
I am confident that I can deal with unexpected problems	1	2	3	4	-98	-97
I can generally work out how to handle new situations	1	2	3	4	-98	-97
I can solve most problems if I try hard	1	2	3	4	-98	-97
I can stay calm when things get difficult because I am good at coping	1	2	3	4	-98	-97
When I meet a problem, I can usually find several solutions	1	2	3	4	-98	-97
If I am in trouble I can usually think of something to do	1	2	3	4	-98	-97

Section H

46. c_QH1 Here is a picture of a ladder. Imagine that the top of the ladder '10' is the best possible life for you and the bottom '0' is the worst possible life for you. In general, where on the ladder do you feel you stand at the moment? PLEASE TICK THE BOX NEXT TO THE NUMBER THAT BEST DESCRIBES WHERE YOU STAND.



-98 I don't know

-97 Prefer not to say

Section I

PLEASE READ:

Families are all different, so here are a few questions about you and your family.

47. c_QI2 How true are the following things about your family and home?

PLEASE TICK ONE BOX ON EVERY LINE

	Not true	A bit true	Fairly true	Very true	I don't know	Prefer not to say
When I speak someone listens to what I say	1	2	3	4	-98	-97
My family really tries to help me	1	2	3	4	-98	-97
I feel safe at home	1	2	3	4	-98	-97

48. c_QI3 / op_QI3 How often do the following things apply to you? If you live an equal amount of time at several places, think about the home where you will be sleeping tonight.

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	Some-times	Often	Very often	I don't know	Prefer not to say
My parent/carer praises me for behaving well	1	2	3	4	5	-98	-97
My parent/carer sets rules about what I can do at home	1	2	3	4	5	-98	-97
My parent/carer sets rules about what I can do outside the home	1	2	3	4	5	-98	-97
My parent/carer tells me when I am doing something well	1	2	3	4	5	-98	-97

ROUTING: If "Never" to ALL items asked <u>in QB5</u> (i.e., never for each option "a" to "h") skip to section J (that means that non users of the internet will skip to section J).

PLEASE READ:

Remember that when we say 'the internet' or 'online', please think how you use any device in any place. This could include your cell phone, tablet, or computer to send or receive messages, emails, browse, or to communicate with friends and family, uploading or downloading, or anything else that you usually do online.

49. c_QI4 / op_QI4 When you use the internet, how often does your parent/carer do any of these things?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	Some-times	Often	Very often	I don't know	Prefer not to say
Encourages me to explore and learn things on the internet	1	2	3	4	5	-98	-97
Suggests ways to use the internet safely	1	2	3	4	5	-98	-97
Talks to me about what I do on the internet	1	2	3	4	5	-98	-97
Sits with me while I use the internet	1	2	3	4	5	-98	-97
Stays nearby when I use the internet	1	2	3	4	5	-98	-97
Does shared activities together with me on the internet	1	2	3	4	5	-98	-97
Talks to me about what to do if something online bothers or upsets me	1	2	3	4	5	-98	-97
Helps me when something is difficult to do or find on the internet	1	2	3	4	5	-98	-97
Explains why some online content is good or bad	1	2	3	4	5	-98	-97
Helps me when something bothers me on the internet	1	2	3	4	5	-98	-97
Talks to me about the commercial activities I am exposed to online (for instance when someone tries to sell me something)	1	2	3	4	5	-98	-97

50. c_QI5 / op_QI5 Have you EVER done any of these things?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	Some-times	Often	Very often	I don't know	Prefer not to say
a)Told my parent/carer about things that bother or upset me on the internet	1	2	3	4	5	-98	-97
b)Helped my parent/carer to do something they found difficult on the internet	1	2	3	4	5	-98	-97
Started a discussion with my parent/carer about what I do on the internet	1	2	3	4	5	-98	-97
Asked for my parent's/carer's advice on how I should act online	1	2	3	4	5	-98	-97
Asked my parent/carer for something that I have seen advertised online	1	2	3	4	5	-98	-97
Asked for my parent's/carer's help with a situation on the internet that I could not handle	1	2	3	4	5	-98	-97

51. **c_QI6 / op_QI6 Does your parent/carer allow you to do the following things on the internet and if so, do you need their permission to do them? PLEASE TICK ONE BOX ON EVERY LINE**

	I am allowed to do this anytime	I am allowed to do this only with permission or supervision	I am not allowed to do this	I do not know if I am allowed to do this	I don't know	Prefer not to say
Use a web or phone camera (e.g., for Skype or video chat)	1	2	3	4	-98	-97
Download music or films	1	2	3	4	-98	-97
Use a social networking site (e.g., Facebook,Snapchat, Instagram, Twitter)	1	2	3	4	-98	-97
Watch video clips (e.g., on YouTube)	1	2	3	4	-98	-97
Play games with other people online	1	2	3	4	-98	-97
Read/watch news online	1	2	3	4	-98	-97
Use the internet for school work	1	2	3	4	-98	-97
Spend time in a virtual world (e.g. Minecraft)	1	2	3	4	-98	-97
Share photos, videos or music online with others	1	2	3	4	-98	-97

52. c_QI7 / op_QI7 Does your parent/carer make use of any of the following…?

