Net Children Go Mobile

Risks and opportunities.
Second edition.

Giovanna Mascheroni & Kjartan Ólafsson

Full Findings
Report

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Net Children
Go Mobile

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Risks and opportunities.
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1 Introduction

1.1 Context

Both childhood and the media environment are changing and co-determining each other (Livingstone, 2009). Children are growing up in a **convergent media ecology** (Ito *et al.*, 2009), whereby significant opportunities for sociability, self-expression, learning, creativity and participation are provided by online media and increasingly, mobile media (Hjorth & Goggin, 2009; Goggin, 2010; Goggin & Hjorth, 2014). However, children may also experience risks on the internet: since 2006, the EU Kids Online network has investigated online opportunities and risks for children, showing their interdependence (Livingstone *et al.,* 2011): the more children use the internet, the wider range of opportunities taken up, the more they are exposed to risky experiences. The changing conditions of internet access by means of mobile media call for new research on children's online experiences, opportunities and risks of the mobile internet.

Although there is much current discussion of mobile media, there is scope for different definitions at this point in time as well as changing definitions over time if, like the internet itself, **mobile media are a moving target** as new technologies and applications are continuously developed. That said, any research project has to define its object of study. Certainly, we would like to differentiate between experiences of the internet when it is accessed by PCs (including via laptops and netbooks) and the online experiences when accessed by portable devices that utilise different operating systems (e.g. smartphones and tablets) since these technological affordances can either enable or hinder different practices.

Hence, when we speak of the 'mobile internet' in this project, we refer to access to the internet from mobile media that is potentially different from a PC-based online experience. The mobile media we focus on are as follows:

- **Portable devices connected to the internet** via wifi or 3G/4G, such as smartphones, tablets, feature phones, portable games consoles and MP3/MP4 players (such as iPod Touch) and e-book readers. Thanks to their portability, the internet can technically be accessed anywhere, anytime that there is a signal, although it is not exclusively used while on the move, and social considerations affect its usage.

- **Convergent multifunctional devices**, which support an ever-growing repertoire of communication practices and online activities. These combine options already supported by previous generations of mobile phones (such as phone calls, text messages, games, radio, music, photos) with activities usually performed on computers, the internet and social media (such as email, instant message services, social network sites [SNS], maps, video, television and blogging). They also enable new activities such as those related to location-based services, and those performed through apps (which can shape new online experiences).

- **Personal devices**,[1] which are affective media (evoking emotional attachment) that have become taken-for-granted components of everyday lives. Being personal and portable, mobile media make the way we consume media and engage in online practices more flexible and personalised, and create new opportunities for private use within the domestic/school/public context. This **privatisation of access and use** is accompanied by **the pervasiveness of the internet in children's daily lives,** and implies the creation of different social conventions of freedom, privacy, sociability and not least, supervision by parents and adults.

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[1] It should be noted that we are interested not just in the owners of mobile devices, but also in users (e.g. of shared tablets).

[2] The EU Kids Online is a research network directed by Prof. Sonia Livingstone and co-funded by the Safer Internet Programme of the European Commission to investigate children's online risks and opportunities. For more information see: www.eukidsonline.net

[3] See www.ictcoalition.eu

[4] Parents were asked questions on the household's

One question is whether, by potentially expanding the range of online opportunities, the mobile internet is promoting a specific repertoire of communication and entertainment activities - eg. social networking and gaming - which are preferred by children compared to educational and other more socially legitimate online activities. Another question is **whether access to the internet by means of mobile media poses greater, fewer or newer risks** to children.

Our aim is therefore to understand and distinguish the mobile internet experience from the PC-based internet experience in terms of opportunities and risks.

1.2 The policy agenda

Both researchers' and policy makers' agendas attribute an increasingly crucial role for children's online safety to teachers', peers' and especially parents' mediation. As the media and communication environment becomes increasingly difficult for governments to regulate, greater parental responsibility in the domestic regulation of their children has been advocated (Oswell, 2008). Thus, activities that were hitherto seen as being private - as parental regulation of children's media use - are more likely to be addressed within public policy frameworks, especially those concerned with protecting children from media-related harm (European Commission, 2008).

Drawing on the EU Kids Online[2] framework, we can understand **parental mediation** of children's internet use as typically articulated in five main forms (Livingstone *et al.*, 2011):

- **Co-use and active mediation of internet use** involves parents discussing with their children what they do online, sharing their online activities and sitting with them while they are online.

- **Active mediation of internet safety** entails parents promoting safer uses of the internet, giving advice on risk and helping children when something on the internet bothers them.

- **Restrictive mediation** entails parents setting rules that limit children's media use (by time or activities).

- **Monitoring** refers to parents checking available records concerning the child's internet use.

- **Technical restrictions** entail the use of software to filter, restrict and monitor the child's internet use.

Overall, the EU Kids Online findings found a positive picture of parental mediation. Not only do parents express confidence in their children's ability to cope with online risks, but children also welcome parental interest and involvement (Haddon, 2012). As regards which parenting strategies work best, while restrictive mediation is clearly associated with lower risk, it may also reduce children's chances of benefiting from the online world, and there is also evidence that parental active mediation of internet use can reduce children's experience of harm without restricting their opportunities (Dürager & Livingstone, 2012).

The portability of smartphones and their personalised and private nature, inherited from ordinary mobile phones, poses **new challenges to parents' ability and willingness to share and supervise their children's use of online media**. Mobile phones can facilitate technical and monitoring mediation, but mobile access may make active mediation more difficult -because the device is more personal, it has smaller screens, etc.. Thus, it becomes necessary to explore the new conditions under which parental mediation is taking place, in order to shed light on the new kinds of constraints and possibilities parents consider when trying to mediate their children's internet experiences.

Teachers and educational institutions also play a crucial role in mediating the internet activities

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[2] The EU Kids Online is a research network directed by Prof. Sonia Livingstone and co-funded by the Safer Internet Programme of the European Commission to investigate children's online risks and opportunities. For more information see: www.eukidsonline.net

undertaken by children from their mobile media. As with parents, online access from mobile platforms deeply modifies both the preconditions for and effectiveness of mediation strategies adopted in school contexts. Thus, we need to understand whether and to what extent teachers are incorporating mobile platforms into e-safety education as well as into class activities overall, and if they need to be supported in carrying out this role, for instance, increasing their awareness about specific risks or signalling priorities to address.

The new conditions of social mediation of mobile internet access define **a new agenda for policy making**. The new convergent media ecology requires a close collaboration between the various social actors that are able to shape children's online experience. Self-regulatory initiatives from the mobile phone industry, such as the European Framework for Safer Mobile Use by Younger Teenagers and Children, or other self-regulatory initiatives endorsed by the European Commission such as the CEO Coalition to Make the Internet a Better Place for Kids and the ICT Coalition for the Safer Use of Connected Devices and Online Services by Children and Young People in the EU[3] 'are starting to take into account the new developments related to the mobile internet, but it is essential to include them in a constructive dialogue with governments, child experts, non-governmental organisations (NGOs), academics, parents and educators as well as children. In this light, the Net Children Go Mobile findings are interpreted in order to establish a list of policy priorities and to identify those critical areas where cooperation between various stakeholders is indispensable for an effective promotion of internet safety.

1.3 The project

The Net Children Go Mobile project is co-funded by the **Safer Internet Programme** to investigate through quantitative and qualitative methods how the changing conditions of internet access and use – namely, mobile internet and mobile-convergent media – bring greater, fewer or newer risks to

children's online safety. Participating countries include **Denmark**, **Italy**, **Romania**, the **UK**, **Belgium**, **Ireland** and **Portugal**, the latter three joining the project on a self-funded basis.

Clearly, these countries cannot be assumed as representative of Europe as a whole. However, the rationale for choosing the first initial countries, as well as the three new countries, represents a clear strength of the project in terms of extending the validity of the findings beyond these single countries to the pan-European area. Indeed, Belgium, Denmark, Ireland, Italy, Portugal, Romania and the UK are emblematic of socio-cultural and technological differences across Europe that have to be considered when planning policy and awareness-raising initiatives aimed at promoting children's online safety on mobile-convergent media. The countries differ in many respects: in terms of their particular historical domestication of mobile phones, which may now influence the domestication of smartphones and other handheld devices; in terms of the digital cultures of their youth; in relation to the incidence of online risks among children; and finally, in terms of childhood and parenting cultures.

With respect to the diffusion of mobile phones during the 1990s, Denmark (as in the other Northern European countries), the UK and Italy have all been characterised by a rapid and pervasive adoption of mobile phones, which have become a distinctive component of youth cultures. The popularity of the devices and the new communication practices (such as SMS [short message service]) in these countries in turn gave rise to a substantial body of national empirical research on the social uses of mobile telephony (Green & Haddon, 2009). It is not only different processes of incorporation of mobile media in the context of everyday life, but also varying technological and economic mobile communications infrastructures that influence the current adoption of smartphones, by supporting or inhibiting it. By investigating access and usage of mobile phones, smartphones and other convergent media devices, the Net Children Go Mobile project provides a portrait of the domestication of new mobile ICTs (information and communication technologies) in relation to social and cultural

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[3] See www.ictcoalition.eu

variations, thus enabling explanations that can be extended to other countries, with similar national media systems, technological infrastructures, patterns of adoption of other ICTs, etc.

The countries participating in Net Children Go Mobile are also relevant in terms of children's experiences of online risks, and their implications for safety awareness policies. According to the new classification provided by the EU Kids Online study (Helsper *et al*., 2013), Belgium, Italy, Ireland, Portugal and the UK belong to the category of countries where children are 'protected by restrictions' - the countries are characterised by relatively low levels of risk, probably because internet use is also more limited and largely restricted to practical activities; Denmark belongs to the 'supported risky explorers' category - with children who are experienced social networkers and are exposed to more sexual risks online, and with parents more actively involved in guiding their children's internet use; while Romania is included in the group of countries where children are 'semi-supported risky gamers' - whereby children encounter only moderate online opportunities, mainly focused on gaming, and yet they experience relatively high levels of risk and harm. The EU Kids Online II verified this classification by comparing daily use of the internet by children, their exposure to risks and parental mediation strategies. Comparing the countries involved in the Net Children Go Mobile project therefore provides further data relevant for the above classification system and the evidence-based policies that can be applied in different countries with similar patterns of internet use, online risks and mediation.

Finally, these countries are emblematic of different cultures of childhood and associated parenting styles. Although all European countries support the United Nations Convention on the Rights of the Child (UNCRC), approaches vary somewhat throughout Europe, and sustain national constructions of childhood, ranging from child-centred states, such as Denmark, to states where the 'child in danger' perspective dominates. Based on these differences, *ad hoc* awareness campaigns and policy initiatives can be planned and extended to other European countries.

1.4 Framework and methodology

Drawing on the experience of network members within the EU Kids Online network, the conceptual framework is operationalised in a *child-centred*, *critical*, *contextual* and *comparative* approach (Livingstone & Haddon 2009; Livingstone *et al*., 2011), which understands children's online experiences as contextualised and shaped by three intersecting circles: 1) childhood, family life and peer cultures; 2) media systems and technological development; and 3) the European social and policy context.

Accordingly the project assumes that the voice and viewpoint of children is crucial to understanding online opportunities, risks and any harmful consequences of mobile-convergent media use. In order to maximise the quality of children's answers and to ensure their privacy, the survey was conducted face to face in the home, but sensitive questions were self-completed by the child. The wording of the questionnaire was refined on the basis of cognitive testing with children of different age groups and gender in each country, in order to ensure children's comprehension and to avoid adults' terminology (such as 'sexting'). Furthermore, particularly emotive terms, such as 'stranger' or 'bullying', were also avoided.

The combination of quantitative and qualitative data will contribute to enhancing knowledge on children's uses of mobile-convergent media by providing clear, representative and cross-nationally comparable quantitative data, combined with in-depth qualitative and comparative research on children's social awareness and perceptions of mobile media risks. Moreover, the qualitative fieldwork includes group interviews with parents, teachers and other youth workers, in order to compare children's and adults' perceptions and awareness of mobile internet risks, and to provide empirical data that can inform awareness-raising initiatives and guide safety policies.

1.5 This report

This report is the updated version of the full findings report *Net Children Go Mobile: risks and opportunities*, launched on Safer Internet Day 2014. It presents the findings of a survey that involved 3,500 children aged 9-16 who are internet users and their parents[4] in seven European countries. The fieldwork was conducted between May and July 2013 in Denmark, Italy, Romania and the UK; between November and December 2013 in Ireland; and between February and March 2014 in Belgium and Portugal.

Key features of the survey are:

• A cognitive testing with eight children from different age groups (9-10, 11-12, 13-14, 15-16) in each country, to check children's understandings of and reactions to the questions.

• Random stratified survey sampling of some 500 children (9-16 years old) who use the internet per country.

• Survey administration at home, face to face, with a self-completion section for sensitive questions.

On several occasions we compare the findings of the Net Children Go Mobile survey with the 2010 EU Kids Online survey. When such comparisons are made we calculate an average number from the EU Kids Online survey only for the countries included in the Net Children Go Mobile survey, thus attempting to provide as direct a comparison as possible.

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[4] Parents were asked questions on the household's demographics and socio-economic status (SES), as well as on their own use of the internet, smartphones and tablets.

2. Access and use

Prior research has shown that the social context of internet access and use shapes children's online experiences and, more specifically, the conditions under which children are taking advantage of online opportunities, or are exposed to online risks (Livingstone *et al.*, 2011). With respect to internet access, mobile-convergent media are likely to expand the spatial and temporal locations of internet use among children by providing 'anywhere, anytime' accessibility, although economic or technological constraints (such as the cost of web packages or the lack of wifi connections) may actually limit the use of mobile devices when children are on the move. Nonetheless, mobile-convergent media may reconfigure social conventions of freedom, privacy and surveillance.

To attempt to capture the complexity of internet use in children's everyday lives we use three indicators. *Location of use:* own bedroom at home; at home but not in own room; at school; other places such as libraries, cafés and relatives' or friends' homes; when out and about, on the way to school or other places. *Frequency of use:* several times each day, daily, at least every week, never or almost never. *And devices through which they go online:* desktop computers, laptop computers, mobile phones, smartphones, tablets, other handheld devices such as iPod Touch, e-book readers and games consoles.

2.1 Where children use the internet

The ways through which and the locations where children go online are diversifying, as the EU Kids Online findings (Livingstone *et al.*, 2011) already showed in 2010. Indeed, the increasing diffusion of portable devices and mobile-convergent media may actually expand the range of places and social situations where children access the internet, fostering the so-called 'ubiquitous internetting' (Peter & Valkenburg, 2006)

and the pervasiveness of online activities in children's everyday lives.

However, when asked how often they go online from the diverse locations listed below by means of any device, children still indicate **the home** – whether their own bedroom or another room at home – **as the most common location of internet use**. Table 1 shows how often children use the internet at the locations asked about, bearing in mind that they generally use it in more than one location.

Table 1: How often children use the internet in different places

%	Several times each day	Daily or almost daily	At least every week	Never or almost never
Own bedroom	29	26	11	34
At home but not in own room	24	36	21	19
At school	8	13	34	45
Other places (home of friends/ relatives, libraries, cafés)	7	11	31	51
When out and about, on the way to school or other places	7	10	8	75

Q1 a-e: Looking at this card, please tell me how often you go online or use the internet (from a computer, a mobile phone, a smartphone, or any other device you may use to go online) at the following locations…
Base: All children who use the internet.

- **More than half of children in our sample (55%) access the internet from their own bedroom on a daily basis**, with 29% of the interviewees saying they do so several times a day. One out of three children do not use the internet in their own bedroom or a private room at home.

- Similar frequency can be observed for **internet access from another room at home: 60% of children** report using the internet several times a day or at least once a day in a room which is not their private room.

- If we consider locations where children access the internet at least once a week, then the percentage of children using the internet in a private bedroom or in a public room at home increases to 66% and 81% respectively.

- **The third most common context of internet access and use** is **school**, where most of the children report having access to the internet daily (21%) or weekly (34%).

- Nearly half of the children use the internet once a week or more in other places such as at friends' or relatives' homes, or in public places such as libraries or cafés.

- **Internet access** while **on the move** – such as on the way to school or when out and about – is **still limited** although on the rise. More specifically, only 7% of our sample say they access the internet several times a day when out and about, a few more children (10%) use the internet on the move at least daily, while the majority (75%) say that they do not use the internet on the move. While this is clearly related to the ways children connect to the internet - more specifically to the availability of internet plans (Table 6) - interviews and focus groups also suggest that children may be wary of using smartphones on the move because they fear they might be stolen or lost.

Table 2 shows the distribution of daily internet access in the locations asked about by gender, age and socio-economic status (SES)[5], and helps us to understand in more detail the changing contexts of internet use

	% Own bedroom	% At home but not own room	% At school	% Other places	% When out and about
Boys	56	58	19	16	16
Girls	55	62	22	19	18
9-10	26	43	7	5	3
11-12	45	59	16	10	9
13-14	67	67	23	24	21
15-16	78	68	34	28	33
Low SES	49	57	17	15	15
Medium SES	63	55	22	20	19
High SES	57	70	25	19	19
All	55	60	21	17	17

Q1 a-e: Looking at this card, please tell me how often you go online or use the internet (from a computer, a mobile phone, a smartphone, or any other device you may use to go online) at the following locations…
Base: All children who use the internet.

- In all the locations asked about, **daily internet access is strongly differentiated by age**, with older children having more access everywhere.

- Age differences, however, are more pronounced for **private and mobile internet use,** with **teenagers aged 15-16** far more likely to access the internet at least daily in their own bedroom (78%) or when out and about (33%) than any other age group. This suggests that **teenagers benefit from a better online experience in terms of flexibility, ubiquity and privacy**.

- Gender differences in access are minor, although girls are slightly more likely to access the internet when out and about and also in places outside of home and school.

- Access to the internet is still **differentiated by SES**, with children from higher or medium SES being more likely to access the internet in all locations than children from lower SES. Remarkably, **children from less advantaged families are** also **less likely to benefit from internet access in school on a daily basis**.

[5] Based on prior research, we hypothesise that differences in children's uses of the internet persist based on the socioeconomic status (SES) of their household as well as on their age, gender and, of course, country.

Table 3: Daily internet use in different places, by country

	% Own bedroom	% At home but not own room	% At school	% Other places	% When out and about
Belgium	38	67	11	11	9
Denmark	77	76	61	38	26
Ireland	46	63	7	11	8
Italy	58	52	8	18	30
Portugal	45	59	19	13	8
Romania	60	40	11	9	8
UK	64	63	29	22	32
All	55	60	21	17	17

Q1 a-e: Looking at this card, please tell me how often you go online or use the internet (from a computer, a mobile phone, a smartphone, or any other device you may use to go online) at the following locations…
Base: All children who use the internet.

- Daily use of the internet varies considerably by country. For example, **private domestic access to the internet at least daily** is the **most common** experience **in most countries** considered **except Belgium, Ireland and Portugal**. Moreover, it is in general significantly higher in Denmark. Meanwhile, **Romanian children are more likely to access the internet daily in the privacy of their bedroom than anywhere else at home (60% compared to 40%)**. By contrast, Belgian, Irish and Portuguese children report using the internet more in a room which is not their own room, than in their private bedroom.

- Danish children are more likely to access the internet on a daily basis at home, school and other places than children in other countries. **Daily internet access when out and about is highest in the UK and Italy** – where one third of children use the internet on the move – **but lowest in Belgium, Ireland, Portugal and Romania**.

- Country differences are also relevant when we examine **school** access. While the school is considered to be a strategic site for digital inclusion, awareness raising and e-safety campaigns (Barbovschi, O'Neill, Velicu & Mascheroni, 2014), **45%** of children do not use the internet at school or else **use the internet at school less than once a week**, and this percentage rises to **73% of Italian children**.

- While school access at least once a week is more common in the UK (87%), only in Denmark is the internet being significantly integrated into daily school activities (61%).

Figure 1 shows the comparison between home and school access across gender, age groups and SES:

Figure 1: Comparison between home and school access, by gender, age and SES

■ % Daily use at school

■ % Daily use at home (bedroom or elswhere)

Q1 a, Q1 b and Q1 c: Looking at this card, please tell me how often you go online or use the internet (from a computer, a mobile phone, a smartphone, or any other device you may use to go online) at the following locations…
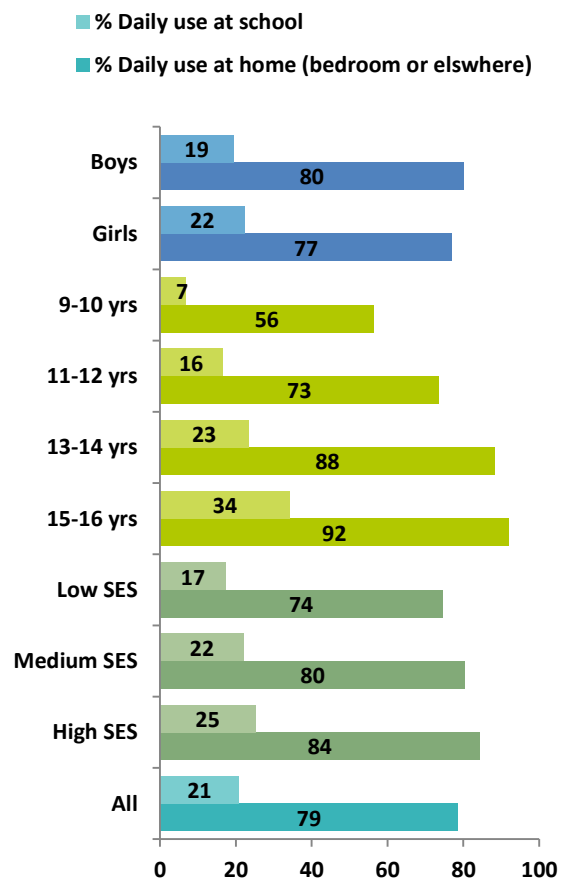Base: All children who use the internet.

- As we have already observed, both home (in own bedroom and/or another room at home) and school access to the internet on a daily basis increase with age. However, while more than half (56%) of 9 to 10 year old children use

the internet at home at least once a day, just 7% of the same age group and a minority, 34%, of the oldest group (teenagers aged 15-16) have internet access in school on a daily basis. This suggests that **the internet is mainly a domestic phenomenon** and that it has not yet been integrated into school life.

- Gender differences are minor, with girls slightly more likely to use the internet at school every day than boys, and boys more likely to access the internet daily from home.

- As anticipated, internet access is also structured by SES, with children from high SES homes being more likely to use the internet daily both at home and at school (see also Figure 84 and Figure 85).

Figure 2 shows the comparison between home and school access by country:

- As anticipated, country differences are also noteworthy: only young Danes have thoroughly incorporated the internet into both domestic and school everyday life contexts and activities, also thanks to different rules regarding the use of wifi networks and smartphones in schools (see chapter 9, Figure 84 and Figure 85).

- By contrast, in Belgium, Ireland, Italy and Romania, daily internet access is almost exclusively domestic, due to different policies in school (see chapter 9, Figure 84 and Figure 85).

Figure 2: Comparison between home and school access, by country
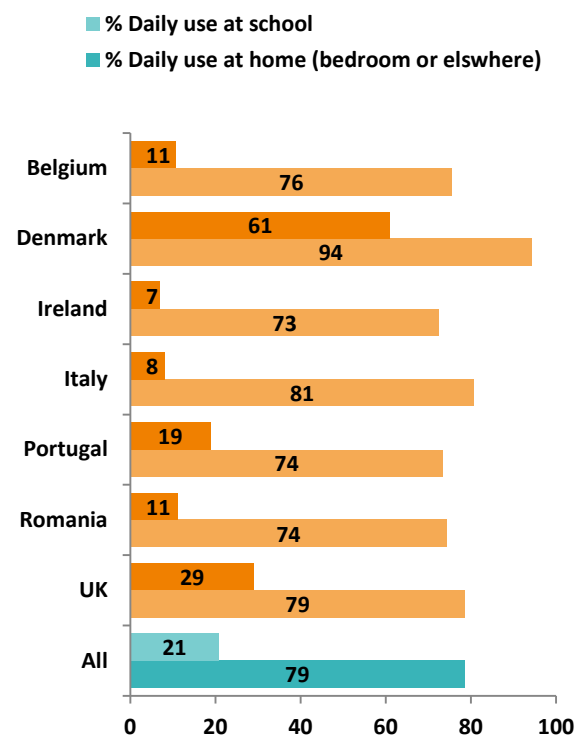
■ **% Daily use at school**
■ **% Daily use at home (bedroom or elswhere)**

Q1 a, Q1 b and Q1 c: Looking at this card, please tell me how often you go online or use the internet (from a computer, a mobile phone, a smartphone, or any other device you may use to go online) at the following locations…
Base: All children who use the internet.

To conclude, **home** is still the **main context of internet use**. In terms of policy recommendations, therefore, empirical evidence confirms the need to focus on promoting awareness among parents as a means of reaching wider populations of children. However, as we have seen, in many countries teenagers use the internet at home **in the privacy of their own bedroom** more than in a public room. Additionally, a further challenge to parental mediation comes from portable, personal devices through which children can create new spaces of privacy within the domestic context, shared rooms included.

2.2 How children access the internet

The **increasing privatisation of internet use** is even more pronounced when we look at the devices through which children access the internet in each of the locations asked about.

Table 4 shows what devices children use at least daily to access the internet in different places, suggesting a shift towards **a post-desktop media ecology**.

- Among all the devices asked about, **smartphones** are the **most used** devices **on a daily basis in all contexts**. Being personal and portable, smartphones are seemingly carried around in various places and integrated into different social contexts and activities.

- **The smartphone** is also the device that is used most **on the move (18%)**.

Table 4: Devices used to go online daily in different places

%	Own bedroom	At home but not own room	At school	Other places	When out and about
Desktop computer (PC)	16	17	7	3	1
Laptop computer	30	30	8	5	1
Mobile phone	10	10	4	4	3
Smartphone	32	33	18	19	18
Tablet	15	18	3	4	1
E-book reader	1	1	0	0	0
Other handheld devices	7	7	2	3	1
Home games consoles	9	8	1	3	0
Access at least once a day	55	60	21	17	17

Q2 a-h: When you use the internet these days at …, how often do you use the following devices to go online?
Base: All children who use the internet.

- However, the place where **children are more likely to use their smartphones at least once a day** is actually their **own bedroom (32%) or another room at home (33%)**. This suggests that children value privacy and convenience more than mobility – perhaps because the smartphone is always 'at hand'

and doesn't need to be turned on.

- Laptop computers are also accessed on a daily basis by a significant number of children, although their use is mainly limited to the child's bedroom (30%), another room at home (30%) and school (8%).

- For each device considered, use on a daily basis in children's bedrooms is higher than use from another room at home in Denmark, Italy, Romania and the UK - and as much high or slightly less than use from a shared room at home in the remaining three countries. This privatisation of internet use reinforces a phenomenon known as '**bedroom culture**' (Livingstone & Bovill, 2001): since children are immersed in media-rich bedrooms that represent the main context of their leisure time, practices and meanings associated with identity construction, sociality and self-expression are increasingly embedded in the space of the bedroom, and, thus, increasingly mediated and privatised.

Table 5 shows how daily use of different devices varies by age and gender.

Table 5: Daily use of devices, by age and gender

| % | 9-12 years | | 13-16 years | | |
	Boys	Girls	Boys	Girls	All
Desktop computer (PC)	31	26	42	30	33
Laptop computer	35	34	52	59	46
Mobile phone that is not a smartphone	10	13	16	21	15
Smartphone	24	25	54	58	41
A tablet	25	18	22	26	23
E-book reader	2	1	3	1	2
Other handheld devices	5	6	13	11	9
Home games consoles	21	5	21	5	13

Q2 a-h: When you use the internet these days at …, how often do you use the following devices to go online?
Base: All children who use the internet.

- Across all age groups, laptops (46%) and smartphones (41%) are the two devices most used to go online followed by desktop computers (33%) and tablets (23%). However, age and gender differences are noteworthy.

- **Use** of each of the devices considered generally **increases with age**, but the age divide is greater for certain devices. The use of smartphones is particularly structured by age, with only 24% of boys and 25% of girls aged 9-12 having access to a smartphone as opposed to 54% and 58% of teenage boys and girls respectively. Age differences matter less for ordinary mobile phones.

- **Use of different devices also varies by gender**. Indeed, certain devices are seemingly highly gendered: while boys of all age groups are more likely to use desktop computers and home games consoles, teenage girls are more likely to use a smartphone, a laptop computer, a tablet, and a mobile phone which is not a smartphone to go online.

Figure 3 looks at the daily use of smartphones and laptop computers.

Figure 3: Daily use of smartphones and laptops, by gender, age and SES
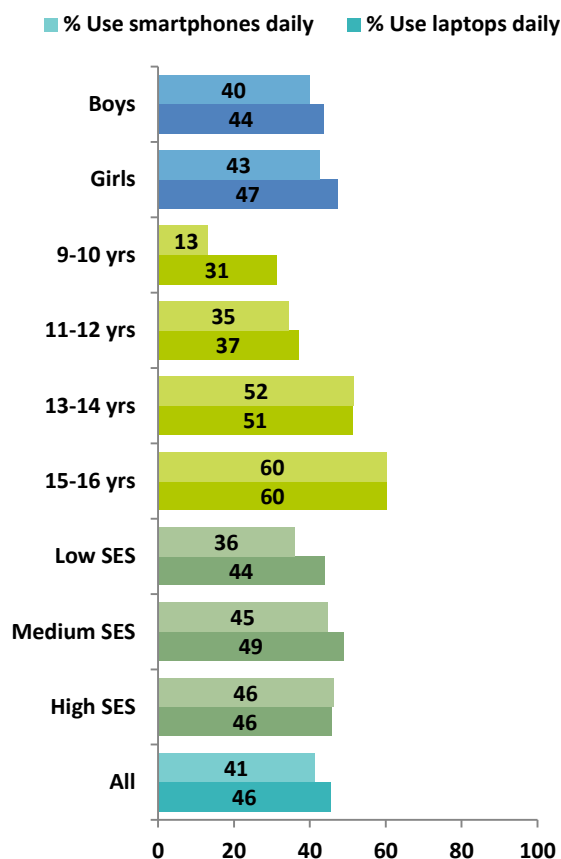
■ **% Use smartphones daily**   ■ **% Use laptops daily**

Q2 b and Q2 d: When you use the internet these days at …, how often do you use the following devices to go online?
Base: All children who use the internet.

- Figure 3 shows that, while gender differences in the daily use of smartphones are very low, girls are more likely than boys to use laptops on a daily basis.

- The daily use of smartphones and laptops is more differentiated by age: **while younger children are much more likely to use laptops every day, teenagers use smartphones as much as laptops**.

- The **differences in daily use of smartphones by SES** are notable: only 36% of children from lower SES homes go online from a smartphone every day, compared to 46% of upper class families.

- As shown in Figure 4, variations across countries are also noteworthy: while children in Belgium, Italy, Portugal and Romania are more

likely to use laptops daily, their peers in Ireland and the UK use smartphones more than laptops, while young Danes are almost equally likely to use both devices.

Figure 4: Daily use of smartphones and laptops, by country
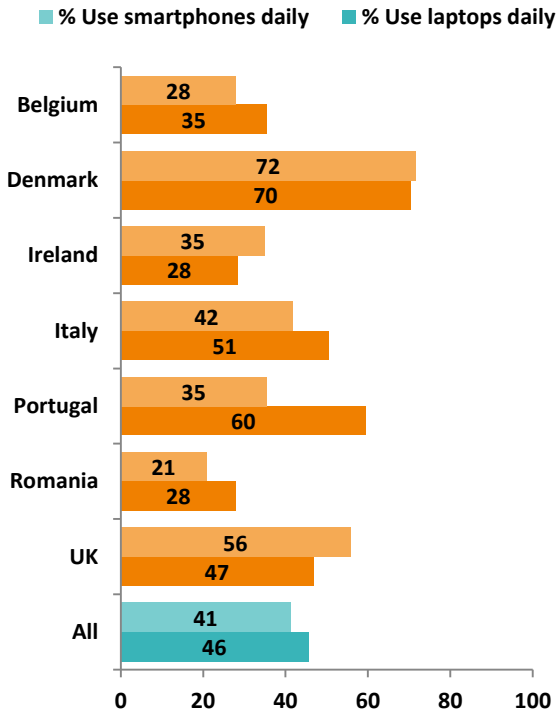

% Use smartphones daily   **% Use laptops daily**

Q2 b and Q2 d: When you use the internet these days at …, how often do you use the following devices to go online?
Base: All children who use the internet.

As anticipated, despite mobile-convergent media providing in principle 'anywhere, anytime' connectivity, mobile internet use may actually be constrained by the cost of the service. This may particularly affect younger children, who can count on less pocket money than teenagers. The availability of wifi networks (at home, school, cybercafés or other places) may also vary, being unevenly distributed across countries, and across different regions within the same country (e.g. urban versus rural areas). , children from higher SES homes are more likely to use only wifi networks from their smartphones. The use of wifi is also higher than the average among children aged 9-10 and 13-14 years old.

Table 6 examines how boys and girls of different ages and SES access the internet from mobile phones or smartphones, showing that the ways in which children connect to the internet from their mobile phones or smartphones is strongly differentiated by age, SES, and, to a minor extent, by gender.

- **Children aged 9-10 (41%)** and children from **lower SES homes (26%)** are **more likely to have a phone that does not connect to the internet**. This is in line with the fact that younger children and children from less advantaged families are not likely to use the internet when out and about (Table 2).

- One out of four interviewees **(27%) use both free wifi networks and internet plans** to go online from their smartphones or mobile phones. If we look at gender, age and SES differences, the percentage of children going online through both wifi networks and mobile web packages is higher for **boys (29%), children aged 15-16 (33%) and higher SES children (31%)**.

- The number of children who go online from their phones/smartphones using **mobile internet plans only is higher than the average (15%) among girls (17%), children aged 13-14 (17%), and lower SES children (19%)**. That less advantaged children are more likely to go online from their smartphones through internet plans and less likely to use wifi networks suggests that lower SES families are less likely to provide wifi connectivity at home. In contrast, children from higher SES homes are more likely to use only wifi networks from their smartphones. The use of wifi is also higher than the average among children aged 9-10 and 13-14 years old.

Table 6: Ways of connecting to the internet from mobile phone/smartphone, by gender, age and SES

	% mobile internet plan and free wifi	% mobile internet plan only	% free wifi only	% phone does not connect to the internet
Boys	29	14	33	24
Girls	25	17	36	22
9-10	14	9	36	41
11-12	23	14	35	28
13-14	27	16	39	18
15-16	33	17	31	19
Low SES	21	19	34	26
Medium SES	29	13	34	24
High SES	31	14	35	20
All	27	15	35	23

Q8 a-c: Are you able to connect to the internet from your smartphone/mobile phone, and if so, how do you connect?
Base: All children who own or have for private use a mobile phone or a smartphone.

Table 7 shows how access to the internet from mobile phones or smartphones varies by country.

Table 7: Ways of connecting to the internet from mobile phone/smartphone by country

	% mobile internet plan and free wifi	% mobile internet plan only	% free wifi only	% phone does not connect to the internet
Belgium	20	8	50	22
Denmark	51	14	28	7
Ireland	5	7	74	14
Italy	32	24	18	26
Portugal	10	11	47	32
Romania	15	24	20	41
UK	41	17	18	24
All	27	15	35	23

Q8 a-c: Are you able to connect to the internet from your smartphone/mobile phone, and if so, how do you connect?
Base: All children who own or have for private use a mobile phone or a smartphone.

- The number of children who have **a mobile phone that does not connect to the internet** is **highest in Romania (41%) and Portugal (32%)** and lowest in Denmark, where just 7% of children own or have for private use a phone that does not provide internet access.

- Danish children (51%) are also more likely than the average (27%) to go online from smartphones or mobile phones through both wifi and internet plans, followed by children in the UK (41%) and Italy (32%). In contrast, the number of children who go online from their phones/smartphones using **mobile internet plans only is higher than the average (15%) in Romania and Italy (24%)**.

- In contrast, **Irish (74%), Belgian (50%) and Portuguese (47%) children** are much more likely to be restricted in **using only free wifi networks** than the average (35%), suggesting cross-cultural differences in parental mediation as well as at the level of wifi provision in public spaces.

To conclude, while those who can rely both on mobile web plans and wifi networks to go online from their mobile phones and smartphones can actually benefit more from 'ubiquitous internetting', those accessing the internet either through free wifi networks only or through internet plans only are likely to experience more constraints when using mobile devices to go online.

2.3 Ownership

The use of a device and ownership do not necessarily coincide, with **children having access to a wider range of devices than those they actually own or have for private use**. However, ownership and private use shape the quality of online experience, with children owning a certain device being more likely to use it intensively throughout the day.

Table 8 shows which devices children own or have for private use, and how ownership varies by age and gender.

Table 8: Ownership of devices, by age and gender

%	9-12 years		13-16 years		All
	Boys	Girls	Boys	Girls	
Desktop computer (PC)	20	23	30	21	24
Laptop computer	31	35	47	55	43
Mobile phone that is not a smartphone	28	31	35	35	33
Smartphone	30	32	60	59	46
Tablet	15	20	21	24	20
E-book reader	5	5	5	8	6
Other handheld devices	14	10	16	16	14
Home games consoles	43	25	50	18	34

Q3 a-h: Do you personally own or have for your private use any of these devices? (By private use of a device we mean a device that only you use.)
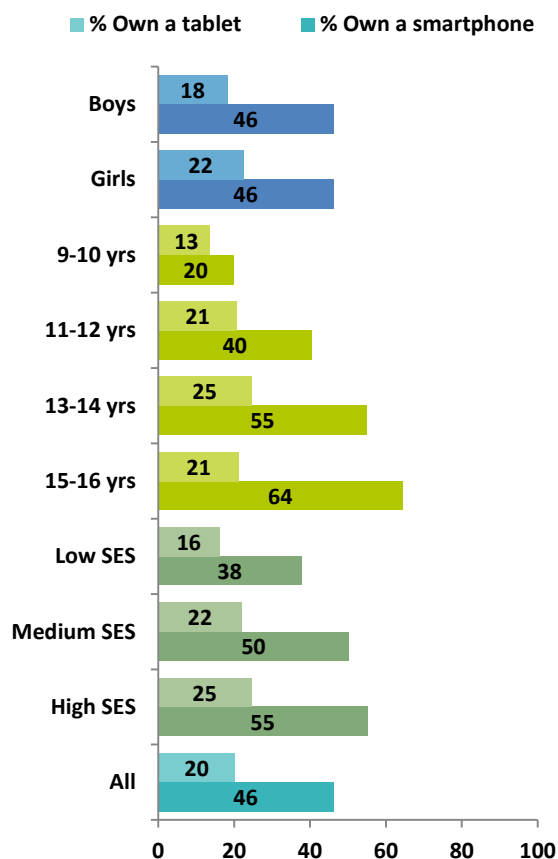Base: All children who use the internet.

- **Smartphones are the devices children are most likely to own across all age groups and gender (46%)**, followed by laptop computers (43%), home games consoles (34%) and ordinary mobile phones (33%).

- **Ownership** of each of the devices in general **increases with age**, but the age divide is greater for certain devices. The possession of smartphones is particularly structured by age, with 30% of boys and 32% of girls aged 9-12 having a smartphone for private use as opposed to 60% and 59% of teenage boys and girls respectively.

- **Ownership of different devices also partially varies by gender**. Indeed, certain devices are seemingly highly gendered: while boys of all age groups are more likely to own home games consoles, girls are more likely to have a laptop and a tablet computer.

Figure 5 shows how ownership of smartphones and tablets varies by age, gender and SES.

- Overall, age and SES differences in smartphone ownership matter more than gender.

- **Teenagers** (55% of children aged 13-14 and 64% of older teenagers) **are more likely to own or have for private use a smartphone** than younger children (20% of children aged 9-10 and 40% of those aged 11-12).

- Similarly, **smartphone ownership is considerably higher among** children from more **advantaged social backgrounds (55%)**, than those from lower SES (38%).

- The ownership of tablet computers follows different patterns with respect to age, gender and SES. Tablet ownership is also structured by age but the divide between the youngest and the oldest is much narrower than in the case of smartphones - varying from 13% of the youngest to 21% of the oldest age group, but with a peak in early adolescence. Indeed, one in four children aged 13-14 report having a tablet for their private use. Moreover, tablet ownership is more differentiated by gender - with 22% of girls having a tablet compared to only 18% of boys. In contrast, socio-economic differences are less pronounced compared to smartphone ownership: 16% of less advantaged children have a tablet, while 25% of medium and higher SES do so.

Figure 5: Ownership of smartphones and tablets, by age, gender and SES

■ % Own a tablet   ■ % Own a smartphone

Q3 a-h: Do you personally own or have for your private use any of these devices? (By private use of a device we mean a device that only you use.)
Base: All children who use the internet.

Figure 6 examines how the ownership of smartphones and tablets varies by country:

- **Children in Denmark (84%) and the UK (58%) are more likely to be smartphone owners** than their peers in Italy (45%), Ireland (40%), Belgium (35%), Portugal (34%) and Romania (26%).

Figure 6: Ownership of smartphones and tablets, by country

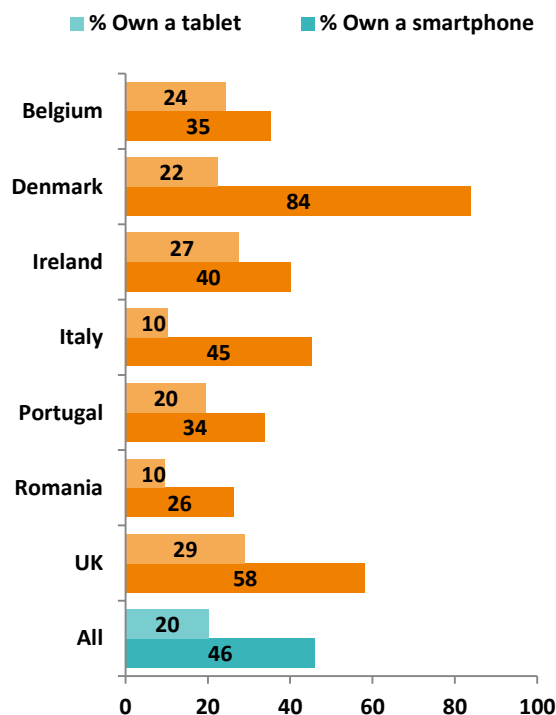■ % Own a tablet   ■ % Own a smartphone

Q3 a-h: Do you personally own or have for your private use any of these devices? (By private use of a device we mean a device that only you use.)
Base: All children who use the internet.

- As noted about gender, age and SES differences, tablet ownership follows different patterns. **Children in the UK (29%) and Ireland (27%) are more likely to be given a tablet**, followed by Belgium (24%), although again, the gap between the country with the highest penetration (the UK with 29%), and countries with the lowest penetration (Italy and Romania, with 10%) is narrower than in the case of smartphones.

Table 9 shows ownership of devices compared with daily use of those same devices (defined as using that device to access the internet at least daily in any of the given locations).

Table 9: Children who own devices and children who use devices daily, by age

%	9-12 years Own	9-12 years Use daily	13-16 years Own	13-16 years Use daily
Desktop computer (PC)	21	29	25	36
Laptop computer	33	34	51	56
Mobile phone that is not a smartphone	29	11	35	19
Smartphone	31	25	60	56
Tablet	17	21	23	24
E-book reader	6	1	7	2
Other handheld devices	12	6	16	12
Home games consoles	34	13	34	13

Q3 a-h: Do you personally own or have for your private use any of these devices? (By private use of a device we mean a device that only you use.)
Q2 a-h: When you use the internet these days at …, how often do you use the following devices to go online?
Base: All children who use the internet.

- More children say that they use a desktop computer at least daily to access the internet than those who say that they own such a device or have it for their private use., and the same trend can be observed for laptops This might indicate that **desktop and laptop computers are, to some extent, shared devices**, that might be shared with siblings, classmates, etc.

- If this comparison between daily use and ownership is to be taken as an indicator of devices that are **shared** between more individuals, then **tablets** would also fall into that category. A higher percentage of children - especially in the youngest group - say that they use such a device at least daily to access the internet than the percentage of children who say that they own such a device. Indeed, evidence from interviews and focus groups shows that borrowing their parents' tablet is quite common among younger children.

- For smartphones, however, the percentage of children who say that they own a smartphone is higher than the percentage of children who say that they use a smartphone at least daily to access the internet.

2.4 Age of first use

Prior research (Livingstone *et al*., 2011) showed that the average age when children start using the internet is dropping. In the Net Children Go Mobile survey, we asked children how old they were when they started to use the internet, but also at what age they were given a mobile phone and/or a smartphone.

Table 10 compares the average age children were given access to these different devices, across age groups, gender and SES.

Table 10: Age of first internet use, first mobile phone and first smartphone, by gender, age and SES

	How old were you when you first… Used the internet	Got a mobile phone	Got a smartphone
Boys	8,2	9,5	11,9
Girls	8,7	9,5	12,0
9-10	7,0	7,9	8,4
11-12	7,9	9,1	10,6
13-14	9,0	9,8	11,9
15-16	9,7	10,4	13,8
Low SES	9,0	9,5	12,0
Medium SES	8,3	9,5	12,2
High SES	7,7	9,5	11,7
All	8,5	9,5	12,0

Q5: How old were you when you first used the internet?
Q6: How old were you when you got your first mobile phone (a phone which is not a smartphone)?
Q7: How old were you when you got your first smartphone?
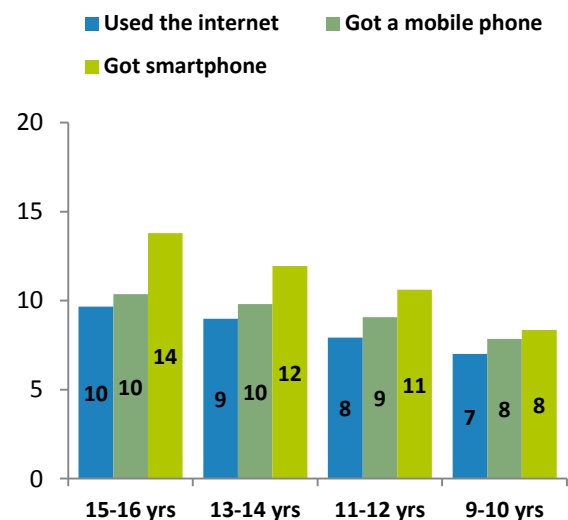Base: All children who use the internet.

