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EU Kids Online: Final Report

Sonia Livingstone and Leslie Haddon

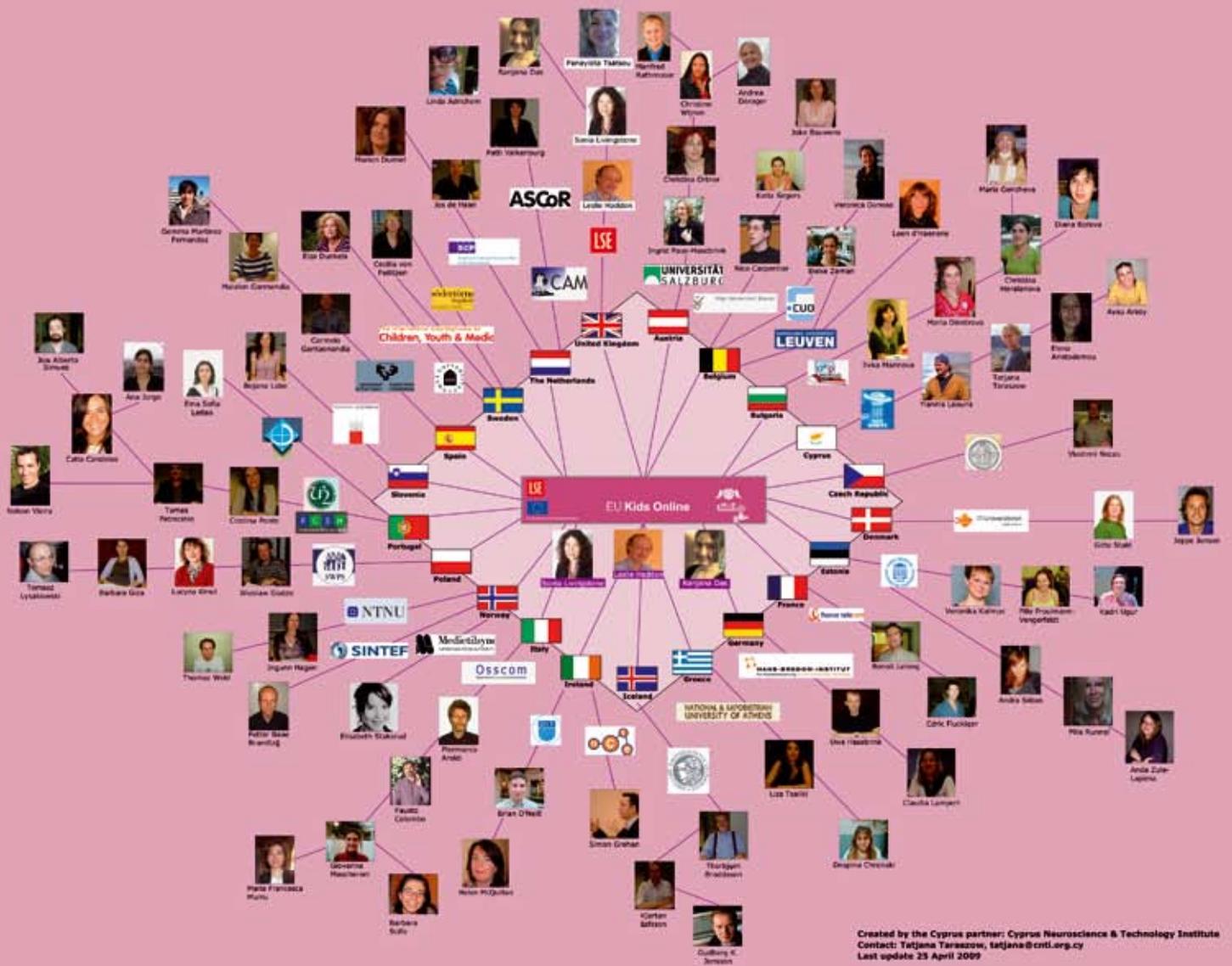
Coordinator, EU Kids Online

The London School of Economics
and Political Science



This is a report from the *EU Kids Online* network
For a complete list of participants, see Annex 2

www.eukidsonline.net



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European Research on Cultural, Contextual and Risk Issues in Children's Safe Use of the internet and New Media

'EU Kids Online' is a thematic network funded by the EC *Safer Internet plus Programme* (SIP-2005-MD-038229; (http://ec.europa.eu/information_society/activities/sip/index_en.htm) from 2006 to 2009. It has examined research findings from 21 member states into how children and young people use the internet and new online technologies. The aim was to identify comparable findings across Europe and evaluate the social, cultural and regulatory influences

affecting online opportunities and risks, along with children's and parents' responses, in order to inform policy. It has charted available data, pinpointed gaps and identified factors shaping the capability of European research institutions. Finally, it examined methodological issues relating to the cross-cultural study of children's online experience. For more information see www.eukidsonline.net

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Executive summary

Context

- 1 With 75% of European children using the internet, some observers celebrate children's youthful expertise while others worry that they are vulnerable to new forms of harm. Policies to balance the goals of maximising opportunities and minimising risks require an evidence-based approach.
- 2 Funded by the European Commission's Safer Internet Programme, EU Kids Online (2006-09) is a thematic network that aimed to identify, compare and draw conclusions from existing and ongoing research on children and online technologies conducted in Europe.

The evidence base

- 3 Having constructed a publicly accessible and searchable database of nearly 400 studies conducted across Europe, it became clear to EU Kids Online that research is unevenly distributed across Europe, with most in Germany, the UK and Denmark and least in Cyprus, Bulgaria, Poland, Iceland, Slovenia and Ireland.
- 4 Although most countries strategically shape the research agenda through collaboration among universities, research councils, government ministries and, sometimes, industry, in countries where little research funding exists, the EC has significantly shaped the research agenda. In countries where internet use is high, media coverage tends to focus the research agenda on risks and safety awareness.

Findings – online use and risk

- 5 Children's use of the internet continues to grow. Striking recent rises are evident among younger children, in countries which have recently entered the EU, and among parents. This last reverses the previous trend for teenagers especially to outstrip adults in internet use. Long-standing gender inequalities may be disappearing, though socio-economic inequalities persist in most countries.
- 6 Across Europe, despite some cross-national variation, available findings suggest that for online teenagers, the rank ordering of risks experienced is fairly similar. Giving out personal information is the most common risky behaviour, followed by encountering pornography online, then by seeing violent or hateful content. Being bullied online comes fourth, followed by receiving unwanted sexual comments. Meeting an online contact offline appears the least common though arguably the most dangerous risk.
- 7 Even though higher status parents are more likely than those of lower socio-economic status to provide their children with access to the internet, it seems that the children from lower status homes are more exposed to risk online. There are also gender differences in risk, with boys more likely to encounter (or create) conduct risks and with girls more affected by content and contact risks.

- 8 Countries were classified by degree of children's internet use and degree of risk online. The classification of countries as 'high risk' (ie, above the European average), 'medium risk' (ie, around the European average) or 'low risk' (ie, below the European average) is a relative judgement based on findings in the available studies reviewed in Hasebrink et al (2009). This suggests a positive correlation between use and risk: Northern European countries tend to be 'high use, high risk'; Southern European countries tend to be 'low use, low risk'; and Eastern European countries tend to be 'new use, new risk'.

Policy recommendations – maximising opportunities

- 9 E-inclusion policies should target countries where children's internet use is relatively low (Italy, Greece, Cyprus), along with certain population segments (less well-off households, parents who are not online) if the remaining 25% of EU children are to get online.
- 10 Balancing empowerment and protection is crucial, since increasing online access and use tends to increase online risks. Conversely, strategies to decrease risks can restrict children's online opportunities, possibly undermining children's rights or restricting their learning to cope with a degree of risk.
- 11 Balancing these competing goals requires a mix of regulation, media literacy and improved interface design. Positive online provision is also important. There are growing indications that such provision, if valued by children, directly benefits their development and reduces online risks by encouraging valuable and valued activities.
- 12 Greater internet use is associated with higher levels of education, so educational achievement may be expected to increase the extent and sophistication of internet use. Further, gaps in ICT provision and insufficient/ outdated provision of ICT in schools should be addressed, and media education should be recognised and resourced as a core element of school curricula and infrastructure.

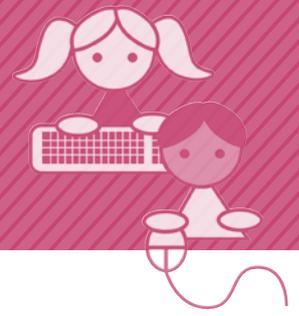
Policy recommendations – minimising risks

- 13 There are good grounds to strengthen regulatory frameworks across Europe, especially in some countries, since substantial proportions of children are encountering content, contact and conduct risks, and since many children and parents lack the tools and skills by which they can prevent or manage such exposure.
- 14 Self-regulatory provision in improving children's safety online is to be welcomed and supported, although it is not always transparent or independently evaluated. Children can only be supported in managing the online environment if this is substantially regulated – by law enforcement, interface and website design, search processes, content and service providers, online safety resources, etc – just as they can only be taught to cross a road on which drivers and driving are carefully regulated.

- 15** Priorities for future awareness-raising should concentrate on countries identified by research as high risk (Estonia, the Netherlands, Norway, Poland, Slovenia, the UK); on countries which have rapidly and recently adopted the internet, where access appears to exceed skills and cultural adjustment (Bulgaria, Estonia, Greece, Poland, Portugal); and on countries where children's use exceeds parents' use (Hungary, Malta, Poland, Romania).
- 16** Awareness-raising priorities should focus on younger children; on strategies to encourage coping after exposure to risk; on addressing girls and boys differently; and on targeting less privileged families, schools and neighbourhoods. Awareness-raising should encompass new risks as these emerge, especially on mobile platforms and via peer-to-peer content and services.
- 17** Policy must move beyond the division between child victims and adult perpetrators. Some children perpetrate online risks, whether from malice, playfulness or mere accident; those who tend to experience online risks may generate further risks; those who create risks may also be victims; and those who are vulnerable online may lack adequate social support offline.
- 18** Although no-one doubts that parents are responsible for their children's safety, evidence suggests that they should not be relied upon as many are unaware or unable to mediate their children's online activities. Rules and restrictions do not fit well with the ethos of modern parenting, especially in some countries, and it is unclear that parental strategies are effective in reducing children's exposure to risk or increasing their resilience to cope.
- 19** Given the growing impetus behind media literacy initiatives, it is timely to evaluate their effectiveness in increasing children's critical knowledge of the online environment. The changing demands of a complex technological, commercial and, increasingly, user-generated environment sets limits on children's media literacy, hence the importance of co- and self-regulation to support children's media literacy.
- how children (and parents) do and should respond to online risk;
 - how to identify particularly vulnerable or 'at risk' children within the general population;
 - evaluations of the effectiveness of technical solutions, parental mediation, media literacy, other awareness and safety measures, both in terms of the ease of implementation and more importantly in terms of their impact on risk reduction; this may vary for different groups of children in different cultural contexts.
- 21** To advance this agenda, and since methods of researching children, the online environment, and countries in comparative perspective are all demanding, EU Kids Online produced two reports on methodology – a literature review and a best practice research guide, plus additional online resources to guide researchers. All are available at www.eukidsonline.net, along with project reports and further publications.