PLEASE TICK ONE BOX ON EVERY LINE

	No	Yes	I don't know	Prefer not to say
Parental controls or other means of blocking or filtering some types of content	0	1	-98	-97
Parental controls or other means of keeping track of the Internet content I look at or apps I use	0	1	-98	-97
Rules about how long or when I am allowed to go online	0	1	-98	-97
A service or contract that limits the time I spend on the internet	0	1	-98	-97
Parental controls that filter the apps I can download	0	1	-98	-97
Parental controls that alert my parent/carer when I want to buy content (in-app purchase)	0	1	-98	-97
Software that limits the people I can be in touch with through voice calls and messages	0	1	-98	-97
Programs that block advertising (ad blocking)	0	1	-98	-97
Technology to track where I am (such as GPS)	0	1	-98	-97

53. c_QI13 Do you ever ignore what your parent/carer tells you about how and when you can use the internet?

1 No

2 Yes, sometimes

3 Yes, often

-98 I don't know

-97 Prefer not to say

Section J

PLEASE READ:

The next questions are about your teachers and your experiences at school.

54. c_QJ1 Here are some statements about your school and the students and teachers in your school. Please say how much you agree or disagree with each one.

PLEASE TICK ONE BOX ON EVERY LINE

	Not true	A bit true	Fairly true	Very true	I don't know	Prefer not to say
I feel like I belong in my school	1	2	3	4	-98	-97
I feel safe at school	1	2	3	4	-98	-97
Other students are kind and helpful	1	2	3	4	-98	-97
Teachers care about me as a person	1	2	3	4	-98	-97
There is at least one teacher I can go to if I have a problem	1	2	3	4	-98	-97

55. c_QJ2 / op_QJ2 Have any teachers at your school done these things?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	Some-times	Often	Very often	I don't know	Prefer not to say
Suggested ways to use the internet safely	1	2	3	4	5	-98	-97
Encouraged me to explore and learn things on the internet	1	2	3	4	5	-98	-97
Made rules about what I can do on the internet at school	1	2	3	4	5	-98	-97
Helped me when I found something difficult to do or find on the internet	1	2	3	4	5	-98	-97
Talked to me about what I do on the internet	1	2	3	4	5	-98	-97
Explained why some online content is good or bad	1	2	3	4	5	-98	-97
Suggested ways to behave towards other people online	1	2	3	4	5	-98	-97
Helped me in the past when something has bothered me on the internet	1	2	3	4	5	-98	-97
In general, talked to me about what I would do if something on the internet ever bothered me	1	2	3	4	5	-98	-97

56. op_QJ3 Do teachers at your school EVER do the following things?
PLEASE TICK ONE BOX ON EVERY LINE

	Yes	No	I don't know	Prefer not to say
Check if students have their mobile phones/smartphones on or off	1	0	-98	-97
Look at my phone to see what I am doing or who I am in touch with	1	0	-98	-97
Make rules about how mobile phones are used at school	1	0	-98	-97
Take students' phones away for a period (e.g., for a day or a week, etc.)	1	0	-98	-97

Section K

PLEASE READ:

The next questions are about your friendships and the area where you live.

57. c_QK1 How true are the following things for you?

PLEASE TICK ONE BOX ON EVERY LINE

	Not true	A bit true	Fairly true	Very true	I don't know	Prefer not to say
My friends really try to help me	1	2	3	4	-98	-97
I can count on my friends when things go wrong	1	2	3	4	-98	-97
I can talk about my problems with my friends	1	2	3	4	-98	-97

58. c_QK2 / op_QK2 Have any of your friends done these things?

PLEASE TICK ONE BOX ON EVERY LINE

	Never	Hardly ever	Some-times	Often	Very often	I don't know	Prefer not to say
Suggested ways to use the internet safely	1	2	3	4	5	-98	-97
Encouraged me to explore and learn things on the internet	1	2	3	4	5	-98	-97
Helped me when I found something difficult to do or find on the internet	1	2	3	4	5	-98	-97
Talked to me about what I do on the internet	1	2	3	4	5	-98	-97
Explained why some online content is good or bad	1	2	3	4	5	-98	-97
Suggested ways to behave towards other people online	1	2	3	4	5	-98	-97
Helped me in the past when something has bothered me on the internet	1	2	3	4	5	-98	-97
In general, talked to me about what I would do if something on the internet ever bothered me	1	2	3	4	5	-98	-97

If you use the **MODULES** Cyberhate/discrimination or E-health or Digital Citizenship or Internet of things or "Social Media and Uses of Sexual Content", please add the modules here.

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