- **The average age of first internet use is still dropping, now being around eight years old**. However, the age at which children start using the internet varies by age group, SES and,

to a lesser extent, by gender. Children now aged 9-10 started to use the internet on average when they were seven, while teenagers now aged 15-16 were almost 10 when they first used the internet. Children from higher SES homes were more than one year younger than children from low SES when they first used the internet. On average, girls started using the internet later than boys.

- The age when children were given their **first mobile phone** is **nine years old** on average, higher than the age of first internet use. So, **children start using the internet before they are given a mobile phone**. The age when children first received a mobile phone does not vary by gender and SES. However, the age of getting the first mobile phone increases with age: children who are aged 9-10 were given a phone when they were eight; at the opposite end of the scale, teenagers aged 15-16 were over ten when they first got a mobile phone

- **The average age at which children receive a smartphone is** older, at **twelve years old**. Similar to mobile phones, ownership of smartphones is differentiated by age more than SES and not influenced by gender. Age patterns are indeed similar to those observed regarding mobile phones: younger children are more likely to be given a smartphone when they are only eight, while older teenagers were aged 14 when they got their first smartphone.

- This suggests that 2011 is a turning point: **after 2011 children of all age groups are more likely to be given a smartphone than an ordinary mobile phone**. Indeed, 15% of our interviewees had never owned a mobile phone that was not a smartphone.

Figure 7 summarises the average age of adoption of the internet, mobile phones and smartphones across different age groups, showing that **children are using the internet and getting a mobile phone or a smartphone at ever younger ages**.

Figure 7: Age of first internet use, first mobile phone and first smartphone, by age

Q5: How old were you when you first used the internet?
Q6: How old were you when you got your first mobile phone (a phone which is not a smartphone)?
Q7: How old were you when you got your first smartphone
Base: All children who use the internet.

Table 11 compares the average age children were given access to the internet, mobile phones and smartphones by country.

Table 11: Age of first internet use, first mobile phone and first smartphone, by country

	How old were you when you first...		
	Used the internet	Got a mobile phone	Got a smartphone
Belgium	8,8	10,8	13,0
Denmark	6,6	8,5	11,1
Ireland	8,6	9,7	11,7
Italy	9,5	9,9	12,2
Portugal	8,6	9,2	12,3
Romania	9,1	9,1	12,4
UK	7,9	9,9	12,3
All	8,5	9,5	12,0

Q5: How old were you when you first used the internet?
Q6: How old were you when you got your first mobile phone (a phone which is not a smartphone)?
Q7: How old were you when you got your first smartphone?
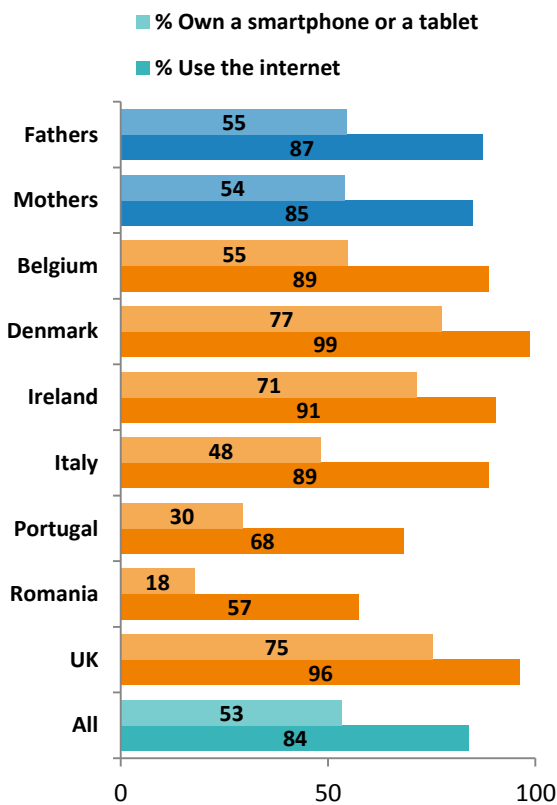Base: All children who use the internet.

- The average **age when children started using the internet** is lowest in Denmark and highest

in Italy. Danish children were also younger when they were given their first mobile phone or smartphone. In contrast, children in Belgium tend to receive either a mobile phone or a smartphone considerably later than their peers in the other six countries, being on average 11 when they are given a mobile phone and 13 when they own a smartphone.

2.5 Parental uses of the internet, smartphones and tablets

Figure 8 shows the percentage of parents in the sample who say that they are internet users, and the percentage of parents who say that they personally own a smartphone or a tablet PC that they use to access the internet.

Figure 8: Parents' internet use and ownership of mobile devices

■ **% Own a smartphone or a tablet**

■ **% Use the internet**

P2: Do you personally use the internet?
P3: Do you personally own a smartphone or a tablet PC that you use to connect to the internet?
Base: Parents of children who use the internet.

• On average, 84% of parents of children who are internet users in the seven countries that we surveyed say that they themselves are internet

users. There is no much difference between fathers and mothers in this respect. There are, however, substantial country differences, with parents in Romania and Portugal less likely than parents in the other five countries to say that they use the internet.

• Use of mobile devices is also different by country, with Romanian and Portuguese parents being much less likely than parents in the other countries to say that they own a smartphone or a tablet PC that they use to connect to the internet[6].

Table 12 shows the percentage of children who own or have for their own use a range of devices, by their parents' internet use and ownership of mobile devices (smartphones or tablet PCs).

Table 12: Children's ownership of devices, by parent's internet use and ownership of mobile devices

% child owns or has for his/her own use...	Is parent an internet user?		Does parent own a mobile device?	
	Yes	No	Yes	No
Desktop computer (PC)	17	31	21	35
Laptop computer	48	37	44	36
Mobile phone	28	38	31	44
Smartphone	58	33	49	29
Tablet	27	13	22	13
E-book reader	9	3	7	1
Other handheld devices	20	9	16	6
Home games consoles	41	26	36	22

Q3 a-h: Do you personally own or have for your private use any of these devices? (By private use of a device we mean a device that only you use.)
P2: Do you personally use the internet?
P3: Do you personally own a smartphone or a tablet PC that you use to connect to the internet?
Base: All children who use the internet and one of their parents.

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[6] This suggests that there are considerable SES variations between and within countries, which will be further explored in future publications by the network.

- To some extent the differences in the ownership of devices among children whose parents are internet and/or smartphone users and those whose parents are non-users can be understood as country differences, since most of the parents who do not use the internet or own a smartphone or a tablet are located in Romania and Portugal.

- If children have parents who are not internet users, they are more likely to say that they use a desktop computer to go online, while a child whose parents use the internet and a smartphone is more likely to own a laptop computer and a smartphone. This finding might suggest that parents who are non-users and thus perhaps, more likely to be digitally illiterate, are less interested in investing in new technological equipment. But it may also point to economic inequalities - whereby non-users are more likely to belong to less advantaged social groups - as well as to different stages of diffusion of ICTs in different societies.

3. Online activities

Previous research has shown that the range of online activities that children take up varies by age – following a progression from basic uses such as gaming and school-related searches to creative and participatory uses of the internet, such as maintaining a blog, creating and sharing content, etc. (Livingstone & Helsper, 2007; Livingstone *et al*., 2011).

The EU Kids Online data have also shown that online activities are difficult to define as either entirely beneficial or risky, and that children who take up a wider range of online activities are usually exposed to more risks, but are also better equipped to cope with those risks, thus experiencing less harm (Livingstone, Hasebrink & Görzig, 2012).

Drawing on these premises, we map children's online activities for three main reasons:

- to understand whether and how the range of online activities varies with mobile-convergent media and 'anywhere, anytime' connectivity;

- to map children's progression – and any relevant changes – on the 'ladder of opportunities' (Livingstone & Helsper, 2007);

- to assess whether and to what extent changes on the level of opportunities relate to variations in the experiences of risk and harm.

3.1 Types of online activities

Table 13 shows how many children do each of a range of activities[7] when they go online from any device, by age and gender.

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[7] We selected daily use to show how much the internet is integrated within children's daily lives. However, we are aware that some of the activities measured here (such as purchasing apps or checking for timetables and maps) are unlikely to be carried out on a daily basis.

Table 13: Daily online activities (all types of access), by age and gender

% who have daily…	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Listened to music	37	36	66	71	53
Watched video clips	43	34	64	68	53
Visited a social networking profile	29	26	71	78	53
Used instant messaging	21	22	57	60	41
Checked information to satisfy a curiosity	18	16	39	48	31
Played games on your own or against the computer	40	21	45	18	31
Used the internet for school work	18	16	34	44	29
Played games with other people on the internet	30	15	44	15	26
Downloaded music or films	13	7	25	34	21
Watched broadcast television / movie online	14	12	28	26	20
Downloaded free Apps	14	11	27	26	20
Published photos, videos or music to share with others	7	9	20	30	17
Visited a chatroom	12	5	19	25	16
Read/watched the news on the internet	8	4	20	23	14
Published a message on a website or a blog	4	6	15	20	12
Registered my geographical location	5	4	12	15	9
Used file sharing sites	3	4	12	14	9
Used a webcam	5	7	8	12	8
Spent time in a virtual world	8	5	11	6	8
Looked up maps / timetables	3	4	8	8	6
Created a character, pet or avatar	3	4	6	3	4
Read an ebook	3	1	2	6	3
Purchasing apps	1	0	3	3	2
Bought things online	1	1	3	2	2
Read QR codes/scan barcodes	0	0	1	1	1

Q9a-d, 10a-e, 11a-e, 12a-k: For each of the things I read out, please tell me how often you have done it in the past month. Base: All children who use the internet.

- **Listening to music, watching video clips and social networking top the list of activities** done on a daily basis. Other social activities also rate fairly high, such as using **Skype** or **WhatsApp**.

- Other activities such as **searching for information** to satisfy a curiosity, **schoolwork**, **playing games** (alone or in multiplayer games) are part of the daily media diets of around one in three children.

- Activities that are typical of, although not exclusive to, mobile-convergent media such as downloading free apps (20%) or locating themselves in places (9%), purchasing apps (2%) or reading QR codes (1%), are practised on a daily basis by only a minority of children.

- All the activities asked about **increase with age**.

- **The range and kind of activities taken up is also different by gender, with gender variations combining with age differences**: younger boys take up more of each of the activities asked about, while teenage girls engage more in all the activities except gaming. Teenage girls tend to engage more in communication practices and entertainment activities, while boys of all ages play more. Of all the activities asked about, indeed gaming is still the most gendered activity: so, if older boys engage more in online games and multiplayer gaming environments than younger boys, younger girls play more games on their own or against the computer than teenage girls. Conversely, girls are more likely to post photos, videos or music to share with others.

Table 14 compares a number of activities done by respondents at least once in the past month in 2013 and 2010 (EU Kids Online survey data for the seven countries).

Table 14: Online activities done at least once in the past month[8]

% who...	2010 (seven countries)	2013-2014
Watched video clips (e.g. on YouTube, iTunes, Vimeo, etc.)	80	85
Used the internet for schoolwork	83	76
Visited a social networking profile	63	71
Played games on your own or against the computer	83	67
Used instant messaging	65	58
Played games with other people on the internet	45	48
Published photos, videos or music to share with others	37	47
Downloaded music or films	45	46
Read/watched the news on the internet	30	33
Published a message on a website or a blog	27	31
Used a webcam	33	27

Q9a-d, 10a-e, 11a-e, 12a-k: For each of the things I read out, please tell me how often you have done it in the past month. EU Kids Online QC102: How often have you played internet games in the past 12 months? QC306a-d, QC308a-f and QC311a-f: Which of the following things have you done in the past month on the internet? (Multiple responses allowed.)
Base: All children who use the internet.

- Table 14 shows that **social networking, sharing and entertainment activities have increased** substantially from 2010 to 2013-2014.

- More specifically, uploading photos, videos or music to share with others is the online activity that shows the highest rate of growth, followed by visiting a profile on a SNS, watching video clips on video sharing platforms, posting a message on a website or blog and playing in multi-players' online environments.

- By contrast, **playing games alone or against the computer, using the internet for schoolwork, using a webcam and instant messaging are decreasing**. Downloading movies or music, reading or watching the news

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[8] Please note that there differences in the response scale used. The EU Kids Online survey measured activities done in the past months, while the Net Children Go Mobile survey measured activities done at least once a week.

on the internet and playing games on their own or against the computer haven't changed much.

3.2. Smartphone users

In order to grasp the consequences of mobile internet devices on the mix of daily online activities, Table 15 compares smartphone and non-smartphone users, divided into two age groups.

- The percentage of children taking up an activity on a daily basis is higher among smartphone users of both age groups for each of the activities asked about. This suggests that on a daily basis, **smartphone users engage more in each of the online activities** measured.

- **The greatest differences are to be found in communication practices** (visiting a profile on a SNS is practised every day by 53% and 87% of smartphone users aged 9-12 and 13-16 respectively; instant messaging by 43% and 73% of younger and older children who use a smartphone), **and in entertainment activities** (listening to music and watching video clips). However, children who use a smartphone are also more likely to **use the internet for schoolwork** on a daily basis (28% and 48% of smartphone users versus 13% and 29% of non-smartphone users).

- Not surprisingly, children who use a smartphone to go online also engage more in activities usually associated with mobile-convergent media such as downloading free apps (29% and 37% of smartphone users versus 7% and 12% of non-users) or registering their position through geolocating systems (11% and 16% of smartphone users versus 2% and 10% of non-users). Nonetheless, **the use of location-tracking services is low even among smartphone users**.

Table 15: Daily online activities, by age and by whether child uses a smartphone or not

% who have daily…	9-12 years		13-16 years		All* (users and non-users)
	Non-user	S-ph user	Non-user	S-ph user	
Listened to music	29	57	51	81	53
Watched video clips	33	56	55	74	53
Visited a social networking profile	19	53	59	87	53
Used instant messaging	15	43	40	73	41
Checked information to satisfy a curiosity	13	29	32	53	31
Played games on your own or against the computer	28	40	26	35	31
Used the internet for school work	13	28	29	48	29
Played games with other people on the internet	18	36	26	32	26
Downloaded music or films	8	15	17	40	21
Watched broadcast television / movie online	9	26	16	35	20
Downloaded free Apps	7	29	12	37	20
Published photos, videos or music to share with others	5	15	14	33	17
Visited a chatroom	5	18	15	27	16
Read/watched the news on the internet	5	9	17	26	14
Published a message on a website or a blog	3	11	10	24	12
Registered my geographical location	2	11	10	16	9
Used file sharing sites	1	10	5	20	9
Used a webcam	4	11	8	12	8
Spent time in a virtual world	5	10	8	9	8
Looked up maps / timetables	3	5	6	10	6
Created a character, pet or avatar	3	5	3	5	4
Read an ebook	1	6	2	6	3
Purchasing apps	0	1	1	4	2
Bought things online	0	3	1	5	2
Read QR codes/scan barcodes	0	1	1	1	1

Q9a-d, 10a-e, 11a-e, 12a-k: For each of the things I read out, please tell me how often you have done it in the past month. Base: All children who use the internet.

* The 'All' values here refer to the average number of children who are internet users and do a certain activity on a daily basis (as shown in Table 13).

However, although smartphone use is associated with higher percentages of children doing each of the activities asked about on a daily basis, **we cannot assume a causal relationship between smartphone use and online activities** at this stage of the analysis: it may well be that children who were already using the internet more and for a wider range of activities are more likely to be given a smartphone. Moreover, we cannot take it for granted that children who are smartphone users practise these activities mostly, if not exclusively, on the smartphones they own or use.

What we can conclude so far is that children who also use a smartphone to go online are more likely to take up online activities on a daily basis, and have thus incorporated the internet more thoroughly into their everyday lives. In other words, **the 'anywhere, anytime' connectivity and the privacy afforded by smartphones is associated with the intensity and the quality of young people's online experiences**.

3.3 Tablet users

Table 16 compares the online activities of tablet users and non-users, divided into two age groups.

Table 16: Daily online activities, by age and by whether child uses a tablet or not

% who have daily…	9-12 years		13-16 years		All* (users and non-users)
	Non-user	Tablet user	Non-user	Tablet user	
Listened to music	31	55	64	81	53
Watched video clips	34	54	63	72	53
Visited a social networking profile	25	36	71	86	53
Used instant messaging	18	34	53	74	41
Checked information to satisfy a curiosity	14	28	42	48	31
Played games on your own or against the computer	26	47	29	37	31
Used the internet for school work	15	24	35	53	29
Played games with other people on the internet	19	33	27	35	26
Downloaded music or films	9	12	26	39	21
Watched broadcast television / movie online	11	20	23	39	20
Downloaded free Apps	10	21	20	45	20
Published photos, videos or music to share with others	7	10	22	33	17
Visited a chatroom	7	12	18	31	16
Read/watched the news on the internet	5	9	21	25	14
Published a message on a website or a blog	4	8	16	20	12
Registered my geographical location	3	8	12	17	9
Used file sharing sites	2	8	10	22	9
Used a webcam	5	7	8	16	8
Spent time in a virtual world	5	12	8	10	8
Looked up maps / timetables	3	8	7	11	6
Created a character, pet or avatar	3	5	4	5	4
Read an ebook	2	4	2	9	3
Purchasing apps	0	1	2	6	2
Bought things online	0	2	2	4	2
Read QR codes/scan barcodes	0	1	1	1	1

Q9a-d, 10a-e, 11a-e, 12a-k: For each of the things I read out, please tell me how often you have done it in the past month. Base: All children who use the internet.
* The 'All' values here refer to the average number of children

who are internet users and do a certain activity on a daily basis (as shown in Table 13).

When looking at the use of tablets, the correlation between going online from a tablet computer and the increase in the daily rate of online activities is less straightforward, and differentiated by age:

- Overall, the activities that tablet users do more than non-users are communication and entertainment. In both age groups, and for all the activities measured, **the difference between users and non-users is lower than the gap between users and non-users of smartphones**.

- **Among younger children, the difference between tablet users and non-user is more pronounced in entertainment activities**: 55% of tablet users aged 9-12 listen to music and 54% watch video clips online (versus 31% and 34% of non-users); 47% play games alone or against the computer (versus 26% of non-users) and 33% play in multiplayers online environments (vs. 19% of non-users).

- Although many schools across Europe are experimenting with the use of tablets in class, **the use of tablets to go online is associated with a smaller increase in the overall use of the internet for schoolwork than the use of smartphones**, especially among younger children (see Table 15).

3.4 Social networking and media sharing platforms

We have seen that social networking tops the activities taken up by children on a daily basis, and that children who also use a smartphone and a tablet to go online are more likely to engage in activities on a SNS every day. Figure 9 shows the number of children who have one or more profiles on SNS, by age, gender and SES.

Figure 9: Children (%) with a SNS profile, by gender, age and SES
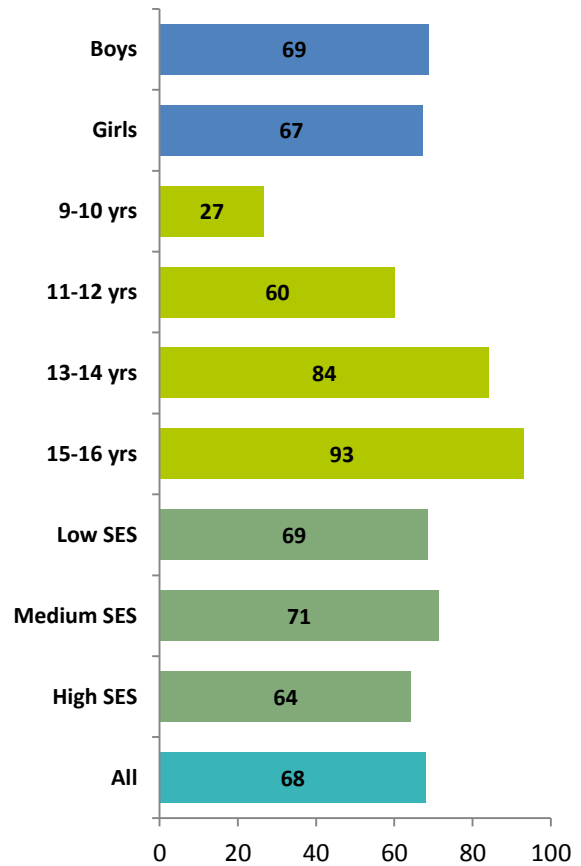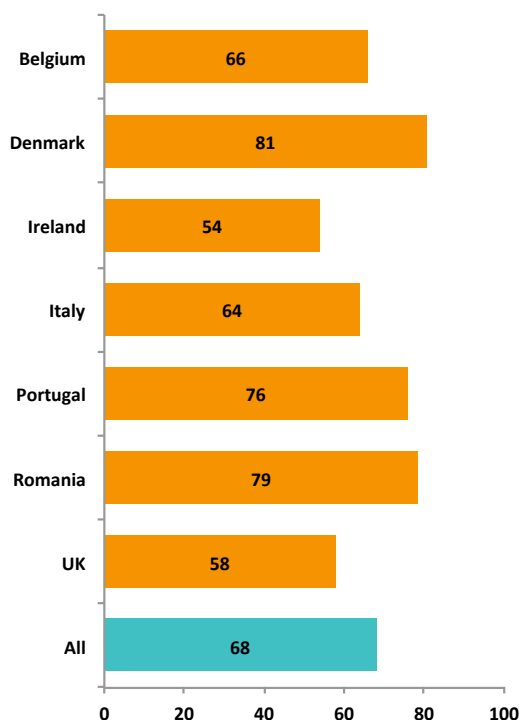

Q16 a-f: Do you have your own profile on a SNS (e.g. Facebook, Twitter, etc.) that you currently use and if you have a profile/account, do you have just one or more than one?
Base: All children who use the internet.

- Overall, **68% of children have at least one profile on a SNS**.

- **The use of SNS varies consistently by age**. While just one fourth of children aged 9-10 have a profile on a SNS, this percentage rises to 93% of older teenagers. The 60% of children aged 11-12 on SNS is also noteworthy, since most social networking platforms have age limits that are not being followed.

- Social networking varies hardly at all by gender, and very little by SES - with children from middle SES being more likely to have one or more profiles on SNS.

Figure 10 shows variations in social networking by country.

Figure 10: Children (%) with a SNS profile, by country

Q16 a-f: Do you have your own profile on a SNS (e.g. Facebook, Twitter, etc.) that you currently use and if you have a profile/account, do you have just one or more than one?
Base: All children who use the internet.

- **Country differences** also matter: despite being very different in terms of both places and devices for internet access, **Denmark and Romania top the list, with around 80% of children who have a profile on a SNS**. These services are less popular in Belgium (66%), Italy (64%), the UK (58%) and in Ireland (54%).

- If we **compare** the Net Children Go Mobile data **with the 2010 EU Kids Online data** regarding the seven countries, overall, **the average use of SNS has increased from 61% to 68%**. However, the rate of this growth is uneven across countries: while social networking has been growing in Denmark, Italy, Portugal and Romania – and it has passed **from 46% to 79% in Romania** – it has **decreased in the UK (from 67% in 2010 to 58% of children in 2013) and Ireland (from 59% to 54%)**. Social networking has varied less in Belgium (from 64% in 2010 to 66% in 2014).

The lower diffusion of social networking in Belgium, Ireland, Italy and the UK is due to lower rates of under-age use in these countries (see Table 17). This finding suggests that awareness campaigns against under-age use of SNS have been more effective in these countries, and that parents are more likely to set rules on social networking. This conclusion is consistent with the new country classification by EU Kids Online (Helsper *et al*., 2013), according to which Ireland, Italy and the UK belong to the category of countries where children are **protected by restrictions**. The higher number of 9-12 year-olds who have a profile on SNS in Portugal is, therefore, a notable exception to the common pattern observed in the protected by restrictions countries.

Table 17: Children with a profile on SNS, by country and by age

%	9-10 years	11-12 years	13-14 years	15-16 years
Belgium	22	55	75	92
Denmark	41	81	98	99
Ireland	14	39	83	91
Italy	15	52	90	93
Portugal	26	80	88	98
Romania	50	80	86	92
UK	19	35	73	88
All	27	60	84	93

Q16 a-f: Do you have your own profile on a SNS (e.g. Facebook, Twitter, etc.) that you currently use and if you have a profile/account, do you have just one or more than one?
Base: All children who use the internet.

Since sharing photos, videos and other content is one of the most popular online activities, and it has increased since 2010, we also asked children if they have a profile on a media sharing platform such as YouTube, Instagram or Flickr. Figure 11 shows the number of children having an account on one of these platforms, by gender, age and SES.
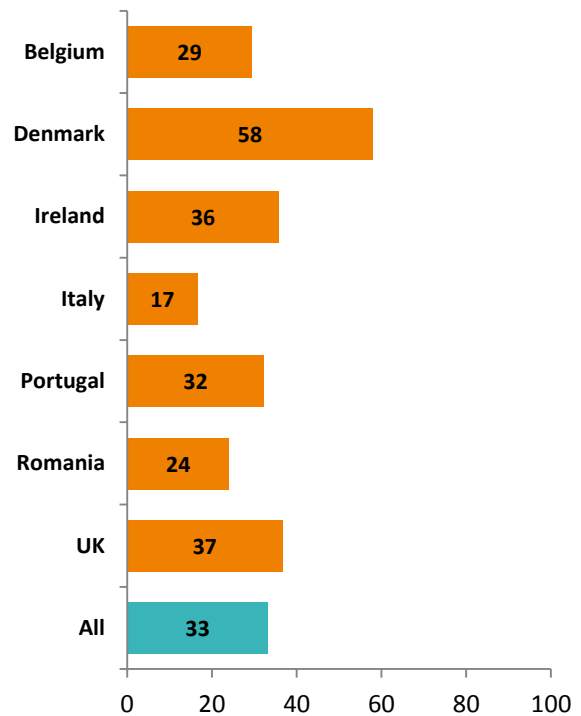
Figure 11: Children (%) with a profile on a media sharing platform, by gender, age and SES
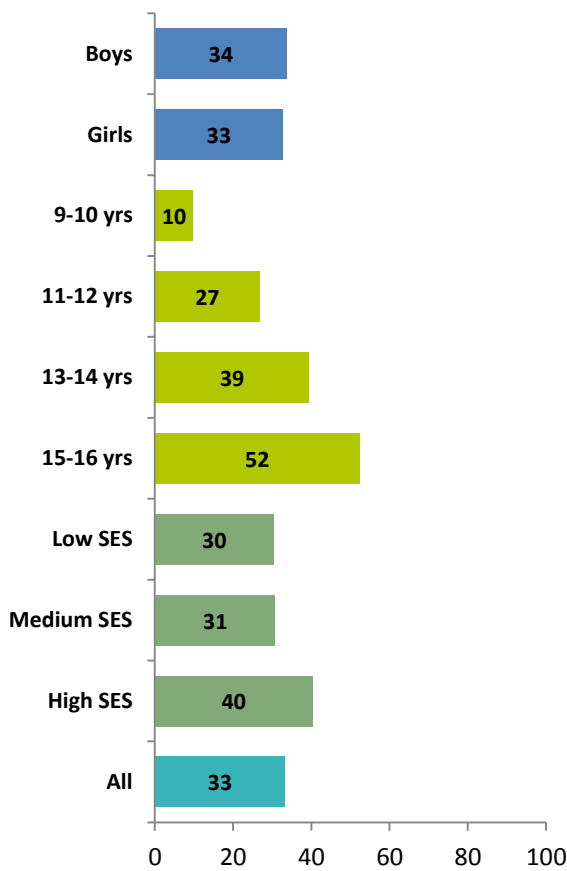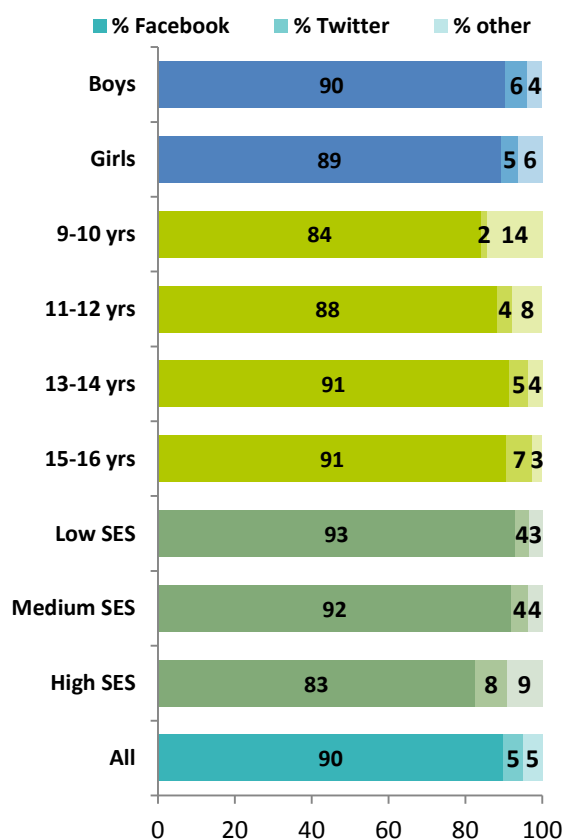

Q23 a-f: Do you have your own profile/account on a media sharing platform (photo and video) such as YouTube, Instagram, Flickr, that you currently use, and if you have a profile/account, do you have just one or more than one?
Base: All children who use the internet.

- While it is equally common among boys and girls, the probability of **having an account on media sharing platforms varies consistently by age and SES**. Just 10% of children aged 9-10 report having a profile on one of these services, a number that rises to more than half of teenagers aged 15- to 16-year-old. Children from higher SES are also more likely to have a profile on a media sharing platform.

Figure 12: Children (%) with a profile on a media sharing platform, by country

Q23 a-f: Do you have your own profile/account on a media sharing platform (photo and video) such as YouTube, Instagram, Flickr, that you currently use, and if you have a profile/account, do you have just one or more than one?
Base: All children who use the internet.

- As shown in Figure 12, country differences are even more striking, with more than half the Danish children having their own accounts on media sharing platforms, and just 17% of Italian youth doing so.

Analysing which are the most popular SNS and media sharing platforms across gender, age groups and countries is also interesting. Figure 13 shows which SNS children use most, by gender, age and SES.

Figure 13: Which social networking profile is the one children use most, by gender, age and SES
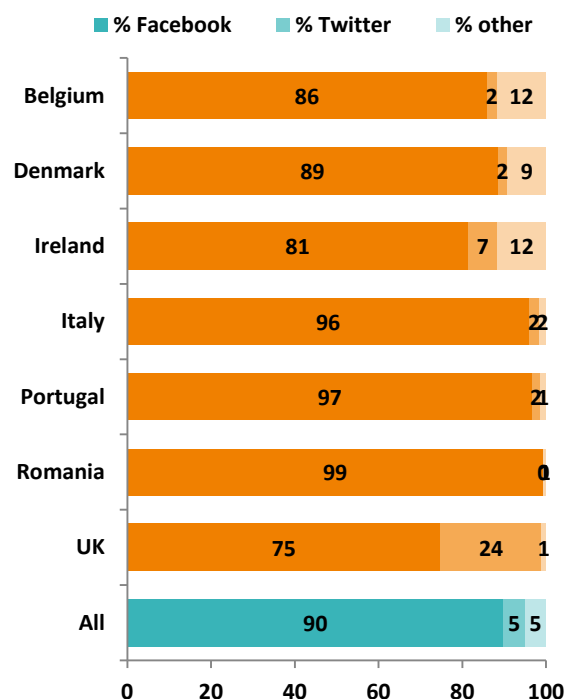
■ % Facebook ■ % Twitter ■ % other

	% Facebook	% Twitter	% other
Boys	90	6	4
Girls	89	5	6
9-10 yrs	84	2	14
11-12 yrs	88	4	8
13-14 yrs	91	5	4
15-16 yrs	91	7	3
Low SES	93	4	3
Medium SES	92	4	4
High SES	83	8	9
All	90	5	5

Q17: What social network is the profile/account that you use the most on?
Base: All children who use SNS.

- **Facebook is still the SNS that children are most likely to use**, with some variations by age and SES: both younger children and children from higher SES are less likely to indicate Facebook as the most used SNS.

- Similarly, the popularity of **Twitter** varies by gender, age and SES, and is **higher among boys, teenagers and higher SES children**.

Figure 14 shows which SNS children use most, by country.

Figure 14: Which social networking profile is the one children use most, by country

■ % Facebook ■ % Twitter ■ % other

	% Facebook	% Twitter	% other
Belgium	86	2	12
Denmark	89	2	9
Ireland	81	7	12
Italy	96	2	2
Portugal	97	2	1
Romania	99	0	0
UK	75	24	1
All	90	5	5

Q17: What social network is the profile/account that you use the most on?
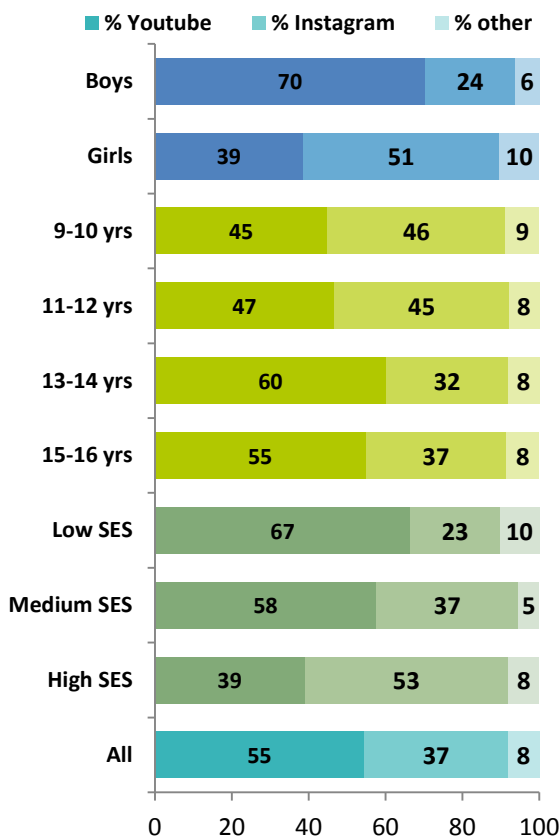Base: All children who use SNS.

- Country differences are more consistent: while it is still the most popular SNS in the countries surveyed, **almost all respondents in Romania, Portugal and Italy indicated Facebook as the SNS they use most**, while just three out of four of UK children did so. The **UK** is an interesting case because **one in four children also said the profile they used the most was on Twitter**.

- If we compare these findings with the EU Kids Online 2010 survey, we can see that Facebook has grown considerably in Romania (where in 2010 just 25% of children indicated it as the profile they used most) and Portugal (from 51% in 2010 to 97% in 2014). Facebook has registered a significant though smaller increase in Belgium (from 70% to 86%) and Ireland (from 58% in 2010 to 81% in 2013); it has faced

smaller variations in Denmark (from 85% to 89%) and Italy (from 94% to 96%), while it has decreased in the UK (from 87% to 75%).

Figure 15 shows which media sharing platform is the account children are most likely to use, by gender, age and SES.

Figure 15: Which media sharing platform is the account children use most, by gender, age and SES

Q24: What media sharing platform is the profile/account that you use the most on?
Base: All children who have a profile on media sharing platforms.

- Contrary to SNS, where Facebook dominates, among media sharing platforms there is no single platform that dominates: **55%** of the respondents who have an account on media sharing platforms indicate **YouTube as the account they are most likely to use**, and **37%** say they use **Instagram** most.

- Having a profile on media sharing platforms is strongly differentiated by gender: while nearly

three out of four **boys are more likely to use YouTube (70%)**, **girls use Instagram more (51%)**.

- Age differences are less linear and clear-cut: Instagram is seemingly more popular than YouTube among children aged 9-12, while in the other age groups, YouTube is still the platform children use most. Findings from the qualitative research confirm that younger children are using Instagram, especially in countries where their parents don't allow them to be on Facebook before they are 13.

- Having an account on a media sharing platform varies also by SES, with more than half of children from higher SES families having a profile on Instagram, compared to just one out of five children from less advantaged homes.

Figure 16 shows variations by country in the number of children having a profile on media sharing platforms.

Figure 16: Which media sharing platform is the account children use most, by country
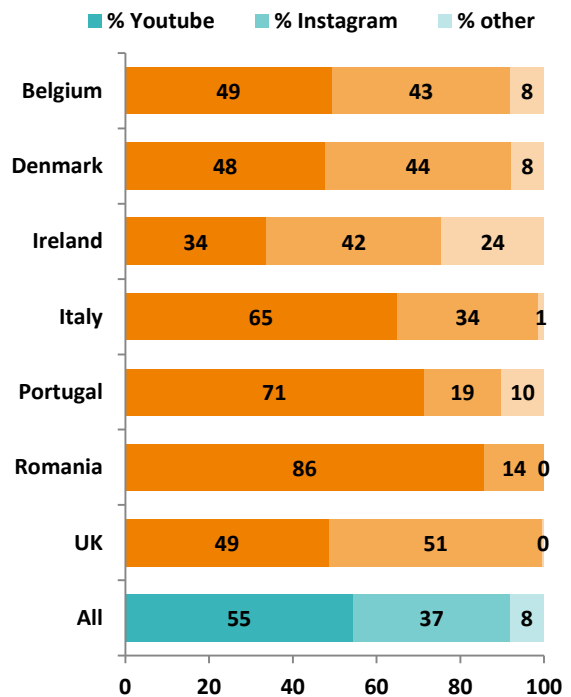
Q24: What media sharing platform is the profile/account that you use the most on?
Base: All children who have a profile on media sharing platforms.

- With respect to country differences, the majority of **Portuguese and Romanian children are most likely to have a profile on YouTube**; YouTube is also still the most popular media sharing platform in **Italy**, where however one in three children use Instagram most. Young **Danes and Belgians** use **Instagram nearly as much as YouTube**, while **in Ireland and the UK, Instagram is more popular than YouTube**.

- Preliminary findings from focus groups and interviews indicate, however, that YouTube and Instagram are attributed different meanings and functions by children: while Instagram is more perceived as an SNS - especially by children who are not allowed to have a profile on Facebook or Twitter - YouTube is used mainly to create playlists of favourite (music) videos.

4. Communication practices

Online communication – more specifically, social networking (SNS) and instant messaging (IM) – is on the rise among children and adolescents. Staying in touch with friends represents a great part of youth's online daily activities, as we have seen in Chapter 3. Moreover, prior research has shown that social access to peers is also the primary motivation for adopting mobile communication, at least among teenagers (Lenhart *et al*., 2010; Ling & Bertel, 2013).

What happens when access to SNS and instant messaging services is provided on mobile phones, and then, always at hand? The potential for **'anywhere, anytime' access to peers and online contacts** has renewed public concerns over SNS, such as popular anxieties regarding the fragile balance between privacy and intimacy, as well as contact with people met online. Moreover, smartphones expand the range of mobile communicative practices and the type of audiences children are now able to engage with (Bertel & Stald, 2013). New questions has thus emerged regarding the changing role of the mobile phone and the potential reconfiguration of communicative practices such as: can the mobile phone still be considered as the tool for accessing 'the full-time intimate sphere' (Ling, 2008; Matsuda, 2005)?

While **Facebook is still** being reported by the majority of respondents as **the most used SNS,**[9] we nonetheless recognise that **the use of social media is diversifying** – children simultaneously use various services, each enabling specific practices and targeted at a specific audience. Furthermore, different SNS may imply different notions of 'friendship' and different regimes of privacy and disclosure. In addition, we rely on the

notion of a '**communication repertoire**' (Haddon, 2004), and assume that children, just like adults, develop sophisticated repertoires of practices, devices and services from which they choose what best suits the particular communicative situation and relationship. Rather than replacing one SNS with another, children combine and integrate them with other communicative practices.
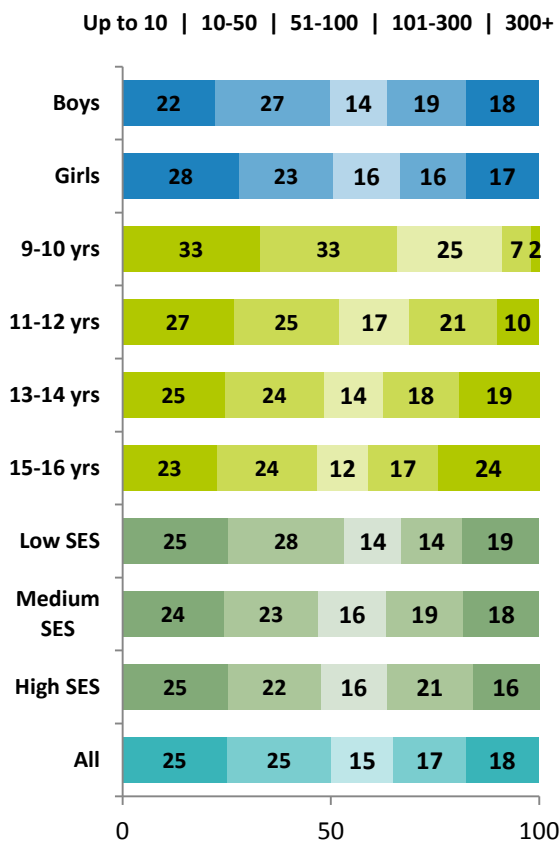
This chapter aims at providing a clearer picture of children's communicative practices by examining, first, SNS use, and more specifically, the number of friends they are in contact with, the management of 'friend' requests, privacy settings and personal information provided on their profiles. Different practices on different SNS – for example, different privacy settings – are highlighted when relevant. In order to grasp the complexity of children's communication repertoires, we then examine the preferred channels children use when communicating with parents, friends, siblings, other relatives, online contacts, teachers and others.

4.1 Nature of children's SNS contacts

The number of contacts on SNS is often assumed as an indicator of risky behaviour. However, as Figure 17 shows, the risk that children are getting in touch with ever-larger social circles is overstated.

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[9] Contrary to the huge debate on the death of Facebook which arose from the misinterpretation of the findings of the Global Social Media Impact Study (http://gsmis.org/) on media coverage.
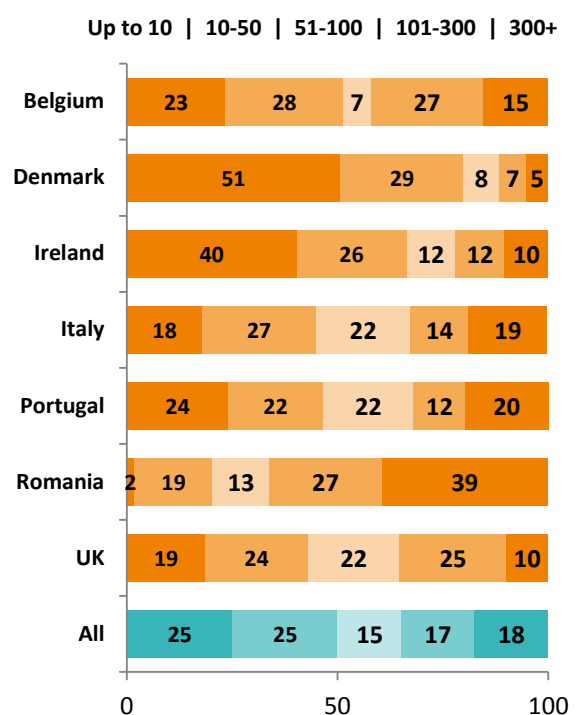
Figure 17: Number of contacts on SNS, by gender, age and SES

Up to 10 | 10-50 | 51-100 | 101-300 | 300+

	Up to 10	10-50	51-100	101-300	300+
Boys	22	27	14	19	18
Girls	28	23	16	16	17
9-10 yrs	33	33	25	7	2
11-12 yrs	27	25	17	21	10
13-14 yrs	25	24	14	18	19
15-16 yrs	23	24	12	17	24
Low SES	25	28	14	14	19
Medium SES	24	23	16	19	18
High SES	25	22	16	21	16
All	25	25	15	17	18

Q18: Roughly how many people are you in contact with when using [SNS profile that is used the most]?
Base: All children who use SNS.

- **One in four children are in touch with 10 or less people on SNS, and half have fewer than 50 contacts**. The proportion of children who have small circles of friends on the internet varies by age and gender, and is higher among girls and younger children (51% of girls and 66% of 9- to 10-year-olds have less than 50 contacts on SNS). SES differences are smaller but still notable, with 53% of lower SES children having up to 50 online contacts compared to 47% of children from medium or high income families.

- **18% of children have more than 300 contacts**: this number rises to nearly one in four teenagers aged 15-16, while it makes up just 2% of 9- to 10-year-olds.

- A further 17% have between 100 and 300

contacts. Therefore, around **one in three children (35%) have more than 100 contacts**, with huge variations across age, gender and SES: this group varies from 9% of younger children to 41% of older teenagers and is more consistent among boys (37%) than girls (33%), and middle or high SES (37%) than lower SES children (33%).

Figure 18 shows variation in the number of contacts on SNS by country.

Figure 18: Number of contacts on SNS, by country

Up to 10 | 10-50 | 51-100 | 101-300 | 300+

	Up to 10	10-50	51-100	101-300	300+
Belgium	23	28	7	27	15
Denmark	51	29	8	7	5
Ireland	40	26	12	12	10
Italy	18	27	22	14	19
Portugal	24	22	22	12	20
Romania	2	19	13	27	39
UK	19	24	22	25	10
All	25	25	15	17	18

Q18: Roughly how many people are you in contact with when using [SNS profile that is used the most]?
Base: All children who use SNS.