Research recommendations

- 20** There are some significant gaps in the evidence base. Research priorities include:
- younger children, especially in relation to risk and coping, though continually updated research on teenagers is also important;
 - emerging contents (especially 'web 2.0') and services (especially if accessed via mobile, gaming or other platforms);
 - understanding children's developing skills of navigation and search, content interpretation and critical evaluation;
 - new and challenging risks, such as self-harm, suicide, pro-anorexia, drugs, hate/racism, gambling, addiction, illegal downloading, and commercial risks (sponsorship, embedded or viral marketing, use of personal data, GPS tracking);



Introduction

The internet and new online technologies are becoming embedded in everyday life across Europe and elsewhere, with many countries under pressure to get online so as to stimulate innovation, education, participation and commerce. The importance of the internet for work, education, community, politics, family life and social relationships raises new questions for researchers, policy makers and the public.

With three quarters of European children using the internet, young people tend to be in the vanguard of new online activities. One consequence is the optimistic celebration of youthful experts pioneering new forms of social life online. A second is the growing anxiety that children are especially vulnerable to new forms of harm. Policies to enable and protect children online requires a sceptical, evidence-based approach if it is to achieve a balanced approach to maximising opportunities and minimising risks.

Supporting evidence-based policy

In Europe, policy is being debated by diverse national and regional bodies, including the EC's Safer Internet Programme. These must contend with substantial cross-national differences in internet access and use, ranging from under half of children online in Italy (45%) and half in Greece and Cyprus (both 50%) to two-thirds of children in many countries, rising to 94% online in Finland¹. As countries also vary economically and culturally in their values, resources and priorities, this affects both contexts of childhood and of research.

The past decade has seen a burgeoning of empirical research conducted in many countries, using a variety of methods and published in diverse languages. Thus is it not easy to ensure that policy designed to enable and protect children online is evidence-based, as the available findings must be identified, sorted, evaluated and interpreted. Further, since technological, economic, political and cultural factors all shape the processes of internet diffusion and use differently in different countries, a comparative lens is vital if one is to understand which conditions are similar for children across countries and what are distinctive to any one country.

Policy makers, industry, child welfare experts and educators rely on research to guide their understanding of the online opportunities and risks experienced by children and families. Research maps knowledge of which children have access to which technologies charting which uses (beneficial or harmful) may result. And it guides policy initiatives and practical interventions – identifying those most at risk, targeting safety advice, guiding awareness programmes and anticipating new trends.

Our approach

EU Kids Online employs an approach to understanding children's online experiences defined by four C's – comparative, contextual, child-centred and critical – to inform research and policy agendas. In undertaking this work, it must be recognised that, while policy makers address both opportunities and risks, this distinction is not easy to draw in research terms. Children and adults categorise online activities differently, and adults themselves do not always agree on definitions, especially regarding risk and especially across cultures. Moreover, without underplaying genuine concerns regarding online harm, it is also important for children to become resilient, encountering and learning to cope with some degree of risk. Thus, EU Kids Online addressed complex issues, many of which are addressed in more depth in the project's reports and publications.

Project design

EU Kids Online (2006-09) is a thematic network examining European research on cultural, contextual and risk issues in children's safe use of the internet and online technologies. It has been funded by the European Commission's Safer Internet Plus Programme (DG Information Society and Media), coordinated by the London School of Economics and Political Science and guided by international and national policy advisors.

The aim was to identify, compare and draw conclusions from existing and ongoing research at the intersection of three domains (see Figure 1):

- Children (up to 18 years old) and their families
- Online technologies, especially the internet
- European empirical research and policy on use, risk and safety

Research teams from 21 European countries were chosen for diversity across countries and range of expertise across researchers:

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, United Kingdom.

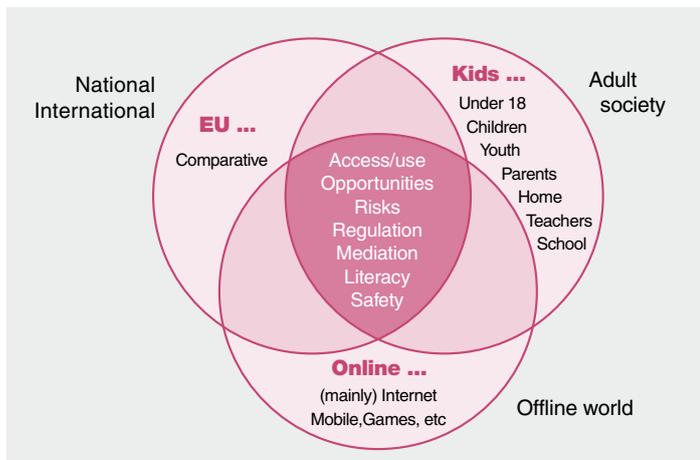
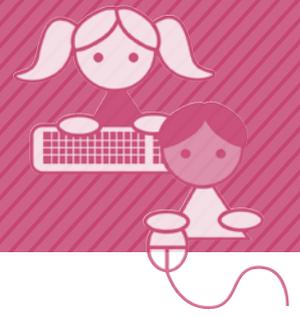


Figure 1: EU Kids Online – project focus

The project objectives, achieved via seven work packages, set out to:

- **Data Availability:** identify and evaluate available data on children's/ families' use of the internet and online technologies, noting key gaps in the evidence base.
- **Research Contexts:** understand the national and institutional contexts of research and inform the future research agenda.
- **Cross-national Comparisons:** compare findings across diverse European countries, contextualising similarities and differences so as to identify opportunities, risks and safety issues.
- **Methodologies for Good Research Practice:** guide researchers in meeting the methodological challenge of studying children online cross-nationally.
- **Policy Recommendations:** develop evidence-based policy recommendations for awareness-raising, media literacy and other actions promoting safer internet use.
- **Dissemination:** disseminate research findings, methods guidance, recommendations and all outputs to public, academic and policy audiences.
- **Network Management:** network researchers across Europe to share and compare data, findings, theory, disciplines and methodological approaches.



Which children are online?

Population statistics and findings from Eurobarometer surveys commissioned by the Safer Internet Programme provide a quantitative framework for EU Kids Online findings (see Table 1).

Country	Population ² (est. millions)	Internet (Broadband ⁴) Penetration (%)	Child Internet Use, by Age ⁵ 2008 (2005) ⁶ (%)				Parents' Internet Use, 2008 ⁷ (2005) (%)
			All	6-10	11-14	15-17	
EU 27	489.1	60.7 (31.6)	75 (70)	60	84	86	84 (66)
Austria (AT)	8.2	68.3 (32.8)	77 (66)	49	90	93	87 (76)
Belgium (BE)	10.4	67.3 (48.1)	71 (84)	58	75	80	92 (80)
Bulgaria (BG)	7.3	32.6 (10.0)	81 (41)	64	89	93	84 (34)
Cyprus (CY)	0.8	41.0 (12.6)	50 (44)	28	57	64	57 (35)
Czech Republic (CZ)	10.2	48.8 (16.5)	84 (78)	58	94	97	91 (73)
Denmark (DK)	5.5	80.4 (63.2)	93 (95)	83	98	99	98 (96)
Estonia (EE)	1.3	65.4 (36.8)	93 (90)	85	97	96	92 (83)
Finland (FI)	5.2	83.0 (53.3)	94 (89)	87	98	100	98 (96)
France (FR)	62.2	64.6 (30.3)	76 (78)	53	86	91	85 (67)
Germany (DE)	82.4	67.0 (33.5)	75 (65)	56	88	94	89 (75)
Greece (EL)	10.7	46.0 (3.90)	50 (39)	25	59	79	54 (24)
Hungary (HU)	10	52.5 (21.8)	88 (65)	68	95	95	80 (41)
Ireland (IE)	4.2	58.0 (13.9)	81 (61)	61	94	96	89 (60)
Italy (IT)	58.1	48.6 (16.4)	45 (52)	34	48	54	82 (62)
Latvia (LV)	2.2	59.0 (22.3)	83 (73)	59	92	99	87 (54)
Lithuania (LT)	3.6	59.0 (19.6)	86 (70)	69	94	96	83 (45)
Luxembourg (LU)	0.5	74.9 (44.1)	75 (88)	47	89	93	92 (87)
Malta (MT)	0.4	23.5 (20.6)	88 (68)	71	93	97	63 (41)
Netherlands (NL)	16.6	82.9 (65.6)	93 (92)	83	96	100	97 (97)
Poland (PL)	38.5	52.0 (21.6)	89 (62)	72	97	98	82 (44)
Portugal (PT)	10.7	39.8 (23.8)	68 (54)	54	81	75	65 (37)
Romania (RO)	22.2	33.4 (n / a)	70 (42)	57	72	82	58 (35)
Slovak Republic (SK)	5.5	49.6 (11.6)	78 (68)	55	87	86	76 (59)
Slovenia (SI)	2	64.8 (33.5)	88 (81)	73	95	96	84 (74)
Spain (ES)	40.5	66.8 (29.3)	70 (52)	52	86	79	72 (50)
Sweden (SE)	9	80.7 (50.8)	91 (86)	77	97	100	97 (98)
United Kingdom (UK)	60.9	70.9 (44.1)	91 (90)	87	94	95	92 (72)
<i>Other</i>							
Iceland (IS) ⁸	0.3	90 (72.2)	94(93)	87	97	100	98(98)
Norway (NO) ⁹	4.6	86 (57.3)	93	n/a	n/a	n/a	n/a(97)

Table 1: Children and parents online by country

Recent changes as younger children go online

As Table 1 shows, several striking changes have occurred in the period from 2005-08.

- Children's use of the internet continues to grow. In 2005, 70% of 6-17 year olds in the EU25 used the internet. By 2008, this rose to 75% on average, though there was little or no increase in use among teenagers. The most striking rise has been among younger children – by 2008, 60% of 6-10 year olds were online (see Figure 2).

- Greater increases in internet use are evident in recent entrants to the EU in Central and Eastern Europe. In other words, countries where use was low in 2005 have seen the greatest increases in recent years, partly because many countries have already approached 'saturation'. One might ask why similar increases are not evident in Cyprus, Italy or, to a lesser extent, Greece.

- Another difference in 2008 compared with 2005 concerns the location of use. While use at school is considerable, in 2005 it was as common as home as a location for children's internet use (one third of under 18's went online in each place). By 2008, 6-17 year olds in all EC countries were much more likely to use the internet at home (65%) than school (57%) or anywhere else, and 34% are now going online using their own computer.¹⁰

Age, gender and socioeconomic trends in use

Cross-national differences remain although, as internet use diffuses further across Europe, these too are reducing with time. In countries with an overall higher internet use (Denmark, Estonia, Netherlands, Sweden, UK), children are much younger when they start to use the internet – in these countries, among the 6 to 7 years old children, almost three quarters use the internet (compared with under one third in Cyprus, Greece, Italy, Portugal and Spain).

- The analysis of internet use by age shows that use increases with each year the child gets older and plateaus by the age of 10-11. In 2005, this plateau was not reached till 12-13¹¹ (Figure 3).

- There are now few differences in internet access and amount of use between girls and boys. The historic tendency for boys, especially when younger, to have more places to use the internet, to get online earlier, and for more of them to use the internet than girls, appears to be disappearing.

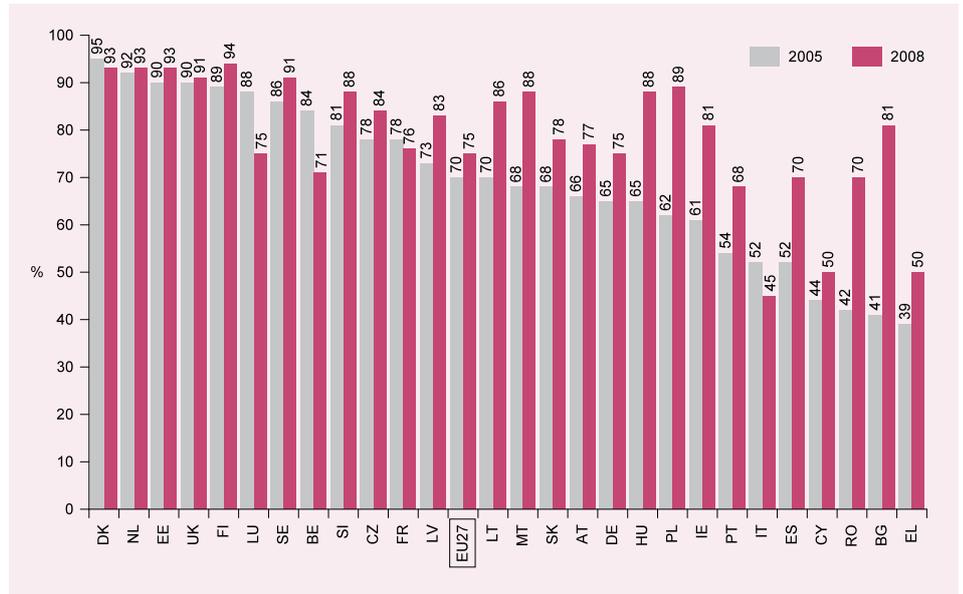


Figure 2: EU children online (%) (Source: Eurobarometer, 2005, 2008)

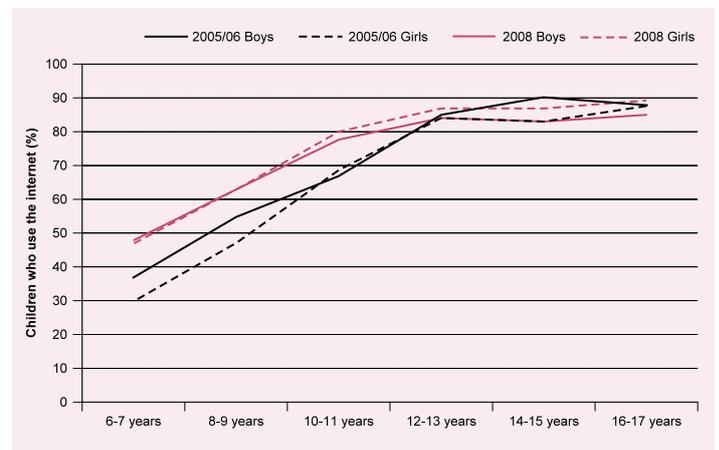
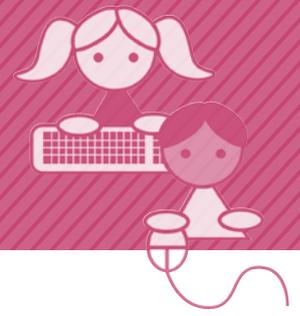


Figure 3: Children's internet use by age and gender (Source: Eurobarometer 2005, 2008)

- However, social inequalities persist in most countries, with better-off, more educated households more likely to provide their children with internet access. There is mixed evidence that, once they have gained access, children from poorer homes may use the internet as much as those in better-off homes. But overall, inequalities remain: in 2008, 76% of highly-educated parents claimed their child uses the internet compared with 61% from the lowest educational group.



Parents are getting online

A further striking change from 2005 to 2008 is that as many parents are now online as children, reversing the previous trend for teenagers especially to outstrip adults in terms of internet use (see Figure 4), although children may still 'lead' in amount/quality of use.

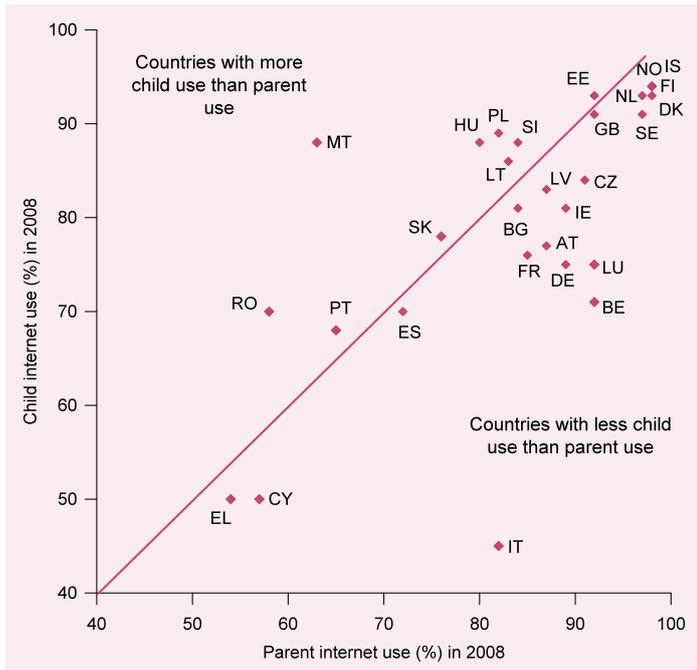


Figure 4: Parents and children's internet use, by country (%) (Source: Eurobarometer, 2008)

- By comparison with their children, parents' use is growing fast. In 2008, 85% of the parents of 6-17 year olds had ever used the internet, a significant increase from the 66% online in 2005. So, in 2005 more children were online than their parents, but no longer. Indeed, across the EU27, only 9% of 6-17 year olds are online while their parents are not.

- There is, therefore, decreasing evidence that children are the 'digital natives', because parents are 'catching up' with teenagers (and were already 'ahead' of younger children).

- 81% of parents of 6-10 year olds are online compared with only 60% of the children of that age. For teenagers, there is little difference – 84% of 11-14 year olds and 86% of 15-17 year olds use the internet compared with 85% of their parents. (In 2005, 12-17 year olds were the digital pioneers, with 87% online compared to only 66% of their parents).

- Only in Estonia, Poland, Slovenia, Malta, Hungary, Lithuania, Slovakia, Portugal and Romania are (slightly) more children online than parents – all countries where the internet is a relatively recent arrival.

- For those children still not online, parental use matters. Children whose parents use the internet are significantly more likely to use the internet (79%) than those whose parents are not online (54%). As Figure 5 shows there is a linear relationship between the frequency of parents' internet use and the likelihood that their children will use the internet themselves. This correlation can be found in countries with a high, medium or low level of internet use.

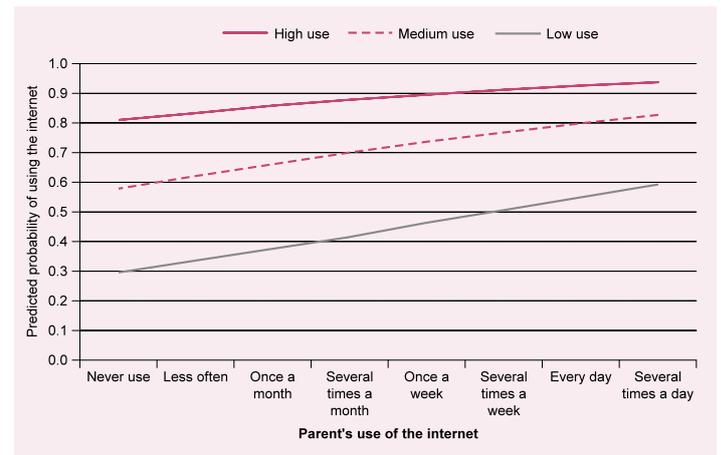


Figure 5: Likelihood of child's internet use, by country type (high/medium/low use)¹² and parents' internet use

Data availability: the evidence base

What do we know about children and young people's access to and use of the internet and online technologies across Europe? This section identifies the available empirical evidence, the aim being to locate what research exists, scope its main features and biases, identify key trends and reveal gaps in the evidence base.¹³

To achieve this, the EU Kids Online network constructed a publicly accessible and fully searchable database of all empirical studies that have been conducted and identified across Europe, provided they meet a certain quality threshold. This 'Data Repository' is online at www.eukidsonline.net. It contains the details of nearly 400 separate studies.