- **The number of contacts varies considerably by country**: while half of Danish children and 40% of their Irish peers have less than 10 contacts, just 2% of Romanian children belong to this category. Conversely, the number of children with more than 100 contacts is higher in Romania (66%) and lower in Denmark (12%) and Ireland (22%). Italy, Portugal and the UK follow similar patterns, with a range of 43% to 46% of children being in contact with up to 50 people, and around one in three having more than 100 contacts. In Belgium, while the

number of children having up to 50 contacts is similar to the average, 42% report having more than 100 friends on SNS. Still, if compared with the 2010 EU Kids Online data, the number of children with over 100 friends has decreased.

- If we relate these data to under-age use of SNS (see Table 17), we can observe **four main patterns**. In Denmark under-age use of SNS is high (61% of 9- to 12-year-olds have at least one profile on a SNS), but the average number of contacts is also low (81% have less than 50 contacts); **being under-age and having up to 10 contacts** could also be a common **preventive measure** in other **'supported risky explorers' countries**, as classified in the EU Kids Online country classification (Helsper *et al.*, 2013). Conversely, in countries such as Ireland, Italy, Portugal and the UK, belonging to the **'protected by restrictions'** group of countries (*ibidem*),[10] **under-age use is low,** and the proportion of **children with more than 100 contacts** is also **low or average**, varying from 22% in Ireland to 35% in the UK. **Belgium** combines a higher rate of underage use compared to 2010 data with the number of children with more than 100 contacts above the average; this is still a decrease compared to 2010. Finally, **Romania** shows a different pattern: while **under-age use** has more than **doubled in the past three years** (from 29% of 9- to 12-year-olds in the EU Kids Online survey to 65% in 2013), **the number of children with over 100 contacts** has also **increased dramatically** (from 8% to 66%).

Table 18 shows the variation in the breadth of online circles of friends by type of SNS.

Table 18: Number of contacts on SNS, by name of profile that is used the most

%	Facebook	Twitter	Other
Up to 10	23	40	51
11-50	24	32	30
51-100	15	13	9
101-300	19	8	4
More than 300	17	7	6

Q18: Roughly how many people are you in contact with when using [SNS profile that is used the most]?
Base: All children who use SNS.

The proportion of children with up to 10 contacts is slightly below average among Facebook users, and above average among children who primarily use Twitter or other SNS. While this might well signal different behaviours and different notions of friendship on different SNS, we cannot underplay the effect of age and country variation. Thus we must bear in mind that Twitter is reported as the most used SNS mainly in the UK, and that younger children – who are more likely to report having a profile on different platforms such as Moviestar Planet – are also more likely to have fewer friends. Moreover, all the Romanian children reported Facebook as their primary SNS, and, as we have just seen, they are more likely to build wider social circles online.
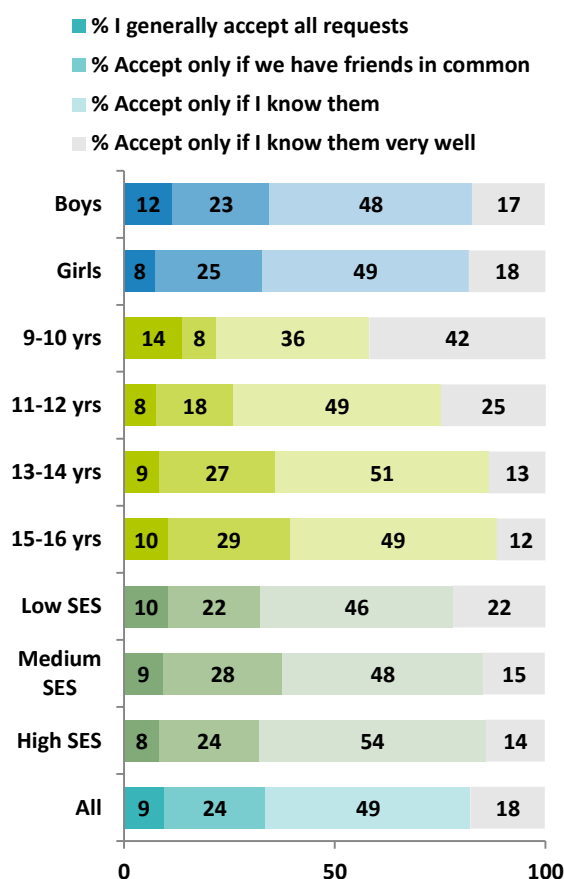
The number of online contacts is also the outcome of different norms of 'friending', as shown in Figure 19:

- **Two out of three children add new contacts when they know them (49%) or know them very well (18%)**, one in four accepts requests from people with whom they share friends in common, while **just 9% accept all requests**.

- Gender differences are not pronounced: while girls are slightly less likely to accept all requests, they tend to be more inclined to add people with whom they share connections or whom they know very well.

- SES variations are also small, though we can observe that lower SES children are more likely

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[10] For a definition of 'supported risky explores' and protected by restrictions countries see par. 1.3 in the Introduction

to both add people they have never met before and they know very well, and less likely to expand their online circles through 'friends of friends' compared to children from middle or upper class.

- The response to people adding them on SNS varies more consistently across age group: while in all groups the majority of children add only people they know or know very well, this varies from 78% of 9- to 10-year-olds to 61% of teenagers aged 13-16.

Figure 19: Children's responses to friends' requests on SNS, by gender, age and SES

- % I generally accept all requests
- % Accept only if we have friends in common
- % Accept only if I know them
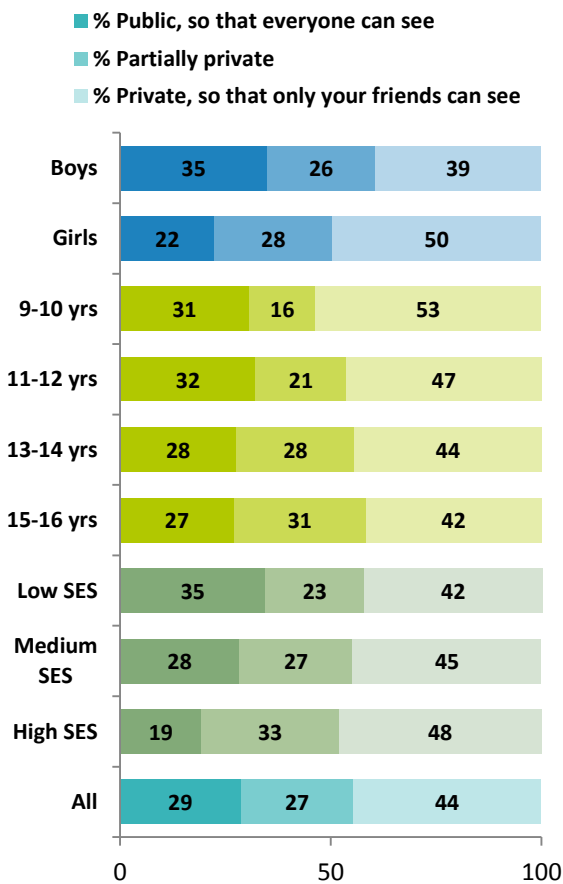- % Accept only if I know them very well

Q22: How do you generally respond to requests from people to become your 'friends' on [SNS profile that is used the most]? Base: All children who use SNS.

Country variations (Figure 20) show interesting patterns: while the number of children who generally accept all requests is highest in Romania

(18%) and lowest in Belgium (5%), Ireland (6%), Italy (6%) and, Portugal (6%), the proportion of children who 'friend' only people they know or know very well is the highest in Denmark (80%) and lowest in Italy (49%). An equally consistent number of Italian children (45%) accept requests from people with whom they share contacts. In other words, Italian children are more likely than children in other countries to expand their online networks by activating 'latent ties' (e.g. people they share friends or locations with). Conversely, although Romanian children are more likely to have a larger number of contacts on Facebook, more than half (56%) prefer to add people they already know. Danish and Irish children, instead, tend to have smaller circles of friends on the internet, which predominantly consists of people they know. Portuguese children are the most cautious, with 31% of respondents saying they add only people they know very well to their online friends.

Figure 20: Children's responses to friends' requests on SNS, by country
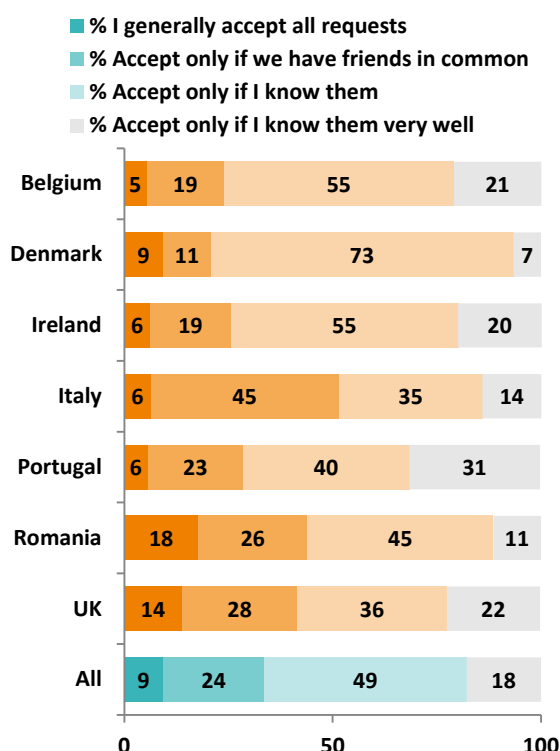
- % I generally accept all requests
- % Accept only if we have friends in common
- % Accept only if I know them
- % Accept only if I know them very well

Q22: How do you generally respond to requests from people to become your 'friends' on [SNS profile that is used the most]? Base: All children who use SNS.

4.2 SNS privacy settings

Figure 21 shows how privacy settings vary by gender, age and SES.

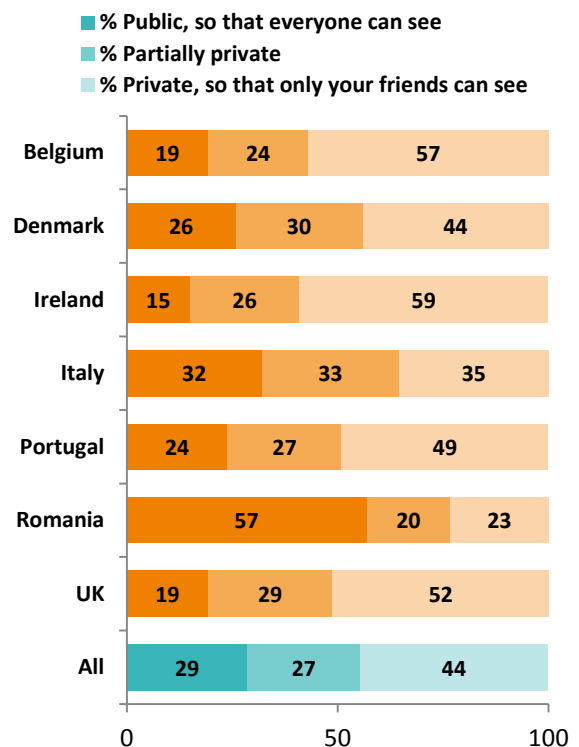### Figure 21: Whether SNS profile is public or private, by gender, age and SES

- ■ % Public, so that everyone can see
- ■ % Partially private
- ■ % Private, so that only your friends can see

	Public	Partially private	Private
Boys	35	26	39
Girls	22	28	50
9-10 yrs	31	16	53
11-12 yrs	32	21	47
13-14 yrs	28	28	44
15-16 yrs	27	31	42
Low SES	35	23	42
Medium SES	28	27	45
High SES	19	33	48
All	29	27	44

Q20: Is your profile set to…?
Base: All children who use SNS.

- **While 44% of SNS users keep their profile private**, and a further 27% keep it partially private (e.g. also disclosing some information to friends of friends and networks), **nearly one in three children report having a public profile**.

- Variations by gender are consistent, with **girls** being **more likely to have a private profile**.

- In terms of age differences, while the proportion of children with a public profile remains somewhat stable across the four age groups, **over half of children aged 9-10 have**

set their profile as private. Conversely, the number of children who keep their profiles as partially private is higher in adolescence, when children are supposedly more skilled in setting different levels of privacy.

- SES differences show that children from wealthier socio-economic backgrounds are more likely to maintain a private profile and least likely to have a public profile compared to **lower SES children**, who, in contrast, **set their profile as public more than the average**.

Figure 22: Whether SNS profile is public or private, by country

- ■ % Public, so that everyone can see
- ■ % Partially private
- ■ % Private, so that only your friends can see

	Public	Partially private	Private
Belgium	19	24	57
Denmark	26	30	44
Ireland	15	26	59
Italy	32	33	35
Portugal	24	27	49
Romania	57	20	23
UK	19	29	52
All	29	27	44

Q20: Is your profile set to…?
Base: All children who use SNS.

- Country differences are pronounced: half the children or more in Belgium, Ireland, Portugal and the UK have a private profile. Around 70% of children in Denmark (74%) and Italy (68%) have a private or partially private profile. Conversely, **57% of Romanian children** report having set their profiles as **public**. Different privacy settings may not necessarily be an indicator of risky behaviour, and also have to

be contextualised within 'friending' practices and number of online contacts. So, while Romanian children are more likely than peers in other countries to have public profiles and over 300 contacts on Facebook, half of them respond to 'friendship requests' by adding just people they know, or know very well.

Table 19 shows the distribution of different privacy settings across different social networks, suggesting that, as for the number of online contacts, different platforms have diverse social and technological affordances that result in slightly different choices.

Table 19: Whether SNS profile is public or private, by name of profile that is used the most

% of children who set their profile as...	Facebook	Twitter Twitter	Other
Public, so that everyone can see	29	29	26
Partially private, so that friends of friends on your network can see	27	22	20
Private, so that only your friends can see	44	49	54

Q20: Is your profile set to…?
Base: All children who use SNS.

Whether it matters that children's profiles are set to public or private depends not only on 'friending' habits, but also on the identifying information they post on their profile.

Table 20 shows what kind of personal information children are likely to share on their SNS profiles:

Table 20: What information children show on their social networking profile, by age and gender

% who say that their SNS profile shows...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
A photo that clearly shows their face	71	73	79	88	80
Their last name	81	80	85	82	82
Their home address	12	12	11	13	12
Their phone number	10	11	14	10	12
Their school	44	52	69	70	63
An age that is not their correct age	62	65	29	28	39

Q21: Which of the bits of information on this card does your profile/account include about you?
Base: All children who use SNS.

- **The majority of children include their surname and a photo showing their face** on their profiles, with small variation across age groups and gender: younger children are generally slightly more reluctant to share a picture of their face, while teenage girls are more likely to do so.

- **Two in three children** display **the name of the school** they attend, but this behaviour varies substantially by age, with teenagers more likely to do so.

- **Nine out of ten children** across all age groups and gender **do not share their phone number and home address**.

- **39% of children display an incorrect age** on their profile. Not surprisingly, more younger children than teenagers include an age that is not correct, often to circumvent the age limits. Notably around 30% of children who are over 13, and therefore allowed to have a profile on SNS, tend to do so.

4.3 Different media for different contacts

To investigate how children develop complex communication repertoires, in which they incorporate different platforms and channels of communication, we asked them how often they are likely to communicate with specific others through a set of platforms or channels. Table 21 shows how children communicate with their parents.

Table 21: Ways of being in contact with parents

| % of children in contact with parents by...	Several times each day	Daily or almost daily	At least every week	Never or almost never
Talking on a mobile or smartphone	19	38	24	19
Sending texts	12	29	24	35
Sending emails	1	2	5	92
Contact on SNS	2	8	14	76

Q13, Q14, Q15, Q19: How often are you in contact with the following people by talking on the mobile phone/smartphone, by sending SMS/text or multimedia messages (MMS) with pictures or videos from your mobile phone/smartphone, by sending email, on all the SNS you use?
Base: All children who use each means of communication.

- **The mobile phone is still the preferred medium to be in touch with parents**: 57% report talking to their parents daily or almost daily, with 19% doing so more than once a day; 41% also exchange SMS with their parents on a regular basis.

Table 22 shows ways of communicating with friends:

Table 22: Ways of being in contact with friends

% of children in contact with friends by...	Several times each day	Daily or almost daily	At least every week	Never or almost never
Talking on a mobile or smartphone	28	33	20	19
Sending texts	32	33	15	20
Sending emails	3	7	18	72
Contact on SNS	34	40	20	6

Q13, Q14, Q15, Q19: How often are you in contact with the following people by talking on the mobile phone/smartphone, by sending SMS/text or multimedia messages (MMS) with pictures or videos from your mobile phone/smartphone, by sending email, on all the SNS you use?
Base: All children who use each means of communication at all.

- While mobile communication is still a relevant mode of contact among friends, SNS are the most used platform: **one in three children keep in touch with friends on SNS several times a day**. Overall, 74% use SNS to communicate with friends daily or almost daily.

- However, as anticipated, **SNS have not replaced mobile communication**: two out of three children regularly use texts to keep in touch with friends, while 61% call them daily or almost daily.

As shown in Table 23, contact with siblings is less regular and mainly carried out through phone calls or SMS:

Table 23: Ways of being in contact with siblings

% of children in contact with siblings by...	Several times each day	Daily or almost daily	At least every week	Never or almost never
Talking on a mobile or smartphone	6	19	23	52
Sending texts	6	17	20	57
Sending emails	1	1	4	94
Contact on SNS	2	10	21	67

Q13, Q14, Q15, Q19: How often are you in contact with the following people by talking on the mobile phone/smartphone, by sending SMS/text or multimedia messages (MMS) with pictures or videos from your mobile phone/smartphone, by sending email, on all the SNS you use?
Base: All children who use each means of communication.

Table 24 shows how children keep in touch with people met online whom they have never met before:

Table 24: Ways of being in contact with people met online

% of children in contact with people met online by...	Several times each day	Daily or almost daily	At least every week	Never or almost never
Talking on a mobile or smartphone	2	4	10	84
Sending texts	2	3	6	89
Sending emails	1	1	3	95
Contact on SNS	4	8	14	74

Q13, Q14, Q15, Q19: How often are you in contact with the following people by talking on the mobile phone/smartphone, by sending SMS/text or multimedia messages (MMS) with pictures or videos from your mobile phone/smartphone, by sending email, on all the SNS you use?

Base: All children who use each means of communication.

- While contact with people met online is sporadic, **26% of children communicate with online contacts on SNS at least every week**, 16% call them on their mobiles at least weekly, while just 11% report exchanging texts with people met online on a weekly basis.

Figure 23 shows how daily contact with parents and friends by talking on a mobile phone varies across age, gender and SES:

Figure 23: Daily contact by talking on the mobile phone/smartphone, by gender, age and SES
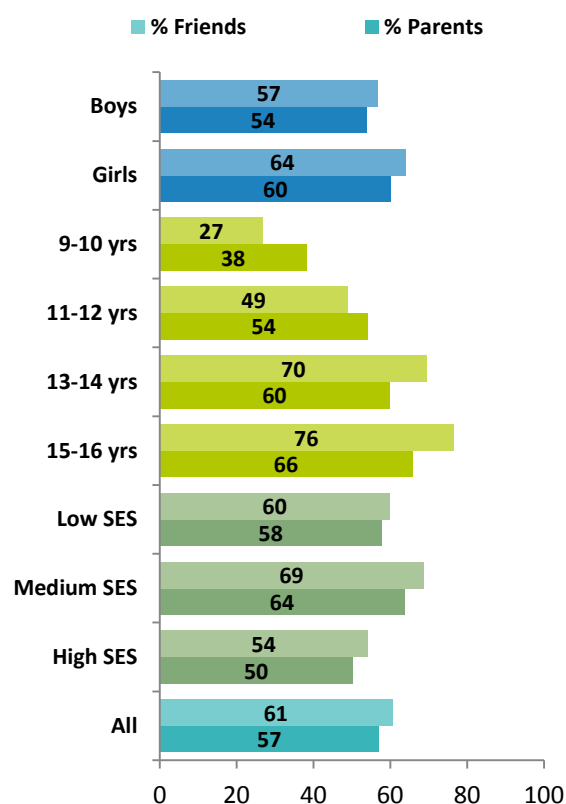
Q13: How often are you in contact with the following people by talking on the mobile phone/smartphone?
Base: All children who use a phone or a smartphone.

- Gender variations in contact with parents are remarkable: **girls are more likely to call both parents and friends** daily.

- Contact with friends and parents through phone calls varies considerably across age groups: while the overall likelihood of calling both parents and friends almost triples from 9- to 10-year-olds to older teenagers, younger children are more likely to be in touch with their parents (38% report calling their parents daily, while just 27% call their friends). At the opposite end, **teenagers call friends more than parents** on a daily basis.

- SES variations are also remarkable: while middle SES children are more likely to be in touch with both parents and children by means of phone calls, children from higher SES homes are the least likely to call their parents or

friends on a daily basis.

Figure 24: Daily contact by talking on the mobile phone/smartphone, by country
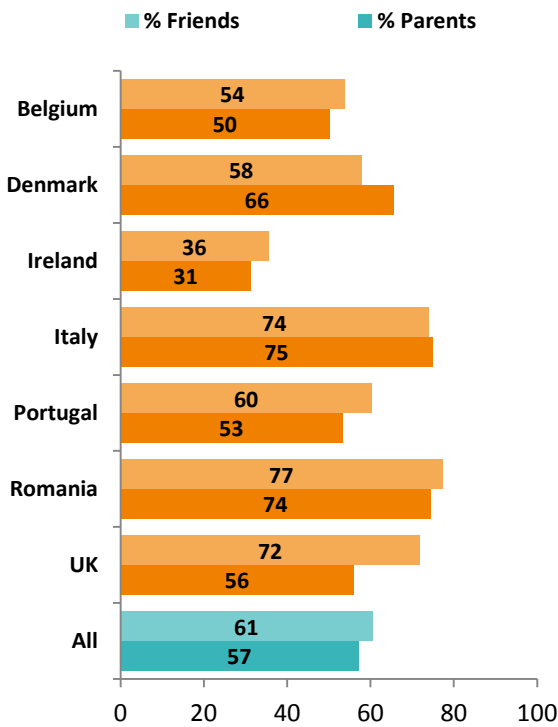
Q13: How often are you in contact with the following people by talking on the mobile phone/smartphone?
Base: All children who use a phone or a smartphone.

- Country differences are also considerable and noteworthy: **Italian and Romanian children are more likely to call their parents and friends daily**, with little difference in the two kinds of interlocutors. **Children in the UK** are almost as likely as their peers in Italy and Romania to be in touch with friends by talking on the phone, but **less likely to call their parents**. Similarly, **Portuguese** children make phone calls to friends more than to parents. **Danish children**, on the other hand, **call their parents more than their friends**. Finally, **just half Belgian children and one in three Irish children call their friends and parents daily**.

As shown in Figure 25 texting follows a different pattern:

- **Most daily texting occurs among friends** though the child–parent communication by means of SMS is also frequent.

- Gender variations are more pronounced compared to phone calls: while both boys and girls text more with friends than parents, girls engage in more texting than boys

- **Texting is strongly structured by age**. The number of children who are in touch with friends and parents daily through SMS increases across age groups, but **texting with friends increases more by age** (from 32% of 9-10 year-olds to 81% of older children) **than texting with parents** (from 25% of younger children to 51% of older teenagers).

Figure 25: Daily contact by sending texts or multimedia messages (MMS) with pictures or videos from a mobile phone/smartphone, by gender, age and SES
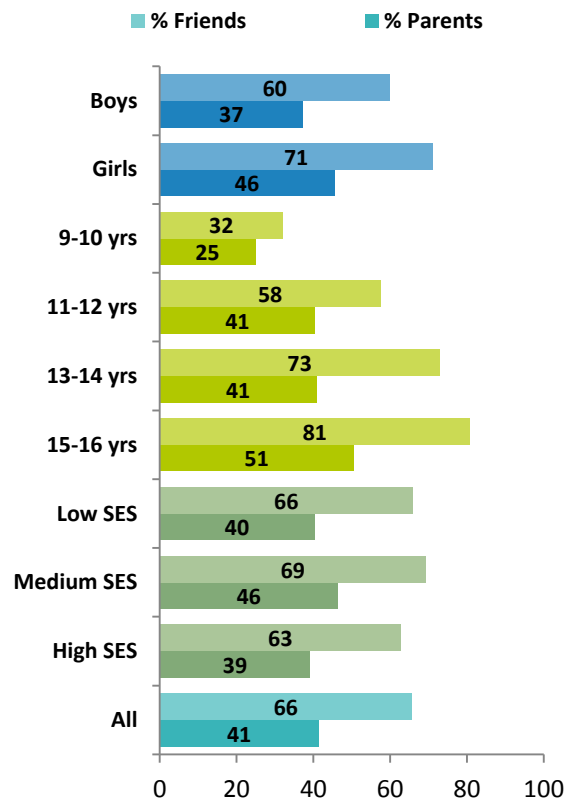
Q14: How often are you in contact with the following people by sending SMS/text or multimedia messages (MMS) with pictures or videos from your mobile phone/smartphone?
Base: All children who use a phone or a smartphone.

- Children from different socio-economic background equally text more with friends than parents. Again, the daily use of SMS to communicate with both friends and parents is below average among higher SES children.

Figure 26 shows how daily contact by texting varies across countries.

Figure 26: Daily contact by sending SMS/text or multimedia messages (MMS) with pictures or videos from a mobile phone/smartphone, by country
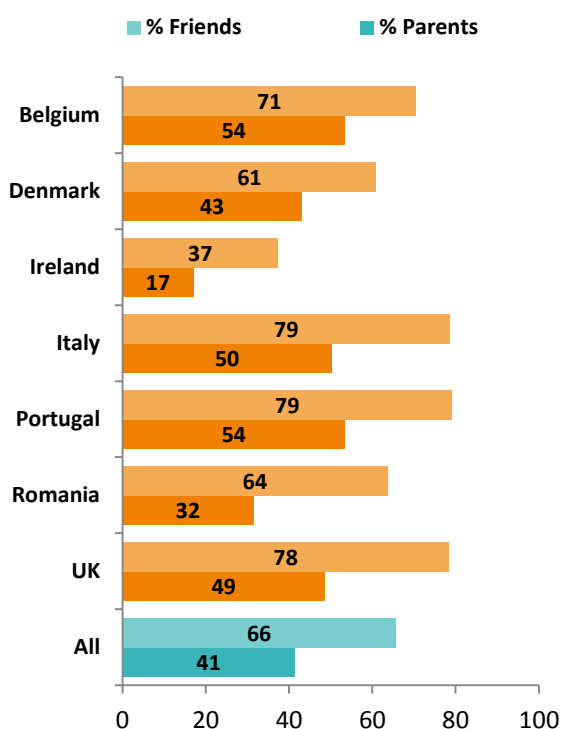
Q14: How often are you in contact with the following people by sending SMS/text or multimedia messages (MMS) with pictures or videos from your mobile phone/smartphone?
Base: All children who use a phone or a smartphone.

- Country variations show that the majority of children in Belgium (71%), Italy (79%), Portugal (79%) and the UK (78%) are in touch with their friends through SMS on a daily basis; one in three children in Denmark and Romania text their peers daily, while only 37% of Irish children do so. Daily contact with parents through texting is reported by 54% of Belgian and Portuguese children, half the children in Italy and the UK, fewer in Denmark (43%) and Romania (32%), and is the lowest in Ireland (17%).

Daily contact on SNS, as shown in Figure 27 reveals even greater disparities between communication with parents and with peers:

- As in the case of texting, most daily communication involves friends rather than parents: **three out of four children use SNS to communicate daily with their peers**, while **only one in ten** use SNS to keep in touch **with parents**.

Figure 27: Daily contact on SNS, by gender, age and SES
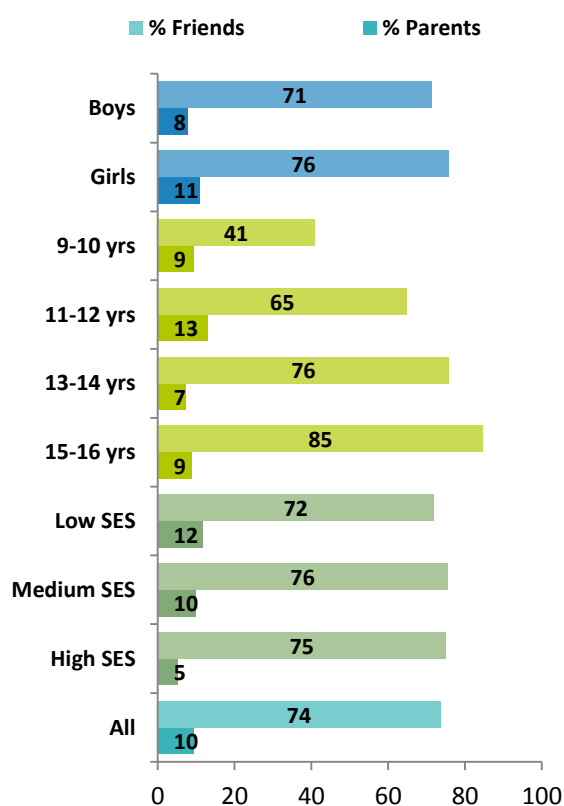
Q18: How often are you in contact with the following people on SNS?
Base: All children who use SNS.

- Use of SNS to communicate with peers and parents does not vary much by gender. Instead, age differences are more considerable: while the number of children in contact with parents on a daily basis remains very low across all age groups, contact with peers increases steadily from 41% of 9-10 year-olds to 85% of those aged 15-16.

- Communication with peers on SNS varies by SES: children from medium SES households

are more likely to communicate with friends on SNS on a daily basis. By contrast, higher SES children are the least likely to communicate with their parents on a social networking service.

Figure 28 examines communication on SNS by country

Figure 28: Daily contact on SNS, by country
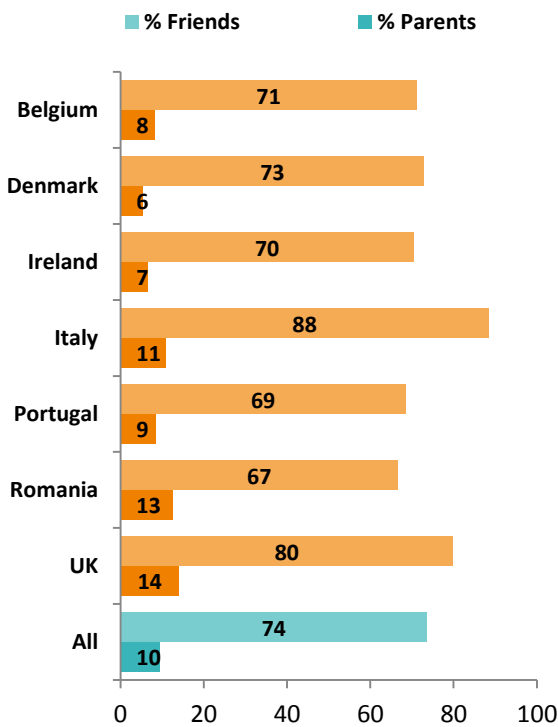
Q18: How often are you in contact with the following people on SNS?
Base: All children who use SNS.

- Country comparisons show that **SNS is the preferred channel to keep in touch with friends daily in Denmark, Ireland, Italy and the UK**. Overall children in Italy and the UK communicate more with peers through all channels; on the other hand, Irish children keep in touch with friends mostly through the SNS platform, while Portuguese children communicate more through texting and Romanians tend to call slightly more than use SNS. Children in Belgium are as likely to use SNS and texts to communicate daily with peers.

4.4 Children's approach to online communication

Online communication is one of the major opportunities that the internet offers children, and one where the boundary between benefits and risks is hard to draw. It has been argued, however, that risk-taking behaviour is associated with a particular approach to online communication (Livingstone *et al.*, 2011). Table 25 shows how children compare online and offline communication.

Table 25: Online and offline communication compared

% who say that...	Not true	A bit true	Very true
I find it easier to be myself on the internet than when I am with people face to face	64	28	8
I talk about different things on the internet than I do when speaking to people face to face	66	25	9
On the internet I talk about private things which I do not share with people face to face	79	15	6

Q47: How true are these of you?
Base: All children who use the internet.

- **36% of children say they find it easier to be themselves on the internet** than when with other people face to face; **64%** however, **say this is not true of them**. Compared to the findings of the EU Kids Online study (Livingstone *et al.*, 2011), and looking only at the five countries included in the Net Children Go Mobile study, the number of children who perceive the internet as the place for more authentic communication is decreasing. Thus in 2010 some 57% of respondents in Denmark, Ireland, Italy, Romania and the UK said it was not true that they found it easier to be themselves on the internet (compared to 64% in 2013). This might well indicate that children are now drawing a distinction between online and offline communication, to a lesser extent,, as the internet is such an integral part of their everyday lives.

- Similarly, one in three children say they talk about different things on the internet, and **just 21% say that they talk about private things online that they do not discuss face to face**.

Figure 29 shows how approaches to online communication vary by age, gender and country.

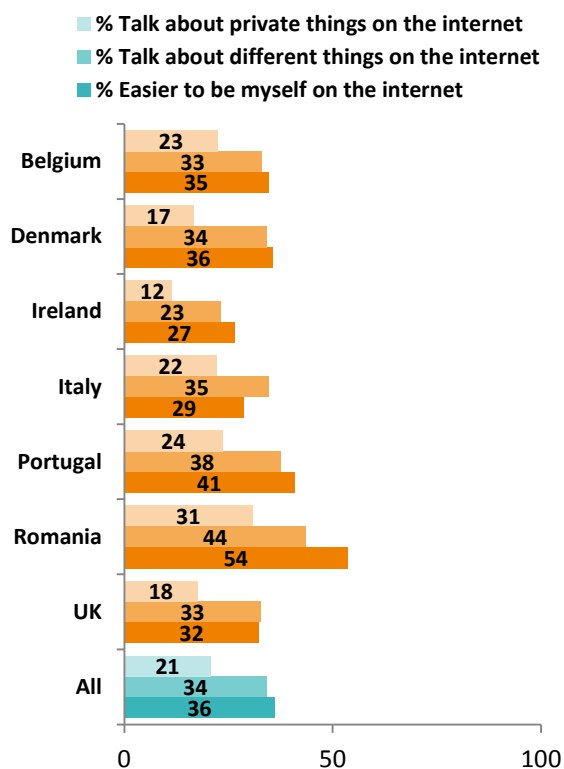Figure 29: Online and offline communication compared, by gender, age and SES
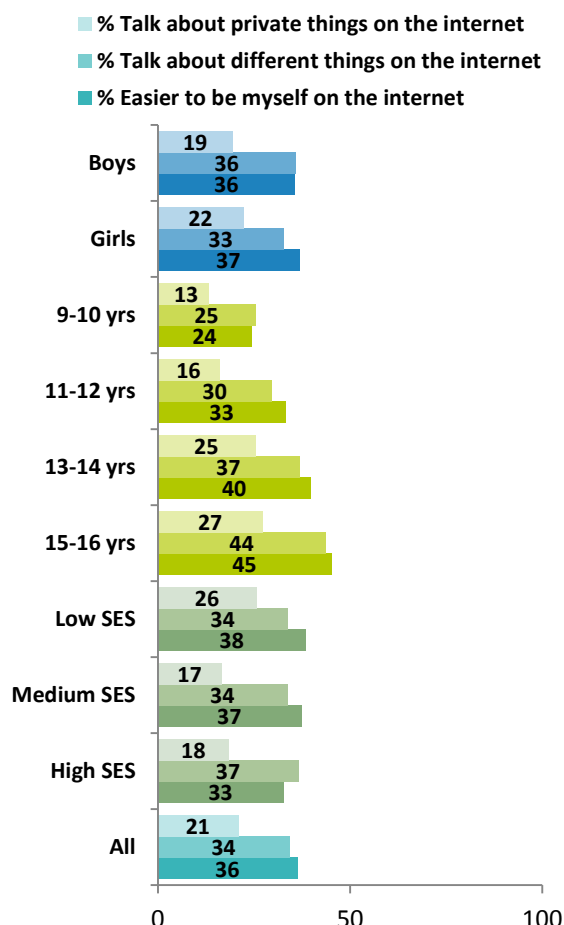
■ **% Talk about private things on the internet**
■ **% Talk about different things on the internet**
■ **% Easier to be myself on the internet**

Q47: How true are these of you?
Base: All children who use the internet.

- Gender differences are slight, though girls are more inclined to believe it is easier to be oneself on the internet, and to talk about private things. Age variations are even more notable: **teenagers**, especially those aged 15-16, **are more likely to agree with each statement**, suggesting that the internet offers adolescents a valued opportunity for intimate communication.

- Approach to online communication is also differentiated by SES: children from less advantaged families are more likely to believe that it is easier to be oneself on the internet and to talk about private things. In contrast, higher SES children are more likely to say it is true that they talk about different things on the internet.

Figure 30 examines country variations in approaches to online communication.

Figure 30: Online and offline communication compared, by country

■ **% Talk about private things on the internet**
■ **% Talk about different things on the internet**
■ **% Easier to be myself on the internet**

Q47: How true are these of you?
Base: All children who use the internet.

- Country differences are also notable: while most countries are below or average, Romanian children score higher on the items examined. More specifically, **more than half of Romanian children find it easier to be themselves on the internet**.

5. Skills

Skills are often assumed to be an indicator of digital literacy, together with online activities and belief in one's own internet abilities. However, **digital literacy is more than a set of specific internet competencies** a child may or may not possess: it is a combination of knowledge, competencies and attitudes, and indeed, a 'social practice' (Buckingham, 2007; Livingstone, 2009). Being digitally literate means having the ability to develop a critical relationship with media, and to engage in communication in an autonomous, competent and safe manner.

Hence, we acknowledge the limitations of using the **three measures of literacy** – **skills, activities and self-confidence** – traditionally employed in surveys (see also Livingstone *et al.*, 2011), as well as the limitations of indirect measurement by means of self-reported abilities compared to direct observation in performance tests (van Deursen & van Dijk, 2008). Nonetheless, the above measure of literacy has proved empirically valid in the study of the relationship between children's risk and opportunities on the internet. Prior research demonstrated that skills are positively associated with the diversity and frequency of online activities (Kuiper & de Haan, 2012; Livingstone & Helsper, 2007, 2009): **the more online activities children engage in, the more children are skilled and self-confident and vice versa**. The role of digital skills in mediating the relationship between risk and harm is less clear, although there are some indicators that more skilled children are less likely to report harm when they encounter online risks, while children who had experienced harm tend to have a lower level of self-reported digital skills (Sonck & de Haan, 2013).

To provide a more accurate account of children's internet competences, we expanded the range of online skills measured so as to include instrumental skills, critical and safety skills and communicative abilities. Furthermore, we also examined smartphone- and tablet-specific skills.

5.1 Self-confidence

To measure children's self-confidence we asked them to assess themselves against a set of statements, as shown in Table 26.

Table 26: Self-assessment of various skills

% of children who say...	Not true	A bit true	Very true
I know more about the internet than my parents	30	32	38
I know lots of things about using the internet	17	47	36
I know how to use 'report abuse' buttons	42	19	39
I know more about using smartphones than my parents	20	22	58
I know lots of things about using smartphones	11	35	54

Q47: How true are these of you?
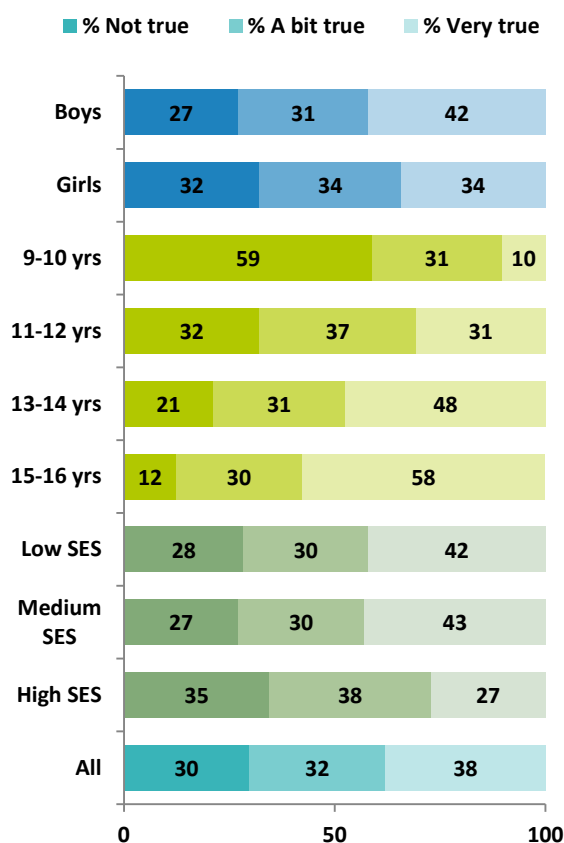Base: All children who use the internet.

- On average, **38% of children say that the statement, 'I know more about the internet than my parents', is 'very true',** a further one third (31%) say it is 'a bit true' and **30% say it is 'not true'**. Compared with the 2010 EU Kids Online survey, the number of children who are very self-confident is quite similar looking only at the seven countries included in the Net Children Go Mobile study.

- **The majority agree it is 'very' (36%) or 'a bit true' (47%) that they know a lot of things about the internet**, while just 17% believe this is not the case. This further suggests that children's belief in their own internet abilities is high.

- **Self-confidence about using smartphones** is even **higher**: **58% of children** say that the statement, **'I know more about using smartphones than my parents'**, is **'very true'** of them, 22% say it is 'a bit true', while 20% think it is not true. Similarly, **more than half (54%) say it is 'very true' that they know a lot of things about using smartphones**, one third (35%) say it is 'a bit true' and just 11% say it is not true. This finding

suggests that the **generational gap** is higher for smartphones, and is consistent with data on the use of the internet and smartphones among parents presented in Figure 8.

- **Self-confidence regarding ability to use the internet safely** is the lowest of the items measured here: while over half of the children say that the statement, **'I know how to use "report abuse" buttons',** is 'very' (39%) or 'a bit true' (19%) of them, **42% say it is 'not true'**.

Figure 31 and Figure 33 help understand how self-confidence varies by gender, age and SES:

Figure 31: 'I know more about the internet than my parents', by gender, age and SES

Q47: How true are these of you?
Base: All children who use the internet.

- Agreement with the statement, 'I know more about the internet than my parents', is differentiated by gender: more boys than girls say that it is 'very true' of them.

- Age variations, however, are more marked: while **59% of younger children don't believe that they have more internet abilities than their parents**, conversely, **58% of teenagers aged 15-16 claim it is 'very true' of them** that they know more about the internet than their parents.

- SES differences in children's self-confidence are less marked but still noticeable: both lower and medium SES children claim more confidence in their own internet abilities than their parents.

Figure 32: 'I know more about the internet than my parents', by country
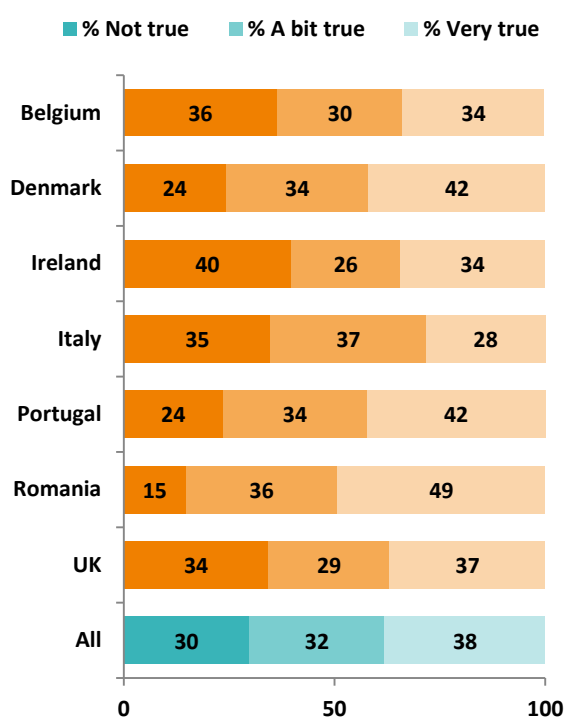
Q47: How true are these of you?
Base: All children who use the internet.

- Country differences must be contextualised in the light of internet and smartphone diffusion, as shown in Figure 8. In **countries where the use of the internet among parents is around or above 90%, the number of children who say it is 'very' or 'a bit true' that they have more internet abilities than their parents ranges between 60% in Ireland to 76% in Denmark**. This variation is consistent with different levels of skills reported by children in these countries. Conversely, **in**

Romania, where just 57% of parents are internet users, 85% of children say it is true that they know more about the internet than their parents.

Figure 33 shows how self-confidence specific to smartphones varies by demographic variables:

Figure 33: 'I know more about using smartphones than my parents', by gender, age and SES

■ % Not true   ■ % A bit true   ■ % Very true
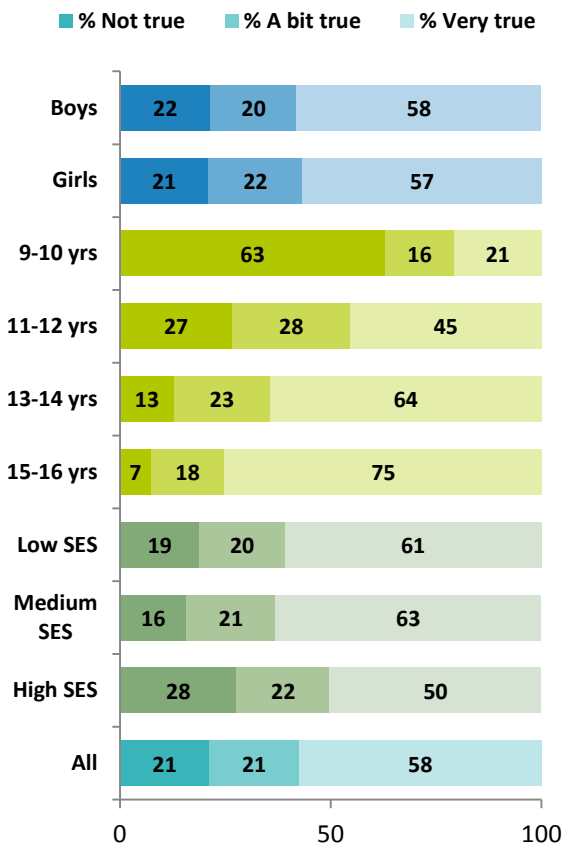
Q47: How true are these of you?
Base: All children who use the internet.