Each is coded by country, topic, age of child, method, sample, etc.¹⁴ References and links to original sources are provided where available, generating a resource for research users in government, academia, policy, funding, regulation and NGOs.

Key features of the available research

Though the scale and quality of studies varies considerably, research on children and young people's use of the internet and online technologies exists in all 21 countries. The evidence base is steadily growing, updating and expanding in scope. Key features of the evidence base are summarised below.

Balance of studies:

- Studies are unevenly distributed across Europe, with most research in Germany, the UK, Denmark and least in Cyprus, Bulgaria, Poland, Iceland, Slovenia and Ireland (see Figure 6).
- In countries where few national studies exist, EC-funded research has shaped the available knowledge by including them in pan-European studies of all member states.

Who is studied?

- Most research focuses on children directly, though much of this concerns teenagers rather than younger children (see Figure 7).
- There is also some research on parents and teachers.

Disciplinary perspectives:

- In terms of academic discipline, much research has been conducted by departments of education, information and psychology, though this varies considerably across countries and may not be easy to determine.
- Too little research is as multidisciplinary as the multidimensional nature of children's internet-related experiences would merit.

Methods:

- The choice of research methodology shapes the available findings. Overwhelmingly, most research, especially non-academic research, is

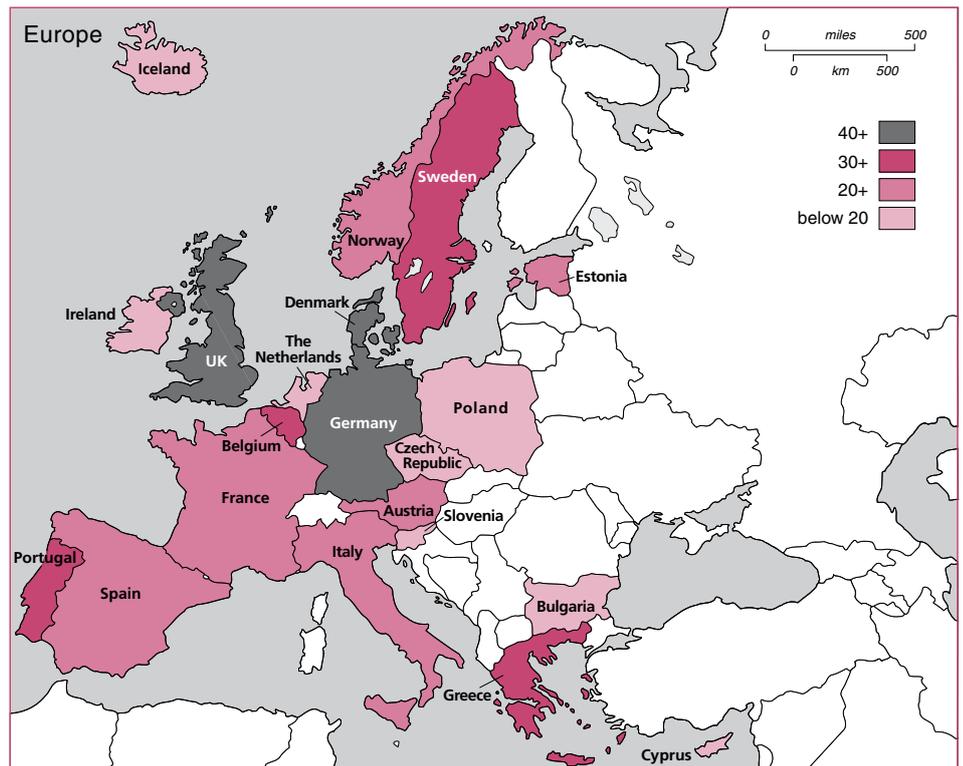
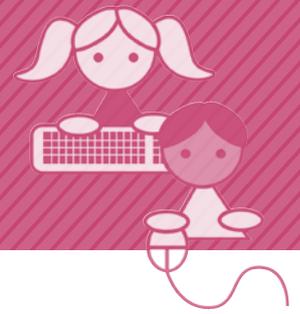


Figure 6: Number of studies identified by country (multicoded)



quantitative, usefully revealing the frequency and distribution of children's activities across the population (though not so much their perceptions of use).

- Since less research uses qualitative or combined methods, the evidence base provides insufficient understanding of children's own experiences or perspectives. It tends to exclude young children (for whom surveys are inappropriate), and it offers little contextualisation of online activities in children's everyday lives.
- In particular, research on teenagers tends to use quantitative methods, while research on younger children is more likely to use qualitative methods. This makes it difficult to estimate the frequency of certain practices or uses among young children or to draw clear comparisons between age or gender. The relative paucity of qualitative methods with older teenagers means that findings lack contextualisation or interpretation in terms of the experiences and perceptions of these young people themselves.

- Outside academic research, most studies are contracted out to market research companies. While the sampling and conduct of such research is often of good quality, typically only descriptive findings are presented, lacking in-depth analysis.

Most research is readily available:

- The internet is itself the main route by which research findings are disseminated, improving the accessibility of research findings. Reported findings for over one half of all the studies identified are freely available online.
- However, relatively few studies are reported in peer-reviewed academic publications, and thus most have not undergone a process of independent scrutiny. In some cases, the absence of vital information (about samples, measures or timing) makes a study difficult to evaluate (and these were excluded).

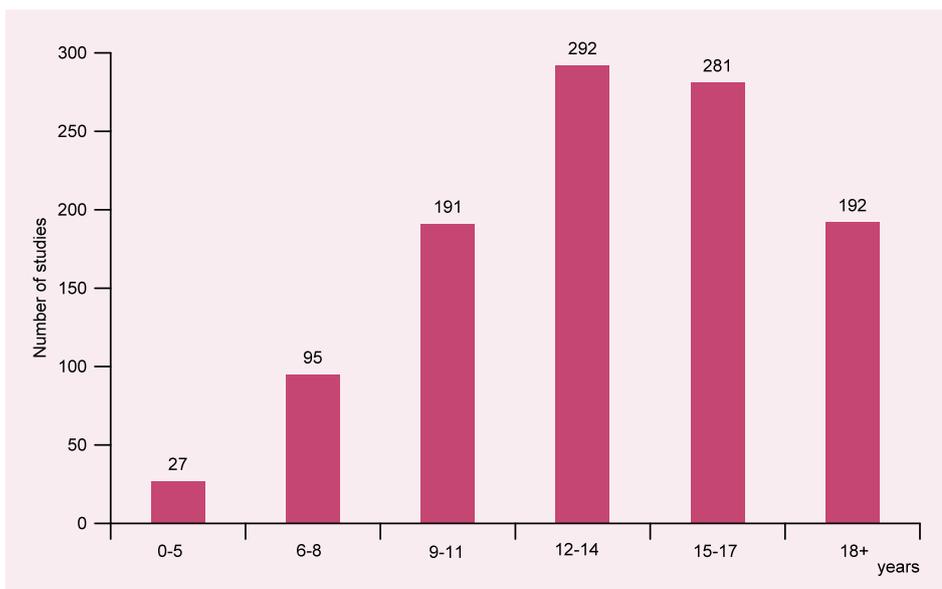


Figure 7: Number of studies per age group (multicoded) 2008

The lower number of studies for the 18+ group reflects the focus of EU Kids Online on under 18s, rather than a paucity of research on older ages – most of these studies are those that capture both children and adults (eg, respondents aged 12-19). Children are often omitted from national studies, though older teenagers may be included in government surveys of 'the population'.

Classifying children's online opportunities and risks

- To analyse the available research findings, children's online opportunities and risks were classified as shown in Table 2.
- The horizontal axis reflects three modes of online communication: one-to-many (ie, child as recipient of mass-distributed content); adult-to-child (ie, child as participant in an interactive situation predominantly driven by adults); and peer-to-peer (ie, child as actor in an interaction in which s/he may be initiator).

- Despite acknowledged difficulties of definition and overlap, for analytic and practical reasons the vertical axis categorises risks and opportunities each according to four research themes.¹⁵

After classifying available research, it was clear that there is more research on access and use than on online risks, with risk addressed in up to a third of all studies.

- The most researched topics are children's online access and usage, followed by lists of online interests and activities. Fewer studies in each country consider children's skills, frustrations, search strategies, creative activities, learning or other topics.

		Content: Child as recipient	Contact: Child as participant	Conduct: Child as actor
OPPORTUNITIES	Education learning and digital literacy	Educational resources	Contact with others who share one's interests	Self-initiated or collaborative learning
	Participation and civic engagement	Global information	Exchange among interest groups	Concrete forms of civic engagement
	Creativity and self-expression	Diversity of resources	Being invited/ inspired to create or participate	User-generated content creation
	Identity and social connection	Advice (personal/ health/ sexual etc)	Social networking, shared experiences with others	Expression of identity
RISKS	Commercial	Advertising, spam, sponsorship	Tracking/ harvesting personal information	Gambling, illegal downloads, hacking
	Aggressive	Violent/ gruesome/ hateful content	Being bullied, harassed or stalked	Bullying or harassing another
	Sexual	Pornographic/harmful sexual content	Meeting strangers, being groomed	Creating/ uploading pornographic material
	Values	Racist, biased info/ advice (eg, drugs)	Self-harm, unwelcome persuasion	Providing advice eg, suicide/ pro-anorexia

Table 2: A classification of online opportunities and risks for children

Risk type	Age (years)											
	0-5		6-8		9-11		12-14		15-17		18+	
Content	11%	3	24%	23	33%	62	33%	95	32%	89	25%	48
Contact	7%	2	18%	17	33%	62	35%	102	35%	98	29%	56
Conduct	7%	2	18%	17	28%	53	30%	90	31%	86	27%	51
N	27		95		191		292		281		192	

Table 3: Percentage (and number) of all studies conducted that address each type of risk by child's age (multicoded for risks and age)



- Nonetheless, across Europe, a fair body of research evidence finds that children use the internet as an educational resource, for entertainment, games and fun, for searching for global information and for social networking, sharing experiences with distant others. Other opportunities (eg, user-generated content creation or concrete forms of civic participation) are less researched and, it also seems, less often taken up by children.
- At present, there is little cross-nationally comparable evidence regarding the take-up of online opportunities. Thus little can be said regarding likely differences across Europe.
- Few studies include parenting issues, though countries with a good deal of research have more studies about parenting than those with little research overall. Thus research on parents' knowledge and management of their children's internet use is lacking in many countries.
- Research on online risks to children is fairly evenly divided across content, contact and conduct risks overall (see Figure 8). Although all countries have some studies addresses each of the three types of risk, there are some cross-national variations.
- These include more research on content than on other risks in Austria, Bulgaria, Cyprus, Greece, Ireland, Poland, Portugal, Slovenia, Sweden and the Netherlands; more on contact than other risks in Belgium, France and the UK; and more on conduct than other risks in Iceland, Norway and Spain.
- Examination of research on risks by the age of the child shows (Table 3) that, of the 27 studies with very young children (0-5 years), few have addressed risk. For 6-8 year olds, there is more work on content risks than other types of risk; for teenagers, there is more research on contact risks. Overall, there is a fair amount of research on each risk for all ages but the youngest.

As shown in Table 4, there is more research overall available in Western Europe, which has both greater research funds and a longer experience of the internet. This is followed by Central Europe, though Germany accounts for over half of this, and more is needed in Poland, Austria, Slovenia and the Czech Republic. Although Northern Europe has long had widespread internet diffusion, the number of studies here is fewer, for the countries and available funding sources are smaller. There is also somewhat less research available in the Mediterranean and Black Sea countries, where internet diffusion has been later and, again, research funding is low.¹⁶

Table 4 also shows the variations in research on risk by region, where both countries and risks are multicoded. Notably conduct risks receive least, except in Northern Europe. Since Northern European countries gained mass internet access earlier than others, their greater focus on conduct risks suggests an agenda yet to be followed elsewhere, though it is noteworthy that attention to cyberbullying is now growing in many countries.¹⁷

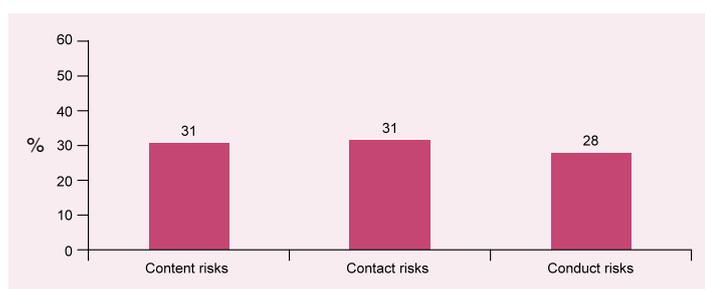


Figure 8: Percentage of studies examining types of online risk (multicoded)

Region	Content	Contact	Conduct	Number of studies (including multi-country studies)
Western Europe (BE, FR, IE, NL, UK)	30% (37)	35% (44)	26% (32)	124
Northern Europe (DK, SE, NO, IS, EE)	37% (36)	38% (37)	40% (39)	98
Central Europe (AT, CZ, DE, PL, SI)	24% (29)	20% (24)	18% (22)	121
Mediterranean and Black Sea (BG, CY, EL, IT, ES, PT)	36% (34)	35% (33)	32% (30)	94

Table 4: Percentage (and number) of all studies conducted that address each type of risk by region (multicoded for risks and region)

Contexts of research

This section examines the factors that influence the research process in this field so as to understand the nature, extent and contexts of research undertaken across Europe. It asks, why are certain aspects of children's experience of the internet researched, and others are not, in different European countries? How far are research contexts common across countries?

Based on a contextual assessment of research activity in the 21 countries, we identify key processes influencing the research agenda and research funding.¹⁸

Setting the research agenda

The source of funding can shape the research agenda (its relation to research is instigated by diverse stakeholders for a range of reasons, resulting in a mixture of strategic and *ad hoc* research activities relating to children and the internet.

- Most countries strategically shape the research agenda through collaboration among universities, research councils, government ministries and, sometimes, industry.
- A range of social and political factors also shape research, including national efforts to support internet diffusion and use, efforts to promote use of the internet in schools, and reactive responses to public concerns.
- Researchers also influence the agenda, as in most countries academics are expected to conduct and publish research, to make external funding applications and, increasingly, to work with government and industry.
- In some countries, especially those which have gained internet access more recently, the EC has set the agenda for research on children and the internet, with national governments often slower to follow.
- Despite some attention to the UN Convention on Children's Rights, the benefits to children of the internet (eg, opportunities for civic participation) are too often low on national and European research agendas.

Factors shaping institutional research contexts

Determining which institutions conduct research is surprisingly difficult: academic institutions are differently organised in different countries; market and industry research is not always published; and the involvement of other bodies (eg, NGOs) varies greatly across Europe.

- Across Europe, the number of universities in a country, itself correlated with population size, is a fair but not a strong predictor of the number of studies on children's internet use in that country.
- Most academic research conducted on children and the internet stems from the disciplines of psychology, education and sociology, with some national variation, while countries where academic departments of media and communications are well established generate more studies of children online (Belgium, Sweden, UK). Most countries use both qualitative and quantitative research methods.
- In most countries, research on the internet began in the early to mid-1990s and became quickly established especially in Nordic countries. Such research has begun more recently in some countries (eg, Czech Republic, Cyprus, Belgium, Greece). Small research communities also tend to have less established research traditions.
- Although it is recognised that research on children's use of the internet raises ethical issues, in many countries research institutions apply few if any regulations regarding the ethical conduct of research (Ireland and the UK appear the most stringent, although many countries have formal regulations regarding parent/teacher permissions for interviewing/surveying children).

Research funding issues

Countries vary considerably in terms of the range of funding sources for research projects.

- Public funding comes mainly from national governments, though the European Commission is also an important source of funding in all countries. Indeed, European Commission funding has been crucial in providing directly comparable data across countries, permitting pan European conclusions regarding children's internet use, and especially developing an adequate evidence base in countries which otherwise lack funding sources.
- Commercial funding is widespread but sporadic, providing one or two studies in most countries but it is only substantial in the UK and Germany. Non-profit organisations also provide some research funding, especially in the UK, though occasionally also in Spain, Belgium, Austria, Poland and Slovenia. In a minority of countries, the regulator is a significant source of research funding.
- In most countries, funding from research councils is modest or (in a third of countries) absent. In countries where external funding is sparse, doctoral and masters' theses can be an important source of information (eg, Portugal, Sweden, Austria).



- Overall, countries can be classified by those that rely on public funding (eg, Czech Republic, France, Norway), those which benefit from public and academic funding (eg, Austria, Portugal, Spain), those which mix public and commercial funding (eg, Germany, Denmark), and those with a more hybrid funding structure (eg, UK, Italy).
- There is no straightforward or systematic relation between funding source and the amount or type of study conducted across Europe. However, the paucity of research in some countries reflects the fact that they are largely reliant on public funding. In most countries, governments and industry are the main funders of research: around half of what they fund goes to research that includes risk issues, and thus they fund a large proportion of the available research on risk. Charities, NGOs, regulators, research councils and the EC fund far fewer studies, though these are much more likely to address risk.
- As a factor influencing the research agenda, media coverage is more frequently mentioned in countries that have higher levels of internet use by children. This seems to suggest that a lower level of internet use among children means less media coverage of this topic and hence less potential to influence the research agenda.
- Happy slapping stories (ie, stories about the peer-based circulation of images of victimisation), news stories of sexual risks and reports on cyber-bullying (these presenting young people as both victims and perpetrators) were the media topics most identified as having influenced the national research agenda.
- Risks of online commercialisation (advertising, sponsorship, marketing) gain little media (or research) attention across Europe, although there are occasional debates on this.

Media influence

It is often asserted that media coverage, especially the media panics all too commonly associated with children and the internet, serves to set the agenda for research, even distracting attention from the potential benefits of the internet to focus public attention disproportionately on the risks.

To investigate this possibility, EU Kids Online conducted a content analysis of press coverage of children and the internet in 14 of the 21 countries.¹⁹ This reveals considerable variation in themes and style of reporting, though it is not so easy to demonstrate any simple influence of media coverage on the research agenda.

- In countries with higher use of the internet among children, media coverage plays a key role in focusing the research agenda on safety and awareness issues.
- In all countries, by far the majority of press coverage on children and the internet is concerned with risks rather than opportunities: nearly two-thirds of all stories (64%) referred to risks, whereas less than a fifth (18%) referred to opportunities.
- There are cross-national differences in the balance of media coverage of content, contact and conduct risks across European countries: in many countries, content risks (mainly pornography) account for over half of all risks covered in the press, being especially high in Greece, Spain, Portugal and Ireland; in some countries, the reporting of conduct risks (mainly bullying) is noticeably high – in Norway, Italy and Austria; only in Denmark (followed by Slovenia) do contact risks attract substantial press coverage (though they still comprise a minority of risk stories covered).
- Such coverage seems likely to sensitise the various national publics and, potentially, the national research communities and research funders to specific issues or priorities. Some national teams reported specific cases in which academic research was influenced by or instigated partly in response to media coverage of online risks.

Making cross-national comparisons

EU Kids Online's analytic framework centres on the online activities of children. It assumes that risks and opportunities are influenced by access, use, attitudes and skills in a mutually reinforcing way. To examine this, the research field was divided into an individual (child-centred) level of analysis and a country (macro-societal) level of analysis (Figure 9).