- Belief in one's own abilities regarding smartphone use shows little variation by gender.

- Age follows a similar pattern as self-confidence regarding internet use: **while just 37% of children aged 9-10 say it is 'very' or 'a bit true' of them that they know more than their parents about using smartphones**, this belief rises to **93% of 15- to 16-year-olds**.

Figure 34 examines country variations in self-confidence specific to smartphones

Figure 34: 'I know more about using smartphones than my parents', by country

■ % Not true   ■ % A bit true   ■ % Very true
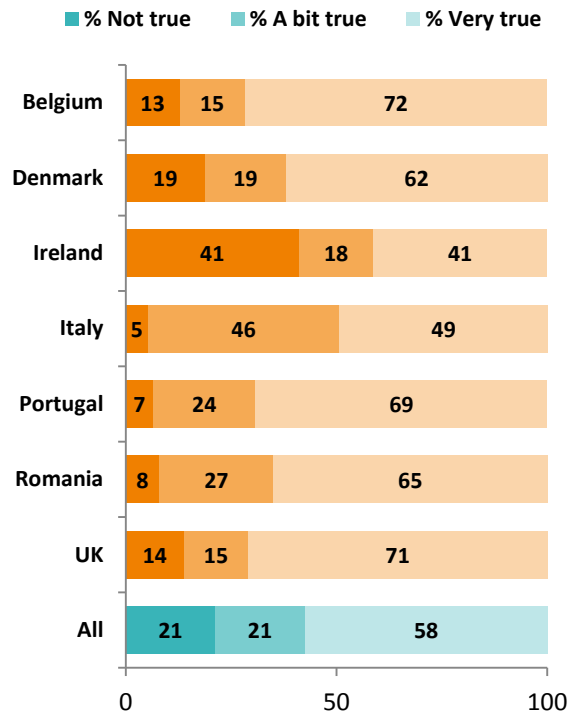
Q47: How true are these of you?
Base: All children who use the internet.

- Country variations are not so straightforwardly related with parents' use of smartphones: in all countries more than half of the children surveyed believe their competencies about smartphones are greater than their parents'. However, while the proportion of **children in Ireland (59%)** who **say it is 'very' or 'a bit true' of them that they know more than their parents about using smartphones** may be linked to a higher diffusion of smartphones among their parents, and the higher numbers **in Belgium (87%), Italy (95%), Portugal (93%) and Romania (92%)** correspond to lower penetration of smartphones among Belgian (55%), Italian (48%), Portuguese (30%) and Romanian parents (18%), **in Denmark and the UK** a substantial majority of parents (respectively 77% and 75%) are smartphone users, but still **81%** and **86%** of children believe they have more abilities regarding use of smartphones. Moreover, other factors may be at play and influence children's self-confidence.

For example, the strong mobile culture of Italian youth is certainly an issue that cannot be underplayed.

The EU Kids Online survey recognised that children do not take advantage of the same online opportunities across countries, due to different levels of familiarity with the English language in each country, and unequal provision of positive content for children in national languages. Figure 35 shows how children's perception of the quality of online content varies by demographics:

Figure 35: 'There are lots of things on the internet that are good for children of my age', by gender, age and SES
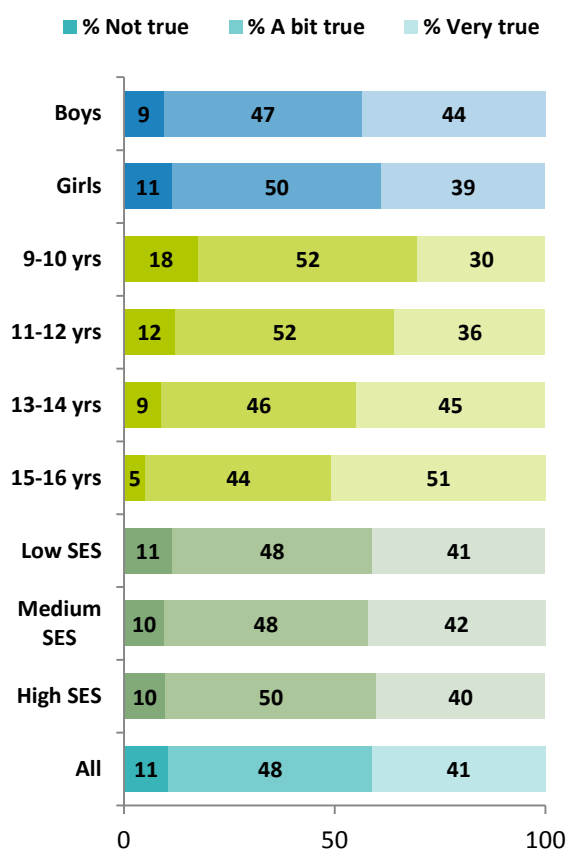
Q47: How true are these of you?
Base: All children who use the internet.

- While **over four in ten (41%) 9-16 year-olds are very satisfied with the online provision** available to them, a minority of children (**11%**) **disagree with the statement, 'There are lots of things on the internet that are good**

for children of my age'.

- Age differences are remarkable. **Younger children are more likely to express dissatisfaction** about the online provision of content for children: **only 30% of 9-10 year-olds say there are lots of good things for children of their age to do online**, an even lower figure than the 35% of respondents in this age group from the same seven countries in 2010. By contrast, the oldest age group is the most satisfied (51%), though satisfaction in this age group was also higher (56%) in the 2010 EU Kids Online survey for the same seven countries.

Figure 36: 'There are lots of things on the internet that are good for children of my age', by country
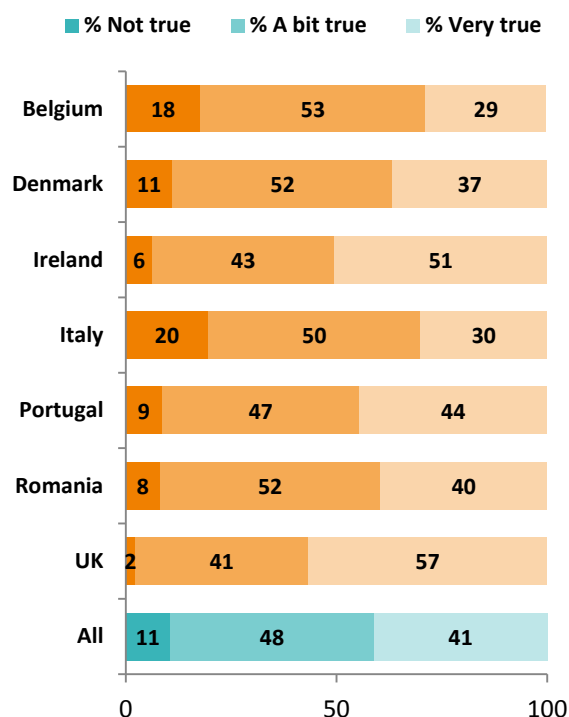
Q47: How true are these of you?
Base: All children who use the internet.

- Country variations are also considerable: **children are most satisfied in the UK (57%) and Ireland (51%)** – in the latter country, with a substantial increase from 2010, where just 44% of children were very satisfied. By contrast, **children's satisfaction is lowest in Belgium (29%) and Italy (30%)**, and **compared to**

2010, has decreased considerably **in all non English-speaking countries**: in Belgium (from 41% to 29%), Denmark (from 47% to 37%), Italy (from 40% to 30%) Portugal (from 52% to 44%), and Romania (from 49% to 40%).

- The unique position of children in Ireland and the UK, who can access all content in English, is also confirmed by the very low levels of dissatisfaction in these countries (6% and 2% respectively).

With children going online at ever younger ages, the gap between the provision of positive online content in English and locally produced content has increased rather than been bridged. Notwithstanding notable policy efforts to promote the provision of positive online content in the past few years, these have proved more effective in English-speaking countries. Therefore, the gap between children who can access a wider variety of content produced both locally and globally, and those who are more reliant on locally produced content, is widening.

5.2 Skills and competences related to internet use in general

Table 27 shows instrumental and critical internet abilities, by age and gender

Table 27: Skills related to internet use and critical understanding, by age and gender

% who say they can…	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Change filter preferences	20	10	52	39	31
Bookmark a website	47	39	76	75	61
Compare different websites to decide if information is true	29	27	68	66	49

Q26 a-c: Which of these things do you know how to do?
Base: All children who use the internet.

- **Basic instrumental and critical skills are**

still unevenly distributed: while 61% of children know how to bookmark a website, and nearly half (49%) can compare different websites to decide if information is true, just 31% of children report being able to change filter preferences.

- Across all age groups boys claim more skills than girls, with differences being higher for changing filter preferences among teenage boys and girls. One notable exception being critical skills, with girls who report being able to compare different websites in order to assess reliability of the source being almost as much as boys.

- Variations by age are also notable, with younger children claiming considerably fewer skills than teenagers, especially in terms of critical understanding and changing filter variables.

Table 28 examines the distribution of the same set of skills among smartphone users and non-users: in both age groups **smartphone users claim more of each skill** considered.

Table 28: Skills related to internet use and critical understanding, by smartphone use and by age

% who say they can…	9-12 years		13-16 years		All* (users and non-users)
	Non user	S-ph user	Non user	S-ph user	
Change filter preferences	14	19	36	53	31
Bookmark a website	37	64	63	86	61
Compare different websites to decide if information is true	25	39	58	75	49

Q26 a-c: Which of these things do you know how to do?
Base: All children who use the internet.
* The 'All' values here refer to the average number of children who are internet users and claim these skills (as shown in Table 27).

On the contrary, differences among tablet users and non-users are less marked, as shown in Table 29:

Table 29: Skills related to internet use and critical understanding, by tablet use and by age

% who say they can…	9-12 years		13-16 years		All* (users and non-users)
	Non user	Tabl user	Non user	Tabl user	
Change filter preferences	15	17	44	52	31
Bookmark a website	40	56	74	83	61
Compare different websites to decide if information is true	25	41	67	72	49

Q26 a-c: Which of these things do you know how to do?
Base: All children who use the internet.
* The 'All' values here refer to the average number of children who are internet users and claim these skills (as shown in Table 27).

Table 30 shows the distribution of **safety skills** by gender and age group. Although safety initiatives across Europe have widely promoted safety skills, just four skills out of the six measured are claimed by over half of the children, who know how **to block messages from unwanted contacts (60%), change privacy settings on SNS (56%),** find information on how to use the internet safely (54%) and delete the record of websites visited (54%). So while there is generally an acceptable level of skills regarding safer social networking, other skills such as blocking spam (45%) and pop-ups (44%) are less common.

Table 30: Skills related to internet safety in general, by age and gender

% who say they can…	9-12 years		13-16 years		All
	Boys	Girls	Boys	Girls	
Block unwanted adverts or junk mail spam	32	21	65	57	45
Delete the record of which sites they have visited	38	31	77	66	54
Change privacy settings on a social networking profile	34	28	78	76	56
Block messages from someone they don't want to hear from	39	33	80	80	60
Block pop-ups	27	25	61	57	44
Find information on how to use the internet safely	40	31	72	69	54

Q26 d, Q27 a-e: Which of these things do you know how to do?
Base: All children who use the internet.

More notably, there are **consistent variations by age and partly by gender**:

• While **boys generally claim more safety skills than girls**, teenage girls claim as many skills as their male peers regarding the safer management of online communication; the majority of girls aged 13-16 years old being able to block unwanted contacts and change privacy settings on SNS.

• **Teenagers claim more than double** the **skills** reported by younger children, though the gap between the two age groups is less pronounced when abilities to find information on how to use the internet safely is considered. That just one in three children aged 9-12 can change privacy settings on SNS, and a few more can block unwanted contacts, raises further concerns regarding underage social networking.

Table 31 shows that **variations between smartphone users and non-users in the possession of safety skills** are also **considerable** in both age groups.

Table 31: Skills related to internet safety in general, by smartphone use and by age

% who say they can…	9-12 years		13-16 years		All* (users and non-users)
	Non user	S-ph user	Non user	S-ph user	
Block unwanted adverts or junk mail spam	23	39	49	71	45
Delete the record of which sites they have visited	29	51	62	79	54
Change privacy settings on a social networking profile	25	53	62	89	56
Block messages from someone they don't want to hear from	29	58	69	89	60
Block pop-ups	21	43	51	66	44
Find information on how to use the internet safely	31	49	61	78	54

Q26 d, Q27 a-e: Which of these things do you know how to do?
Base: All children who use the internet.
* The 'All' values here refer to the average number of children who are internet users and claim these skills (as shown in Table 30).

Table 32 confirms that, as for instrumental and critical skills, **disparities between tablet users and non-users are less pronounced** than in the case of smartphones. However, **younger children who are tablet users claim considerably more safety skills related to SNS**, such as blocking an unwanted contact and changing privacy settings, compared to non-users.

Table 32: Skills related to internet safety in general, by tablet use and by age

% who say they can…	9-12 years		13-16 years		All* (users and non-users)
	Non user	Tabl user	Non user	Tabl user	
Block unwanted adverts or junk mail spam	26	29	60	67	45
Delete the record of which sites they have visited	33	41	71	73	54
Change privacy settings on a social networking profile	28	43	74	83	56
Block messages from someone they don't want to hear from	31	54	78	86	60
Block pop-ups	26	27	59	61	44
Find information on how to use the internet safely	34	42	68	79	54

Q26 d, Q27 a-e: Which of these things do you know how to do?
Base: All children who use the internet.
* The 'All' values here refer to the average number of children who are internet users and claim these skills (as shown in Table 30).

When we look at **communicative abilities** (Table 33), we find support for the hypothesis that **creative and interactive uses of the internet are still at the top of the 'ladder of opportunities'** (Livingstone & Helsper, 2007), **but** that **social media are now taken-for-granted everyday activities** for the majority of children: so while just 31% of children know how to create a blog, 56% claim they know how to post a comment online and 63% how to upload and share content on social media. The distribution by age and gender shows the same patterns, with little variation among boys and girls, and **teenagers claiming considerably more skills than younger children**.

Table 33: Communicative abilities, by age and gender

| % who say they can… | 9-12 years | | 13-16 years | | |
	Boys	Girls	Boys	Girls	All
Publish a comment on a blog, website or forum	35	34	72	78	56
Upload images, videos or music onto social media	41	36	84	84	63
Create a blog	14	14	45	47	31

Q27 f-h: Which of these things do you know how to do?
Base: All children who use the internet.

Table 34 shows that, as for other sets of skills examined in this report, **smartphone users claim more communicative abilities**, although disparities between users and non-users are higher among 9-12 year-olds with respect to uploading content on to social media.

Table 34: Communicative abilities, by smartphone use and by age

| % who say they can… | 9-12 years | | 13-16 years | | All* (users and non-users) |
	Non user	S-ph user	Non user	S-ph user	
Publish a comment on a blog, website or forum	28	54	63	85	56
Upload images, videos or music onto social media	30	64	74	92	63
Create a blog	10	25	37	54	31

Q27 f-h: Which of these things do you know how to do?
Base: All children who use the internet.
* The 'All' values here refer to the average number of children who are internet users and claim these skills (as shown in Table 33).

Table 35 shows variations between tablet users and non-users, which follow the same patterns just noted for smartphone users: those aged 9-12 who are tablet users are significantly more likely to be able to share content on social media than their peers who do not use a tablet.

Table 35: Communicative abilities, by tablet use and by age

| % who say they can… | 9-12 years | | 13-16 years | | All* (users and non-users) |
	Nonuser	Tabl user	Nonuser	Tabl user	
Publish a comment on a blog, website or forum	31	47	72	84	56
Upload images, videos or music onto social media	34	54	82	90	63
Create a blog	13	17	43	56	31

Q27 f-h: Which of these things do you know how to do?
Base: All children who use the internet.
* The 'All' values here refer to the average number of children who are internet users and claim these skills (as shown in Table 33).

5.3 Skills related to smartphones and tablets

After asking all children who are internet users about a set of instrumental, critical, safety and communicative skills, we also measured skills related to smartphones and tablets among children who own or have for personal use mobile devices.

As shown in Table 36, **the majority** of children know how to **download apps** and **connect** their devices **to a wifi network**. Variations by age and gender persist, with **boys and older children likely to claim more skills**; moreover, the divide between boys and girls is stronger in the youngest group.

Less common, but still claimed by more than half the children, is the ability to **compare different apps** in order to choose the most reliable, and to **synchronise** all the devices the child has access to. With respect to these two skills, age differences are marked. By contrast gender variations in the ability to compare different apps are considerable only among children of the youngest group.

Table 36: Skills related to use and critical understanding on smartphones and tablets, by age and gender

% who say they can…	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Download apps	94	85	98	93	93
Connect to a wifi network from smartphone	85	73	96	92	89
Have the same documents, contacts and apps on all devices that they use	41	32	71	64	57
Compare different apps with similar functions in order to choose the one that is most reliable	56	45	73	72	66

Q28 a, Q28 c, Q28 e, Q29 b: Which of these things do you know how to do?
Base: All children who own or have for their own use a smartphone or a tablet.

Table 37 shows the distribution of safety skills related to smartphones and tablets, by age and gender.

Table 37: Skills related to safety on smartphones and tablets, by age and gender

% who say they can…	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Deactivate the function showing their geographical position	49	32	78	72	63
Block push notifications from different apps	50	29	77	68	61
Block pop-ups which promote apps, games or services they have to pay for	33	29	64	52	48
Protect a smartphone with a PIN, with a screen pattern	78	80	95	92	88
Find information on how to use smartphones safely	54	45	75	76	68

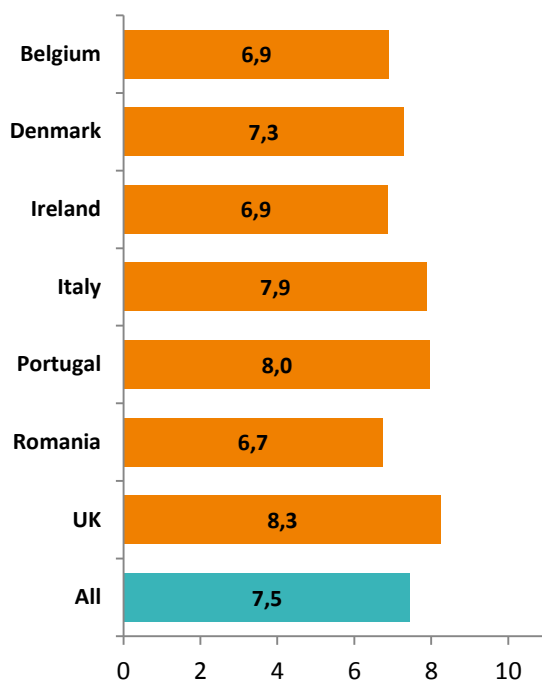Q28 b, Q28 d, Q28 f, Q28 g, Q29 a: Which of these things do you know how to do?
Base: All children who own or have for their own use a smartphone or a tablet.

- It is comforting that **the majority of children can protect their smartphones and tablets with a passcode**, with few variations across age groups, but some differences between girls and boys. Indeed, risks related to personal data misuse are often listed among the top concerns by children, as the qualitative interviews and focus groups currently being carried out suggest.

- The second most common skill is **finding information on how to use smartphones and tablets safely**, a skill claimed by **two out of three teenagers**, **half of the younger boys and just 45% of girls aged 9-12**.

- **Deactivating location-tracking functions** is claimed by **63%** of smartphone users and tablet users overall, but with considerable variations by age and gender: while 78% of boys and 72% of girls over 13 can do it, **just** 49% of younger boys and **32% of younger girls** say they are able to do it.

- **Blocking push notifications from apps** is claimed by **61% of children**, but is also strongly structured by age and gender, so while boys and older children are more likely to claim this skill, **just 29% of younger girls** report being able to do it.

- Finally, **blocking pop-ups that promote apps, games or services you have to pay for** is the least common ability, claimed by **half** of the children overall, with considerable gender and age differences: just one in three boys and girls aged 9-12 and one in two teenage girls say they can actually block pop-up messages.

Therefore, the findings suggest that **younger children**, and younger girls in particular, are **more vulnerable to privacy and commercial risks** on mobile media.

Finally, we asked children about specific communicative abilities on smartphones and tablets. As shown in Table 38, **the majority** of children claim the ability to **update their status on SNS** from a mobile device and to **create and share content on SNS by means of their**

smartphones or tablets. Age differences persist, with around two out of three children in the youngest age group saying they are able to do these activities. However, together with data on daily online activities, these findings point to **a more advanced progression on the 'ladder of opportunities'** by children who own smartphones and tablets.

Table 38: Communicative abilities on smartphones and tablets, by age and gender

% who say they can…	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Update status on SNS used most	62	55	93	88	79
Take a picture or a short video with smartphone and upload it on to social media	73	67	92	93	86

Q28 h, Q29 c: Which of these things do you know how to do?
Base: All children who own or have for their own use a smartphone or a tablet.

5.4 Average number of skills

It has already been shown that specific skills vary considerably by age, and in some cases, by gender.

Figure 37 shows variations by age, gender and SES in the overall number of skills claimed by children.

- **On average** children claim **half of the 12 skills** we asked about, with small differences between girls and boys.

- By contrast, the number of skills is strongly structured by age, ranging from **two skills claimed by 9-10** year-olds to **over eight skills among 15-16** year-olds.

- Children from medium SES background claim slightly more skills than higher SES children and, especially, peers from lower income

families.

Figure 37: Average number of skills related to internet use (out of 12)
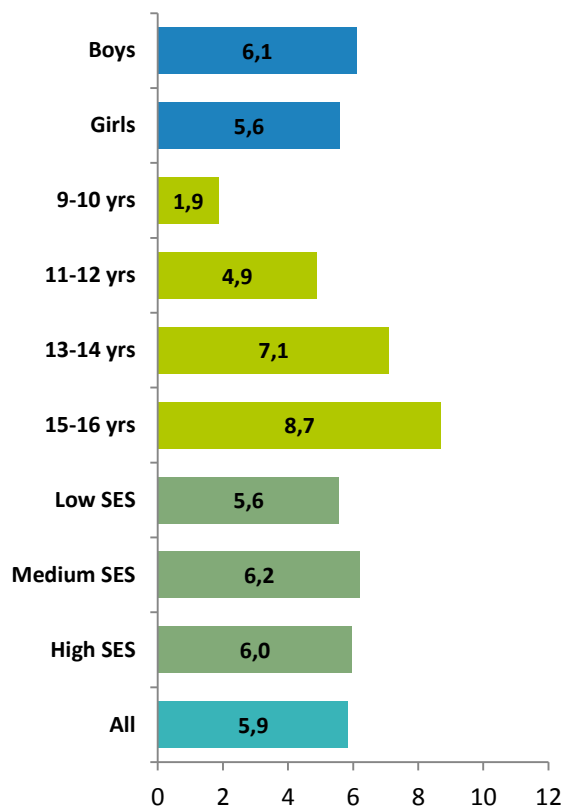
Q26 a-d, Q27 a-h: Which of these things do you know how to do? (Average out of 12 items.)
Base: All children who use the internet.

Country variations show some differences compared to the EU Kids Online 2010 data (Livingstone et al., 2011): Portugal and Denmark now top the list with children claiming seven skills on average, followed by the UK with an average of six skills; Romania exceeded Ireland and Belgium, Italy is close to the latter two.

Figure 38: Average number of skills related to internet use (out of 12), by country
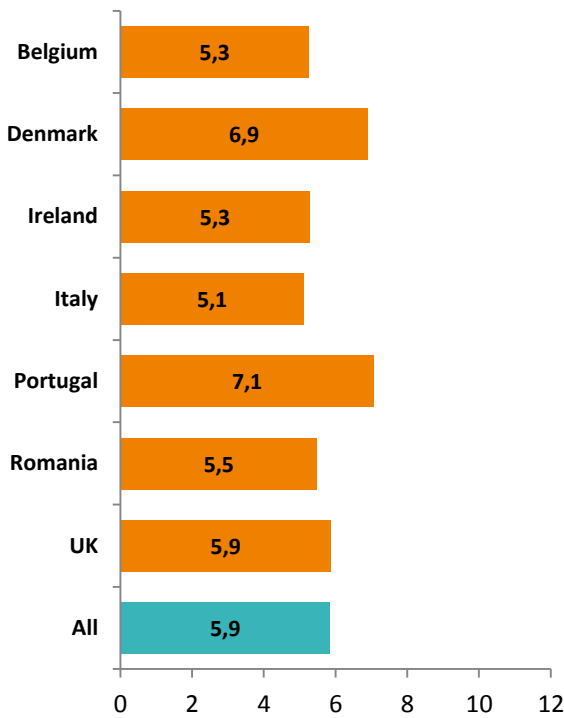
Q26 a-d, Q27 a-h: Which of these things do you know how to do?
(Average out of 12 items.)
Base: All children who use the internet.

When we focus on skills related to smartphones and tablets, as shown in Figure 39, the picture is somewhat different:

- **On average**, children claim more skills related to smartphones and tablets (**7.5 out of 11**), with a slight gender difference, and even smaller variations by SES.

- Age differences are again considerable, but less wide, ranging from **four skills claimed by 9-10** year-olds to nearly **nine skills among 15-16** year-olds.

Figure 39: Average number of skills related to smartphones and tablets (out of 11)
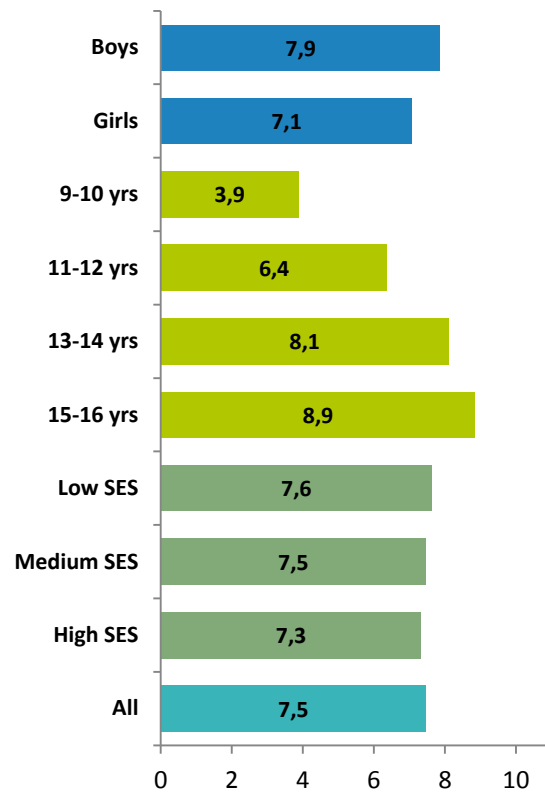
Q26 a-d, Q27 a-h: Which of these things do you know how to do?
(Average out of 11 items.)
Base: All children who own or have for their own use a smartphone or a tablet.

Variations across countries (Table 40) are also noteworthy, with **the UK, Portugal and Italy leading with around eight skills on average**, followed by Denmark, Belgium and Ireland, and Romania.

These country differences may be the outcome of different processes of domestication of smartphones and tablets among young people, diverse diffusion of the internet overall, a different way of incorporating the internet in the education system, as well as reflecting specific youth media cultures.

Figure 40: Average number of skills related to smartphones and tablets (out of 11), by country

Q26 a-d, Q27 a-h: Which of these things do you know how to do?
(Average out of 11 items.)
Base: All children who own or have for their own use a smartphone or a tablet.

6. Risk and harm

The body of research on risks of the internet for children has been considerable in the past decade.[11] However, most studies have focused on specific risks in certain countries, rather than on the overall experience of risk and harm in comparative perspective. One notable exception is the EU Kids Online project, which has surveyed more than 25,000 children aged 9-16 and their parents in 25 European countries. One of the major findings of this project is that **online risky experiences do not necessarily result in harm**, as reported by children (Livingstone *et al.*, 2011). Rather, the EU Kids Online research showed that children who encounter more risks online are not necessarily those who experience more harmful consequences; on the contrary, they are usually more skilled and develop more resilience. On the other hand, children who are less exposed to both opportunities and risks tend to be more bothered when they have a negative experience online (*ibidem*; See also Livingstone *et al.*, 2012). In both categories – that is, older users who tend to be exposed to more risks but who are also more resilient, and younger users who are less skilled, undertake fewer activities and encounter less risks – those who are vulnerable offline because of psychological problems or social characteristics find online risks more harmful (Livingstone *et al.*, 2012). In other words, **online and offline vulnerability go hand in hand**.

In order to measure the incidence of online risks and harm, we asked children who use the internet if they had '*seen or experienced something on the internet that has bothered them in some way*', where 'bothered' was defined as something that '*made you feel uncomfortable, upset, or feel that you shouldn't have seen it*'. Additionally, children were asked if they had encountered a range of online risks, and then, if they had been bothered by these.

The measurement of risky and harmful online experiences largely draws on the EU Kids Online

framework and methodology (Livingstone *et al.*, 2011). Similarly, then, **harm was measured subjectively in terms of the severity of children's responses to online risky experiences**. Continuities with the EU Kids Online project were also ensured, both at the level of the survey administration and in the questionnaire design. In order to maximise the quality of children's answers and to ensure their privacy, the survey was conducted face to face in the home, but sensitive questions were self-completed by the child. The wording of the questionnaire was refined on the basis of cognitive testing with children of different age groups and gender in each country, in order to ensure children's comprehension and to avoid adults' terminology (such as 'sexting'). Furthermore, particularly emotive terms, such as 'stranger' or 'bullying', were also avoided.

6.1 Overall perception of risk and harm

Before asking children about specific risky experiences, we asked them a closed and an open-ended question, asking them to provide their overall view on negative online experiences. Children were asked, 'In the past 12 months, have you seen or experienced something on the internet that has bothered you in some way? For example, made you feel uncomfortable, upset, or fe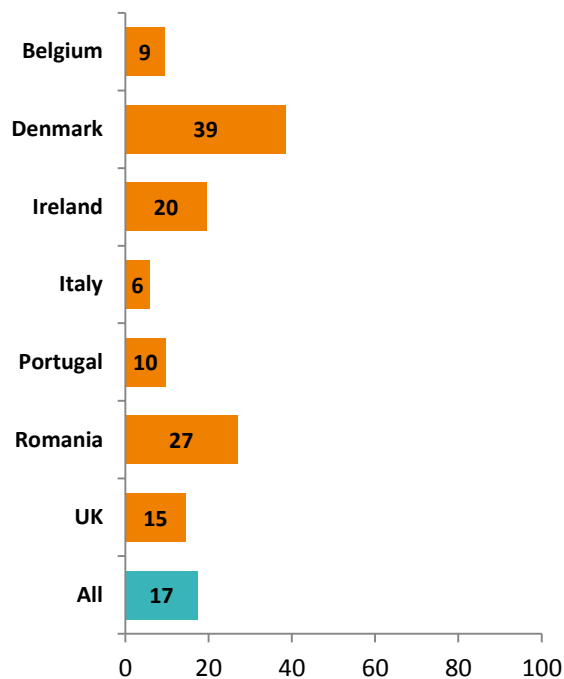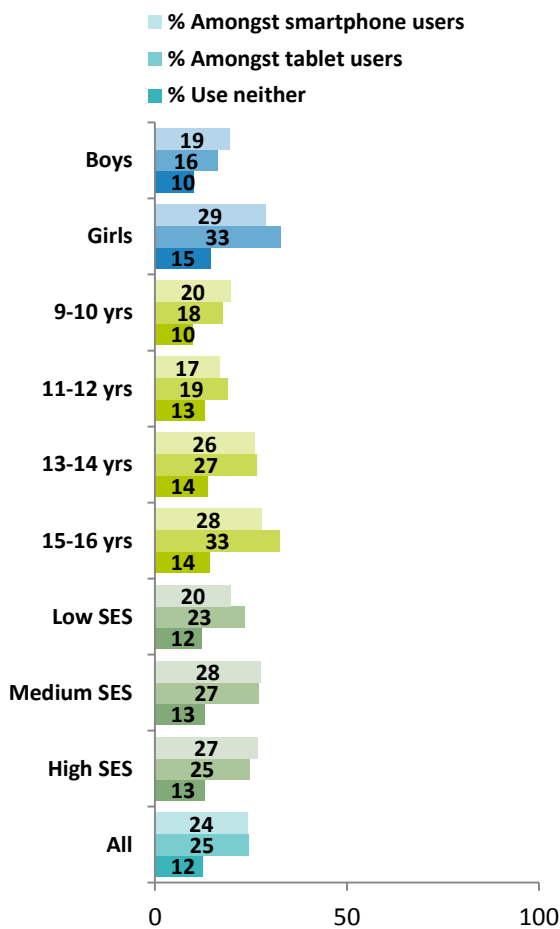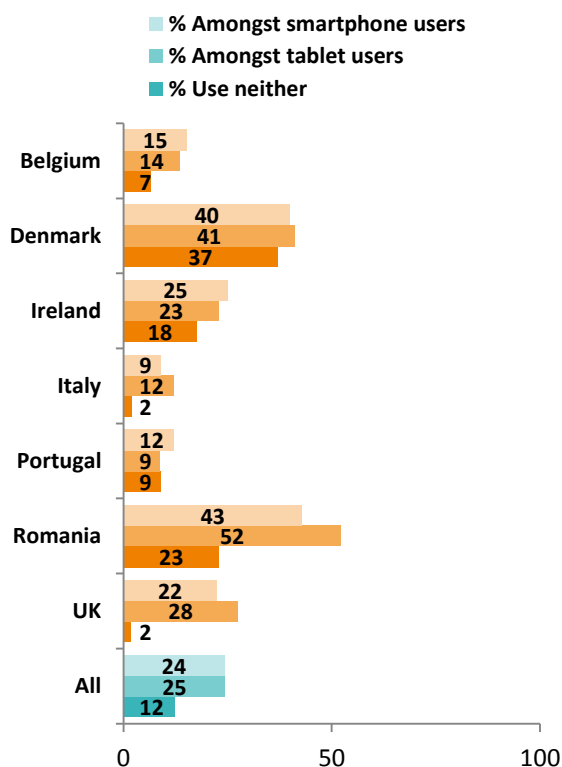el that you shouldn't have seen it?', and 'If you have seen or experienced something on the internet in the past 12 months that has bothered you in some way, can you write down what happened or what it was that bothered you or made you upset?'

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[11] For a review of the European evidence see Ólafsson et al., 2013.

Figure 41 shows children's experiences of problematic events, by age, gender and SES.

Figure 41: Online experiences that have bothered children (%), by gender, age and SES
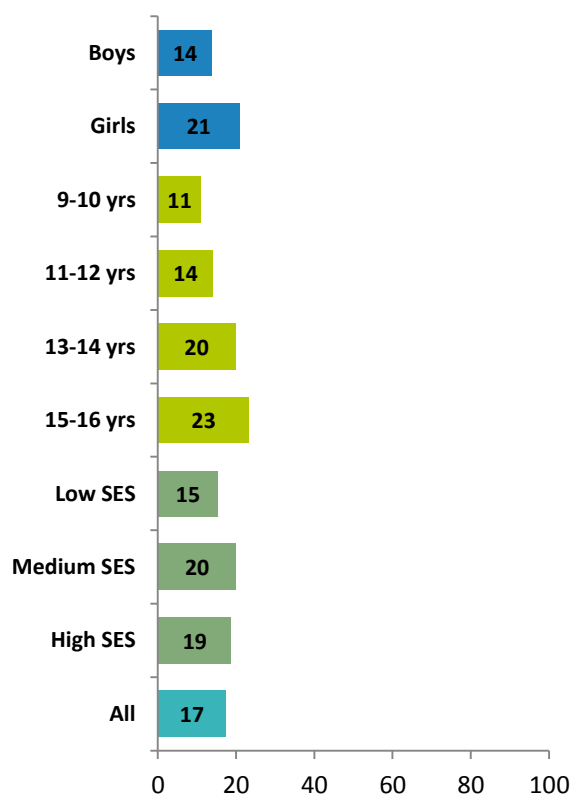
Q30: In the PAST 12 MONTHS, have you seen or experienced something on the internet that has bothered you in some way? For example, made you feel uncomfortable, upset, or feel that you shouldn't have seen it?
Base: All children who use the internet.

- Overall, 17% of **children** say that they **have been bothered by something on the internet in the past year**. While it is still a minority of children, this is a higher percentage than reported by children in the 2010 EU Kids Online survey.

- Gender and age differences are considerable: **girls (21%) are more likely to be bothered than boys (14%),** and **the youngest children, aged 9-10, are the least likely to have been bothered by something online (11%) compared with older teenagers (23%**).

- SES differences are less marked but still noteworthy: children from lower income families are the least likely to have experienced

anything on the internet which bothered them.

Figure 42 examines country variations in children's experiences of problematic situations on the internet.

Figure 42: Online experiences that have bothered children (%), by gender, age and SES

Q30: In the PAST 12 MONTHS, have you seen or experienced something on the internet that has bothered you in some way? For example, made you feel uncomfortable, upset, or feel that you shouldn't have seen it?
Base: All children who use the internet.

- Perceptions of problematic events on the internet is also variable across countries: **Danish children (39%) are more likely to report being bothered** by something on the internet, while **Italian children (6%) are the least likely** to do so. Comparison with the EU Kids Online data shows that **since 2010 the number of children reporting an online experience that bothered them has increased in Denmark (from 28% to 39%), Ireland (from 11% to 20%) and Romania (from 21% to 27%)**, while it has been more or less **stable in the UK (from 13% to 15%), Portugal (from 7% to 10%), Belgium (from 10% to 9%) and Italy (also 6%** in 2010).

Figure 43 shows variations in the perceptions of online risks among children who use smartphones or tablets daily, and children who do not use smartphones or tablets to go online, by gender, age and SES:

Figure 43: Online experiences that have bothered children, by gender, age and SES, comparing mobile and non-mobile internet users

■ % Amongst smartphone users
■ % Amongst tablet users
■ % Use neither

Q30: In the PAST 12 MONTHS, have you seen or experienced something on the internet that has bothered you in some way? For example, made you feel uncomfortable, upset, or feel that you shouldn't have seen it.
Base: All children who use the internet.

- Overall, there is no difference between **children who use tablets daily (25%) and those who use smartphones daily (24%), when it comes to online experiences that have bothered them. However both are twice as likely to have bothering online**

experiences than children who use neither (12%) of the mobile devices to go online.

- There are some **gender variations** in the general pattern: across all three categories of internet users, girls are more likely to claim they have been bothered, with tablet users especially likely to say so. Instead, among boys smartphone users are more likely to have had a negative online experience than tablet users. Some **age differences** are also worth noting: among children aged 11-14 years old, tablet users are slightly more likely to say they have been bothered. By contrast, in the remaining three age groups, tablet users are more exposed to bothering experiences, the gap being wider among 15-16 years old.

- Differences in the general pattern across SES show that while among lower SES children those who are tablet users indicate higher levels of bothering experiences, among middle and higher SES children smartphone users are slightly more likely to report an online experience which has bothered them.

Figure 44: Online experiences that have bothered children, by country, comparing mobile and non-mobile internet users

- % Amongst smartphone users
- % Amongst tablet users
- % Use neither

Country	smartphone	tablet	neither
Belgium	15	14	7
Denmark	40	41	37
Ireland	25	23	18
Italy	9	12	2
Portugal	12	9	9
Romania	43	52	23
UK	22	28	2
All	24	25	12

Q30: In the PAST 12 MONTHS, have you seen or experienced something on the internet that has bothered you in some way? For example, made you feel uncomfortable, upset, or feel that you shouldn't have seen it.
Base: All children who use the internet.

- **Country differences are also remarkable** as shown in Figure 42: while in **Denmark** the likelihood of reporting being bothered doesn't change much across the three categories of internet users, in **Romania** tablet users (52%) are more exposed to problematic experiences than both smartphone users (43%) and non-users (23%). **Italy** and the **UK** follow a similar pattern, but with lower differences between tablet users (12% and 28% respectively), smartphone users (9% and 22%) and a greater difference with non-users (2% in both countries). In **Belgium**, **Ireland** and **Portugal** smartphone users are slightly more likely to be bothered than tablet users.

A few preliminary conclusions can be drawn. First, what we have examined here are children's perceptions that there are things that have bothered them online. The following sections provide a more detailed picture of the specific problems children experience on the internet.

Second, there seems to be **an increase in the likelihood that children say they have been bothered by something they have seen on the internet** that **can be associated with the use of smartphones and tablets to go online**. Denmark is the only exception, since the overall perception of problematic experiences has risen, independently from single platforms.

Third, this association reinforces the so-called 'usage hypothesis': **the more children use the internet, the more opportunities they take up, but also the more risky experiences they are exposed to**.

6.2 Bullying

Despite being a recurrent theme in the research, public and policy agenda, there is no standard definition of 'cyberbullying', because the phenomenon itself is a moving target (Schrock & boyd, 2008; see also Levy *et al*., 2012). Most definitions rely on the definition of bullying itself, and its components. '**Bullying**' has been defined as a form of aggression that is (a) **intentional**, (b) **repetitive** and (c) involving a **power imbalance** between a victim and a perpetrator. Accordingly, cyberbullying is defined as intentional and repeated aggression using any form of technological device such as the internet or mobile phone. To avoid adopting contested, adult or emotionally-charged terms, bullying was here defined as follows: '*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; intentionally leaving someone out of things. When people are hurtful or nasty to someone in this way, it can happen: in person face to face (a person who is together with you in the same place at the same time); by mobile phone (texts, calls, video clips); on the internet (email, instant messaging, social networking, chatrooms); on whatever device*
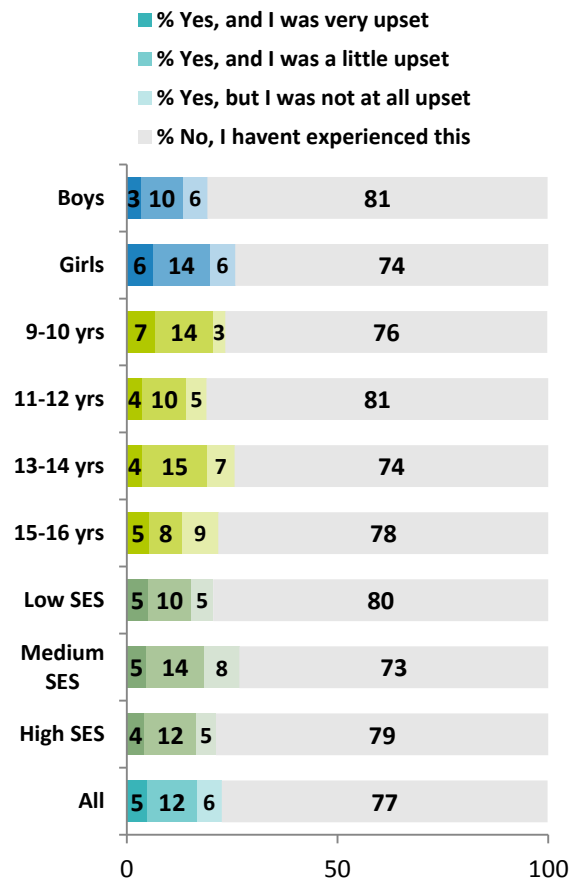
you use to go online'.

Although cyberbullying is also an intentional and repeated communication activity aimed at harassing or making fun of someone – and as such it involves power imbalance – research has shown that the specificities of online or mobile communication reinforce the features of traditional bullying while adding new elements. For example, **anonymity** 'can heighten the threatening nature of an act of cyberbullying, or the victim's resultant sense of powerlessness' (Levy *et al*., 2012, p. 11), thus reinforcing the power imbalance between the victim and the aggressor. Anonymity, however, may not be exclusive of online communication (the school environment may well facilitate acts of bullying that are anonymous, as Levy and colleagues point out). Moreover, while an act of cyberbullying may not necessarily be repeated over time (Levy *et al*., 2012), the properties of mediated publics – **persistence**, **searchability**, **replicability** and **invisible audiences** (boyd, 2008) – potentially amplify the duration of cyberbullying and its harmful consequences, as wider audiences can be involved.

Prior research has shown that, while cyberbullying is less common than offline bullying (Livingstone *et al*., 2011; Ybarra *et al.,* 2012), it is a very distressing and harmful experience (Livingstone *et al*., 2011). The shift from offline to online spaces means that the boundaries of space and time are becoming meaningless: one cannot leave a place and know that the bullying will end; rather, the bullying is likely to take place also after school, on a variety of platforms (Kernaghan & Elwood, 2013). Moreover, compared to face-to-face forms of bullying, the boundaries between the roles of victim, perpetrator and bystanders are less easily drawn in online bullying (Lampert & Donoso, 2012).

Consequently, we asked children how upset they were when they experienced 'mean' conduct by someone else, and also whether they had ever behaved in this way with someone else.

Figure 45 shows that **23% of children have experienced any form of bullying on- or offline; 17% say they were 'very' (5%) or 'a little upset' (12%)** about what happened:

Figure 45: Child has been bullied online or offline in the past 12 months, by gender, age and SES

- % Yes, and I was very upset
- % Yes, and I was a little upset
- % Yes, but I was not at all upset
- % No, I havent experienced this

	Very upset	A little upset	Not at all upset	No
Boys	3	10	6	81
Girls	6	14	6	74
9-10 yrs	7	14	3	76
11-12 yrs	4	10	5	81
13-14 yrs	4	15	7	74
15-16 yrs	5	8	9	78
Low SES	5	10	5	80
Medium SES	5	14	8	73
High SES	4	12	5	79
All	5	12	6	77

Q32: In the PAST 12 MONTHS, has someone treated you in this kind of way, and if so, how upset were you about happened? Base: All children who use the internet.

- The experience of bullying is gendered, with **girls** being **more likely to experience bullying (26%) and to be upset (20%)** than boys (among whom 19% reported being bullied and 13% being harmed).