To operationalise this framework, the strategic decision was taken not to attempt to compare the findings of the nearly 400 separate studies identified in the Data Repository, because of their many differences in approach, sample, methodology and quality. Instead, the EU Kids Online network proceeded thus:

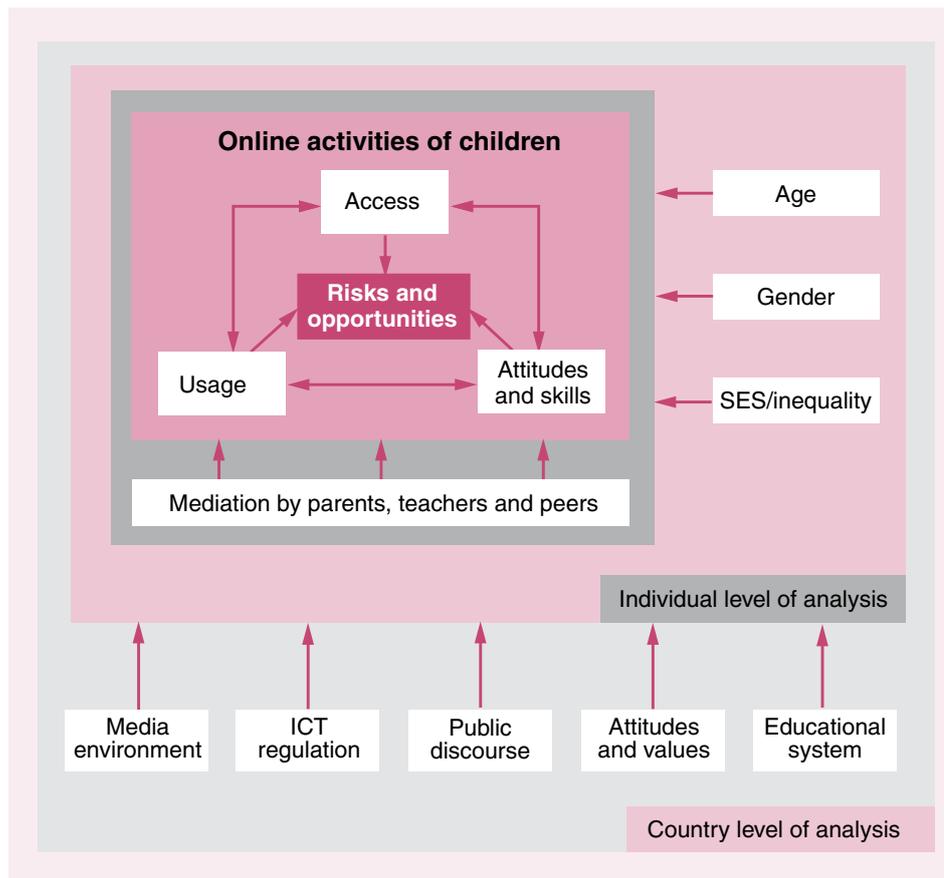
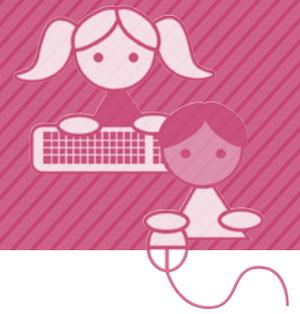


Figure 9: EU Kids Online – analytic framework

- The individual level of analysis (in darker grey) examines whether and how opportunities and risks vary according to a child's age, gender and socio-economic status.
- This level of analysis also examines the mediating role of parents, teachers and peers. The parsimonious assumption would be that these factors influence children's opportunities and risks similarly across Europe.

However, contrary to this assumption, actual findings reveal cross-national differences. Hence a second level of analysis is required. This compares countries according to relevant contextual factors (ie, their media environment, ICT regulation and so forth, as shown). This country level of analysis allows the explanation of observed differences in children's opportunities and risks across Europe.

- First, network members discussed the various approaches taken and findings reported in these many studies across all the different countries included, also benefiting from the 'view from outside Europe' offered by the international advisory panel.
- Then the network constructed a list of key research questions and specific hypotheses of policy relevance that could feasibly be tested against the available evidence. For example, are there gender differences in internet access? How do parents mediate children's internet use? Do middle class children enjoy more online opportunities than working class children? And so forth.
- Finally, the body of findings from each country was interrogated by network members from that country in order to judge whether there is sufficient evidence within each country to answer each research question and support/contradict each hypothesis, or not. Note that where the evidence is insufficient, no conclusions can be drawn.



This proved an effective approach with which the network could be reasonably confident of the conclusions reached. The following grid of countries, defined by countries C1-C21 and research questions RQ1-n and Hypotheses 1-n, was helpful in guiding the work. This distinguishes two main forms of analysis *at the individual level* (Figure 10):

- (1) Reading horizontally: 21 country reports were generated by using available findings to address each of the research questions/ hypotheses at the national level. This provided a structured account of the situation in each country.
- (2) Reading vertically: comparative reports were generated for each question/ hypothesis. In the interests of parsimony, cross-national similarities were checked for first.

(3) In the cases where cross-national differences were found, a third form of analysis was required – the *country level of analysis*. Here the network drew on the contextual information collected regarding national differences in media environment, ICT regulation, public/media discourses, values and education systems to explain these.

In the full report,²⁰ conclusions regarding the key research questions and hypotheses are carefully examined in relation to the available findings across Europe. These permit some general conclusions which hold across the countries examined. But it must be noted that these are based on the judicious interrogation of the studies included in the online database, and so their scope and certainty is constrained by the strengths and limitations of the available body of research.

In what follows, we draw out the main comparative conclusions regarding online risk.

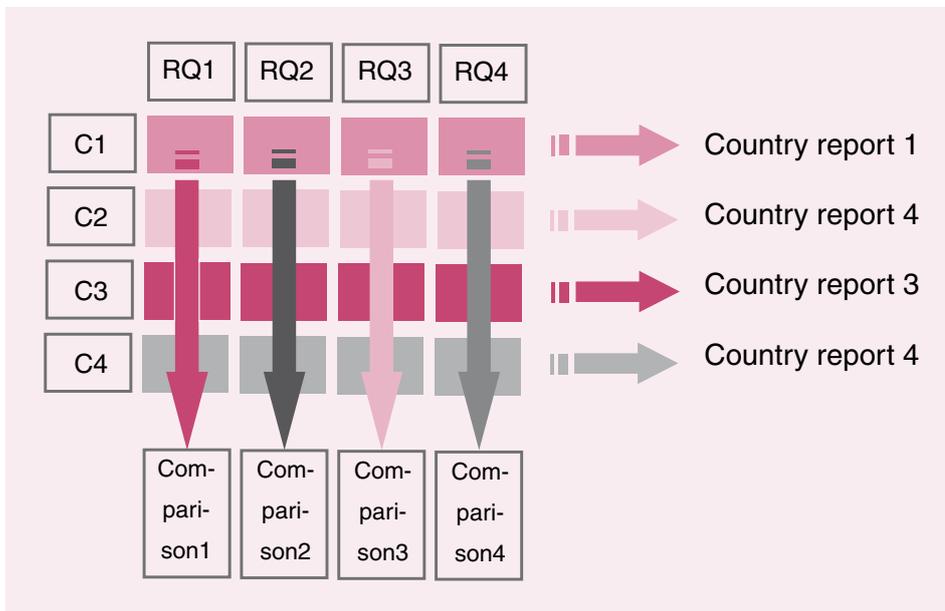


Figure 10: EU Kids Online – comparative method

Comparing online risks to children

In making cross-national comparisons, we first examine similarities in online risk experience, based for the most part on research with teenagers.

Ranking of risk incidence

Across Europe, notwithstanding considerable cross-national variation, it appears that the rank ordering of risks experienced is fairly similar in each country.

- Giving out personal information is the most common risky behaviour at around half of online teenagers,²¹ Note that, as anonymity removes conventional constraints on communication, there are risks associated both with disclosing and not disclosing personal details.
 - Seeing pornography online is the second most common risk at around 4 in 10 teenagers across Europe. This risk is widely regarded with ambivalence by both adults and children, with considerable disagreement over the potential harm involved.
 - Seeing violent or hateful content is the third most common risk, experienced by approximately one third of teenagers. As with pornography, the nature or level of violent content encountered is little researched, partly for ethical reasons.
 - Being bullied (ie, 'cyber-bullied) comes fourth, affecting some 1 in 5 or 6 teenagers online, along with receiving unwanted sexual comments – experienced by between 1 in 10 teenagers (Germany, Ireland, Portugal) and as many as 1 in 3 or 4 teenagers in Iceland, Norway, UK and Sweden, even rising to 1 in 2 in Poland.
 - Last, meeting an online contact offline appears the least common though arguably the most dangerous risk. There is a fair degree of consistency in the findings across Europe: around 9% (1 in 11) of online teenagers go to such meetings, rising to 1 in 5 in Poland, Sweden and the Czech Republic. Often these meetings are with teenagers of a similar age
 - In several countries, there is evidence that around 15%-20% of online teenagers report a degree of distress or of feeling uncomfortable or threatened online. This provides some indication, arguably, of the proportion of teenagers for whom risk poses a degree of harm.
- In most countries, household inequalities in socioeconomic status have consequences for risks as well as opportunities. Specifically, even though higher status parents are more likely than those of lower status to provide their children with access to the internet, this generally enabling more use among advantaged children, it seems that lower class children are more exposed to risk online.
 - There are also gender differences in risk, with boys apparently more likely to encounter (or create) conduct risks and with girls more affected by content and contact risks.
 - Specifically, boys appear more likely to seek out offensive or violent content, to access pornographic content or be sent links to pornographic websites, to meet somebody offline that they have met online and to give out personal information. Girls appear more likely to be upset by offensive, violent and pornographic material, to chat online with strangers, to receive unwanted sexual comments and to be asked for personal information though they are wary of providing it to strangers. Both boys and girls appear at risk of online bullying.
 - It seems likely that these gender differences are the (mainly) unintended consequences of the choices that girls and boys make regarding preferred online activities. Nonetheless, this hardly makes the associated risks something they can be held responsible for, and nor is restricting their preferences the optimal solution to the problem of risk.
 - Last, it appears that older teenagers encounter more online risks than younger children, though the question of how younger children cope with online risk remains little researched.

Classification of countries by online risk to children

Second, we consider the cross-national variation in children's experiences of risk online. The differences identified across countries were used to construct a classification of countries in terms of children's online use and risk. This revealed the following:

Who encounters online risks and where?

- Findings from the pan-European Eurobarometer survey suggest that, according to their parents, children encounter more online risk through home than school use (though this may be because parents know little of their children's use at school)
 - But since children use the internet at home for longer periods and often with less supervision, this is also likely to increase risk. Further among those (relatively few) children who use the internet in an internet café or at a friend's house, the absence of supervision makes these risky locations.
- Although generally European children are gaining access to the internet, considerable differences in access and use remain, enabling a country classification based on the percentage of children who use the internet (as low, medium or high).
 - Also striking is the diversity of online risk figures obtained across countries, suggesting a classification of countries based on the likelihood (also low, medium or high) of children's experiencing online risk. This classification reflects a composite judgement, based on EU Kids Online's review of a fair number of studies that use more or less similar methods.²² In other words, the classification of countries as 'high risk' (ie, above the European average), 'medium risk' (ie, around the European average) or 'low risk' (ie, below the European average) is a relative judgement based on findings in the available studies reviewed in Hasebrink et al (2009).