- Age variations are also notable, and confirm that **the transition from pre-adolescence to adolescence marks a time of increased bullying**: 13- to 14-year-olds (26%) are more likely to be bullied. It is, however, **the youngest children** who **report higher** rates of **harm** (**21%**).

Figure 46: Child has been bullied online or offline in the past 12 months, by country
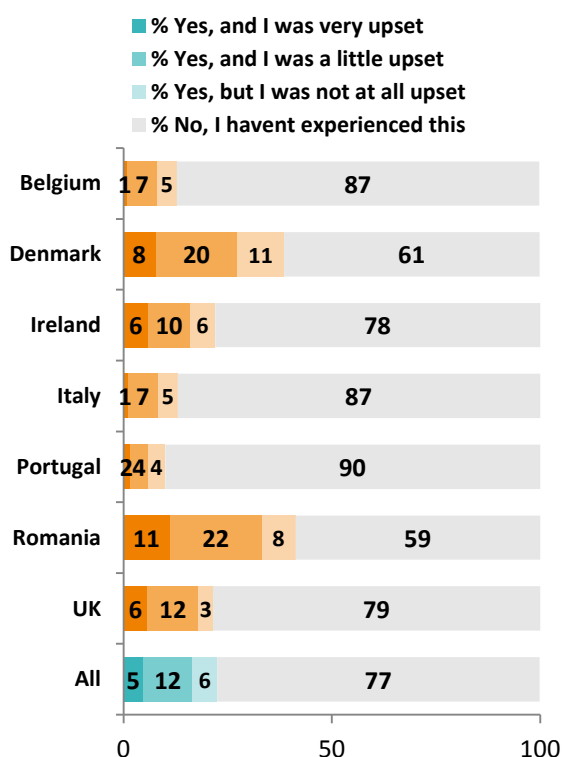
- % Yes, and I was very upset
- % Yes, and I was a little upset
- % Yes, but I was not at all upset
- % No, I havent experienced this

Q32: In the PAST 12 MONTHS, has someone treated you in this kind of way, and if so, how upset were you about happened?
Base: All children who use the internet.

- The likelihood of being a victim of bullying varies considerably through the countries: **children are more likely to be bullied in Romania (41%) and Denmark (39%)**, and less likely in **Belgium (13%), Italy (13%) and Portugal (10%)**.

Bullying can occur in many ways. Table 36 shows the ways in which children have actually been bullied[12].

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[12] Note that 23% of children said that they had been treated in a hurtful or nasty way but only 19% specified how this had happened. For those who had been 'very upset', 9% failed to give a concrete answer as to how this had happened, for the 'a little upset' group 12% didn't give a definitive answer to how it happened and for the 'not at all upset', 19% didn't give a definitive answer.

Table 39: Ways in which children have been bullied in the past 12 months, by age

%	Age				All
	9-10	11-12	13-14	15-16	
In person, face to face	12	8	10	9	10
By mobile phone calls	2	1	1	3	2
By messages sent on phone (SMS, TEXT or MMS)	1	2	3	5	3
On SNS	1	5	11	8	7
On a media sharing platform	0	0	2	1	1
By instant messaging	1	2	2	2	2
In a chatroom	1	1	0	0	1
By email	0	0	0	0	0
On a gaming website	4	1	1	1	2
In any form on the internet or through mobile phones	10	9	15	13	12

Q33: If someone has treated you in this kind of way, how did it happen? (Multiple responses allowed).
Base: All children who use the internet.

- While **10% of children have been bullied face to face**, offline bullying is no longer the dominant mode of mean and offensive conduct; indeed, if we sum all the forms of **cyberbullying**, **12% report being bullied online or through mobile communication**.

- The most common ways cyberbullying occurs is on **SNS (7%), SMS and texts (3%), phone calls (2%), instant messaging (2%) and gaming websites (2%)**.

- Age differences are noteworthy: the **youngest children are more likely to report being bullied face to face and on a gaming website**. By contrast, among **teenagers** (aged 13-14 and 15-16), cyberbullying is more likely to occur on **SNS**. The oldest group also reports more experiences of cyberbullying via SMS and phone calls.

Table 40 shows how the ways in which bullying occurs varies across mobile and non-mobile internet users:

Table 40: Ways in which children have been bullied in the past 12 months, comparing mobile and non-mobile internet users

%	Smart-phone users	Tablet users	Use neither
Have experienced any form of cyberbullying	17	15	8
In person, face to face	10	10	10

Q33: If someone has treated you in this kind of way, how did it happen? (Multiple responses allowed.)
Base: All children who use the internet.

- **Smartphone users (17%) and tablet users (15%) are more likely to have experienced any form of cyberbullying than children who do not use mobile devices (8%)**

- Conversely, there are no differences among different categories of internet users in the likelihood of being bullied face to face.

As anticipated, research has shown that the line between victims and perpetrators is more difficult to draw in cyberbullying, and indeed, it is so for this sample: **61% of those children who admit to having treated others in a hurtful or nasty way on the internet or by using mobile phones have themselves been treated in a hurtful or nasty way by others**.

Table 41 shows the ways in which children bullied others, by age:

Table 41: Ways in which children bullied others in the past 12 months, by age

%	9-10	11-12	13-14	15-16	All
In person, face to face	8	8	7	9	8
By mobile phone calls	2	2	2	2	2
By messages sent on phone (SMS, TEXT or MMS)	1	3	2	4	3
On a SNS	0	3	3	4	3
On a media sharing platform	0	1	0	1	1
By instant messaging	1	0	1	1	1
In a chatroom	0	1	1	0	1
By email	0	0	0	1	0
On a gaming website	2	1	2	1	2
In any form on the internet or through mobile phones	6	9	7	10	8

Q34 In the PAST 12 MONTHS, have you ever behaved in this way to someone else and if so, in which way did you do it? (Multiple responses allowed.)
Base: All children who use the internet.

- **The single most common mode of bullying is face to face**: **8%** of children report having bullied others in an offline context. But combining **all forms of cyberbullying,** some **8%** of children admit to having used any of those communication channels to bully others.

- Among the forms of **cyberbullying**, children report aggressive conduct against other peers especially on **SNS**, via **SMS** and other **texts** on mobile phones, or through phone **calls**.

- Age trends are notable: **older teenagers** are **more likely to bully others** overall, and to do so **face to face, by messages sent on mobile phones or on SNS**.

Table 42 shows how aggressive conduct varies among mobile- and non-mobile internet users.

Table 42: Ways in which children bullied others in the past 12 months, comparing mobile and non-mobile internet users

%	Smart-phone users	Tablet users	Use neither
Have engaged in any form of cyberbullying	9	6	8
In person, face to face	8	9	8

Q34 In the PAST 12 MONTHS, have you ever behaved in this way to someone else and if so, in which way did you do it? (Multiple responses allowed.)
Base: All children who use the internet.

- Children who **use tablets to go online are slightly more likely to bully others face to face but the least likely to engage in any form of cyber-bullying**. Conversely, smartphone users are a bit more likely to report having bullied others on the internet or by means of mobile communication.

Some preliminary observations are required. Although we are arguably observing a rise in cyberbullying compared to the 2010 EU Kids Online data (Livingstone *et al.*, 2011), whether this is a direct outcome of new media devices or rather, an indirect outcome of changes in the way children access the internet, or, even, the consequence of awareness campaigns - whereby children are more sensitive to this issue and more likely to recognise mean conduct as bullying - needs further analysis. We are rather inclined, however, to believe that **the 'more opportunities, more risks' hypothesis** is a valid framework to understand the changes associated with smartphones and tablets, changes that lead to more pervasive internet access and use in children's everyday lives.

Since those who report being harmed by bullying represent a consistent minority, it is vital to address vulnerable children with specific safety and empowering programmes.

6.3 Sexual messages

There is evidence that children are using the internet and mobile phones as part of their sexual interactions and explorations (Lenhart, 2009; Livingstone *et al.*, 2011). This practice has been termed 'sexting' (the amalgam of 'sex' and 'texting'), and has been variously defined. One approach restricts sexting to the exchange of images by means of mobile phones: for example, Lenhart defines sexting as 'the creating, sharing and forwarding of sexually suggestive nude or nearly nude images' of themselves or someone they know by mobile phones (2009, p. 2), thus excluding sexually suggestive texts as well as other communication platforms. The EU Kids Online survey, instead, adopted a more inclusive notion of sexting, which includes both images and texts and privileges online communication over the use of mobile phones (Livingstone *et al.*, 2011). Drawing on this broader definition, we defined sexting as '**sexual messages or images**. *By this we mean talk about having sex or images of people naked or having sex. Here are some questions about this. Think about any way in which you use the internet and your mobile phone/smartphone*'.

The Pew Internet study (Lenhart, 2009) identifies three basic **sexting scenarios**, where the exchange of sexual images occurs as (a) part of teenagers' experimenting with sexual identity and intimacy, while they are not yet sexually active; (b) between two romantic partners, as part of a sexual relationship; c) as a prelude to sexual activity, between friends who are not yet in a relationship, but where at least one hopes to become romantically involved. Indeed, most sexting is likely to be contextualised in a peer-to-peer romantic relationship, as a form of 'relationship currency' (Lenhart, 2009, p. 8). However, the specific technological and social affordances of ICTs may amplify the borders, meanings and audiences of sexting: images and texts exchanged in the context of a romantic relationship by means of SMS and MMS, instant messaging (WhatsApp, Snapchat, etc.) or SNS, can be easily forwarded, posted in more public online spaces and thus shared with wider audiences. Therefore, sexual messaging can have **unintended consequences** and may turn into an

upsetting or problematic experience for some children. Prior research has claimed that the exchange of sexually explicit images, messages or invitations is linked to harassment and bullying, thus leading to a form of 'sexual cyberbullying' (Kofoed & Ringrose, 2012; Ringrose *et al*., 2012).

Consequently, we asked children '*In the past 12 months, have you received sexual messages of this kind (this could be words, pictures or videos), and if so, how upset were you about happened? Think about any way in which you use the internet and your mobile phone/smartphone*'.[13] For ethical reasons, this question was not asked of 9- to 10-year-olds.

Figure 47 shows how children answered this question by gender, age and SES:

Figure 47: Child has received sexual messages online in the past 12 months (age 11+), by gender, age and SES
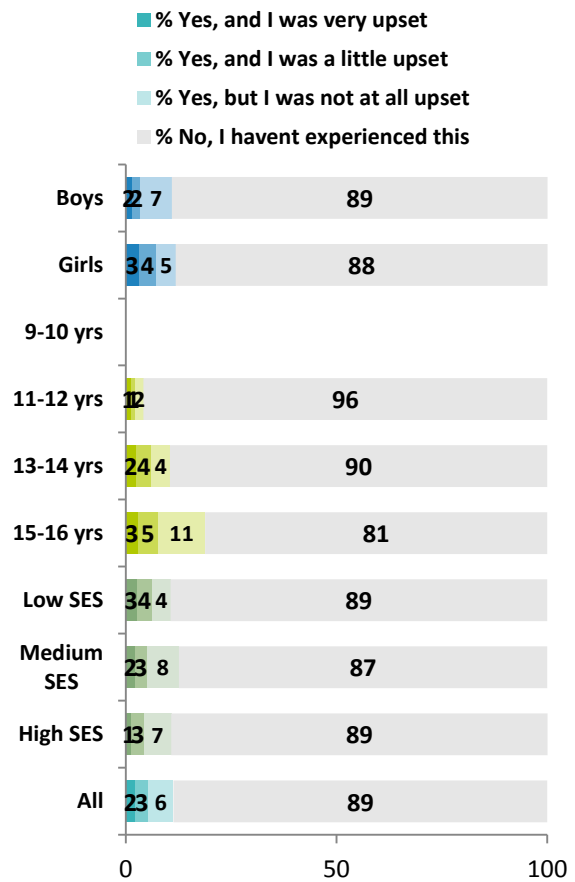
Legend:
- % Yes, and I was very upset
- % Yes, and I was a little upset
- % Yes, but I was not at all upset
- % No, I havent experienced this

	Very upset	A little upset	Not at all upset	No
Boys	2	2	7	89
Girls	3	4	5	88
9-10 yrs				
11-12 yrs	1	1	2	96
13-14 yrs	2	4	4	90
15-16 yrs	3	5	11	81
Low SES	3	4	4	89
Medium SES	2	3	8	87
High SES	1	3	7	89
All	2	3	6	89

Q42: In the PAST 12 MONTHS, have you received sexual messages of this kind (this could be words, pictures or videos), and if so, how upset were you about happened?
Base: All children aged 11-16 who use the internet.

- Overall, **11% of children have received sexual messages of any kind**, and 5% report being **'very' (2%) or 'a little' (3%) upset** as a consequence.

- While the overall experience of receiving sexual messages is not differentiated by gender, the likelihood of being harmed from this experience is: **girls are more likely to be 'very' (3%) or 'a bit' upset (4%) by sexting than boys** (among whom 2% and 2% respectively are 'very' or 'a bit' bothered).

- **Sexting increases with age**: while just **4% of children aged 11-12** are likely to say they have received messages of this kind, **10% of 13- to 14-year-olds and 19% of 15- to 16-year-olds** are likely to report this experience. However,

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[13] The question asked in the EU Kids Online survey was if children had 'seen or received sexual messages'. Here, we excluded the word 'seen' as potentially misleading (it was thought to lead to potential confusion with sexual images).

half of 11-12 years old children who have received sexual messages report being harmed, compared to one out of three 15- to 16-years - old.

- SES differences in the number of children who have experienced sexting are small; lower SES children, however, seem slightly more likely to report being bothered by what happened.

Figure 48 examines country variations in the number of children who received sexual messages:

Figure 48: Child has received sexual messages online in the past 12 months (age 11+), by country
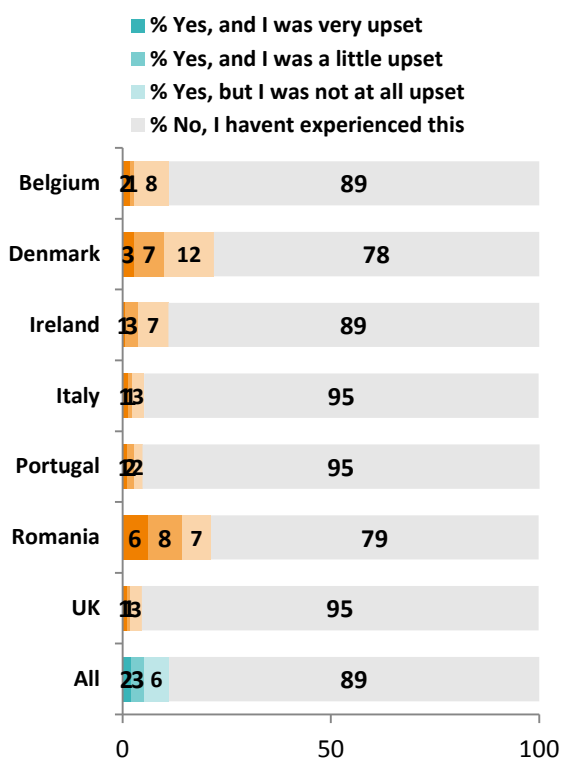
Legend:
- ■ % Yes, and I was very upset
- ■ % Yes, and I was a little upset
- ■ % Yes, but I was not at all upset
- ■ % No, I havent experienced this

Q42: In the PAST 12 MONTHS, have you received sexual messages of this kind (this could be words, pictures or videos), and if so, how upset were you about happened?
Base: All children aged 11-16 who use the internet.

- Receiving sexual messages of any kind is more likely to be experienced by **Danish (22%) and Romanian children (21%)**; it has been reported by **11% of Belgian and Irish children** and is a limited experience in **Italy, Portugal and the UK (5%)**.

Table 43 examines the ways in which children have received sexually suggestive messages of any kind, and shows that this **occurs most on SNS (6%), SMS or MMS (3%) and instant messaging (2%)**. Children who are 15-16 years old experience more sexting across all channels examined.

Table 43: Ways in which children have received sexual messages in the past 12 months, by age (age 11+)

	Age				
%	9-10	11-12	13-14	15-16	All
By mobile phone calls	n/a	0	0	2	1
By text messages sent on phone	n/a	1	3	6	3
On a SNS	n/a	2	6	10	6
On a media sharing platform	n/a	0	1	2	1
By instant messaging	n/a	1	1	4	2
In a chatroom	n/a	0	0	1	0
By email	n/a	0	0	2	1
On a gaming website	n/a	0	0	1	1
In a gaming community	n/a	0	0	0	0

Q43: Again, if you have received any messages of this kind, how did it happen? (Multiple responses allowed).
Base: All children aged 11-16 who use the internet.

Table 44 examines the differences between mobile- and non-mobile internet users in the way sexual messages are received.

Table 44: Ways in which children have received sexual messages in the past 12 months, comparing mobile and non-mobile internet users (age 11+)

%	Smart-phone users	Tablet users	Use neither
By text messages sent to phone	5	4	1
On a SNS	8	8	3

Q43: Again, if you have received any messages of this kind, how did it happen? (Multiple responses allowed).
Base: All children aged 11-16 who use the internet.

- Children who are **smartphone users are more likely to receive sexually suggestive messages on SNS (8%) and by text messages on their phones (5%).**

- **Tablet users are as likely to experience sexting on SNS (8%)**, but less likely than smartphone users to receive sexual texts on their mobile phones.

Comparison with the EU Kids Online data (Livingstone *et al.*, 2011) helps us advance some observations: **sexting has increased in Denmark (from 16% to 22%),** it has remained stable or almost stable in Ireland (also 11% in 2010), Italy (from 4% to 5%) and Romania (from 22% to 21%), and has **decreased substantially in Belgium** (from 18% to 11%), **Portugal** (from 15% to 5%) **and the UK** (from 12% to 5%). **The number of children who have been bothered** by sexually suggestive messages received online or on their phones **has increased in all countries apart from Belgium, Portugal and the UK** (where it has dropped from 3% to 2% or has remained stable as in Portugal), most notably in **Denmark (from 4% to 10%) and Romania (from 9% to 14%)**. While the numbers overall are lower, the proportion of children who said they were upset after this experience has also doubled in **Ireland (from 2% to 4%)** and **Italy (from 1% to 2%)**. Therefore, urgent policy initiatives are needed in countries where children are more likely to be bothered by sexual messages. Even in countries where the incidence of both risk and harm is lower, it is of vital importance to address the minority of children who are more vulnerable to the harmful consequences of sexting.

6.4 Meeting new people

One of the major anxieties regarding young people's online communication concerns what can be referred to as **the 'stranger danger'**, that is, the idea that young people might meet someone online, be persuaded to meet them offline and end up being abused in the face-to-face encounter. Indeed, previous research suggests that 'meeting strangers' can encompass a variety of circumstances and experiences, which cannot be

assumed as universally problematic (Barbovschi *et al.*, 2012; Ito *et al.*, 2009); at the same time, prior studies show that the risk of being harmed from a face-to-face contact with someone met online is low (Livingstone *et al.*, 2011). One major reason lies in the modes of online sociability, whereby children tend to extend their online contacts by activating 'latent ties' (e.g. people they share friends or locations with), rather than looking for people with no connections with their offline worlds. Indeed, most of the face-to-face meetings with contacts first met online is with '**friends of friends**' and not with complete strangers (Barbovschi *et al.*, 2012).

As for other online risks, therefore, the relationship between risk and harm must be understood within the broader social context in which it is embedded; more specifically, within the patterns of online communication and sociality, within the broader online activities and also, within the broader social context, including offline factors of vulnerability. Therefore, the first step is to understand the patterns of online communication and contact with people met online, and second, to identify the patterns of meeting offline with someone met online.

Figure 49 shows the number of children who have been in contact on the internet with people they have never met face to face before, by gender, age and SES:

Figure 49: Child (%) has been in contact with someone not met face to face before, by gender, age and SES
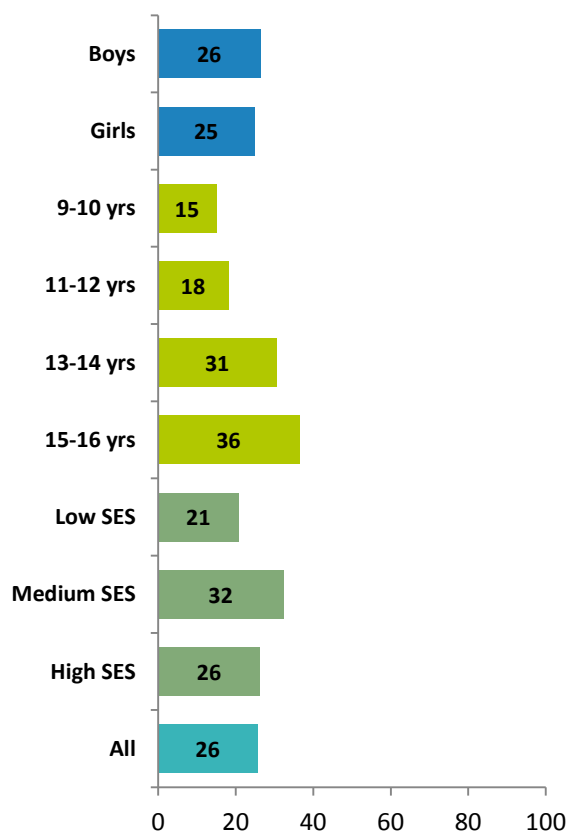
Q37: In the PAST 12 MONTHS, have you ever had contact on the internet (on all platforms/devices) with someone you had not met face to face before? This could have been by email, chatrooms, SNS, instant messaging or gaming sites.
Base: All children who use the internet.

- **One in four children (26%) have had contact online with people they have never met face to face.**

- While gender variations are weak, the age trend is marked: **contact with people met online increases with age, ranging from 15% of children aged 9-10 to 36% of teenagers aged 15-16**.

- SES differences are also considerable, with medium (32%) and higher SES (26%) children being more likely to be in contact with people never met before than the children from lower income families.

Figure 50: Child (%) has been in contact with someone not met face to face before, by country
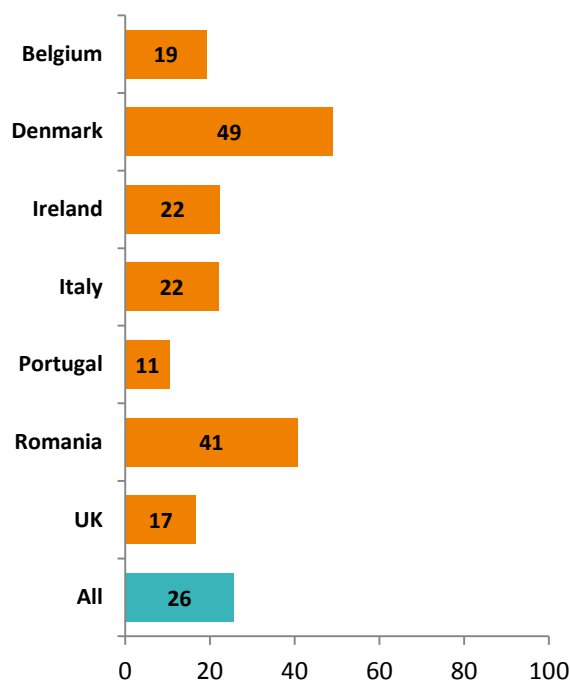
Q37: In the PAST 12 MONTHS, have you ever had contact on the internet (on all platforms/devices) with someone you had not met face to face before? This could have been by email, chatrooms, SNS, instant messaging or gaming sites.
Base: All children who use the internet.

- **Country variations are also noteworthy**: children in **Denmark** (49%) and **Romania** (41%) are considerably more likely to be in contact on the internet with someone they haven't met face to face. Contact with people met online is less common in the other countries, concerning one in five children in **Ireland** (22%), **Italy** (22%), **Belgium** (19%), and even less in the **UK** (17%). **Just 11% of Portuguese children** include among their online contacts people they have never met offline.

Contact with people met online is not negative or risky *per se*: rather, it often provides children with an opportunity to share interests and hobbies (Ito *et al.*, 2009). Moreover, not every online contact leads to an offline encounter, and more importantly, not every face-to-face meeting with someone met on the internet has harmful consequences.

Figure 51 how many children have gone to meet someone offline they first met online, and whether they were bothered by this experience.

Figure 51: Child has gone to an offline meeting with, someone not met face to face before, by gender, age and SES

■ % Yes, and I was very upset
■ % Yes, and I was a little upset
■ % Yes, but I was not at all upset
□ % No, I havent experienced this

	% Very upset	% A little upset	% Not at all upset	% No
Boys	0	2	9	89
Girls	1	2	9	88
9-10 yrs	0	2	3	95
11-12 yrs	1	2	5	92
13-14 yrs	1	2	10	87
15-16 yrs	1	2	16	81
Low SES	1	3	9	87
Medium SES	0	3	12	85
High SES	0	1	5	94
All	1	2	9	88
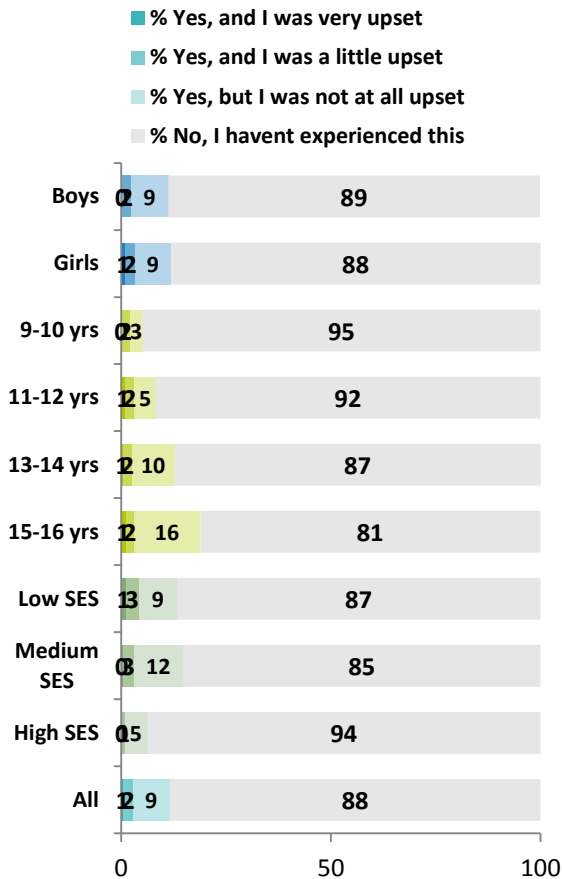
Q39: In the PAST 12 MONTHS, have you ever gone on to meet anyone face to face who you had first met on the internet, and if so, were you at all upset by what happened or wish that you had not done it?
Base: All children who use the internet.

- **12% of children say they have met someone face to face they first met on the internet, and for 3%** (one in four of whom had such meetings) **this made them 'very' or 'a little' upset**.

- While there is almost no difference in the number of girls and boys who went to such meetings, girls are just a little more likely to have had a negative experience.

- **Meeting online contacts offline increases**

with age, rising from 5% of the youngest to 19% of the oldest age group.

- **Children from lower income families** (13%) are twice as likely to go to an offline meeting with an online contact than children from wealthier homes (6%).

Figure 52: Child has gone to an offline meeting with, someone not met face to face before, by country
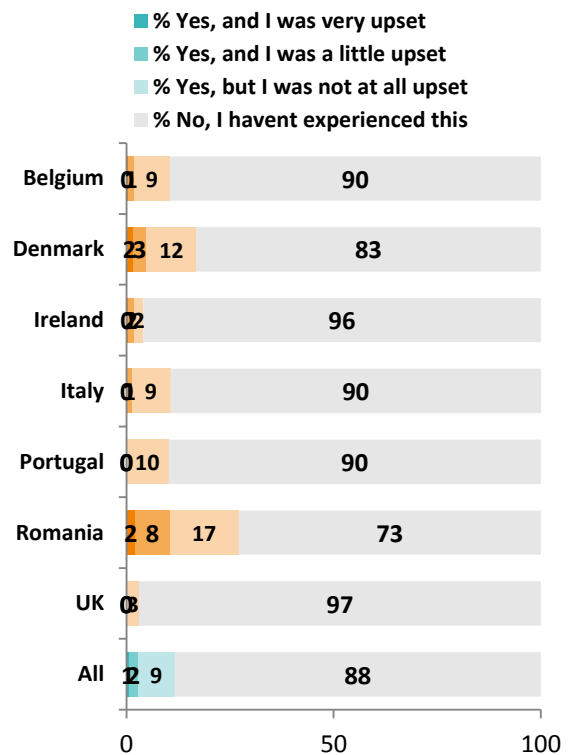
■ % Yes, and I was very upset
■ % Yes, and I was a little upset
■ % Yes, but I was not at all upset
□ % No, I havent experienced this

	% Very upset	% A little upset	% Not at all upset	% No
Belgium	0	1	9	90
Denmark	2	3	12	83
Ireland	0	2	2	96
Italy	0	1	9	90
Portugal	0	0	10	90
Romania	2	8	17	73
UK	0	0	3	97
All	1	2	9	88

Q39: In the PAST 12 MONTHS, have you ever gone on to meet anyone face to face who you had first met on the internet, and if so, were you at all upset by what happened or wish that you had not done it?
Base: All children who use the internet.

- As for online contacts with people never met face to face, **the likelihood of an offline encounter also varies substantially across countries**: **Romanian children** are more likely to meet someone face to face they met online (27%) and more likely to be bothered (10%); going to an offline meeting with someone met online is also common in **Denmark** (17%), but harmful experiences are lower (5%). A total of 10% of **Belgian**, **Italian and Portuguese children** go and meet their online contacts,

but just 1% of Italian and Belgian children who went to such meetings have been bothered. Conversely, no children in Portugal were harmed. The 4% of **Irish children** have gone to an offline meeting of this kind but half of them were 'a little' upset. Finally, meeting online contacts offline is lowest in the **UK** (3%), and for none of the respondents in this country has it had any harmful consequences.

Figure 53 and Figure 54 show the number of online contacts children have gone on to meet offline[14], and confirm what has already been shown in Figure 51, that it is uncommon for children to go on to a face to face meeting with online contacts. But those who have done this have **in most cases met only one or two people**. **The number of people met in this way varies by country and age**. Older children and children from medium or low SES have gone on to meet more contacts than the younger ones and those from higher SES. Children in Denmark and Romania have met more online contacts offline.

Figure 53: Number of online contacts children have gone on to meet offline, by gender, age and SES
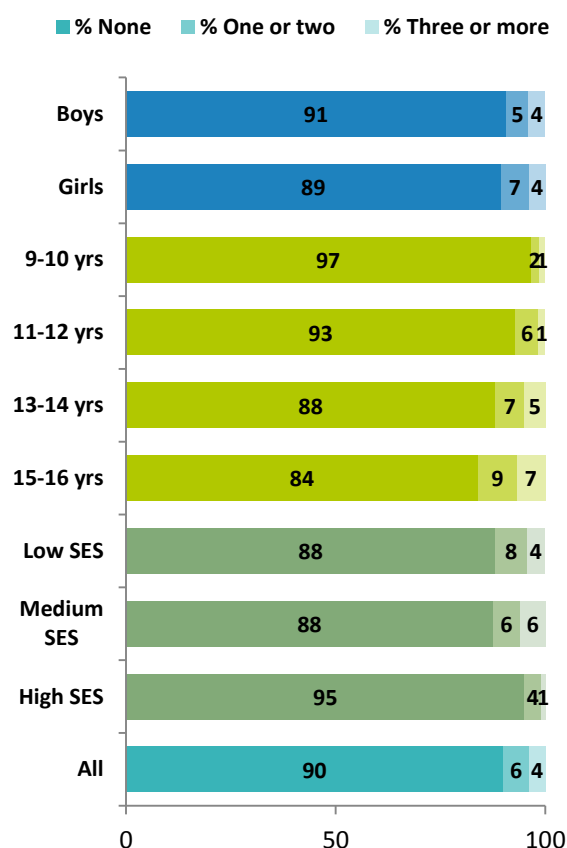
Q40: In the PAST 12 MONTHS, how many people have you gone on to meet face to face (who you had previously only met on the internet)?
Base: All children who use the internet.

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[14] Note that 12% of children said that they have gone to an offline meeting with an online contact, but only 10% specified how many people they have met offline.

Figure 54: Number of online contacts children have gone on to meet offline, by country
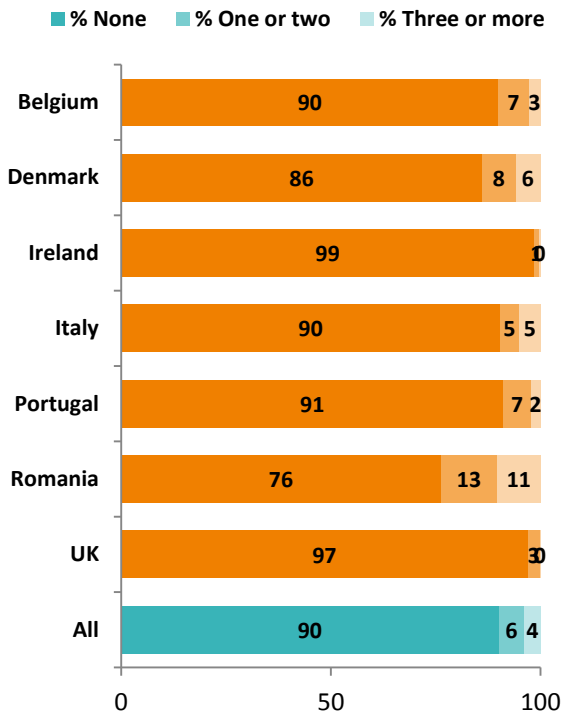
■ % None   ■ % One or two   ■ % Three or more

Q40: In the PAST 12 MONTHS, how many people have you gone on to meet face to face (who you had previously only met on the internet)?
Base: All children who use the internet.

Therefore, considering that **the relationship between risk and harm is complex** and not linear, even countries where meeting online contacts offline is less common may benefit from awareness-raising initiatives, as well as safety programmes that promote a responsible management of online contacts.

There are many ways in which children get in touch with people online that they then meet offline, as shown in Table 45.

Table 45: Ways in which children first contacted someone they later met offline, by age

%	Age				
	9-10	11-12	13-14	15-16	All
By mobile phone calls	1	2	3	6	3
By text messages sent to phone	2	1	3	7	3
On a SNS	0	4	7	13	6
On a media sharing platform	0	0	0	0	0
By instant messaging	0	1	1	3	1
In a chatroom	0	0	1	1	1
By email	1	0	0	0	0
On a gaming website	1	1	2	2	1

Q41: If you have gone on to meet people face to face who you met before just on the internet (never face to face), in what ways did you get in contact with them for the first time? (Multiple responses allowed).
Base: All children who use the internet.

- **Children get in touch with people met online who they have later met offline mainly on SNS (6%), by phone calls (3%) or texts received on their mobiles (3%).**

- Age differences are notable: **teenagers aged 15-16** are more likely to contact people met online than other age groups, and tend to do so **on a SNS (13%), by phone calls (7%), texts received on their mobiles (6%) or instant messaging (3%).**

Does the way children contact new people who they will then meet offline change among smartphone and tablet users? Table 43 shows that mobile internet users are more likely to contact people they will then meet offline through various channels. More specifically, smartphone users are more likely than both tablet users and non-users to get in touch for the first time with people they will later meet face to face on SNS, messages on their phones and phone calls.

Table 46: Ways in which children first contacted someone they met offline, comparing mobile and non-mobile users

%	Smart-phone users	Tablet users	Use neither
By mobile phone calls	5	2	2
By text messages sent to phone	5	3	3
On a SNS	9	8	5

Q41: If you have gone on to meet people face to face who you met before just on the internet (never face to face), in what ways did you get in contact with them for the first time?
Base: All children who use the internet.

6.5 Sexual images

Pornography, and more specifically, the assumed harmful influence of pornography on children, is a contested object of study. Public anxiety originates from the belief that lack of censorship and consequent ease of circulation of pornographic content on the internet turns pornography from 'under the bed' into 'onto your screen' practice (Rovolis & Tsaliki, 2012, p. 173). However, the **ubiquity of sexual content on the internet** has been discussed in many studies (see, among others, Ey & Cupit, 2011). The EU Kids Online project revealed that only one in four children have come across pornographic content, and just 14% have accidentally or intentionally encountered sexual images online (Livingstone *et al*., 2011). The data also showed that, while seeing sexual images is more common among boys and older teenagers, younger children and girls are more likely to be bothered from what they have encountered. Overall, just one in three children who have been exposed to sexual content online report being upset after this experience, although cross-cultural variation is considerable (*ibidem*). Based on these findings Rovolis and Tsaliki concludes that, as cultural studies-oriented approaches have been arguing for some time (Attwood & Smith, 2011; Buckingham & Bragg, 2004), the concern for the negative effect of pornography is exaggerated in media panics.

Drawing on the EU Kids Online methodology, questions about pornography were introduced in the following way: '*In the past year, you will have seen lots of different images – pictures, photos, videos. Sometimes, these might be obviously sexual – for example, showing people having sex, or naked people in sexy poses.*[15] *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, on whatever device you use to go online*'.

Figure 55 shows how seeing sexual images on and offline varies by gender, age and SES.

• Overall, 28% of children say that they have seen sexual images in the past 12 months, whether online or offline.

• **Seeing sexual images** is partially related to gender – with 30% of girls who have reported this experience against 27% of boys – and more strongly **related with age**: **44% of older teenagers have seen sexual images in the past 12 months compared to 14% of younger children.**

• Exposure to sexual images is more common among middle class children.

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[15] The original text in the EU Kids Online questionnaire stated: 'In the past year, you will have seen lots of different images – pictures, photos, videos. Sometimes, these might be obviously sexual – for example, showing people naked or people having sex'. We changed it into 'naked people in sexy poses' because cognitive testing and researchers' experience suggested that naked images are not necessarily associated with pornographic material in all countries.

Figure 55: Child has seen sexual images online or offline in the past 12 months, by gender, age and SES
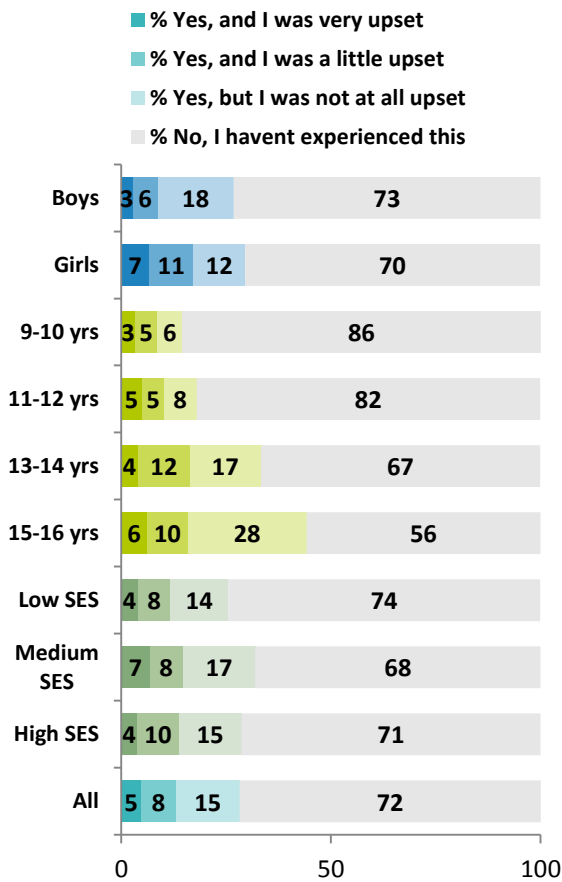
■ % Yes, and I was very upset
■ % Yes, and I was a little upset
■ % Yes, but I was not at all upset
■ % No, I havent experienced this

	% very upset	% a little upset	% not at all upset	% No
Boys	3	6	18	73
Girls	7	11	12	70
9-10 yrs	3	5	6	86
11-12 yrs	5	5	8	82
13-14 yrs	4	12	17	67
15-16 yrs	6	10	28	56
Low SES	4	8	14	74
Medium SES	7	8	17	68
High SES	4	10	15	71
All	5	8	15	72

Q35: In the PAST 12 MONTHS, have you seen anything of this kind, and if so, how upset were you by what you saw?
Base: All children who use the internet age 11-16.

- While overall one in three children have experienced sexual content on or offline, **13% of children** (more or less half of those who encountered sexually explicit images) **were bothered by this experience**.

- While, as we have seen, girls and boys are almost equally exposed to sexual images, **girls are more likely to be 'very' (7%) or 'a little' (11%) upset** by what they have seen.

- **The relation between risk and harm varies by age**: two thirds of children aged 9-10 who had seen sexual content report being bothered by this; half of the girls and boys aged 11-12 and 13-14 years old have been bothered; while just one in three children who are 15-16 years old report being upset.

- Medium or higher SES children are more likely to be bothered by what they have seen.

Figure 56: Child has seen sexual images online or offline in the past 12 months, by country
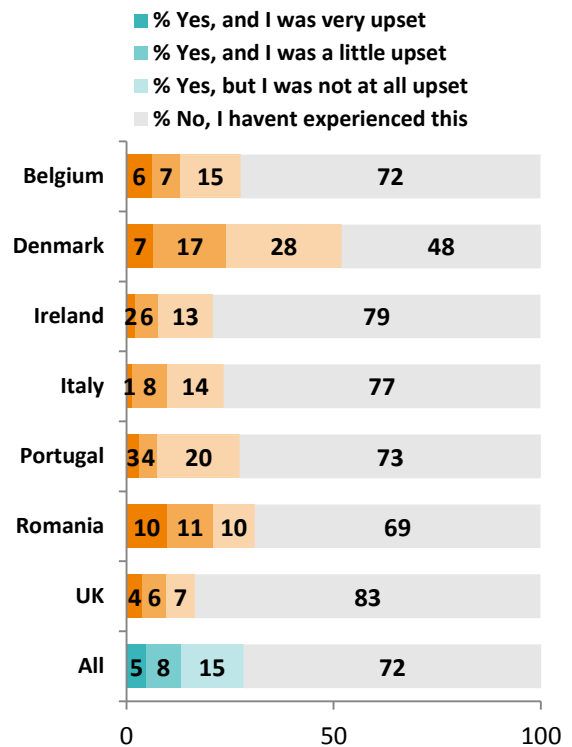
■ % Yes, and I was very upset
■ % Yes, and I was a little upset
■ % Yes, but I was not at all upset
■ % No, I havent experienced this

	% very upset	% a little upset	% not at all upset	% No
Belgium	6	7	15	72
Denmark	7	17	28	48
Ireland	2	6	13	79
Italy	1	8	14	77
Portugal	3	4	20	73
Romania	10	11	10	69
UK	4	6	7	83
All	5	8	15	72

Q35: In the PAST 12 MONTHS, have you seen anything of this kind, and if so, how upset were you by what you saw?
Base: All children who use the internet age 11-16.

- Children in different countries have different likelihoods of experiencing sexual content: **the greatest exposure to sexual images is among children in Denmark (52%) and Romania (31%)**. Lower exposure than the average is reported **in Italy (23%), Ireland (21%) and the UK (17%)**.

- The relation between risks and harm varies **across countries**: while **Denmark** has the highest incidence of exposure, less than half of Danish children who have seen sexual content report being upset (24%). In the other countries, although the overall experience of sexual content is lower, the proportion of children who report harm is higher than in Denmark, ranging from 21% of **Romanian children**, to 13% in **Belgium**, 10% in the **UK,** 9% in **Italy** and 8% in **Ireland**. It appears,

therefore, that **British children are more likely to be bothered** by what they have seen. **Portugal** is a notable exception: exposure to sexual content is on average (27%) and just one in three children have been upset.

Table 47 shows the ways in which children have seen sexual images by age:

Table 47: Ways in which children have seen sexual images, by age

%	Age				
	9-10	11-12	13-14	15-16	All
In a magazine or book	2	1	5	8	4
On television, film	6	6	13	17	11
On a video sharing platform	3	2	4	11	5
On a photo sharing platform	0	1	2	6	2
By pop-ups on the internet	1	4	10	13	7
On a SNS	1	4	9	14	7
By instant messaging	0	0	1	3	1
In a chatroom	0	0	1	2	1
By email	0	1	0	1	1
On a gaming website	1	0	2	1	1

Q36: If you have seen images of this kind, how did it happen? (Multiple responses allowed).
Base: All children who use the internet.

- **Television and films (11%) are still the most common way of seeing sexual images, followed by SNS (7%), pop-ups on the internet (7%), or video sharing platforms (5%).**

- Although the trend for increasing exposure with age is strong, it does not vary much by medium, the only difference being that the youngest are more likely to have this experience on video sharing platforms or pop-ups compared to SNS. Overall, **as children grow older, they are more likely to see sexual images across all media**.

Table 48 shows how the way children are exposed to sexual content varies across mobile and non-mobile internet users: overall, **smartphone users are more exposed to sexual content offline and online** than children who don't use smartphones or tablets to go online, and more likely to see sexual images on the internet than tablet users.

Table 48: Ways in which children have seen sexual images, comparing mobile and non-mobile internet users

%	Amongst smartphone users	Amongst tablet users	Use neither
On television, film	13	11	9
By pop-ups on the internet	11	10	5
On a SNS	12	10	4

Q36: If you have seen images of this kind, how did it happen? (Multiple responses allowed).
Base: All children who use the internet.

To sum up, exposure to sexual images continues to be a rather common experience offline and online. While older children, boys and children living in countries where this experience is more common are generally more resilient, younger children, girls and children in countries where seeing sexual content affects only a minority of children are usually more vulnerable to the harmful consequences of sexual content.

6.6 Other inappropriate content

Social media enable an unprecedented circulation of user-generated content (UGC). While the creation and sharing of content is a primary opportunity of the so-called Web 2.0, and an important component of digital literacy, some UGC is arguably problematic: content that promotes eating disorders; self-harm behaviour and drug consumption, along with online materials that promote discrimination and violence against certain groups are among the main examples of **negative user-generated content** (NUGC). While there is some evidence that exposure to NUGC is a rather common experience for children (Livingstone *et al.*, 2011), it has received less

attention among policy makers and researchers than bullying, sexting, meeting strangers or pornography.