Putting these two classifications together produces Table 5.

- This classification suggests a positive correlation between use and risk. High use, high risk countries are, it seems, either wealthy Northern European countries or new entrants to the European Union. Southern European countries tend to be relatively lower in risk, partly because they provide fewer opportunities for use.
- Further, high use of the internet is rarely if ever associated with low risk, this setting a challenge for public policy ambition of maximising opportunities while minimising risks. Average use may, it seems, be associated with high risk, suggesting particular problems in new entrant (eg, Eastern European) countries where regulatory infrastructure and safety awareness is relatively underdeveloped.
- Stating this differently, we might conclude, as a broad generality, that (i) Northern European countries tend to be 'high use, high risk'; (ii) Southern European countries tend to be 'low use, low risk', and (iii) Eastern European countries tend to be 'new use, new risk'.
- More promisingly for public policy, high use may also be associated with only average risk, notably in Nordic countries where both regulation and awareness are most developed, these countries having 'led' in internet adoption and, presumably, cultural adjustment.

Online risk	Children's internet use		
	Low (< 65%)	Medium (65%-85%)	High (> 85%)
Low	Cyprus Italy	France Germany	
Medium	Greece	Austria Belgium Ireland Portugal Spain	Denmark Sweden
High		Bulgaria Czech Republic	Estonia Iceland Netherlands Norway Poland Slovenia UK

Table 5: Classification of countries by children's internet use and online risk

Coping with risk

- Given the available evidence, it seems that there are both pan-European similarities and cross-national differences in how children cope with online risk. Note, first, that is little consensus on what it means to 'cope' with or 'be resilient' to online risk, nor much expertise in measuring this.

- A qualitative study for the Safer Internet Programme scopes the range of children's coping responses, from ignoring the problem to checking website reliability or reporting it online, telling a friend or (rarely) a parent or, for some, exacerbating the problem by forwarding on or responding with hostility. These are not yet systematically studied and nor is their effectiveness evaluated.²³
- Generally, it seems that children's internet-related skills increase with age. Such skills are likely to include children's abilities to protect themselves from online risks although, perhaps surprisingly, this has been little examined. However, there are difficulties measuring internet-related skills as yet, and little available comparable research on children's attitudes to the internet. For example, boys often claim higher skill levels than girls, but this remains to be tested objectively, and little is known of how children evaluate websites, determine what is trustworthy, cope with what is problematic and respond to what is dangerous.
- There are cross-national differences in coping, it seems. Children's perceived ability to cope with online risk (as reported by parents in different countries, based on the 2005 Eurobarometer survey) reveals that high ability to cope is claimed for children in Austria, Belgium, Cyprus, Denmark, France, Germany, and the UK; low ability to cope is claimed in Bulgaria, Estonia, Greece, Portugal and Spain (intermediate countries are Czech Republic, Ireland, Poland, Slovenia and Sweden).
- Across countries, findings for coping are negatively correlated with parents' perception that their child has encountered harmful content online. In other words, in high risk countries, parents perceive that children have lower coping skills and vice versa. It seems likely that in high risk countries, parents have good reason to doubt their children's ability to cope, while in low risk countries, parents may overestimate their children's capacity to cope, since both parents and children lack experience of online risk. High risk/low coping countries include Estonia, Bulgaria, Poland and Czech Republic. Note that this correlation does not hold at an individual level (ie, it cannot be said that if a parent claims their child has encountered harmful content, that parent is also more likely to think their child can cope).
- In the 2008 Eurobarometer survey, 27% of parents in the EU27 said their child had asked them for help when a problem of any kind occurred while using the internet. This figure is high in Denmark (48%) and Slovenia (45%) and low in Ireland (18%) and the UK (15%). Children's problems were mostly technical (eg, viruses) or related to information seeking. The same survey found very few parents who reported that their child had asked for help because of being contacted by strangers online, having found sexually or violently explicit images online, being harassed or bullied online. It seems that asking parents for help does not play a significant role in children's approach to coping with online risks.

Parental mediation of children online

As noted earlier, there is relatively little evidence regarding parental practices in most European countries. Hence in what follows, we rely largely on analysis of the 2008 Eurobarometer survey. This shows, as with other findings, both cross-national similarities and differences. Overall, parental concern regarding their children's safety online is high, this apparently stimulating a fair range of practices designed to make internet use safer for their children. However, little is known of their effectiveness in either encouraging resilience in children or in reducing their experience of risk.

- The 2008 Eurobarometer survey found that, parents of 6-17 year olds in the EU27 were rather or very worried about their child seeing sexually/violently explicit images (65%), being a victim of online grooming (60%), getting information about self-harm, suicide or anorexia (55%), being bullied online by other children (54%), becoming isolated from other people (53%) and giving out personal/private information online (47%). A quarter of parents worry about all of these risks. And parents worry more about girls and about younger children (though, as was seen above, boys and teenagers encounter as many or more risks online).
- Cross-national differences are also evident, largely related to the degree of internet diffusion. The correlation (r) between parental worries and national percentage of children online is negative ($r = -0.62$). Thus, if fewer children are online in a country, parents are more (not less) worried. Notably, parents in France, Portugal, Spain, and Greece (all countries where children's internet use is lower) are far more worried than parents in high use countries like Denmark and Sweden. To reduce parental worries, one could encourage internet use; yet such a conclusion might be counter-productive, insofar as worries are likely to encourage mediation practices. Clearly parental mediation (though not necessarily worry) should increase as more children go online in a country.
- Parents who are themselves online are less worried than those who are not. The correlation between parental worries and the national percentage of parents online is also negative ($r = -0.60$). Thus, parents in a country where experience of the internet is commonplace are less worried. Getting parents online is therefore likely to produce a good means of reducing anxiety as they will then learn about the online experience and improve their online skills.
- As with most media, parents report various strategies for mediating their children's online activities. These include, first, imposing rules and restrictions; second, social approaches – watching, sharing, talking about the internet with their children; and third, using technical tools such as filtering, monitoring. Generally, parents prefer to talk to their child about what they do online and to stay nearby when their child is online – for younger children, because parents wish to share their experiences, for older teenagers because parents think rules do not work or are inappropriate for their age, and for all children because parents wish to trust their child and treat them with respect. Nonetheless, a substantial proportion reports using each of the available strategies.
- The 2008 Eurobarometer survey reveals that cultural values matter. The lower levels of worry and of mediation among Nordic parents, despite their high internet use, may be due to more laissez faire attitudes regarding the internet or to greater confidence in their children. Specifically, parents in Denmark and Sweden claim to mediate their children's internet use much less than parents in Germany, Greece, Ireland, Italy, Portugal, Spain and the UK. So too do parents in Estonia and the Czech Republic, but this may rather reflect a relative lack of parental knowledge of the internet. Overall, analysis of the 2008 Eurobarometer suggests that if parents are internet users, they report more mediation of their child's internet use; non-using parents mediate less.
- Categorising parental mediation as either, broadly, social or restrictive, we can position countries according to parental preferences for strategies of mediation, as shown in Figure 11. This shows both that countries differ

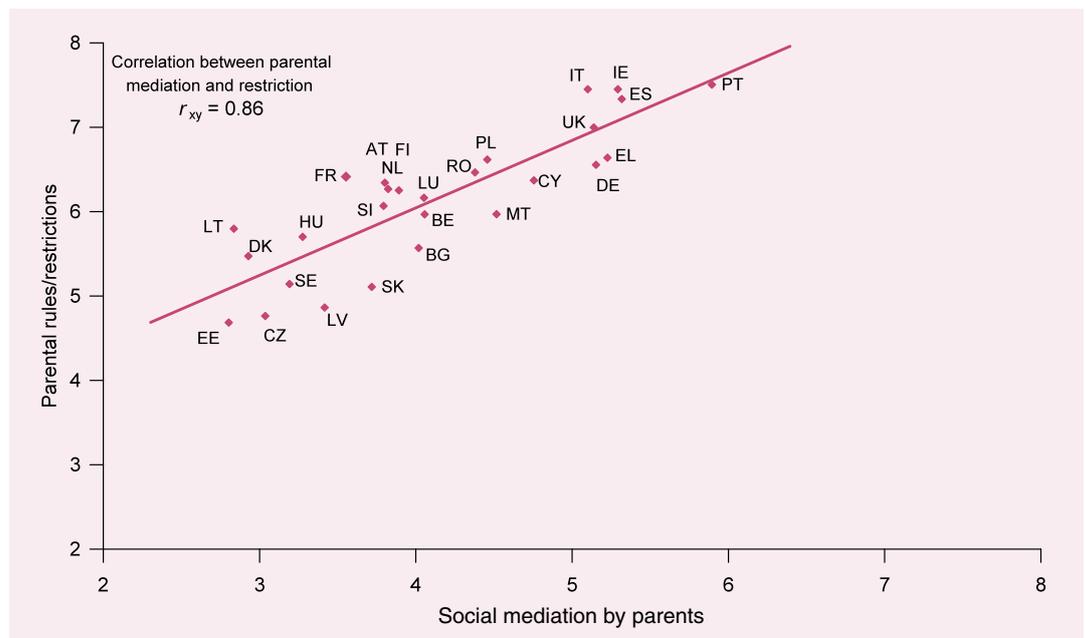
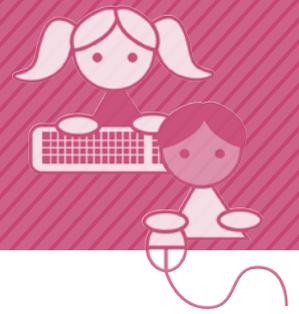


Figure 11: Parental use of social mediation and rules/restrictions, by country

The 2008 Eurobarometer survey included six questions on, broadly, forms of social mediation (stay nearby when your child is online, sit with..., talk to..., check computer, check messages, check profile) on a scale from 1-4. A 'social mediation index' was calculated by putting each question on a scale from 0 (never) to 3 (always), calculating the average for the six questions, and projecting onto a scale from 0 to 10. The survey also included nine questions on parental rules and restrictions with a yes/no answer (are there things your child is not allowed to do – talk to people they don't know online, use email, instant messaging, chat rooms, create profile, access certain websites, download music, films, games, buy online, give out personal information). A 'parental restriction index' was constructed by summing positive answers to the nine questions and then, for comparability, projecting onto a scale from 0 to 10.