We asked children: '*In the past 12 months, have you seen websites where people...*' For ethical reasons, this question was not addressed to 9- to 10-year-olds.

Table 49 shows what kind of problematic content children have come across, and how this varies by age.

Table 49: Child has seen potentially harmful user-generated content on websites in past 12 months, by age (age 11+)

% seen websites in past 12 months where people...	Age				All
	9-10	11-12	13-14	15-16	
Discuss ways of physically harming or hurting themselves	n/a	6	11	16	11
Discuss ways of committing suicide	n/a	4	7	7	6
Discuss ways of being very skinny, anorexic or bulimic	n/a	9	16	15	13
Publish hate messages that attack certain groups or individuals	n/a	10	20	28	20
Talk about or share their experiences of taking drugs	n/a	5	10	15	10
Has seen any such material at all on websites	n/a	16	26	34	25

Q44: In the PAST 12 MONTHS, have you seen websites where people discuss…
Base: All children who use the internet aged 11-16.

Overall, **25% of children report seeing potentially harmful UGC online** – indicating that exposure to NUGC has increased (it was 21% in 2010 considering only these countries).

- Across all age groups, **children encounter hate and discriminatory messages (20%) and anorexic or bulimic content (13%) more** than they do self-harm sites (11%) or sites where people share their experiences with drugs (10%). Although a smaller percentage, it is nevertheless noteworthy that 6% encounter suicide sites.

- **Seeing negative UGC increases with age**: 16% of children aged 11-12 have encountered one or more of the NUGC Table 49 compared with 34% of those aged 15-16.

6.7 Other risks

Other risks include: commercial, such as losing money by being victims of online fraud; technical, namely, viruses and malicious software; and risks connected to the **misuse of personal information**. The latter comprise of having an email account or SNS profile hacked or violated (as in Facebook rape, or **'Frape'**); the misuse of personal information and photos by people pretending to be the victim (e.g. through the creation of **fake profiles**); and people pretending to be someone else or **'catfishing'**. While the literature on this issue remains sparse, there is some evidence that the misuse or abuse of personal data deserves attention. The EU Kids Online data show that 9% of children aged 11-16 have experienced one or more of the three forms of personal data misuse investigated, with someone using the child's password or pretending to be them the most common experience. Similarly, the qualitative fieldwork currently carried out by the Net Children Go Mobile researchers indicates that risks related to personal data and damages to one's reputation are among the major concerns of children.

Table 50 shows the distribution of other risks across age groups:

Table 50: Child has had other negative online experiences in the past 12 months, by age

% of children who experienced	Age				All
	9-10	11-12	13-14	15-16	
Somebody used personal information in a way they didn't like	3	3	3	5	4
The computer got a virus	17	15	22	27	21
The mobile phone/smartphone got a virus	1	2	3	4	3
lost money by being cheated on the internet	1	1	1	3	2
Somebody used their password/used their phone, accessed their phone to access information or to pretend to be them	3	3	6	9	5
Experienced one or more of the above	19	18	26	31	24

Q45: In the PAST 12 MONTHS, has any of the following happened to you on the internet/on your smartphone/mobile phone? Base: All children who use the internet.

- **Viruses** are a risk encountered by **one in five children**, and one that increases with age, ranging from 17% of younger children to 27% of older teenagers. By contrast, getting a virus on a smartphone has been reported by only a minority of children (3%), although it is more common in the oldest age group.

- Among risks associated with personal data misuse, **children are more likely to experience privacy-related risks on their smartphones** (e.g. people accessing their personal information or pretending to be them). Although just a minority of children are exposed to this risk (5% overall), this rises to **9% of teenagers aged 15-16**.

- Having someone using their information in a way they did not like or losing money after being cheated on the internet are less common, perhaps suggesting that children

have learned how to prevent these problematic situations.

- We can observe a marked trend in age, with older teenagers being exposed more to all the risks we asked about.

While the data presented in Table 47 are somewhat comforting, we must not underplay the relevance of risks associated with personal data misuse: as the qualitative material we are collecting shows, children seem particularly sensitive to privacy issues.

6.8 Responding to risks

Most online experiences do not prove harmful, even because children do not perceive them as dangerous or problematic (Livingstone *et al.*, 2012; Vandoninck, d'Haenens & Roe, 2013). However, when they encounter a negative experience on the internet, children engage in a set of strategies to adapt to the problematic situation and to reduce emotional and psychological stress. **Online coping** can be defined as '**internet-specific problem-solving strategies children adopt after a negative experience online**' (Vandoninck *et al.*, 2013, p. 61). The EU Kids Online survey (Livingstone *et al.*, 2011) identified three main coping strategies: **passive responses**, that include fatalistic (stop using the internet for while) and self-accusatory responses (feeling guilty about what happened); **proactive responses** (such as reporting inappropriate content and contact, blocking the unwanted contact, etc.); and **communicative responses** (talking with parents, peers, teachers or other trusted adults about what happened). Learning how to cope with negative experiences in an effective way – and which are the most effective responses for any particular situation – is part of the process of building **resilience** (Vandoninck *et al.*, 2013).

Responding to online risks by seeking support from social networks is the most common coping strategy adopted by children, although in most cases they tend to combine two strategies (Livingstone *et al.*, 2011).

In this chapter we focus on communicative responses to online risks. Indeed, prior research has proved that children who receive greater support from their peers are more resilient to online negative experiences, and both parents and teachers are in a position to mediate children's online resilience, provided that they engage in actively mediating children's online activities and safety (Vandoninck *et al.*, 2013).

Therefore, we asked children, '*If you were to experience something on the internet or when you were online from different devices that bothered you or made you upset, how likely or unlikely is it that you would talk with the following people?*'

Table 51 shows how likely children are to talk about their negative online experiences with various people: **mothers (71%), friends (57%) and fathers (54%)** represents the sources of social support to whom children are **'very' or 'rather' likely to turn to** when they had any online experience that made them feel upset. By contrast, **the majority of children say it is 'very' or 'rather' unlikely that they would talk to teachers (64%) or youth workers (59%)** and other adults whose job it is to help children when they have a negative online experience.

Table 51: How likely it is for children to talk about things that bothered them on the internet

%...	Very likely	Rather likely	Rather unlikely	Very unlikely	Does not apply
Father	33	21	16	18	12
Mother	48	23	11	11	7
Brother or sister	20	20	16	23	21
Other relatives	9	16	24	36	15
Friends	26	31	17	18	8
Teachers	7	11	21	43	18
Someone whose job is to help children	7	13	17	42	21
Another trusted adult	8	22	19	34	17

Q48: If you were to experience something on the internet or when you were online from different devices that bothered you or made you upset, how likely or unlikely is it that you would talk with the following people?
Base: All children who use the internet.

Table 52 shows how the likelihood of children talking to someone after a negative online experience varies across age groups and by gender:

Table 52: Children who are very likely to talk about things that bothered them on the internet, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Father	43	39	29	23	33
Mother	52	65	32	44	48
Brother or sister	20	22	13	26	20
Other relatives	9	10	7	8	8
Friends	17	16	27	42	26
Teachers	10	8	4	7	7
Someone whose job is to help children	7	8	6	7	7
Another trusted adult	8	8	8	7	8

Q48: If you were to experience something on the internet or when you were online from different devices that bothered you or made you upset, how likely or unlikely is it that you would talk with the following people?
Base: All children who use the internet.

- **Younger children are more likely to talk to their parents than anyone else**, with both girls and boys more likely to seek support from mothers**.**

- **The importance of parents as the primary source of social support** in case of experiencing something upsetting on the internet **decreases with age**: teenagers are more likely than younger children to seek support from their peers. However, there are important variations by gender. **Teenage girls are more likely to talk with their friends and still more likely to turn to their mothers**. Conversely, teenage boys continue to seek support from parents than friends.

- While children are not generally used to talking with their teachers, younger boys and girls are more inclined to indicate teachers as a very likely source of support. Younger girls also put more trust in youth workers, counsellors, etc.

Figure 57 shows that **67% of children are likely to talk with at least one person** when they have a negative online experience:

Figure 57: Children (%) who are very likely to talk to at least one person about things that might bother them on the internet, by gender, age and SES
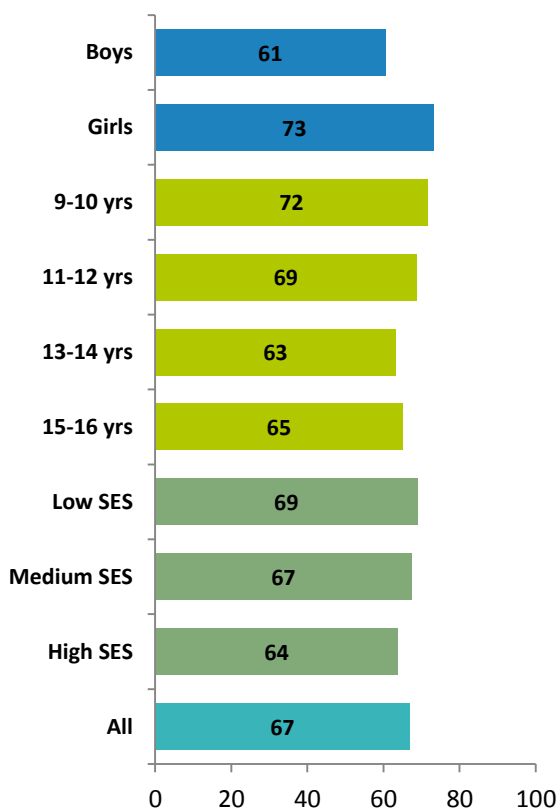
Q48: If you were to experience something on the internet or when you were online from different devices that bothered you or made you upset, how likely or unlikely is it that you would talk with the following people? (% who say they are very likely to talk to at least one of those named in Table 51.)
Base: All children who use the internet.

- **Gender and age differences are considerable**: younger children (72%) and girls (73%) are more likely than boys (61%) and teenagers (63% and 65%) to talk with at least one person about what bothers them on the internet.

- **SES variations are also noteworthy**: children from lower income families are much more likely to seek support from someone when they

have a negative experience on the internet.

Figure 58: Children (%) who are very likely to talk to at least one person about things that might bother them on the internet, by country
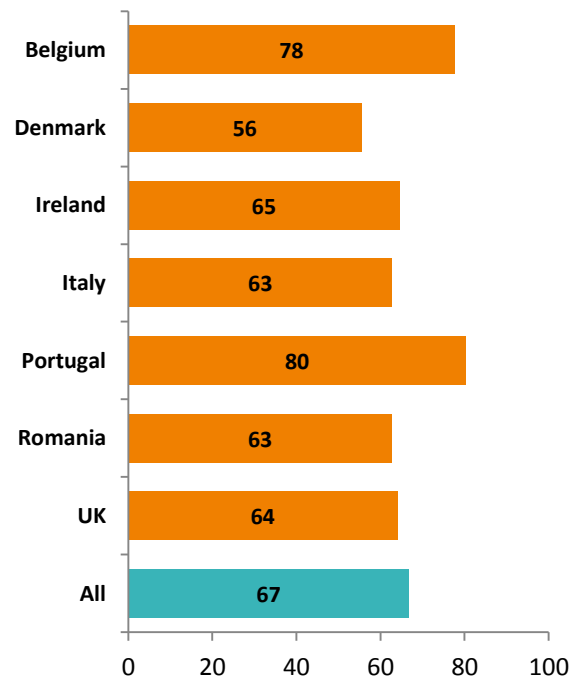
Q48: If you were to experience something on the internet or when you were online from different devices that bothered you or made you upset, how likely or unlikely is it that you would talk with the following people? (% who say they are very likely to talk to at least one of those named in Table 51.)
Base: All children who use the internet.

- Country variations are also pronounced, with **Portuguese and Belgian children** who are considerably **more likely to look for social support**. By contrast, **children in Denmark are the least likely to do so.**

These findings suggest that parents and peer mediation are valued by children and should be promoted within policy initiatives. However one in three children is still not likely to ask for support from parents or peers. Policy makers should aim at ensuring that all children, across all countries, find social support of any kind when they need it.

7. Dependence and overdependence

The fear that children might lose control over their use of new media is a key component of media panics over the internet and mobile phones. Moreover, 'internet addiction' has become an important field of research, as well as a debated issue on the policy agenda. While previous research framed internet addiction as an impulse-control disorder that can be assimilated to other pathological conditions such as gambling, more recent studies adopt a **compensatory model** of internet use, whereby some individuals turn to the internet as a way of escaping from their problems and to compensate for psychological difficulties (Kardefeldt-Winther, 2014). So not all 'symptoms' of internet addiction would necessarily be an indicator of a psychological problem; rather, what researchers, policy makers and the public treat as **'excessive internet use'** may signal a new way of life characterised by the embeddedness of the internet in everyday life and novel modes of communication and entertainment, which adults normatively sanction as pathological behaviour (Kardefeldt-Winther, 2014).

The issue of 'addiction' is even more problematic when we turn to mobile phones. Mobile communication has indeed become a taken-for-granted condition of our social ecology (Ling, 2012): being accessible to our intimate friends and relatives is not only part of the social expectations we form of one another, but also informs our sense of personal security. Moreover, being able to access the internet on the move helps manage a variety of tasks, including using maps, accessing information in real time, re-arranging meetings 'on the fly', etc.

As research on mobile communication has shown, we do not assume that 'perpetual contact' (Katz & Aakhus, 2002) is positive *per se* or unproblematic; rather, it may lead to overdependence and a feeling of 'entrapment' (Hall & Baym, 2012). Equally we do not exclude excessive and compensatory uses of mobile devices as a means of escaping from psychological vulnerabilities. Rather, we prefer to speak of **dependence and overdependence**, to suggest that the boundary between intensive and pathological uses of the internet is negotiable and must be contextualised, taking into account individual experiences and vulnerabilities. This expression also helps us recognise the positive consequences of a strong embeddedness of mobile media into everyday life.

7.1 Managing the complexity of everyday life

Mobile communication has become an integral part of our social ecology (Ling, 2012), bringing about notable benefits – for example, always being in contact with family and friends, easier management of everyday life activities and mobility, better employment of otherwise 'dead' time, etc. – as well as some negative consequences – more stress, and the pressure to be 'always on'. Therefore, we wanted to measure what, if ever, changes are associated with smartphones in children's perception.

Table 53 shows how true children think a set of items are:

Table 53: Managing the complexity of everyday life

%	Not true	A bit true	Very true
Since I have had a smartphone I find it easier to organise my daily activities	35	42	23
Thanks to my smartphone I feel more connected to my friends	19	39	42
Thanks to my smartphone I feel more connected to my family	43	36	21
Thanks to my smartphone I feel safer	44	36	20
Since I have had my smartphone I feel I have to be always available to family and friends	28	40	32
Thanks to my smartphone it is easier to do my homework and class assignments	47	37	16
Thanks to my smartphone I feel less bored	16	43	41

Q50: How true are these of you?
Base: All children who own or have for their own use a smartphone.

- **Feeling less bored** is the most notable consequence of smartphones: the majority of children agree 'a bit' (43%) or 'a lot' (41%) with this statement.

- The second statement children agree with relates to **social access to peers**: most children think it is **'a bit' (39%) or 'very' (42%) true that they feel more connected to their friends thanks to smartphones**. This confirms that for children, contact with peers represents the main motivation for adopting mobile communication.

- Feeling connected to parents and other family members is also an important, although less common, consequence associated with smartphones: over half of the children claim that it is **'a bit' (36%) or 'very' (21%) true that they feel more connected to their family**.

- This increased opportunity to keep in touch with one's social circles not only through SMS and phone calls, but also instant messaging and SNS, also has a notable 'side effect', that is, **overdependence**: **three out of four children (72%) think it is true that '*Since I have had my smartphone I feel I have to be always available to family and friends*.**'

- **Two out of three children** believe that **smartphones help them organise their daily activities**.

- **Over half of the children** who own smartphones also agree that **smartphones improve their sense of personal safety, and help them do their homework**.

Table 54 shows how agreement with statements regarding the role of smartphones in children's everyday life varies by age and gender:

Table 54: Managing the complexity of everyday life, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Since I have had a smartphone I find it easier to organise my daily activities	9	15	26	28	23
Thanks to my smartphone I feel more connected to my friends	28	24	48	50	42
Thanks to my smartphone I feel more connected to my family	24	16	22	21	21
Thanks to my smartphone I feel safer	18	22	20	20	20
Since I have had my smartphone I feel I have to be always available to family and friends	30	26	36	32	32
Thanks to my smartphone it is easier to do my homework and class assignments	10	12	18	19	16
Thanks to my smartphone I feel less bored	29	35	47	43	41

Q50: How true are these of you?
Base: All children who own or have for their own use a smartphone.

- Age differences are more notable than gender differences: **teenagers are more likely to agree with each of the statements** except for the feeling of perpetual contact with family - experienced especially by younger boys - and the feeling of greater personal safety - experienced especially by younger girls.

- Indeed, social connectivity afforded by mobile communication is where the major difference between children and teenagers is played out: **teenagers are almost twice as likely to think of smartphones as tools that facilitate a stronger connection with the peer group**.

- Curiously, however, the gap between younger children and teenagers is reduced when it comes to the sense of being required to be always accessible to parents and friends: **both children aged 9-12 and teenagers aged 13-16 associate smartphones with the pressure to be 'always on'**.

7.2 Excessive use of the internet and smartphones

In order to explore excessive internet use and to ensure comparability with the EU Kids Online 2010 survey, the same questions were asked to children to measure potential conflict of internet use with other activities and the experience of unsuccessful attempts to reduce time spent on the internet, as shown in Figure 59.

- The measure of excessive internet use that children are more likely to experience **'very' or 'fairly often'** is **spending time online without being really interested in it** (20%), followed by the feeling of **spending less time than appropriate with family, friends or doing homework** (18%), the perceived incapacity to reduce time spent online (16%), and feeling bothered when not able to be online (15%).

- Encouragingly, three out of four children have never experienced going without sleeping or eating because they were online.

A single experience associated with excessive internet use is not sufficient to measure problematic behaviour.

Figure 59: Excessive use of the internet among children
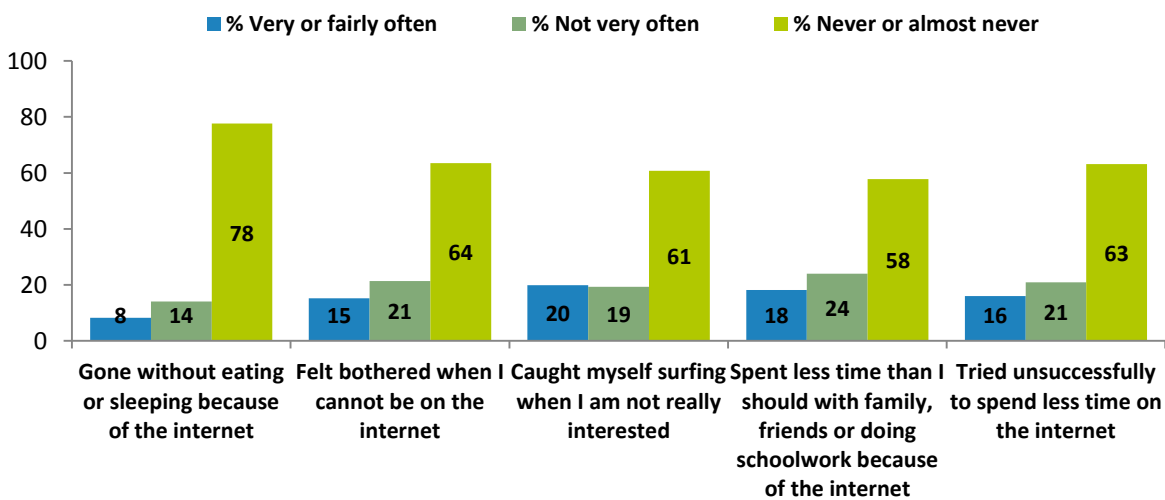
Q46: In the PAST 12 MONTHS, how often, have these things happened to you?
Base: All children who use the internet.

Figure 60 shows the percentage of children, out of all the children, who answer 'fairly' or 'very often' to two or more of the five experiences of excessive use, by gender, age and SES:

Figure 60: Child (%) has experienced two or more forms of excessive internet use fairly or very often, by gender, age and SES
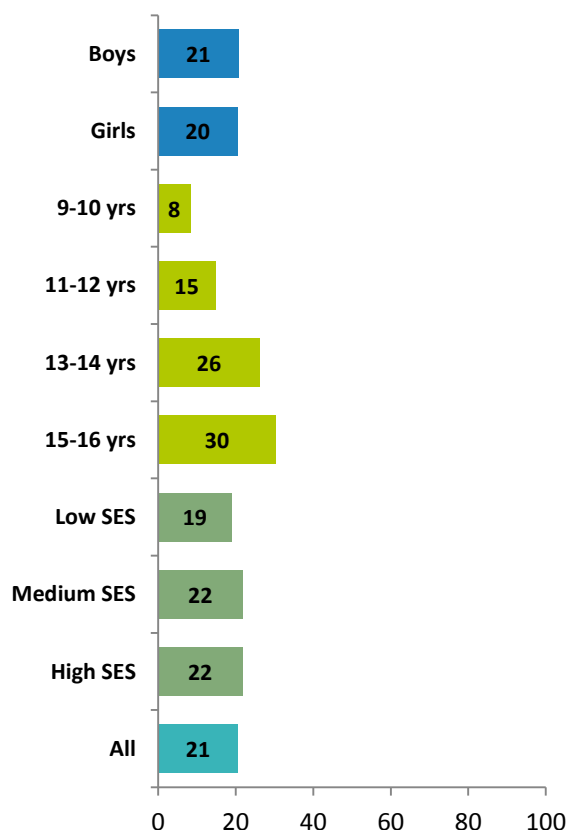
Q46: In the PAST 12 MONTHS, how often, have these things happened to you? The graph shows the percentage of children who answer 'fairly often' or 'very often' to at least two of the five statements in Figure 59.
Base: All children who use the internet.

- **One in five children have experienced at least two behaviours or feelings associated with excessive internet use**, with little gender differences.

- Age variations are more marked, ranging **from 8% of 9- to 10-year-olds to 30% of 15- to 16-year-olds**. That older teenagers are more likely to report two or more experiences of excessive use is no surprise since, as we have seen, the overall use of the internet as well as the number of activities taken up also increases with age. And as the variety of activities done online multiplies, consequently, one gets more likely to be overdependent.

- Excessive internet use varies also according to SES: children of medium or higher socio-

economic backgrounds are more likely to experience two or more forms associated with excessive internet use than children of lower income homes.

Figure 61: Child (%) has experienced two or more forms of excessive internet use fairly or very often, by country
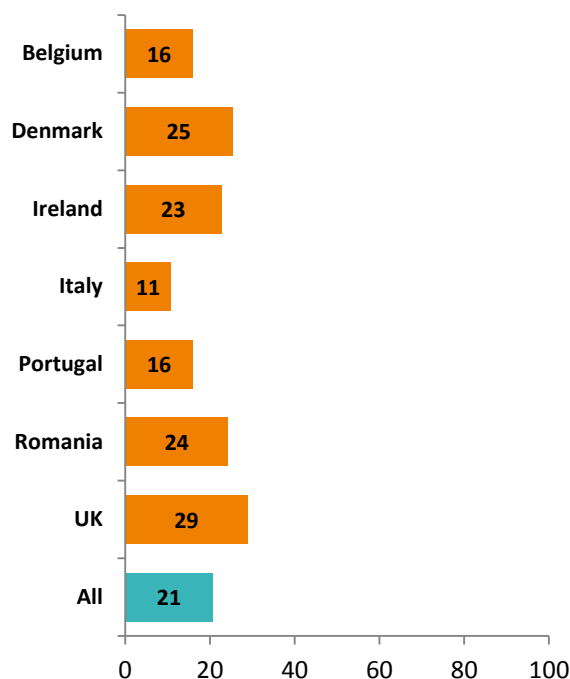
Q46: In the PAST 12 MONTHS, how often, have these things happened to you? The graph shows the percentage of children who answer 'fairly often' or 'very often' to at least two of the five statements in Figure 59.
Base: All children who use the internet.

- Differences between countries are considerable, ranging from 11% of children who report two or more experiences of excessive use in Italy to 29% in the UK. Countries can be grouped into two categories: Belgium, Italy and Portugal are below the average, whereas children in Denmark, Ireland, Romania and the UK, are more likely to experience two or more forms of overdependence to the internet.

Smartphones are portable, always at hand devices to access the internet, which could make the experiences of dependence and overdependence even more diffused, as shown in Figure 62:

- **One in two children** agree with the statement **'I have felt a strong need to check my phone to see if anything new has happened very or fairly often'**.

- **Around one in three** children have reported feeling **'very' or 'fairly' often bothered when they could not use their phone** because the battery was out of power or they were in a dead zone, **or using their phone in places where it was not appropriate**.

- The feeling of neglecting family, friends and school activities has been experienced 'very' or 'fairly' often by one in four children, as much as the experience of using the phone while not really interested in it.

- Children are least likely to agree with the statement '*I have tried unsuccessfully to spend less time using my phone*'.

These first findings suggest that **children are more likely to develop an overdependent attitude towards their smartphones because of its features**: first, like mobile phones before them, smartphones are perceived among children and adolescents **as 'extensions' of their body**, that can be easily stored in a pocket and carried around all the day long (Vincent & Fortunati, 2009); and second, they support a new mode of communication called 'connected presence' (Licoppe, 2004), associated with a feeling of perpetual contact with friends and family. For these reasons, it is understandable that children feel uncomfortable when they cannot check their phones, or tend to check them every once in a while when they can do so.

Figure 62: Excessive use of smartphones among children
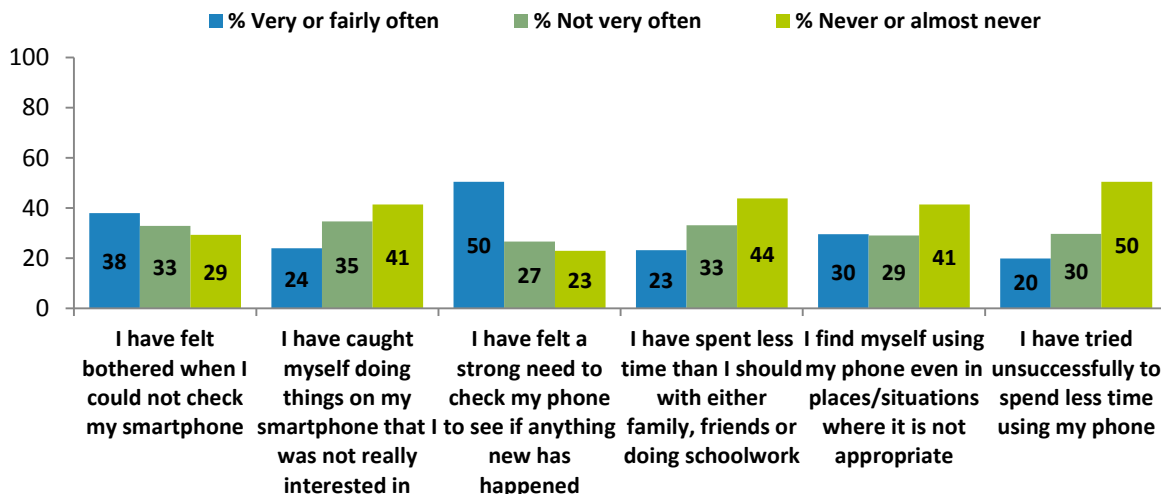
Q49: In the PAST 12 MONTHS, how often, have these things happened to you?
Base: All children who own or have for their own use a smartphone.

Figure 64 shows the percentage of children, out of all the children, who answer 'fairly' or 'very often' to two or more of the five experiences of overdependence, by gender, age and SES:

- **Overall, 48% of have reported two or more experiences associated with dependence and overdependence on their smartphones**, with little gender or SES differences.

- **Overdependence increases with age**, with just 20% of the youngest children experiencing two or more of the items measured, compared to 61% of teenagers aged 15-16. This is no surprise, given that use increases with age, and that dependence on mobile devices is associated with dependence on mobile communication and *anywhere, anytime* social access to the peer group, which, as known, increases through adolescence.

Figure 63: Child (%) has experienced two or more forms of excessive smartphone use fairly or very often, by gender, age and SES
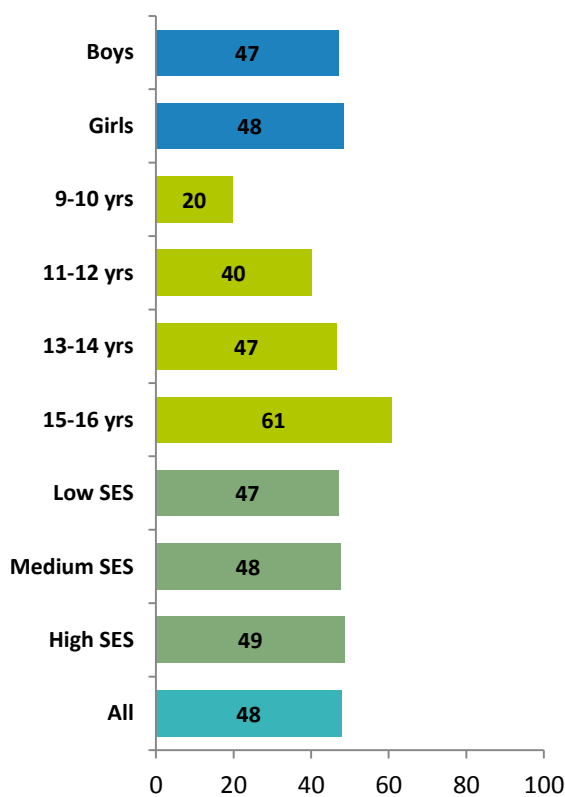
Q49: In the PAST 12 MONTHS, how often, have these things happened to you? The graph shows the percentage of children who answer 'fairly often' or 'very often' to at least two of the six statements in Figure 59.
Base: All children who own or have for their own use a smartphone.

Figure 64: Child (%) has experienced two or more forms of excessive smartphone use fairly or very often, by country
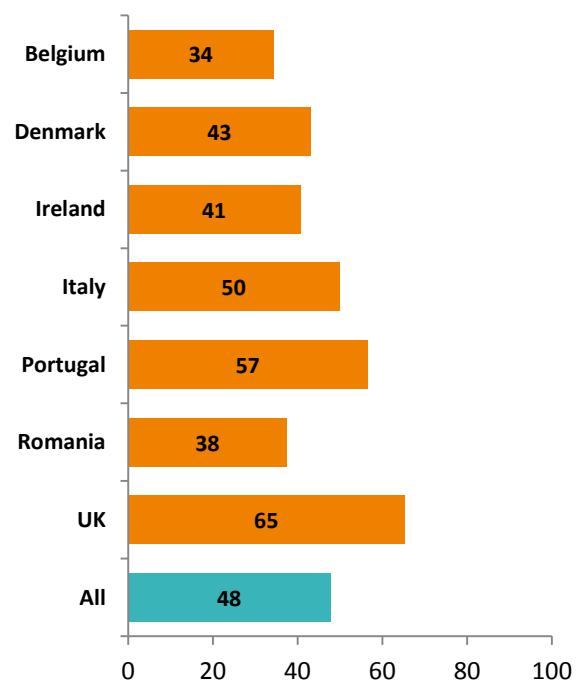
Q49: In the PAST 12 MONTHS, how often, have these things happened to you? The graph shows the percentage of children who answer 'fairly often' or 'very often' to at least two of the six statements in Figure 59.
Base: All children who own or have for their own use a smartphone.

- **Country variations are considerable**: **children in the UK (65%), Portugal (57%) and Italy (50%)** are more likely than children in other countries to agree with two or more statements among the five proposed. We cannot simply assume that British, Italian and Portuguese children are at risk of excessive use of smartphones. Rather, to understand these cultural differences, we should contextualise variations in overdependence on smartphones within different cultures of childhood – for example, different constructions of children's leisure time, and different gradations of the 'bedroom culture' (Livingstone & Bovill, 2011) - and within different patterns of domestication of mobile communication.

8. Mediation

The perspective on risks and opportunities of the internet adopted in this study assumes that children's online experiences are contextualised within intersecting socio-cultural, technological and political spheres. Family, peer cultures and the school context are all influential sources of mediation of children's internet use, whose relevance has been widely recognised within policy debates.

Parents have been especially valued for their role in regulating the benefits and risks of the internet for children, primarily within regulatory approaches that promote empowerment and self-regulation (Mascheroni *et al.*, 2013). The role of teachers has also been welcomed, particularly as compensation for parents' low digital literacies in countries with persisting inequalities in adults' access to the internet. Schools are then assumed to be strategic sites of e-safety education (O'Neill & Laouris, 2013). Finally, research has argued that the importance of online and mobile communication in children's everyday life is associated with a growing influence of peer culture in children's socialisation (Pasquier, 2005), against a declining role of both parents and teachers. Researchers emphasise the positive outcomes of peer exchanges, namely, practical guidance and sharing of experience, and policy makers have increasingly recognised the rights of children to be actively involved in the discussion of internet safety issues, and in awareness-raising initiatives (Barbovschi & Marinescu, 2013).

Since teachers' attitudes towards the internet and their engagement in different forms of mediation is also related to schools' policies regarding the internet, wifi networks and use of smartphones, we treat teachers' mediation in a separate chapter on schools (see Chapter 9).

8.1 Parents

The EU Kids Online survey (Livingstone *et al.*, 2011; Mascheroni et al., 2013) proposed five main categories of parental mediation:

1) **Active mediation of internet use**, where parents engage in activities such as talking about internet content while the child is engaging with it, and sharing the online experience of the child by remaining nearby.

2) **Active mediation of internet safety**, where the parent promotes safer and responsible uses of the internet.

3) **Restrictive mediation**, which involves setting rules that limit and regulate time spent online, location of use and online activities.

4) **Technical restrictions**, that is, the use of software and technical tools to filter, restrict and monitor children's online activities.

5) **Monitoring** or checking the record of online activities.

The EU Kids Online findings have shown that, among the five parental strategies examined, only active mediation of internet use and restrictions are associated with lower risk and harm (Dürager & Livingstone, 2012; Mascheroni *et al.*, 2013). However, restrictive measures are also likely to undermine children's digital literacy; indeed, 'restrictions on use and opportunities are the most effective but destructive (in terms of resilience building) means of reducing risks' (Livingstone *et al.*, 2012, p. 331).

Research on parental mediation of children's media use has shown that not all the strategies parents used to regulate children's television viewing could be adapted to the internet, which requires instead more innovative strategies (Clark, 2012; Livingstone & Helsper, 2008; Mendoza, 2009). Similarly, we assume that not all the strategies of parental mediation so far adopted in the regulation of internet use can be enacted regarding the use of smartphones. Mobile devices are usually perceived as more personal media, and have smaller screens.

For these reasons, some of the strategies usually adopted by parents to regulate their children's internet use may be hindered. Monitoring in particular is likely to be more difficult, if not impossible.

Therefore, in this chapter, we focus mainly on the active mediation of internet use and safety, restrictions that apply to the internet in general and to mobile devices more specifically, and the use of technical restrictions on both computers and smartphones.

Table 55 shows the different forms of **active mediation of internet use**, as reported by children, and variations by age and gender:

Table 55: Parent's active mediation of the child's internet use, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Talk to child about what they do on the internet	72	68	58	69	66
Sit with child while they use the internet	55	57	32	44	47
Stay nearby when child uses the internet	69	68	42	53	58
Encourage child to explore and learn things on the internet on their own	50	46	35	39	42
Do shared activities together with child on the internet	45	50	29	30	38

Q53: Does your parent/do either of your parents sometimes…
Base: All children who use the internet.

- **Two out of three parents talk to their children about what they do on the internet** (66%), making this the most popular way to actively mediate children's internet use.

- Second most popular is staying nearby while children are online (58%). Other strategies, such as sitting with the child while online, doing shared activities together or encouraging children to explore and learn things on the internet, are adopted by around four out of ten parents.

- Active mediation is structured by age, with parents doing considerably more active mediation of younger children's use of the internet.

- Gender differences within the same age group are smaller. However, if we look at the three most popular mediation strategies of this kind - talking about the child's online activities, staying nearby or sitting with the child while she uses the internet - teenage girls are far more mediated than boys.

Gender, age and SES variations are also presented in Figure 65, which shows the number of children whose parents engage in at least two forms of active mediation of internet use:

Figure 65: Parent's active mediation (%) of the child's internet use, by gender, age and SES
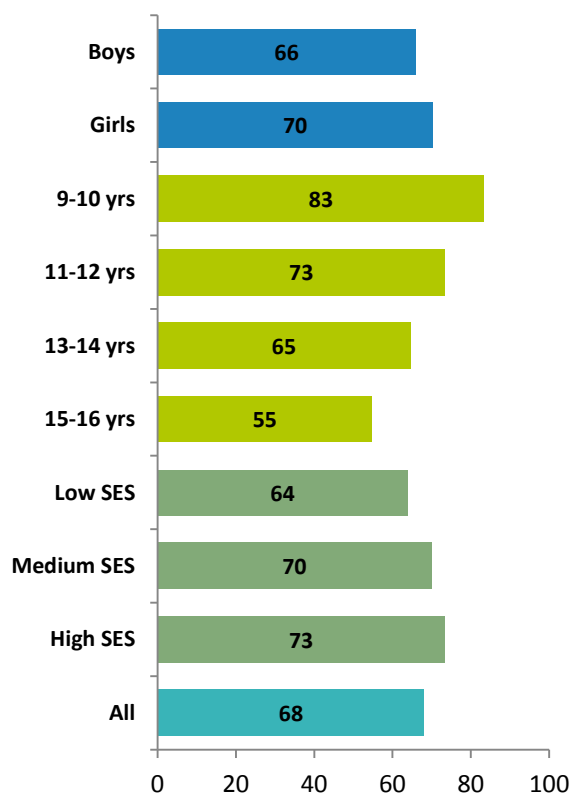
Q53: Does your parent/do either of your parents sometimes…
The graph shows the percentage of children who say 'yes' to at least two of the items in Table 55.
Base: All children who use the internet.

- **The majority of parents (68%) engage in at least two forms of active mediation of internet use, according to their children**.

- **Gender differences** are noticeable, with girls receiving more active mediation by their parents.

- **Age differences** are even more consistent; while 83% of parents whose children are 9-10 years old engage in two or more strategies of active mediation of internet use, just 55% of parents of older teenagers do so.

- **Parents' engagement in forms of active mediation varies also across SES**, with parents from middle or higher SES being more engaged in actively mediating their children's internet use.

Figure 66: Parent's active mediation (%) of the child's internet use, by country
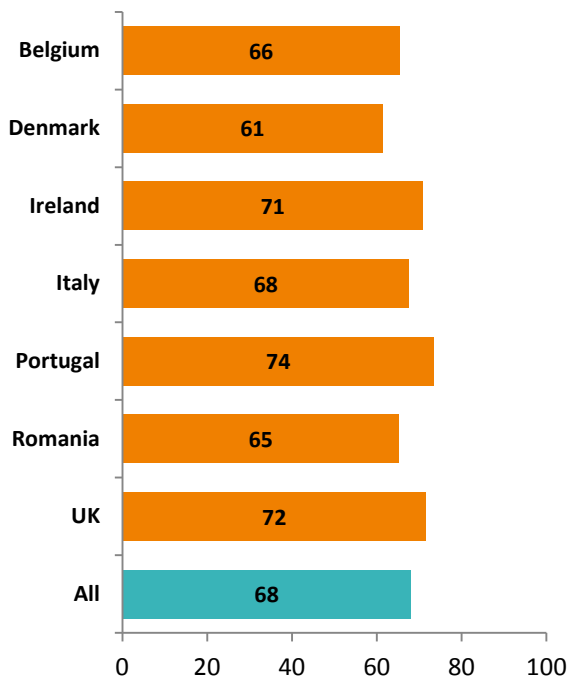
Q53: Does your parent/do either of your parents sometimes…
The graph shows the percentage of children who say 'yes' to at least two of the items in Table 55.
Base: All children who use the internet.

- Country variations are smaller, but still considerable: **parents in Portugal (74%) and the UK (72%) are more likely to actively**

mediate their children's internet use than parents in Denmark (61%), Belgium (66%) and Romania (65%). Irish (71%) and Italian parents (68%) are average. Lower active engagement with children's online activities by Danish and Romanian parents may be linked to higher number of children in these countries who claim more online skills than their parents.

Parents are more likely to engage in **active mediation of children's internet safety**, as shown in Table 56:

Table 56: Parent's active mediation of the child's internet safety, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Helped child when something was difficult to do or find on the internet	76	81	56	62	68
Explained why some websites were good or bad	72	72	61	67	68
Suggested ways to use the internet safely	67	72	57	67	66
Suggested ways to behave towards other people online	64	67	62	70	66
Helped child in the past when something bothered them on the internet	40	46	33	45	41
In general, talked to child about what to do if something on the internet ever bothered them	54	65	50	61	57

Q54: Has your parent/have either of your parents ever done any of the following things with you?
Base: All children who use the internet.

- **68% of parents helped their children when something was difficult to do or find on the internet, and suggested how to behave with others online**.

- Equally popular are two other strategies: according to children, **66% of parents explained why some websites were good or bad, or suggested safer internet uses**.

- Other strategies, such as talking to children about negative online experiences, or helping them when something had bothered them online, are only adopted by 57% and 41% of parents respectively.

- Age and gender patterns are similar to those observed with respect to active mediation of internet use (Table 52): younger children and teenage girls are more mediated than older boys. However, the difference between the two age groups is smaller than in the case of active mediation of internet use.

Figure 67 shows the number of children whose parents engage in at least two forms of active mediation of internet safety:

Figure 67: Parent's active mediation (%) of the child's internet safety, by gender, age and SES
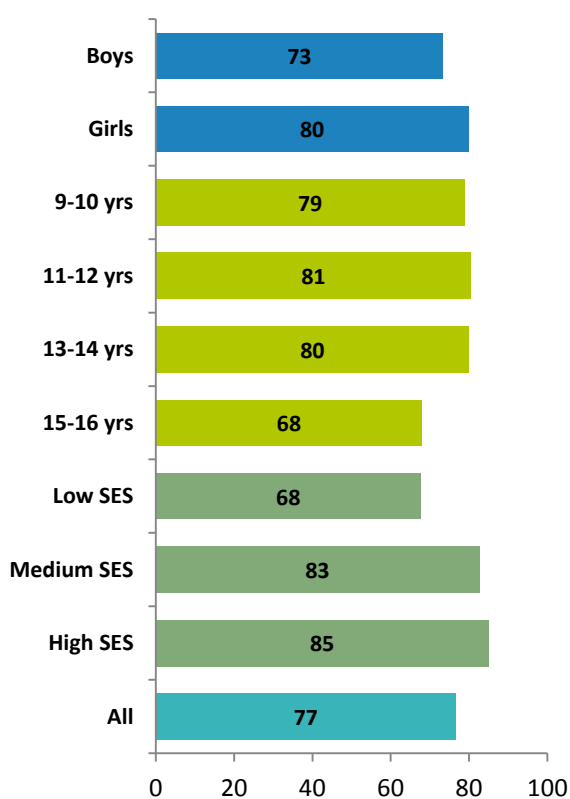
Q54: Has your parent/have either of your parents ever done any of the following things with you? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 56.
Base: All children who use the internet.

- **Most parents (77%) engage in two or more forms of active mediation of internet safety.**

- **Gender variations** are considerable, with parents mediating girls more.

- Equally, **active mediation of internet safety**

is structured by age: around 80% of parents of children aged 9-14 mediate children's online safety in at least two of the forms of mediation, compared to just 68% of older teenagers.

- Again, **SES variations are also remarkable**: children from wealthier homes are more likely to receive two or more forms of active mediation of internet safety by their parents. Lower active mediation of internet safety by lower income parents may well depend on lower rates of internet use among low SES parents.

That active mediation of internet safety is also related to parents' own familiarity with the internet is confirmed by country variations, as shown in Figure 68.

Figure 68: Parent's active mediation (%) of the child's internet safety, by country
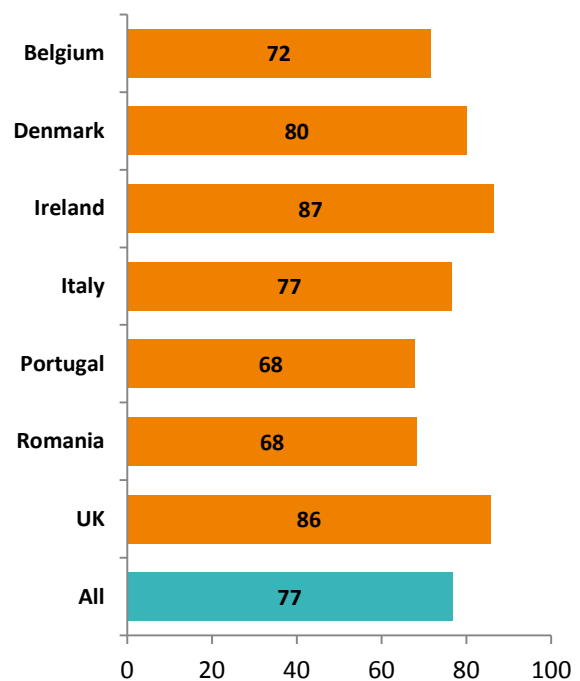
Q54: Has your parent/have either of your parents ever done any of the following things with you? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 56.
Base: All children who use the internet.

- **Parents in Ireland (87%) and the UK (86%) are more likely to engage in two or more forms of mediation of children's internet safety**. Active mediation of children's online safety is lowest **in Portugal and Romania**

(68%), countries where parents are least likely to be internet users and smartphone or tablets owners compared to the other countries. Parents in Denmark and Italy are average, while parents in Belgium tend to engage less in this form of mediation.

Table 57: shows what kind of restrictive measures parents are likely to adopt, by age and gender:

Table 57: Parents restrict child's internet use, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Download music or films from the internet	30	32	6	6	18
Watch video clips on the internet	15	16	4	2	8
Have own social networking profile	43	50	8	8	26
Give out personal information to others on the internet	73	77	41	51	60
Upload photos, videos or music to share with others	48	51	14	8	29
Download free apps	30	33	8	8	19
Purchase apps	70	75	49	56	62
Register geographical location	75	78	40	46	59
Use instant messaging	50	50	17	16	32

Q55: For each of these things, please tell me if your parents CURRENTLY let you do them whenever you want, or let you do them but only with permission or supervision, or NEVER let you do them.
Base: All children who use the internet.

- The most common restrictive measure parents adopt, according to their children, applies to **purchasing apps**, followed by **disclosing personal information, which 62% and 60% of children respectively say they are never allowed to do**.

- **59%** are **not allowed to register their geographical position**. This suggests that **restrictive mediation of smartphone use** is quite diffused among parents.

- Other rules are adopted by one in three parents or less, the least common being not allowing children to watch video clips online.

- As already noted regarding other mediation strategies, restrictions apply especially to younger children. **Just one in two parents don't allow children aged 9-12 to have a profile on SNS**.

- Gender differences are smaller, but teenage girls are more likely to be restricted when it comes to sharing personal information on the internet, purchasing apps and using location-tracking services.

Figure 69 shows the number of parents who adopt at least two forms of restriction, by gender, age and SES.

Figure 69: Parent's restrictive mediation (%) of the child's internet use, by gender, age and SES
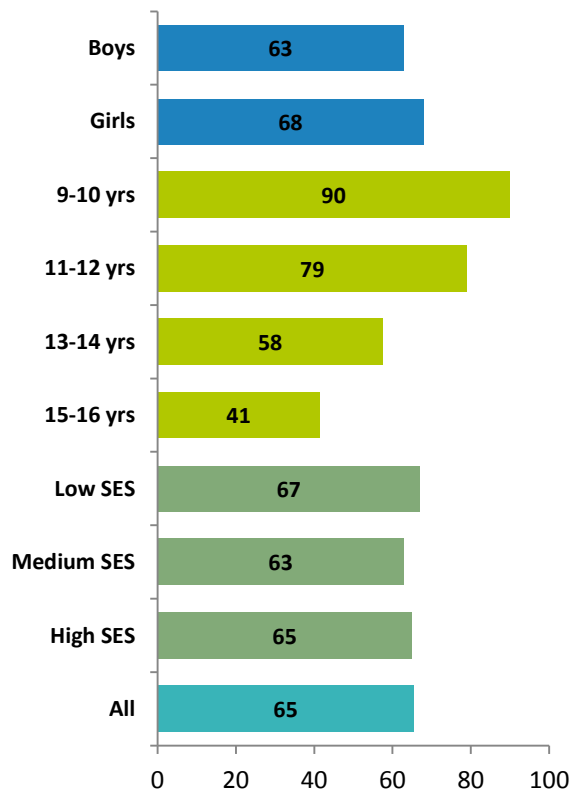
Q55: For each of these things, please tell me if your parents CURRENTLY let you do them whenever you want, or let you do them but only with permission or supervision, or NEVER let you do them. The graph shows the percentage of children who say 'can never do this' to at least two of the items in Table 57.
Base: All children who use the internet.

- Restrictive mediation is less common than active mediation of children's internet use or online safety: according to the children, **65% of**

parents adopt two or more forms of restrictive mediation.

- **Restrictive measures are strongly structured by age**: youngest children (90%) are more than twice as likely to be restricted in their online activities than older teenagers (41%).

- Gender and SES differences are small, with girls and lower SES children being more likely to have rules regarding internet use.

Figure 70: Parent's restrictive mediation (%) of the child's internet use, by country
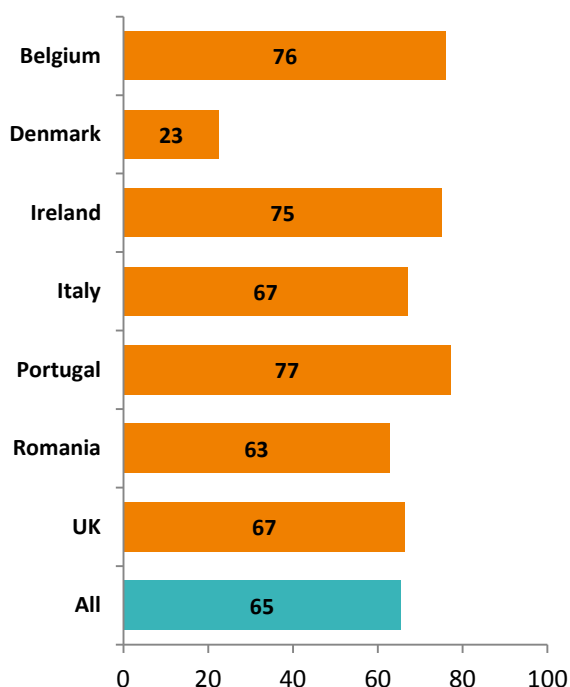
Q55: For each of these things, please tell me if your parents CURRENTLY let you do them whenever you want, or let you do them but only with permission or supervision, or NEVER let you do them. The graph shows the percentage of children who say 'can never do this' to at least two of the items in Table 57.
Base: All children who use the internet.

- When looking at country differences, again children in **Portugal (77%), Belgium (76%) and Ireland (75%)** are more restricted than their peers in **Denmark (23%)**. Italy (67%), the UK (67%) and Romania (63%) are a little above or below the average.

Table 58: shows the use of parental controls and other technical tools to restrict and monitor children's internet use, by age and gender:

Table 58: Parent's technical mediation of the child's internet use, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Parental controls or other means of blocking or filtering some types of website	30	28	20	26	26
Parental controls or other means of keeping track of the websites visited	28	29	19	26	25
A service or contract that limits the time child spends on the internet	13	17	9	13	13
Software to prevent spam, junk mail, viruses	50	53	51	50	51

Q56: As far as you know, does your parent/do your parents make use of any of the following for the computer that you use the MOST at home?
Base: All children who use the internet.

- Overall, the findings are consistent with what has already been noted in prior studies, such as the EU Kids Online 2010 survey (Livingstone *et al.*, 2011), that point to **technical mediation as the least favoured mediation strategy by parents**.

- The most common form of technical mediation is using **software to prevent viruses and spam (51%)**. The major form of technical intervention, therefore, does not relate to safety concerns but rather to security.

- **Parental controls** are less common: used by **one in four parents**. Finally, just 13% of parents adopted software that limits the time the child spends on the internet.

- Overall, parents of younger children are slightly more likely to adopt software to regulate their children's internet use.

As shown in Figure 71, **just one in four parents adopt at least two forms of technical mediation,** according to their children:

Figure 71: Parent's technical mediation (%) of the child's internet use, by gender, age and SES
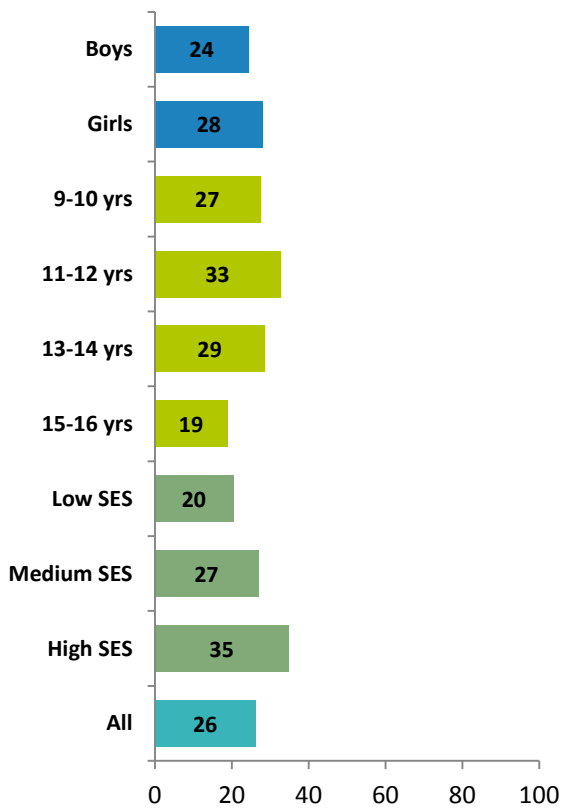
Q56: As far as you know, does your parent/do your parents make use of any of the following for the computer that you use the MOST at home? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 58.
Base: All children who use the internet.

- While gender differences are small, **parents of younger children**, especially those aged 11-12 years old, are more likely to adopt at least two forms of technical mediation than parents of teenagers aged 15-16.

- **Higher income parents are more likely to adopt parental controls** or other technical mediation of children's internet use.

Figure 72: Parent's technical mediation (%) of the child's internet use, by country
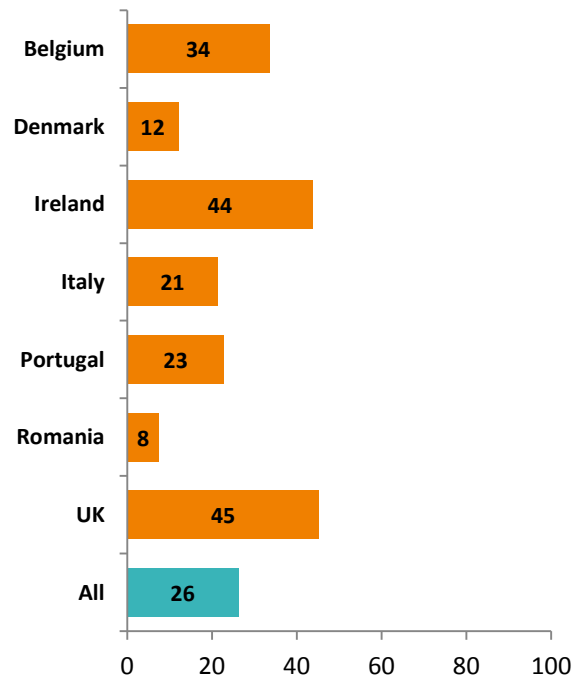
Q56: As far as you know, does your parent/do your parents make use of any of the following for the computer that you use the MOST at home? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 58.
Base: All children who use the internet.

- At the same time, **country variations are considerable**: technical mediation is more likely to be adopted by British (45%) and Irish (44%) parents, and least common in Denmark (12%) and Romania (8%). One in three parents in Belgium, and one in five parents in Italy and Portugal employ software to restrict their children's internet use.

Table 59 shows the use of technical mediation -that is parental controls and other software - to regulate children's smartphone use, by age and gender:

Table 59: Parent's technical mediation of the child's smartphone use, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Parental controls or other means of blocking or filtering some types of websites	20	12	15	17	16
Parental controls that filter the apps child can download	21	22	11	11	14
A service or contract that limits the time child spends on the internet	21	22	15	17	17
Software that limits the people child can be in touch with	9	12	10	13	11

Q57: Are any of the following installed on your smartphone? Base: All children who own or have for their own use a smartphone.

- **Parents are even less likely to engage in any form of technical mediation** to restrict activities **on smartphones**: none of the four strategies asked about is practised by more than one in five parents.

- Younger children tend to be more restricted by means of technical tools than teenagers.

Figure 73 shows the number of parents who, according to their children, adopt two or more forms of technical mediation on children's smartphones, by gender, age and SES:

- Overall, **just one in ten parents (14%)adopt two or more technical tools to restrict their children's use of smartphones**.

- **Gender and age differences** are smaller compared to the other mediation strategies analysed in this section: overall, boys and children aged 11-12 years old are slightly more likely to be restricted by means of software installed on their smartphones.

- **Both higher and lower SES children** are more likely to have parental controls or any other technical mediation tool installed on their phone, compared to children from medium SES.

Figure 73: Parent's technical mediation (%) of the child's smartphone use, by gender, age and SES
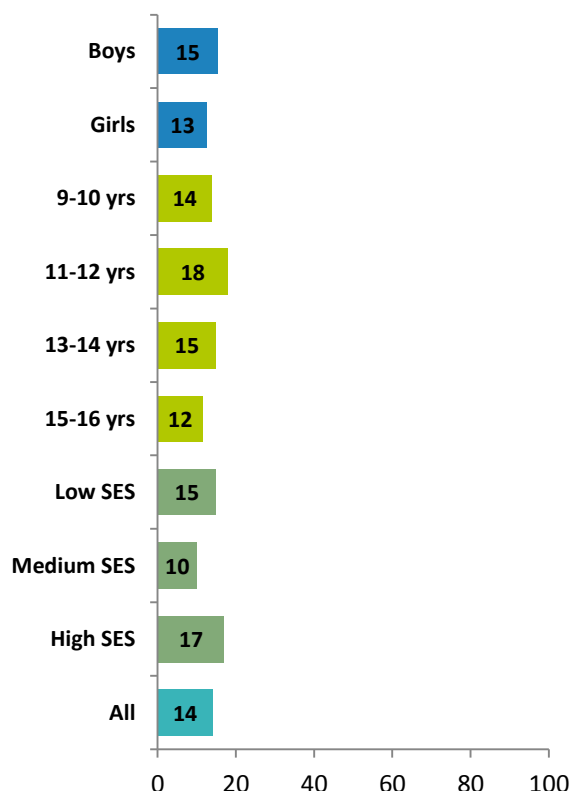
Q57: Are any of the following installed on your smartphone? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 59.
Base: All children who own or have for their own use a smartphone.

Figure 74: Parent's technical mediation (%) of the child's smartphone use, by country
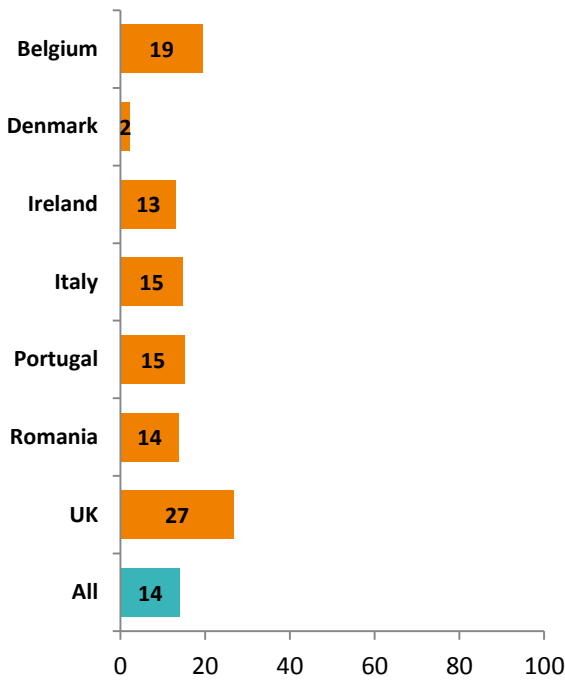
Q57: Are any of the following installed on your smartphone? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 59.
Base: All children who own or have for their own use a smartphone.

- The number of parents who adopt at least two measures of technical mediation on children's smartphones rises to **one in four British parents**, and is **least in Denmark (2%).**

Comparing all forms of mediation parents engage in, we can conclude that parents in **Ireland** and **the UK** are more likely to engage in both active and technical mediation. **Romanian** children are the least likely to receive any form of mediation of their use of the internet, except from restrictions. **Danish** parents score lower than Romanian parents when it comes to restrictive and technical mediation, but tend to engage more in active mediation of safer internet use. Similarly, of the types of mediation asked about, **Italian and Portuguese parents** favour active and restrictive mediation over parental controls, with some differences: according to children, Italian parents are more engaged in forms of active mediation of internet safety, while Portuguese parents score higher on active mediation of internet use and restrictive mediation.

Is the differential adoption of various mediation strategies influencing how much parents know about what their children do on the internet? Figure 75 shows how much parents know about their children's internet use, according to the children, by gender, age and SES:

Figure 75: How much the child thinks their parents know about what they do on the internet, by gender, age and SES
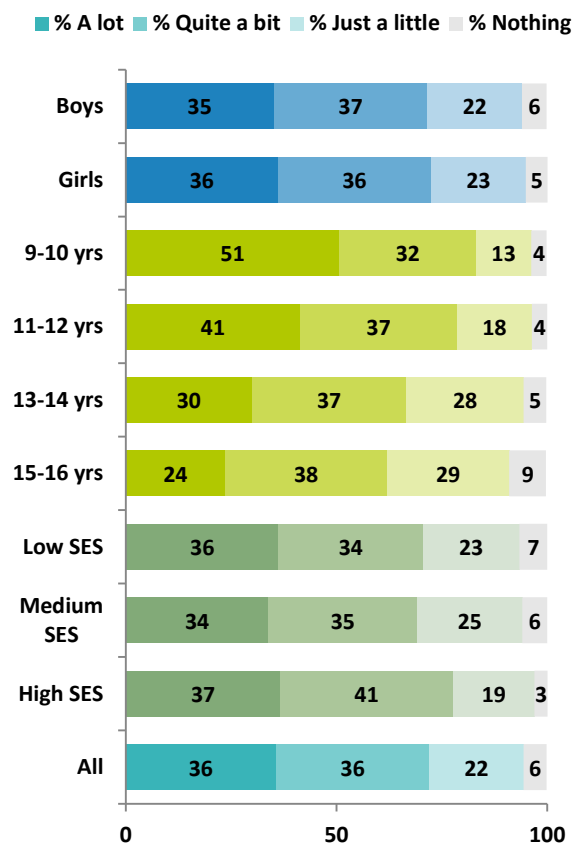
Q51: How much do you think your parent(s) knows about what you do on the internet? Would you say a lot, quite a bit, just a little, or nothing?
Base: All children who use the internet.

- Overall, **three out of four children think their parents know 'a lot' (36%) or 'quite a bit' (36%)** about what they do on the internet, with no gender differences..

- **Age variations** are more pronounced, ranging from 83% of 9-10 year-olds to 62% of 15-16 year-olds who claim their parents know what they do on the internet.

- Children from higher income (78%) homes are more likely to say their parents know what they do online.

Figure 76: How much the child thinks their parents know about what they do on the internet, by country
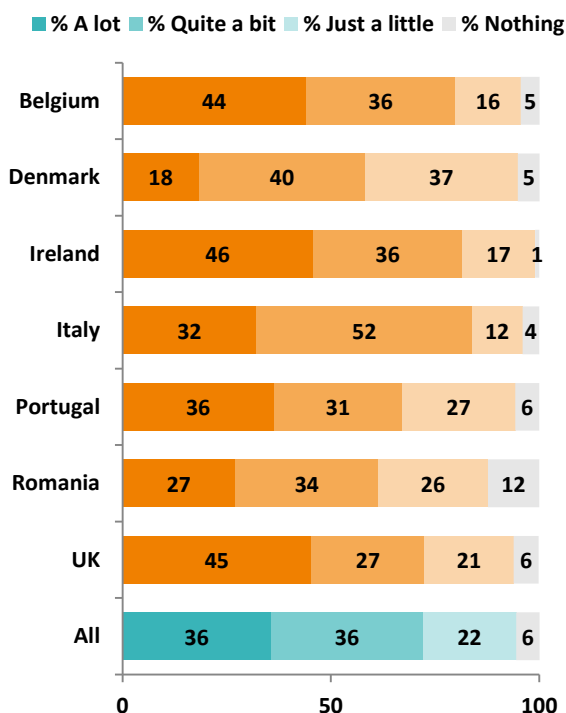
■ % A lot ■ % Quite a bit ■ % Just a little ■ % Nothing

Country	% A lot	% Quite a bit	% Just a little	% Nothing
Belgium	44	36	16	5
Denmark	18	40	37	5
Ireland	46	36	17	1
Italy	32	52	12	4
Portugal	36	31	27	6
Romania	27	34	26	12
UK	45	27	21	6
All	36	36	22	6

Q51: How much do you think your parent(s) knows about what you do on the internet? Would you say a lot, quite a bit, just a little, or nothing?
Base: All children who use the internet.

- The perception of parents being informed about their online activities varies consistently across countries, in a way that can be associated with trends regarding parental mediation strategies. Although it is not the country where more mediation is exercised by parents, **Italy** is the country where **the highest number of children (84%) think their parents know 'a lot' (32%) or 'quite a bit' (52%)** about what they do on the internet. If we look just at **the likelihood that parents are 'very' informed** about their children's online activities, then **Ireland (46%), the UK (46%) and Belgium (44%)** – the first two being also the countries where parents engage in more mediation overall – lead. Countries where children are less mediated are also the countries where the lowest proportion of

children think their parents know 'a lot' or 'quite a bit' about what they do on the internet.

Figure 77 and Figure 78 show how much parents know about children's smartphone use, by gender, age and country. While it clearly follows the same patterns observed about knowledge of online activities – with girls, younger children and children in Belgium, Ireland, Italy and the UK more likely to say that their parents are informed about what they do on their smartphones – generally **parents' knowledge of what their children do on their smartphones (68%) is lower than their knowledge regarding the internet (72%), suggesting that smartphones are perceived as more private media**.

Figure 77: How much the child thinks their parents know about how they use their phone, by gender, age and SES
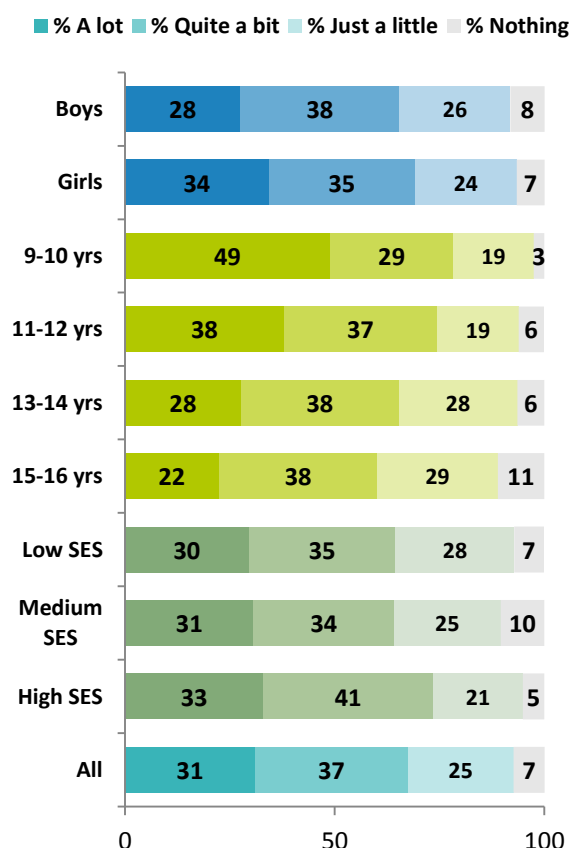
■ % A lot ■ % Quite a bit ■ % Just a little ■ % Nothing

Group	% A lot	% Quite a bit	% Just a little	% Nothing
Boys	28	38	26	8
Girls	34	35	24	7
9-10 yrs	49	29	19	3
11-12 yrs	38	37	19	6
13-14 yrs	28	38	28	6
15-16 yrs	22	38	29	11
Low SES	30	35	28	7
Medium SES	31	34	25	10
High SES	33	41	21	5
All	31	37	25	7

Q52: How much do you think your parent(s) knows about how you use your phone/smartphone? Would you say a lot, quite a bit, just a little, or nothing?
Base: All children who own or have for their own use a smartphone.

Figure 78: How much the child thinks their parents know about how they use their phone, by country
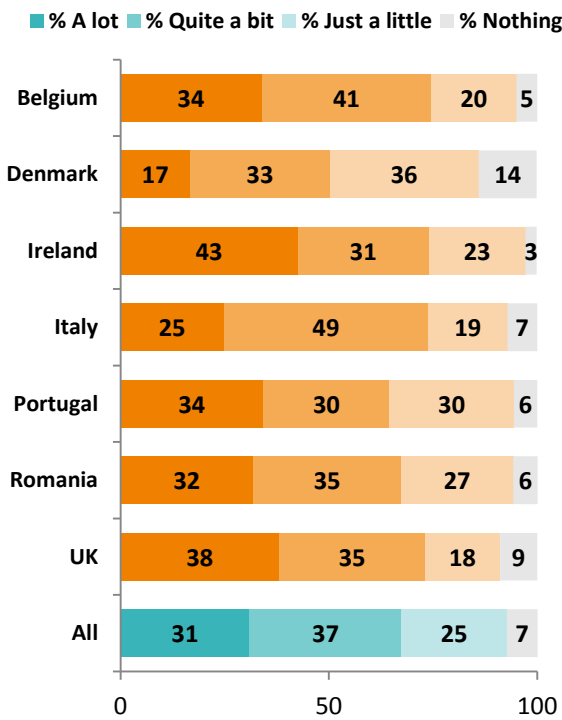
■ % A lot ■ % Quite a bit ■ % Just a little ■ % Nothing

Country	% A lot	% Quite a bit	% Just a little	% Nothing
Belgium	34	41	20	5
Denmark	17	33	36	14
Ireland	43	31	23	3
Italy	25	49	19	7
Portugal	34	30	30	6
Romania	32	35	27	6
UK	38	35	18	9
All	31	37	25	7

Q52: How much do you think your parent(s) knows about how you use your phone/smartphone? Would you say a lot, quite a bit, just a little, or nothing?
Base: All children who own or have for their own use a smartphone.

8.2 Peers

Support from peers is positively associated with online opportunities and digital literacy; especially for younger children, friends are often the main reason for taking up creative and interactive activities such as social media and blogging (Kalmus, von Felitzen, & Siibak, 2012). The effects of peer mediation on online risky and harmful experiences are, instead, less clear: the EU Kids Online findings suggest that peer mediation is more likely to follow after negative experiences (*ibidem*).

Here we investigate how children perceive their peers to engage in forms of active mediation of internet safety.

Table 60 shows how peers engage in active mediation of children's internet safety, by age and gender:

Table 60: Friends' active mediation of child's internet safety, by age and gender

%...	9-12 years		13-16 years		
	Boys	Girls	Boys	Girls	All
Helped when something was difficult to do or find on the internet	60	53	71	78	66
Explained why some websites were good or bad	27	33	39	48	37
Suggested ways to use the internet safely	25	27	34	42	32
Suggested ways to behave towards other people online	21	29	31	44	32
Helped in the past when something bothered child on the internet	21	25	32	47	32
In general, talked about what to do if something on the internet ever bothered them	22	26	33	48	33

Q58: Have your friends ever done any of these things? Please say yes or no to each of the following…
Base: All children who use the internet.

- In general, **peers are more likely to mediate in a practical way, helping each other to do or find something (66%)**.

- By contrast, they are less likely **to give safety advice or to help peers in coping with a negative online experience**. **Around one in three children** engage in the other forms of active mediation of internet safety asked about.

- Table 60 also shows that, in general, **teenagers are more likely to receive support from their peers**.

Figure 79 shows how the percentage of children who say that their friends engage in two or more forms of active mediation of internet safety varies by gender, age and SES:

Figure 79: Friends' active mediation (%) of child's internet use, by gender, age and SES
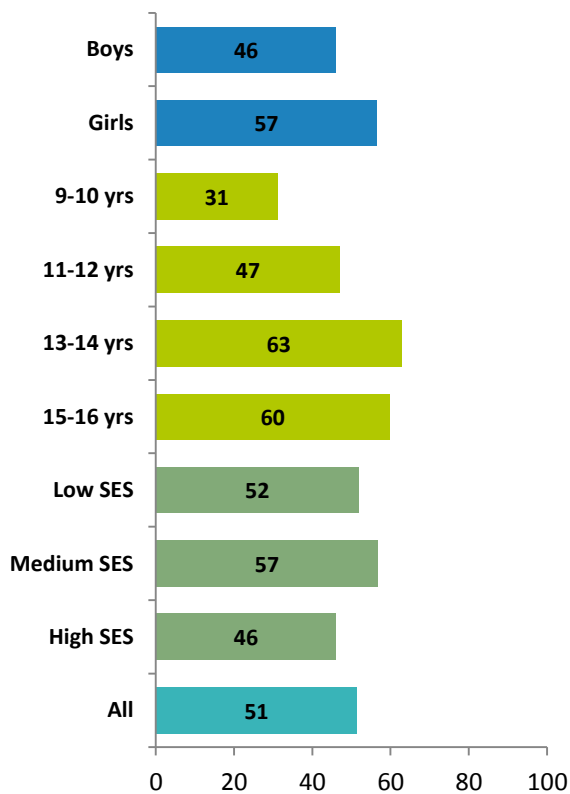
Figure 80: Friends' active mediation (%) of child's internet use, by country
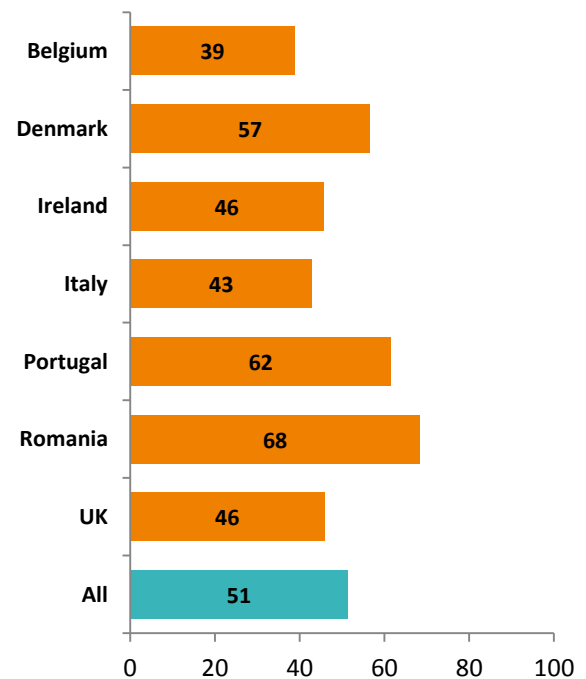
Q58: Have your friends ever done any of these things? Please say yes or no to each of the following... The graph shows the percentage of children who say 'yes' to at least two of the items in Table 60.
Base: All children who own or have for their own use a smartphone.

Q58: Have your friends ever done any of these things? Please say yes or no to each of the following... The graph shows the percentage of children who say 'yes' to at least two of the items in Table 60.
Base: All children who own or have for their own use a smartphone.

- **51% of children report their peers support them by engaging in at least two forms of active mediation of internet safety**.

- As has already emerged from data presented in Table 60, **girls and teenagers are more likely to receive at least two forms of peer support** than boys and younger children.

- Similarly, **middle and lower SES children** are more likely to report being supported by their friends in two or more ways.

- Interestingly, country variations suggest that **peer support may compensate for lower parental engagement**. Indeed, children are more likely to say that their friends engage in two or more forms of mediation of internet safety in **Romania** (68%) and **Denmark** (57%), countries where children are less likely to receive mediation by parents. Conversely, in Belgium, Ireland, Italy and the UK, less than half the children report that their friends support them in at least two ways. The case of **Portugal** is uncharacteristic, for in this country children are more likely to receive active mediation of internet use from both their parents and peers.

9. Mobile internet in schools

Within policy discourses, education is attributed a strategic role among various sources of internet safety: school, it is argued, can complement parental mediation by also providing **basic access to internet safety** to children whose parents are not sufficiently informed or competent. Consequently, schools and teachers are invested with more responsibilities and challenges that they are not always prepared to address. In order to fulfil their role and promote children's digital literacy, schools need to be equipped with ICT and integrate digital technologies in the teaching and learning processes. Moreover, the introduction of internet safety in educational curricula should go beyond 'don't do' lists, as overprotective measures in schools have proven detrimental to the take-up of online opportunities (O'Neill & Laouris, 2013).

To provide a comprehensive picture of how teachers and schools can mediate children's use of the internet, we examined two aspects: school provision of **wifi networks** and **rules regarding children's use of smartphones in school**, as an indicator of the general attitude towards new technologies in the educational system; and **teachers'** engagement in various **mediation strategies** – namely, active mediation of internet safety, restrictions on internet and smartphone use, and promotion of positive school-related uses of the internet and smartphones.

9.1 Availability of and rules about wifi in schools

As we have seen, the number of children who access the internet every day in school varies considerably, from 61% of Danish children to 7% in Ireland and 8% in Italy. These inequalities are the outcome of different stages of the digitisation of schools and learning processes. As a measure of the technological infrastructures of schools, we

asked children if wifi connectivity was available in their schools, although not necessarily accessible to students, as shown in Figure 81:

Figure 81: Availability of wifi at school, by gender, age and SES
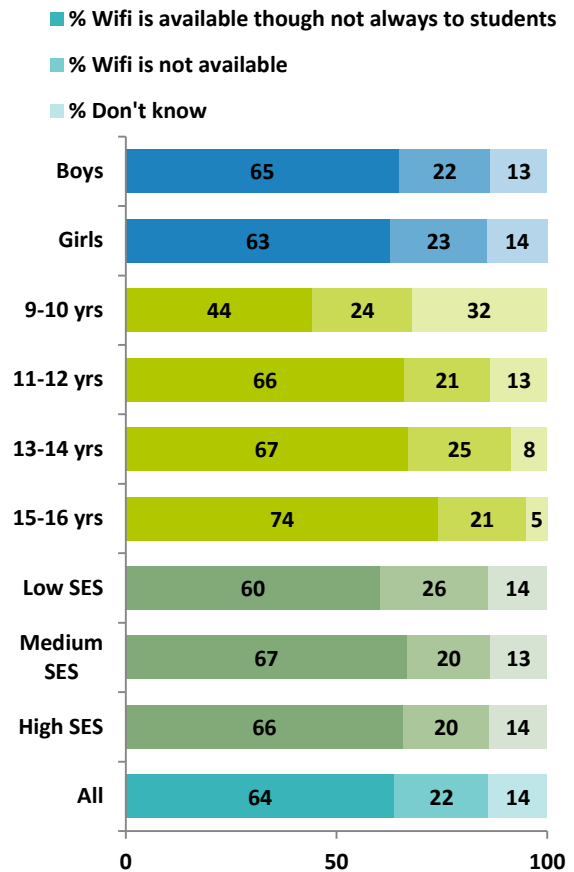
Q60: Is wifi available at your school, and if so, are the students allowed to use it?
Base: All children who use the internet.

- Overall, **two thirds of schools have wifi networks, according to the children**: 64% of respondents say a wifi network is available in their school, while 22% say it is not available.

- Age differences are considerable, suggesting that **wifi networks are more common in secondary schools** (up to 74% of children aged 15-16 say there is wifi connectivity at school) than in primary schools (where availability drops to 44%).

- As with internet access in school in general (see Figure 1), **lower SES children are considerably less likely to be provided with wifi networks** in school.

Figure 82: Availability of wifi at school, by country
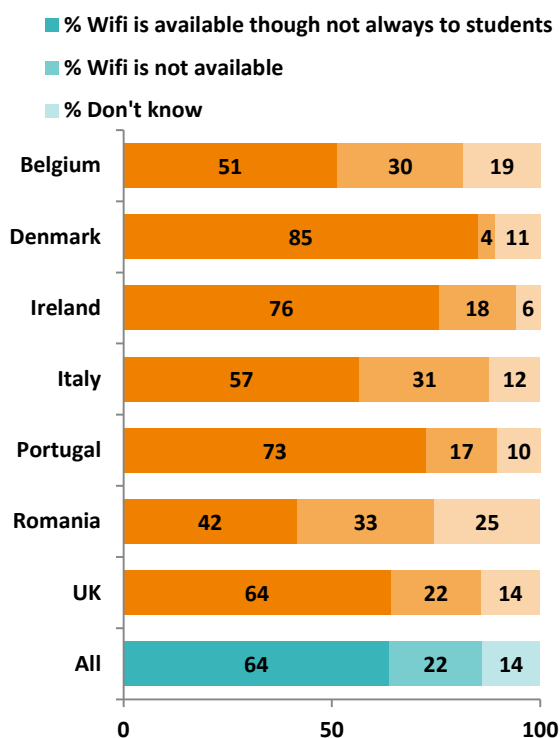
- % Wifi is available though not always to students
- % Wifi is not available
- % Don't know

Country			
Belgium	51	30	19
Denmark	85	4	11
Ireland	76	18	6
Italy	57	31	12
Portugal	73	17	10
Romania	42	33	25
UK	64	22	14
All	64	22	14

Q60: Is wifi available at your school, and if so, are the students allowed to use it?
Base: All children who use the internet.

- **Country variations** show that availability of wifi networks in schools does not necessarily mirror use of the internet in school by children. Indeed, it is **above average in Denmark, Ireland and Portugal**, where **85%, 76%, and 73%** of children say wifi is available in their school; average in the **UK (64%)**; lower in **Italy (57%) and Belgium (51%)**; and lowest in **Romania (42%)**, where the number of children who don't know if wifi is available in school is also well above average.

Figure 84 shows whether students are allowed to access wifi networks in school, by gender, age and SES. Overall, **one in three children say they are not allowed to access the school's wifi** network; **8%** are not allowed to use it but **have hacked the password**; **42%** can access the wifi network **with some restrictions,** and **just 16%** are free to use it **without any restrictions**.

- Access to wifi in schools varies somewhat by **gender**: girls are more likely to be denied access to wifi but, at the same time, slightly more likely to access it with no restrictions. On the contrary, boys are more likely to be granted access with some restrictions, and to have hacked the password.

- Access to wifi networks slightly **increases with age**, with 30% of teenagers not allowed to access the school's wifi network compared to 39% of 9- to 10-year-olds.

- Children from less advantaged families are also more likely to be denied the access to the school's wifi network and to have hacked the password.

Figure 83: Accessibility of wifi to students at schools where wifi is available, by gender, age and SES
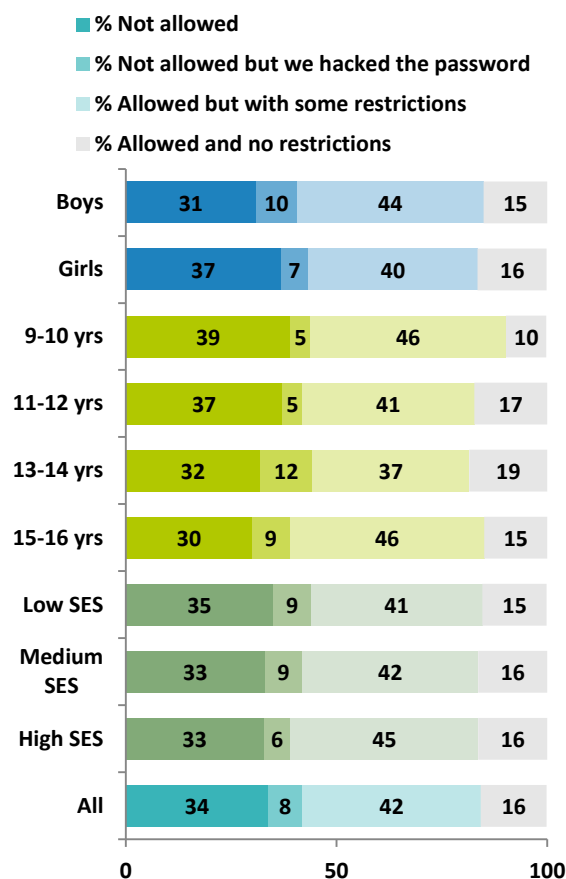
- % Not allowed
- % Not allowed but we hacked the password
- % Allowed but with some restrictions
- % Allowed and no restrictions

Boys	31	10	44	15
Girls	37	7	40	16
9-10 yrs	39	5	46	10
11-12 yrs	37	5	41	17
13-14 yrs	32	12	37	19
15-16 yrs	30	9	46	15
Low SES	35	9	41	15
Medium SES	33	9	42	16
High SES	33	6	45	16
All	34	8	42	16

Q60: Is there Wifi available at your school, and if so, are the students allowed to use it?
Base: All children who say wifi is available at school.

- **Country differences** show that access to wifi is unevenly distributed: **access with some or no restrictions** involves the great majority of **Danish children (92%)**, a consistent number of children in **Portugal (72%)** and the **UK (59%)**, a lower but still substantial number of children in **Ireland (49%)**, **Belgium (42%)** and **Romania (42%)**, and a much smaller number of children in **Italy (28%)**. Italian, Portuguese and Romanian children are more likely to say that they have hacked the password (13%) of the school network in order to access wifi.

Figure 84: Accessibility of wifi to students at schools where wifi is available, by country
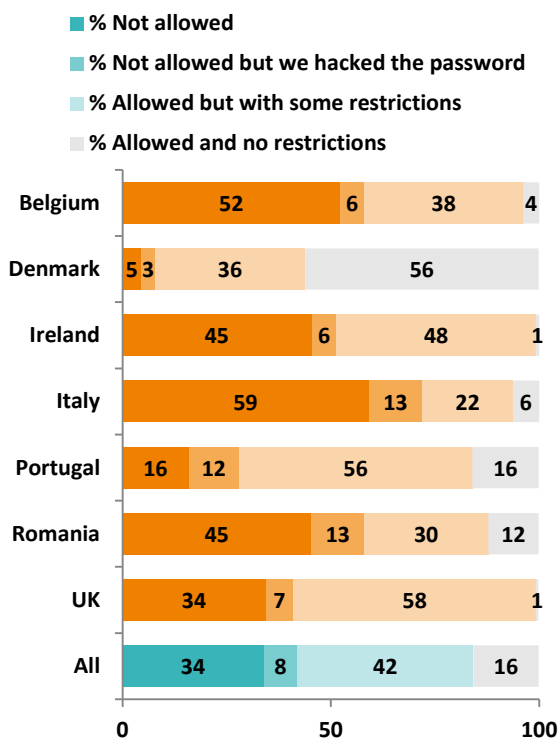
- ■ **% Not allowed**
- ■ **% Not allowed but we hacked the password**
- ■ **% Allowed but with some restrictions**
- ■ **% Allowed and no restrictions**

	% Not allowed	% Not allowed but we hacked the password	% Allowed but with some restrictions	% Allowed and no restrictions
Belgium	52	6	38	4
Denmark	5	3	36	56
Ireland	45	6	48	1
Italy	59	13	22	6
Portugal	16	12	56	16
Romania	45	13	30	12
UK	34	7	58	1
All	34	8	42	16

Q60: Is there Wifi available at your school, and if so, are the students allowed to use it?
Base: All children who say wifi is available at school.

9.2 Rules about smartphones in school

Smartphone use in schools also tends to be regulated, as shown in Figure 85:

Figure 85: Rules about smartphone use at school, by gender, age and SES
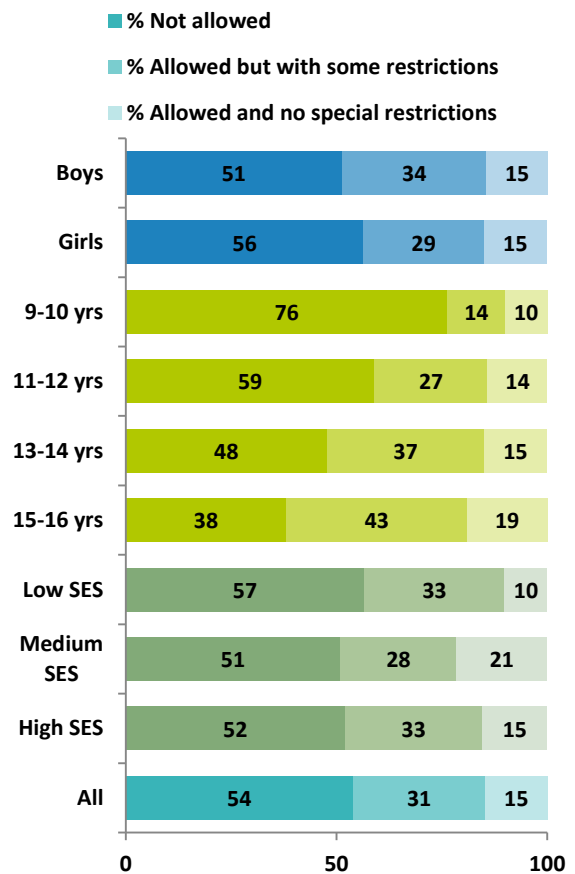
- ■ **% Not allowed**
- ■ **% Allowed but with some restrictions**
- ■ **% Allowed and no special restrictions**

	% Not allowed	% Allowed but with some restrictions	% Allowed and no special restrictions
Boys	51	34	15
Girls	56	29	15
9-10 yrs	76	14	10
11-12 yrs	59	27	14
13-14 yrs	48	37	15
15-16 yrs	38	43	19
Low SES	57	33	10
Medium SES	51	28	21
High SES	52	33	15
All	54	31	15

Q61: Are students allowed to use their smartphones when at school?
Base: All children who use the internet.

54% of children are not allowed to use their smartphone at school, one in three say they can use it with some restrictions and just 14% report that they can use their phones with no restrictions. Gender, age and SES differences matter:

- A smaller percentage of girls (44%) are allowed to use their smartphone in schools with some (29%) or no restrictions (15%), compared to boys (49%).

- **Smartphone use in schools increases with age**: younger children are least likely to be allowed to use their smartphones in schools, while 62% of 15- to 16-year-olds are allowed to use their phones in school, with restrictions or not.

- SES variations are also noteworthy: lower SES children are more likely to be denied use of smartphones in school (57%) and the least likely (10%) to use smartphones with no restrictions at all.

Figure 86: Rules about smartphone use at school, by country
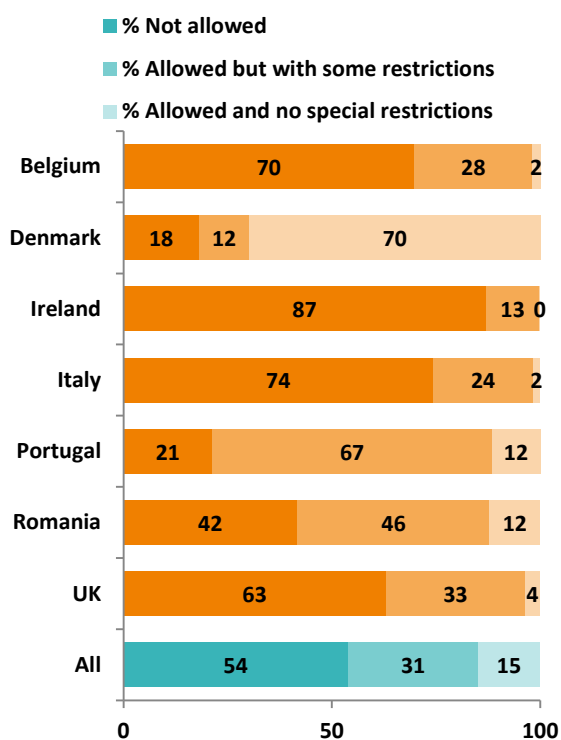
Q61: Are students allowed to use their smartphones when at school?
Base: All children who use the internet.

- **Country differences are also considerable**: 87% of Irish children, 74% of Italian peers, 70% of children living in Belgium, and 63% of children in the UK are banned from using their smartphones in school. By contrast, 70% of Danish children are allowed to use smartphones with no restrictions, and 67% of Portuguese children are allowed to use smartphones with some restrictions. In

Romania, 58% can use their phones, with restrictions (46%) or without (12%). These differences are mirrored in country variations in how teachers integrate the internet and smartphones in learning activities (See Figure 90).

9.3 Teachers mediation and learning opportunities

Teachers engage in a variety of mediation activities, including providing practical guidance and restrictions (Table 61). **61% of teachers made rules about what students are allowed to do on the internet at school**, and **little more than half (54%) assist students in doing or finding things on the internet**. **One in two teachers also engage in mediation of children's internet safety**, by explaining why some websites are good or bad (56%), suggesting ways to use the internet safely (56%) or how to behave with others on the internet (51%). According to children, teachers are also likely to talk to them about their online activities (49%), or about what they should do after a negative online experience (40%); they are least likely to help children cope with a bothering experience (23%), but we must not forget that children themselves are not likely to talk to teachers when they have such experiences.

- **Gender and age differences are small**. We can observe, however, that teenage girls generally receive more mediation of internet safety than boys and younger children.

Table 61: Teachers' active mediation of child's internet use, by age and gender

| %... | 9-12 years | | 13-16 years | | |
	Boys	Girls	Boys	Girls	All
Talked about what to do on the internet	50	46	49	51	49
Made rules about what can be done on the internet at school	55	58	62	66	61
Helped when something was difficult to do or find on the internet	52	53	54	58	54
Explained why some websites were good or bad	52	53	55	62	56
Suggested ways to use the internet safely	49	53	57	62	56
Suggested ways to behave towards other people online	46	48	52	58	51
Helped in the past when something bothered child on the internet	21	21	21	28	23
In general, talked about what to do if something on the internet ever bothered them	36	40	36	48	40

Q59: Have any teachers at your school ever done any of these things?
Base: All children who use the internet.

Figure 87: Teachers' active mediation (%) of child's internet use, by gender, age and SES

Q59: Have any teachers at your school ever done any of these things? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 61.
Base: All children who use the internet.

Figure 87 shows how teachers' mediation – measured by the number of teachers who engage in at least two activities – varies by age, gender and SES. Overall, **69% of teachers engage in two or more activities to mediate students' internet use**.

- **Gender differences** can be observed, with girls being more mediated than boys, as already observed in Table 61.

- **Teachers' mediation increases with age**, and reaches a peak in adolescence, with teenagers receiving more mediation than younger children.

- Again, lower SES children are disadvantaged when it comes to both teachers' mediation and use of the internet and smartphones in school, as we have seen.

Figure 88 shows how mediation that children receive in schools varies across countries:

- **Country variations** are considerable: the majority of Irish (89%) and UK teachers (80%), and two out of three Danish teachers (74%) mediate children's internet use in at least two ways. Teachers' mediation is slightly above average in Portugal (70%). By contrast, the number of teachers engaged in at least two of the mediation activities measured is lower than average in Belgium (65%) and Romania (62%), and drops in Italy (44%).

Figure 88: Teachers' active mediation (%) of child's internet use, by country
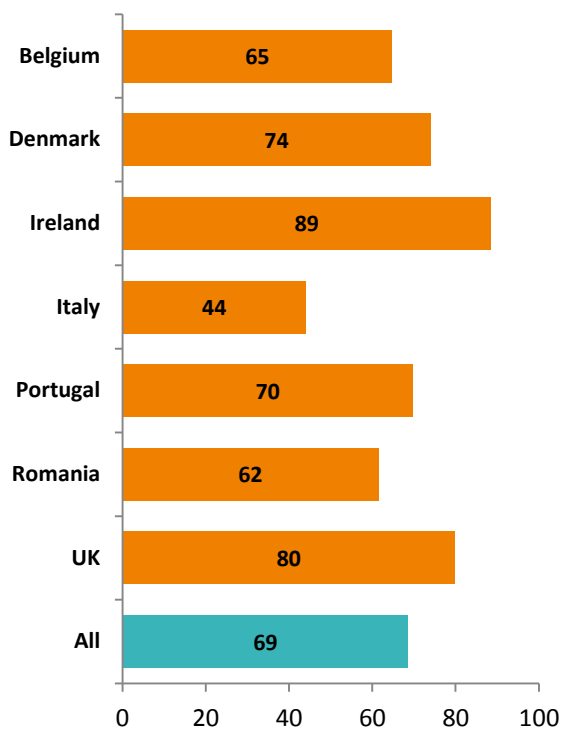
Q59: Have any teachers at your school ever done any of these things? The graph shows the percentage of children who say 'yes' to at least two of the items in Table 61.
Base: All children who use the internet.

We can draw some interesting conclusions at this point, comparing restrictions on the use of wifi networks with teachers engagement. In some countries, such as the UK and Ireland, the more children are restricted in using wifi and their smartphones, the more they are mediated. However, the relationship between rules regarding smartphones and wifi and mediation by teachers is not always so straightforward: on one side, allowing internet use in school does not necessarily mean encouraging unsupervised use - Danish students are the least restricted in their access to the internet and smartphones in school but are also likely to report teachers mediation; on the other side, more restrictions do not necessarily mean more mediation - Italian children are usually highly regulated but poorly mediated.

Beyond active mediation of children's internet safety, teachers may also encourage positive uses of the internet by promoting use of the internet and smartphones in school-related activities.

Table 62 shows how frequently teachers have encouraged students to use the internet and smartphones in learning activities, according to children:

Table 62: Use of the internet and smartphones at school

%	Several times each day	Daily or almost daily	At least every week	Never or almost never
Use the internet to do research for school assignments	6	20	44	30
Collaborate with other students over the internet	3	10	24	63
Use smartphones for assignments in class	2	4	8	86

Q62: If you think about your school how often do the teachers want students to do these things?
Base: All children who use the internet.

- **Two out of three children report being encouraged by their teachers to use the internet** to do research for school assignments **at least every week**; however, **just 26%** of children report this happens **every day**.

- One in three children report being encouraged to collaborate with other students on the internet at least every week.

- Far less common is being encouraged to use smartphones for assignments in class.

Figure 89 shows how the number of children whose teachers promote every day the use of the internet and smartphones for school assignments varies by gender, age and SES:

- Boys are slightly more likely to be encouraged to use the internet and smartphones for school-related activities than girls.

- **The integration of the internet and smartphones into the learning process substantially increases with age**.

- SES variations are also considerable, with a huge gap between lower and higher SES in children in the use of the internet for school

work. The gap is smaller, if not existent, for the other two activities, which are very low in every category.

Figure 89: Students who use the internet or smartphones daily at school, by gender, age and SES
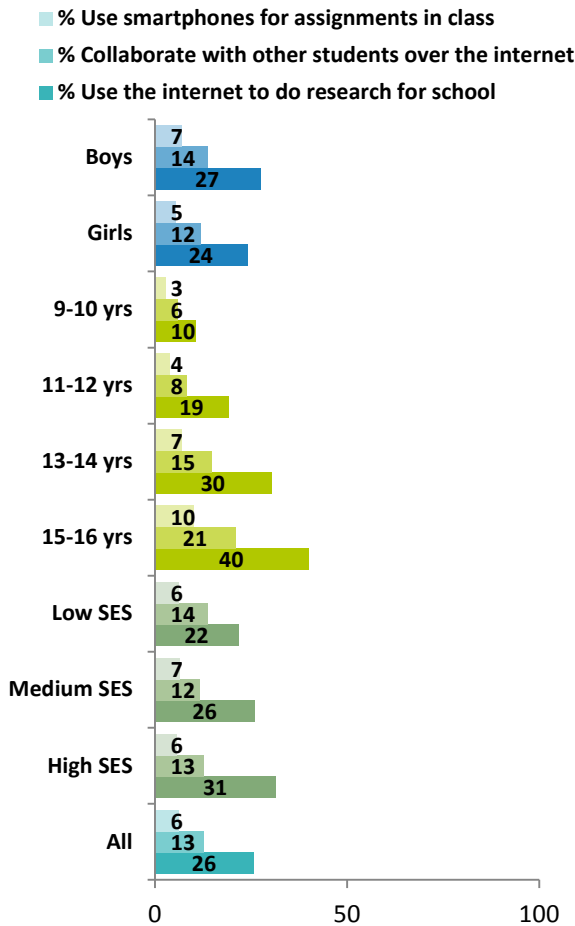
- % Use smartphones for assignments in class
- % Collaborate with other students over the internet
- % Use the internet to do research for school

Q62: If you think about your school, how often do the teachers want students to do these things?
Base: All children who use the internet.

Figure 90 examines how use of the internet and smartphone for school activities varies across countries.

Figure 90: Students who use the internet or smartphones daily at school, by country
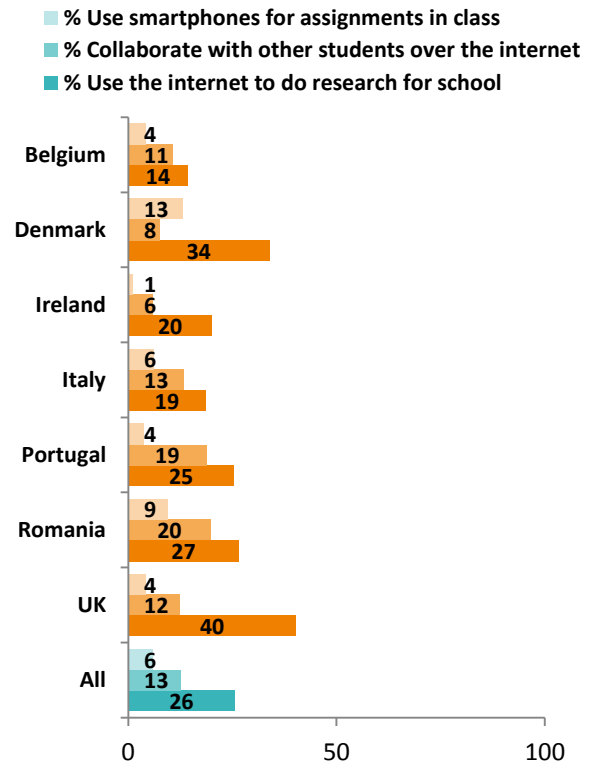
- % Use smartphones for assignments in class
- % Collaborate with other students over the internet
- % Use the internet to do research for school

Q62: If you think about your school, how often do the teachers want students to do these things?
Base: All children who use the internet.

- Country variations are also considerable: although still marginal, the use of smartphones in daily class activities is promoted especially in Danish (13%) and Romanian (9%) schools. Use of the internet for school activities is particularly encouraged in the UK (40%) and Denmark (34%). Portuguese and Romanian children are more likely than the average to be encouraged to collaborate with other students over the internet. Overall, the integration of new technologies in learning activities in Belgium, Ireland and Italy is quite poor. As anticipated, these differences are grounded in different rules regarding the use of the internet and smartphones at school.

10. Conclusions

In this chapter, we provide an overview of the main findings presented throughout the report, and try to address the main research questions: what, if anything, is specific to mobile internet users? Does the use of mobile devices to go online pose more or fewer risks to children?

10.1 Access, usage, opportunities and skills

Tables 63 and 64 provide an overview of locations of use, age of first internet use, online activities and skills by age, and mobile versus non-mobile internet use.

Locations of access and use. Ways of going online are diversifying with the diffusion of mobile media. Smartphones in particular are becoming an integral part of the media ecologies that children inhabit: among all the devices asked about, smartphones are the devices that children are more likely to own (46%) and use to go online at least daily in all the contexts we examined (Table 4). **Despite being the devices most likely to be used on the move, however, smartphones are mainly used at home, more often in the privacy of the child's own bedroom**. As shown in Table 63, 79% of children use the internet daily at home: domestic access to the internet (in own bedroom or elsewhere at home) increases with age, rising from 56% of 9-10 year-olds to 92% of older teenagers. **Mobile internet users are much more likely to use the internet at home every day (95%) than children who don't use smartphones or tablets to go online (62%)**. These findings suggest that the internet is more thoroughly embedded in the lives of children who have access to mobile devices to go online. Second, the home is still a strategic site for raising awareness on online risks and for promoting safer and responsible uses of the internet. However, as we have seen, smartphones and tablets in general are personal, portable media which are thoroughly and seamlessly integrated into children's and their parents' everyday life.

Table 63: Summary of children's access, use, activities and skills, by age

| % | Age | | | | All |
	9-10 yrs	11-12 yrs	13-14 yrs	15-16 yrs	
Daily internet use at home (bedroom or elsewhere)	56	73	88	92	79
Daily internet use at school	7	16	23	34	21
Has a profile on SNS	27	60	84	93	68
Has a profile on media sharing platform	10	27	39	52	33
Daily contact with parents on SNS	9	13	7	9	9
Daily contact with friends on SNS	41	65	76	85	74
How old when first used the internet	7.0	7.9	9.0	9.7	8.5
Average number of skills related to internet use	1.9	4.9	7.1	8.7	5.9

For the exact questions, see earlier sections and definitions at the end of this chapter.
Base: All children who use the internet.

Table 64: Summary of children's access, use, activities and skills, comparing mobile and non-mobile users

| % | Daily use of mobile devices | | | All |
	Smart-phones	Tablets	Neither	
Daily internet use at home (bedroom or elsewhere)	95	95	62	79
Daily internet use at school	40	35	6	21
Has a profile on SNS	89	75	52	68
Has a profile on media sharing platform	53	47	17	33
Daily contact with parents on SNS	11	13	7	9
Daily contact with friends on SNS	83	76	64	74
How old when first used the internet	8.4	7.9	8.7	8.5
Average number of skills related to internet use	8.0	6.8	4.2	5.9

For the exact questions, see earlier sections and definitions at the end of this chapter.
Base: All children who use the internet.

Consequently, the **increasingly privatised conditions of internet use** are likely to inhibit or challenge established parental mediation strategies such as active mediation of children's online experiences. Therefore, parents, more than ever, need to communicate with children about their online experiences. Moreover, it is of vital importance that when industries, governments, policy makers, NGOs, researchers and other stakeholders cooperate to build a better internet for children, they should prioritise goals such as content classification, age-appropriate services and privacy settings, and easy and robust reporting mechanisms on mobile devices and services. These tools can complement parental mediation, while empowering and protecting children.

School is the second most common location of internet access; however, use of the internet in school is unevenly distributed across the five countries surveyed, and overall just **21% of respondents reported using the internet at school everyday**. Access at school is also structured by age, with older teenagers (34%) five times more likely than younger children (7%) to use the internet at school everyday. **Smartphone users (40%) and tablet users (35%) are far more likely than non-mobile internet users (6%) to access the internet daily at school**. Despite these considerable variations, the importance of schools as places to engage children in online safety education cannot be underplayed, especially in those countries where parents are less likely to be internet and smartphone users themselves, such as Romania. Schools also provide the chance to engage children in forms of peer mediation.

Age of first internet use. Table 63 also shows that **the age when children start to go online is dropping**, with younger children being around seven when they first used the internet; children who use smartphones and tablets to go online were slightly younger when they started to use the internet (Table 64). These findings and those presented in Figure 7 earlier show that children go online at even younger ages from a variety of devices. Beyond children who are given a smartphone at the age of eight, younger children are also likely to borrow a tablet computer from

their parents or older siblings. It is therefore important to ensure age-appropriate settings and contents on all devices.

Activities. Comparison of online activities across time (Table 14) has shown that **social networking, entertainment on media sharing platforms and sharing content with others are on the rise**. Table 63 shows that two out of three children have at least one profile on a SNS, and one in three have a profile on a media sharing platform such as YouTube or Instagram; the age trend is marked in both social media items, suggesting that, at least in some countries (see also Table 17), under-age use of SNS is dropping. It is not clear at this stage whether this is the outcome of awareness-raising campaigns targeting parents and consequent parental mediation, or of media panics. However, the findings suggest that there is potential for reducing under-age use of SNS even in countries where parents are less familiar with the internet. Table 64 shows that **the differences between mobile and non-mobile internet users in the use of SNS and media sharing platforms are considerable**: 89% of smartphone users and 75% of tablet users have at least one profile on a social network platform compared to just half of the children who use neither of the mobile devices to go online; similarly, 53% of smartphone users and 47% of tablet users report having a profile on a media sharing platform, compared to 17% of non-mobile internet users. Given that smartphones and tablet users are more likely to use SNS and to share media content on the internet, we can therefore assume a correlation – although not a causal relationship – between mobile-convergent media and online participatory activities.

Communication. Three out of four children use SNS to keep in touch with their friends on a daily basis, while just one in ten is in contact with parents every day. Daily contact with friends on SNS increases with age, reaching a peak of 85% of older adolescents; by contrast, contact with parents is higher among 11- to 12-year-olds. **Smartphone and tablet users are more likely than non-users to be in daily touch with both friends and parents on SNS**.

Skills. On average, children claim half (5.9) of the 12 internet skills we asked about (see also Figure 37). The average number of skills is strongly structured by age, ranging from two skills claimed by 9- to 10-year-olds to over eight skills among 15- to 16-year-olds. Variations between mobile and non-mobile internet users are also consistent: while **smartphone users claim 8 skills** on average, and **tablet users** slightly less (**6.8**), children who use **neither smartphones nor tablets** to go online claim **just 4 skills**.

From the brief overview of data on access, usage, activities and skills, we can conclude that these **findings are supportive of the 'usage hypothesis': the more children use the internet, the more opportunities they take up and the more skills they develop**. Smartphone and tablet users use the internet more, both at home and school (as well as in all the locations asked about), are more likely to engage in the activities we measured and claim nearly twice as many skills as children who don't use mobile devices to go online.

10.2 Risks and harm

Online risky experiences do not necessarily result in harm, as reported by children. Rather, prior research showed that children who encounter more risks online are not necessarily those who experience more harmful consequences. On the contrary, they are usually more skilled and develop more resilience (Livingstone *et al.*, 2011, 2012).

Risks. For the purpose of comparing and summarising the findings presented throughout this report, Table 65 reviews the incidence of risk online by age for each of the risks included in the survey. Table 66 compares the incidence of risks among mobile internet users and non-mobile internet users.

The most common risk of children's internet use is seeing sexual images on- or offline experienced by 28% of 9- to 16-year-olds.

Table 65: Summary of children's negative online experiences, by age

% in past 12 months	Age				
	9-10 yrs	11-12 yrs	13-14 yrs	15-16 yrs	All
Treated in a hurtful or nasty way online or offline	24	19	26	22	23
Experienced any form of cyberbullying	10	9	15	13	12
Treated others in hurtful or nasty way online or offline	14	15	12	15	14
Treated others in hurtful or nasty way using internet or mobile phones	6	9	7	10	8
Received sexual messages (only 11+)	n/a	4	10	19	11
Had contact with someone not met face to face before	15	18	31	36	26
Gone to a face-to-face meeting with someone only met online before	5	8	13	19	12
Seen sexual images online or offline	14	18	33	44	28
Seen any type of harmful user-generated content on websites (only 11+)	n/a	16	26	34	25
Have had other negative online experiences	19	18	26	31	24
Excessive internet use (two out of five items)	8	15	26	30	21

For the exact questions, see earlier sections and definitions at the end of this chapter.

Base: All children who use the internet.

Almost as common is **communicating online with someone the child has not met face to face before**, characteristic of 26% of 9- to 16-year-olds. As already noted, however, such communication is also an opportunity for children to make new friends beyond the constraints they experience offline (such as those associated with disadvantaged socio-economic background).

Table 66: Summary of children's negative online experiences, comparing mobile and non-mobile users

% in past 12 months	Daily use of mobile devices			
	Smart-phones	Tablets	Neither	All
Treated in a hurtful or nasty way online or offline	26	26	20	23
Experienced any form of cyberbullying	17	15	8	12
Treated others in hurtful or nasty way online or offline	14	13	14	14
Treated others in hurtful or nasty way using internet or mobile phones	9	6	8	8
Received sexual messages (only 11+)	15	14	7	11
Had contact with someone not met face to face before	35	28	18	26
Gone to a face-to-face meeting with someone only met online before	15	10	10	12
Seen sexual images online or offline	37	33	22	28
Seen any type of harmful user-generated content on websites (only 11+)	32	32	17	25
Have had other negative online experiences	31	29	20	24
Excessive internet use (two out of five items)	30	28	14	21

For the exact questions, see earlier sections and definitions at the end of this chapter.
Base: All children who use the internet.

Seeing potentially negative user generated content [UGC] (concerned with hate, pro-anorexia, self-harm, drug taking or suicide), **is the third most common risk**, reported by 25% of children aged 11-16.

Rather less **(24%)** is the number of **children who experienced other risks online, such as viruses or personal data misuse**.

Similarly, **23% of children aged 9-16 report being bullied on or offline**. The number of children who reported any form of **cyberbullying** on the internet or through mobile phones is, however, **12%**.[16]

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[16] Note that 23% of children said that they had been treated in a

A total of 21% had experiences of at least two of the five behaviours we associated with over-dependence on the internet.

Last, and **least common, are receiving sexually suggestive messages** (12% of 11-16 year-olds) **and going to meetings offline with people first met online** (11% of 9-16 year-olds).

All risks - except bullying others - increase with age, and among smartphone and tablet users. This supports the so-called **'more opportunities, more risks' hypothesis**: older users and smartphone and tablet users benefit from more online opportunities, but are also exposed to more risks.

Harm. Risk refers to the probability of harm, while the severity of harm has been judged by children who reported being upset for what they had seen or experienced on the internet. Table 67 summarises the number of children who have been bothered by online risky experiences, by age, while Table 68 shows the differences between mobile internet users and children who don't use smartphones or tablets to go online.

Overall **17% of children said they had seen or experienced something on the internet that had bothered them**.

As already noted in the EU Kids Online survey, **bullying is still the most harmful risky experience**: two out of three children who have been bullied on- or offline claim they have been 'very' or 'a bit' upset.

Sexual risks are the second most bothering of the experiences: **less than half of the children who have received sexual messages and of those who have seen sexual content of any kind (on- and offline) have been bothered**.

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hurtful or nasty way but only 19% specified how this had happened. For those who had been 'very upset', 9% failed to give a concrete answer as to how this had happened, for the 'a little upset' group 12% didn't give a definitive answer to how it happened and for the 'not at all upset', 19% didn't give a definitive answer.

Last, meeting online contacts offline is the least common risky experience, and one that bothers the least: just one in three children who have gone to such meetings were upset from what happened.

Age trends are less clear compared to incidence of risks: both younger children (19%) and those aged 13-14 (18%) are more likely to be harmed by bullying. This finding is consistent with prior research, confirming that younger children are usually more vulnerable to harmful consequences, and that the transition from pre-adolescence to adolescence marks a time of increased bullying. Teenagers are more vulnerable to sexting and sexual images.

The incidence of harm among smartphones and tablet users follows an interesting pattern: generally **smartphone users (24%) and tablet users (25%) are more likely to say that they have seen or experienced something on the internet that bothered them**. However, **this increased exposure to bothering experiences does not necessarily imply more harmful experiences**: while tablet users report lower harm or equal to what is seen as average, smartphone users are just slightly more likely than average to report harmful consequences from bullying, sexual messages and sexual images.

Table 67: Summary of children's harmful experiences online, by age

% in past 12 months	Age				All
	9-10 yrs	11-12 yrs	13-14 yrs	15-16 yrs	
Have seen or experienced something on the internet that has bothered them	11	14	20	23	17
Treated in a hurtful or nasty way online or offline and been upset	20	14	19	13	17
Received sexual messages and been upset (only 11+)	0	2	6	8	5
Gone to a face-to-face meeting and been upset	2	3	3	3	3
Seen sexual images and been upset	9	10	17	16	13

For the exact questions, see earlier sections and definitions at the end of this chapter.
Base: All children who use the internet.

Table 68: Summary of children's negative online experiences, comparing mobile and non-mobile users

% in past 12 months	Daily use of mobile devices			All
	Smart-phones	Tablets	Neither	
Have seen or experienced something on the internet that has bothered them	24	25	12	17
Treated in a hurtful or nasty way online or offline and been upset	18	18	16	17
Received sexual messages and been upset (only 11+)	7	5	4	5
Gone to a face-to-face meeting and been upset	3	1	4	3
Seen sexual images and been upset	16	15	11	13

For the exact questions, see earlier sections and definitions at the end of this chapter.
Base: All children who use the internet.

10.3 Mediation

Finally, Tables 68 and 69 summarise findings regarding parents and peer mediation. These findings suggest that **parents engage more in active mediation of internet safety (77%)**, which makes it the most common intervention by parents, followed by active mediation of internet use (68%) and restrictions (65%). Compared to the EU Kids Online data (2010) parental mediation of children's online safety is increasing, while active mediation of internet use and restrictions are less often adopted by parents. Technical restrictions are still the least favoured mediation activities, adopted by just one in four parents. One in two children say they receive mediation from their friends, and 67% are very likely to talk to at least one person when they have negative online experiences.

Table 69: Summary of mediation, by age

% in past 12 months	Age				
	9-10 yrs	11-12 yrs	13-14 yrs	15-16 yrs	All
Active mediation of internet use by parents	83	73	65	55	68
Active mediation of internet safety by parents	79	81	80	68	77
Restrictive mediation of internet safety by parents	90	79	58	41	65
Technical mediation of internet safety by parents	27	33	29	19	26
Active mediation by friends	31	47	63	60	51
At least one person very likely to talk to if bothered	72	69	63	65	67

For the exact questions, see earlier sections and definitions at the end of this chapter.
Base: All children who use the internet.

Table 70: Summary of mediation, comparing mobile and non-mobile users

% in past 12 months	Daily use of mobile devices			
	Smart-phones	Tablets	Neither	All
Active mediation of internet use by parents	61	69	72	68
Active mediation of internet safety by parents	79	85	72	77
Restrictive mediation of internet safety by parents	45	54	82	65
Technical mediation of internet safety by parents	26	33	25	26
Active mediation by friends	61	60	44	51
At least one person very likely to talk to if bothered	66	69	67	67

For the exact questions, see earlier sections and definitions at the end of this chapter.
Base: All children who use the internet.

Younger children are more mediated by parents than teenagers, while 13-16 year-olds receive more mediation by peers.

As shown in Table 70, **smartphone and tablet users are less likely to be restricted** in their online activities, and smartphone users also receive less active mediation of internet use by parents. But

both are **more likely to receive mediation of internet safety by parents and friends**. Tablet users are also slightly more likely to report that their parents adopt technical mediation. When it comes to social responses to online risks, smartphone users are slightly less likely than the average to have at least someone they would talk to.

10.4 Conclusive remarks

The findings presented in this report show that there is an increasing awareness of online risks among parents and children: important factors - such the decrease of underage use of SNS (social networking sites) in certain countries, the growing engagement of parents in mediating children's online safety, and the acquisition of safety skills or the adoption of preventive measures among children - all signal this trend, although country differences are notable.

A second major finding is that exposure to online risks seem to have increased compared to the 2010 EU Kids Online data, more specifically among children using also mobile devices to go online. Further analysis is required in order to identify which children, among smartphone and tablet users, are more vulnerable. What is clear from these findings is that we cannot assume smartphone and tablet use as a factor of vulnerability. Rather, the **'more opportunities, more risks'** thesis is a valid framework to understand the changes associated with smartphones and tablets, changes that lead to more pervasive internet access and use in children's everyday lives. Since more children are going online, and they are doing so from more devices and in more contexts, it is no surprise that exposure to online risks is increasing; what is surprising is that **the proportion of those who are harmed out of those who experienced any risk is not increasing**.

Bullying remains the risk that causes most harm. Adolescents now report more bullying through SNS and phone calls than face-to-face. Despite evidence that children are more aware of the dangers of online harassment, **more needs to be done to**

promote safer and more responsible uses of mobile communication. This should include raising awareness of privacy issues, reporting and blocking features, location-tracking functions, as well as the risks of escalation of exchanges that can occur through online 'social drama' (Marwick & boyd, 2014). Schools, in particular, can play a more active role, given that most social media communication happens between peers and schoolmates.

Finally, findings show that **strong inequalities in internet use** persist among children, with lower SES children being less likely to use the internet daily both at home and at school, or to have a smartphone or a tablet computer. Children from

less advantaged families are also less skilled and receive less mediation by parents and teachers, restrictive mediation being a notable exception (they have more rules limiting their internet use both at home and school). Therefore, policy initiatives promoting children's digital inclusion should be a priority.

10.5 A list of variables used in tables in this chapter

Daily internet use at home (bedroom or elsewhere): See Table 1 and Table 2
Q1 a-e: Looking at this card, please tell me how often you go online or use the internet (from a computer, a mobile phone, a smartphone, or any other device you may use to go online) at the following locations…

Daily internet use at school: See Table 1 and Table 2
Q1 a-e: Looking at this card, please tell me how often you go online or use the internet (from a computer, a mobile phone, a smartphone, or any other device you may use to go online) at the following locations…

Has a profile on SNS: See Figure 9
Q16 a-f: Do you have your own profile on a SNS (e.g. Facebook, Twitter, etc.) that you currently use and if you have a profile/account, do you have just one or more than one?

Has a profile on media sharing platform: See Figure 7
Q23 a-f: Do you have your own profile/account on a media sharing platform (photo and video) such as YouTube, Instagram, Flickr, that you currently use, and if you have a profile/account, do you have just one or more than one?

Daily contact with parents on SNS: See Table 21 and

Figure 27
Q18: How often are you in contact with the following people on SNS?

Daily contact with friends on SNS: See Table 22 and

Figure 27
Q18: How often are you in contact with the following people on SNS?

How old when first used the internet: See Table 10 and Figure 7
Q5: How old were you when you first used the internet?

Average number of skills related to internet use: See

Figure 37

Q26 a-d, Q27 a-h: Which of these things do you know how to do? (Average out of 12 items.)

Treated in a hurtful or nasty way online or offline: See Figure 45

Q32: In the PAST 12 MONTHS, has someone treated you in this kind of way, and if so, how upset were you about happened?

Experienced any form of cyberbullying: See Table 36 and Table 37

Q33: If someone has treated you in this kind of way, how did it happen? (Multiple responses allowed)

Treated others in hurtful or nasty way online or offline: See Table 38

Q34 In the PAST 12 MONTHS, have you ever behaved in this way to someone else and if so, in which way did you do it? (Multiple responses allowed.)

Treated others in hurtful or nasty way using internet or mobile phones: See Table 39

Q34 In the PAST 12 MONTHS, have you ever behaved in this way to someone else and if so, in which way did you do it? (Multiple responses allowed.)

Received sexual messages (only 11+): See Figure 47

Q42: In the PAST 12 MONTHS, have you received sexual messages of this kind (this could be words, pictures or videos), and if so, how upset were you about happened?

Had contact with someone not met face to face before: See Figure 49

Q37: In the PAST 12 MONTHS, have you ever had contact on the internet (on all platforms/devices) with someone you had not met face to face before? This could have been by email, chatrooms, SNS, instant messaging or gaming sites.

Gone to a face-to-face meeting with someone only met online before: See Figure 51

Q39: In the PAST 12 MONTHS, have you ever gone on to meet anyone face to face who you had first met on the internet, and if so, were you at all upset by what happened or wish that you had not done it?

Seen sexual images online or offline: See Figure 55

Q35: In the PAST 12 MONTHS, have you seen anything of this kind, and if so, how upset were you by what you saw?

Seen any type of harmful user-generated content on websites (age 11+): See Table 49

Q44: In the PAST 12 MONTHS, have you seen websites where people discuss…

Have had other negative online experiences: See Table 50

Q45: In the PAST 12 MONTHS, has any of the following happened to you on the internet/on your smartphone/mobile phone?

Excessive internet use (two out of five items): See Figure 60 shows

Q46: In the PAST 12 MONTHS, how often, have these things happened to you? The figure indicates the percentage of children who answer 'fairly often' or 'very often' to at least two of the five statements in Figure 59

Have seen or experienced something on the internet that has bothered them: See Figure 41

Q30: In the PAST 12 MONTHS, have you seen or experienced something on the internet that has bothered you in some way? For example, made you feel uncomfortable, upset, or feel that you shouldn't have seen it?

Treated in a hurtful or nasty way online or offline and been upset: See Figure 45

Q32: In the PAST 12 MONTHS, has someone treated you in this kind of way, and if so, how upset were you about happened?

Received sexual messages and been upset (only 11+): See Figure 47

Q42: In the PAST 12 MONTHS, have you received sexual messages of this kind (this could be words, pictures or videos), and if so, how upset were you about happened?

Gone to a face-to-face meeting and been upset: See Figure 51

Q39: In the PAST 12 MONTHS, have you ever gone on to meet anyone face to face who you had first met on the internet, and if so, were you at all upset by what happened or wish that you had not done it?

Seen sexual images and been upset: See Figure 55

Q35: In the PAST 12 MONTHS, have you seen anything of this kind, and if so, how upset were you by what you saw?

Active mediation of internet use by parents: See Table 55 and Figure 65

Q53: Does your parent/do either of your parents sometimes… The figure indicates the percentage of children who say 'yes' to at least two of the items in Table 55.

Active mediation of internet safety by parents: See Table 56 and Figure 67

Q54: Has your parent/have either of your parents ever done any of the following things with you? The figure indicates the percentage of children who say 'yes' to at least two of the items in Table 56.

Restrictive mediation of internet safety by parents: See Table 57: and Figure 69
Q55: For each of these things, please tell me if your parents CURRENTLY let you do them whenever you want, or let you do them but only with permission or supervision, or NEVER let you do them. The figure indicates the percentage of children who say 'can never do this' to at least two of the items in Table 57.

Technical mediation of internet safety by parents: See Table 58: and Figure 71
Q56: As far as you know, does your parent/do your parents make use of any of the following for the computer that you use the MOST at home? The figure indicates the percentage of children who say 'yes' to at least two of the items in Table 58.

Active mediation by friends: See Table 60 and Figure 79
Q58: Have your friends ever done any of these things? Please say yes or no to each of the following... The figure indicates the percentage of children who say 'yes' to at least two of the items in Table 60.

At least one person very likely to talk to if bothered: See Figure 57
Q48: If you were to experience something on the internet or when you were online from different devices that bothered you or made you upset, how likely or unlikely is it that you would talk with the following people? (% who say they are very likely to talk to at least one of those named in Table 51).

References

Attwood, F., & Smith, C. (2011). Investigating young people's sexual cultures: an introduction. *Sex Education, 11*(3), 235-242.

Barbovschi, M. & Marinescu, V. (2013). Youth. Revisiting policy dilemmas in internet safety in the context of children's rights. In B. O'Neill, E. Staksrud, & S. McLaughlin (eds) *Towards a better internet for children? Policy pillars, players and paradoxes* (pp. 227-246). Göteborg: Nordicom.

Barbovschi, M., Marinescu, V., Velicu, A., & Laszlo, E. (2012). Meeting new contacts online. In S. Livingstone, L. Haddon, & A. Görzig (eds) *Children, risk and safety on the internet* (pp. 177-189). Bristol: Policy Press.

Barbovschi, M., O'Neill, B., Velicu, A., & Mascheroni, G. (2014). *Policy Recommendations. Report D5.1.* Milano: Net Children Go Mobile.

Bertel, T. & Stald, G. (2013). From SMS to SNS: the use of the internet on the mobile phone among young Danes. In K. Cumiskey & L. Hjorth (eds) *Mobile media practices, presence and politics. The challenge of being seamlessly mobile* (pp. 198-213). New York: Routledge.

boyd, d. (2008) Why youth (heart) social network sites: the role of networked publics in teenage social life. In D. Buckingham (ed.) *Youth, identity and digital media* (pp. 119-142). Cambridge, MA: MIT Press.

Buckingham, D. (2007). Digital Media Literacies: rethinking media education in the age of the Internet. *Research in Comparative and International Education, 2*(1), 43-55.

Buckingham, D., & Bragg, S. (2004). *Young people, sex and the media: The facts of life?* Basingstoke: Palgrave Macmillan.

Clark, L. S. (2012). *The Parent App: Understanding Families in the Digital Age*. Oxford: Oxford University Press.

Dürager, A. & Livingstone, S. (2012). *How can parents support children's internet safety?* London: EU Kids Online.

European Commission (2008) *Towards a safer use of the Internet for children in the EU: A parents' perspective*. Luxembourg: European Commission.

Ey, L. A., & Cupit, C. G. (2011). Exploring young children's understanding of risks associated with Internet usage and their concepts of management strategies. *Journal of Early Childhood Research, 9*(1), 53-65.

Green, N. & Haddon, L. (2009). *Mobile communications: an introduction to new media*. Oxford: Berg

Goggin, G. (2010). *Global mobile media*. New York: Routledge.

Goggin, G., Hjorth, L. (2014). *The Routledge Companion to Mobile Media*. New York: Routledge.

Haddon, L. (2004). *Information and communication technologies in everyday life*. Oxford: Berg.

Haddon, L. (2012). Parental mediation of internet use: Evaluating family relationships. In E. Loos, L. Haddon and E. Mante-Meijer (Eds) (2012) *Generational use of new media* (pp. 13-30). Aldershot: Ashgate.

Hall, J.A. & Baym, N.K. (2012). Calling and texting (too much): Mobile maintenance expectations (over) dependence, entrapment, and friendship satisfaction. *New Media & Society*, 14(2), 316-331.

Helsper, E., Kalmus, V., Hasebrink, U., Sagvari, B. & de Haan, J. (2013). *Country classification: Opportunities, risks, harm and parental mediation*. London: EU Kids Online.

Hjorth, L. & Goggin, G. (2009). *Mobile technologies: From telecommunications to media*. London: Routledge.

Ito, M. *et al*. (2009). *Hanging out, messing around, and geeking out: Kids living and learning with new media*. Cambridge, MA: MIT Press.

Kardefelt-Winther, D. (2014). A conceptual and methodological critique of internet addiction research: Towards a model of compensatory internet use. *Computers in Human Behavior*, 31, 351-354.

Kalmus, V., von Felitzen, C., & Siibak, A. (2012). Effectiveness of teachers' and peers' mediation in supporting opportunities and reducing risks online. In S. Livingstone, L. Haddon, & A. Görzig (eds) *Children, risk and safety on the internet* (pp. 245-256). Bristol: Policy Press.

Katz, J.E. & Aakhus, M. (2002). *Perpetual contact: Mobile communication, private talk, public performance*. Cambridge: Cambridge University Press.

Kernaghan, D., & Elwood, J. (2013). All the (cyber) world's a stage: Framing cyberbullying as a performance. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 7*(1). Retrieved from: http://www.cyberpsychology.eu/view.php?cislocl anku=2013011604&article=5

Kofoed, J. & Ringrose, J. (2012). Travelling and sticky affects: Exploring teens and sexualized cyberbullying through a Butlerian-Deleuzian-Guattarian lens. *Discourse: Studies in the Cultural Politics of Education*, 33(1), 5-20.

Lampert, C. & Donoso, V. (2012). Bullying. In S. Livingstone, L. Haddon & A. Görzig (eds) *Children, risk and safety on the internet* (pp, 141-150). Bristol: Policy Press.

Lenhart, A. (2009). *Teens and sexting: How and why minor*

teens are sending sexually suggestive nude or nearly nude images via text messaging. Washington, DC: Pew Research Center. Retrieved from: http://pewresearch.org/assets/pdf/teens-and-sexting.pdf.

Lenhart, A., Ling, R., Campbell, S., & Purcell, K. (2010). *Teens and mobile phones*. Washington, DC: Pew Research Center.

Levy, N., Cortesi, S., Crowley, E., Beaton, M., Casey, J., & Nolan, C. (2012). Bullying in a networked era: A literature review. *Berkman Center Research Publication*, 17. Retrieved from http://cyber.law.harvard.edu/publications/2012/kbw_bulling_in_a_networked_era

Licoppe, C. (2004). 'Connected' presence: the emergence of a new repertoire for managing social relationships in a changing communication technoscape. *Environment and Planning D: Society and Space, 22*(1), 135 – 156.

Ling, R. (2008). *New tech, new ties. How mobile communication is reshaping social cohesion*. Cambridge, MA: MIT Press.

Ling, R. (2012). *Taken for grantedness. The embedding of mobile communication into society*. Cambridge, MA: MIT Press.

Ling, R. & Bertel, T. (2013). Mobile communication culture among children and adolescents. In D. Lemish (ed.) *The Routledge international handbook of children, adolescents and media* (pp. 127-133). London: Routledge.

Livingstone, S. (2009). *Children and the Internet: Great expectations, challenging realities*. Cambridge: Polity.

Livingstone, S. & Bovill, M. (2001). *Children and their changing media environment: A European comparative study*. New Jersey, NJ: Lawrence Erlbaum Associates, Inc.

Livingstone, S. & Haddon, L. (eds) (2009). *Kids Online. Opportunities and risks for children*. Bristol: Policy Press.

Livingstone, S. & Helsper, E.J. (2007). Gradations in digital inclusion: children, young people and the digital divide. *New Media & Society*, 9, 671-696.

Livingstone, S. & Helsper, E. (2008). Parental mediation and children's Internet use. *Journal of Broadcasting & Electronic Media,* 52(4), 581-599.

Livingstone, S., Hasebrink, U. & Görzig, A. (2012). Towards a general model of determinants of risks and safety. In S. Livingstone, L. Haddon, & A. Görzig (eds) *Children, risk and safety on the internet* (pp. 323-339). Bristol: Policy Press.

Livingstone, S., Haddon, L., Görzig, A., & Ólafsson, K. (2011). *Risks and safety on the internet: The perspective of European children. Full findings*. London: LSE, EU Kids Online.

Marwick, A., & boyd, d. (2014). "It's just drama": teen perspectives on conflict and aggression in a networked era. *Journal of Youth Studies*.

Mascheroni, G., Murru, M.F., Aristodemou, E., & Laouris, Y. (2013). Parents. Mediation, self-regulation and co-regulation. In B. O'Neill, E. Staksrud, & S. McLaughlin (eds) *Towards a better internet for children? Policy pillars, players and paradoxes* (pp. 211-225). Göteborg: Nordicom.

Mascheroni, G. & Ólafsson, K. (2013). *Mobile internet access and use among European children. Initial findings of the Net Children Go Mobile project*. Milano: Educatt.

Matsuda, M. (2005). Mobile communication and selective sociality. In M. Ito, D. Okabe, & M. Matsuda (eds) *Personal, portable, pedestrian. Mobile phones in Japanese life* (pp. 123-142). Cambridge, MA: MIT Press.

Mendoza K. (2009). Surveying Parental Mediation: Connections, Challenges, and Questions for Media Literacy. *The Journal of Media Literacy, 1*(2009): 28-41.

Ólafsson, K., Livingstone, S. & Haddon, L. (2013) *Children's use of online technologies in Europe : a review of the European evidence base*. London: EU Kids Online.

O'Neill, B. & Laouris, Y. (2013). Teaching internet safety, promoting digital literacy. The dual role of educations and schools. In B. O'Neill, E. Staksrud, & S. McLaughlin (eds) *Towards a better internet for children? Policy pillars, players and paradoxes* (pp. 193-209). Göteborg: Nordicom.

Oswell, D. (2008). Media and communications regulation and child protection: An overview of the field. In S. Livingstone & K. Drotner (eds) *The international handbook of children, media and culture* (pp. 475-492). London: Sage.

Pasquier, D. (2005). *Cultures Lycéennes: la tyrannie de la majorité*. Paris: Éditions Autrement.

Peter J. & Valkenburg P. M. (2006). Adolescents' Internet Use: Testing the 'disappearing Digital Divide' Versus the 'emerging Digital Differentiation' Approach. *Poetics, 34*(4-5): 293- 305.

Ringrose, J., Gill, R., Livingstone, S., & Harvey, L. (2012). *A qualitative study of children, young people and 'sexting': A report prepared for the NSPCC*. London: National Society for the Prevention of Cruelty to Children.

Rovolis, A. & Tsaliki, L. (2012). Pornography. In S. Livingstone, L. Haddon, & A. Görzig (eds) *Children, risk and safety on the internet* (pp. 165-176). Bristol: Policy Press.

Schrock, A. & boyd, D. (2008). *Online threats to youth: Solicitation, harassment, and problematic content: Literature review prepared for the Internet Safety*

Technical Task Force. Retrieved from http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/RAB_Lit_Review_121808_0.pdf

Sonck, N. & de Haan, J. (2013). How the internet skills of European 11- to 16-year-olds mediate between online risk and harm. *Journal of Children and Media*, 7(1), 79-95.

Sonck, N., Kuiper, E., & de Haan, J. (2012). Digital skills in the context of media literacy. In S. Livingstone, L. Haddon, & A. Görzig (eds) *Children, risk and safety on the internet* (pp. 87-98). Bristol: Policy Press.

van Deursen, A. & van Dijk, J. (2011). Internet skills and the digital divide. *New Media and Society*, 13(6), 893-911.

Vandoninck, S., d'Haenens, L., & Roe, K. (2013). Online risks: Coping strategies of less resilient children and teenagers across Europe. *Journal of Children and Media*, 7(1), 60-78.

Vincent, J. & Fortunati, L. (Eds.). (2009). *Electronic emotion: The mediation of emotion via information and communication technologies*. Oxford: Peter Lang.

Ybarra, M.L., boyd, d., Korchmaros, J.D., & Oppenheim, J. (2012). Defining and measuring cyberbullying within the larger context of bullying victimization. *Journal of Adolescent Health,* 51(1), 53-58.

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