As the scales are standardised, the scale values cannot be interpreted directly: rather, Figure 11 shows the relative positioning of one country compared with the others.



in the overall amount of mediation claimed by parents, and also in their relative preference for social strategies (notably Germany, Bulgaria, Latvia) or rules and restrictions (notably, Austria, Finland, France).

- As for using technical tools, among parents whose children use the internet at home, 49% across Europe claim that they have installed filtering software; another 37% say they have monitoring software, and 27% use both tools. 31% have none of these, and 11% were not able to answer this question. Cross national comparisons show that parents in the UK, Ireland and Germany are most likely to use software tools, while parents in Bulgaria, the Czech Republic, Portugal and Estonia are the least likely (Eurobarometer, 2008). Compared to 2005/06, parents in Slovenia and Greece have considerably increased their use of technical tools.
- In interpreting the above, it should be noted that when researchers interview children as well as parents, there is a substantial gap between the (lower) amount of parental mediation reported by children and the

(higher) amount reported by parents. The reverse holds for parental and children’s reports of the incidence of online risk: parents perceive that children encounter less risk than do children.²⁴

- From the 2005 Eurobarometer survey, which compared parental mediation across media, it was found that internet mediation is lower for television for children younger than 13, suggesting a willingness to mediate the internet more if only parents understood the technology better. It was also found that in high internet use countries, parents restrict internet use more than they do television. In low use countries, by contrast, they are more likely to restrict children’s television viewing. This suggests that there is a regulation gap in low use countries: though parents are evidently willing to mediate, since they do so for television, it seems they lack either the awareness or the skills to mediate the internet to a similar degree (see Figure 12).

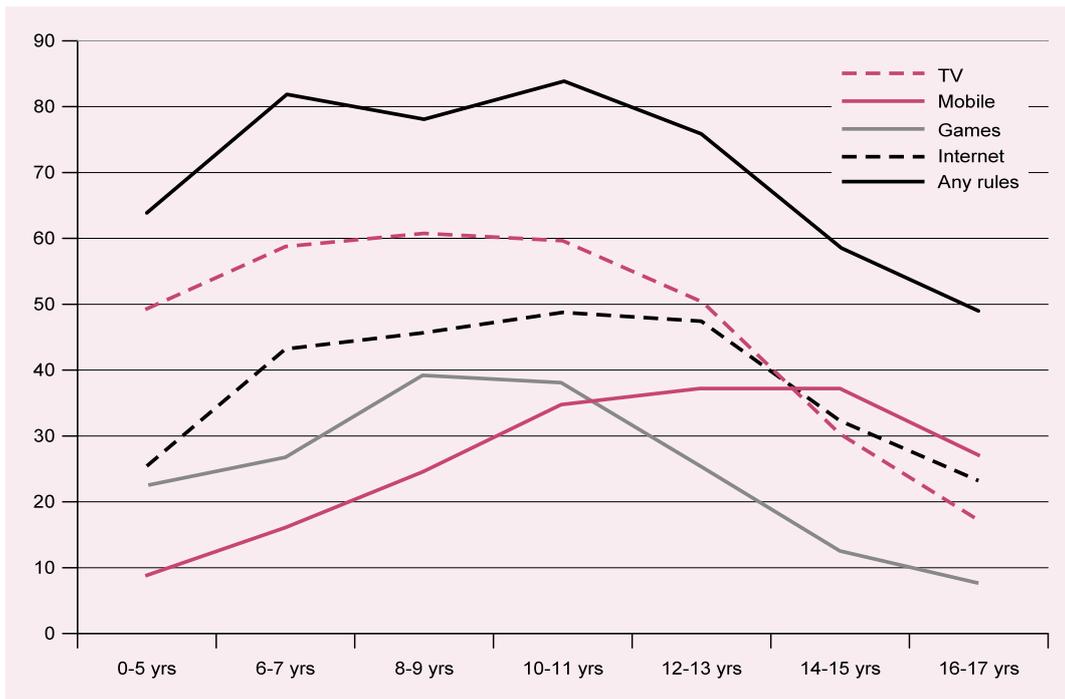


Figure 12: Parents who have set (any) rules for using different media (% , 2005)

Explaining cross-national differences

To the extent that the foregoing has revealed cross-national differences rather than similarities, a country level of analysis is required to explain them (ie, treating countries rather than individuals as the unit of analysis). The EU Kids Online comparative report (Hasebrink et al, 2009) reviews evidence for possible contextual explanations of cross-national differences in access, use and, especially, risk.

The absence of sufficient comparable data, and limitations on the network's resources and time, made this a challenging task, and we had to collapse our original six dimensions into four overall areas of comparative difference (see Figure 13).

This shows the different contexts that shape children's online activities, and the different levels (from cultural through discursive to local/domestic) through which they work and interact together.

In addressing these factors in what follows, we stress that our interpretations are tentative, suggesting rather than establishing explanations as a guide for policy and research.

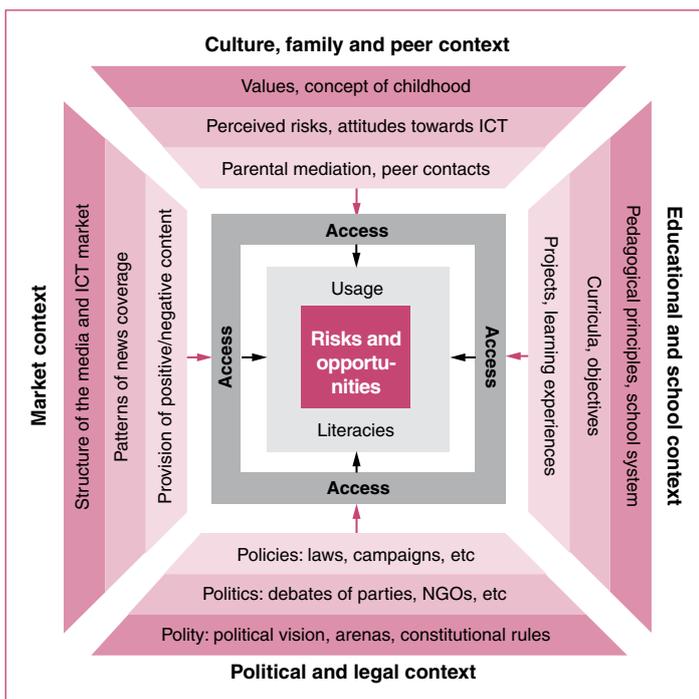


Figure 13: Contextualising children's internet use

Market context

- The degree of internet diffusion influences children's access and use. Since differences in diffusion and, therefore, access, across European countries are still large, this is an obvious and crucial factor influencing children's experience of the internet in Europe. With access comes familiarity, interest and expertise. It also results in both online opportunities and risks.
- In some countries, the internet is a normal part of people's daily lives, in others people must make a specific effort or possess particular resources not available to all. In countries where access has become commonplace, it appears that gender and socio-economic status differences across households are reducing. However, these differences (or inequalities) remain significant, especially where access cannot (yet) be taken for granted.
- There are some indications that the presence of a strong public service broadcaster or other public content provider(s) for children plays a role in encouraging online opportunities. EU Kids Online lacked a rigorous indicator for this factor, so it is put forward here as a hypothesis: if children have a positive online alternative to risky activities, this may both benefit them and also reduce risk.
- English language proficiency tends to be higher in Northern Europe, where both use and risks tend to be average or high. It is possible that greater access to English language content may bring risks as well as opportunities. Compared with small language communities (eg, Czech Republic, Slovenia, Greece), in larger language communities (notably Germany, France, Spain, UK) it is more likely that the market will provide sufficient positive online content for children, reducing the likelihood of inadvertent or deliberate risks.
- The overwhelming focus of media coverage on online risks rather than opportunities may increase parental anxiety. Since there is a correlation between national levels of parental internet use and parental anxiety about children's internet use, the combination of low parental use and media panics may exacerbate parental anxiety in some countries.

Cultural context

- Cultural conceptions of childhood are often reflected in national media coverage. For example, in Norway there is a notion of a 'natural childhood', where sexuality is less of a risk while at the same time discussions of children's rights is strong. Such underlying conceptions may well help to shape the nature of how media engage with the topic of children and the internet.
- Little is known of how peer culture mediates children's internet use, though previous research has pointed to cross-national variations in the balance of family and peers as children grow older, to the constraints on friendships in cultures where outside play is highly restricted, and the growth of media-rich bedrooms in individualised cultures.²⁵



- The European Values Survey permits a classification of countries according to the dimensions of individualism and collectivism.²⁶ Analysis reveals a relationship between national values and the ways in which parents mediate their children's use of television and the internet. Countries where parents put more emphasis on the mediation of television use belong to 'Catholic Europe', whereas in 'Protestant Europe' parents apply more rules for online use.

Political/legal context

- Broadly, it seems that where the internet is less common, more efforts are made in promotion of internet use. Once the internet becomes more common, risk awareness and then literacy initiatives gain priority on the policy agenda.
- Specifically, where national internet access is greater, self regulation by the industry, including provision of safety information provided by ISPs to complement that provided by government and NGOs, appears also greater. It also seems that Anglo-Saxon, Northern and Central European countries have a greater tradition of self-regulation than Latin and Southern European countries; here legislation plays more of a role than self-regulation.
- In terms of the role of the State, the EU Kids Online network members classified their own country as more or less interventionist. Countries classified as relatively interventionist tended to be low to medium on both use and risk (with the exception of the Czech Republic and the UK – medium and high use respectively, and both high risk). Notably, two countries described as taking a liberal approach (Bulgaria, Estonia) appear to be high risk for children online.
- Information from the World Economic Forum²⁷ indicates that while about half of the countries judge that they have adequate regulation on internet issues in general, other countries – such as Cyprus, Poland and Greece – consider more regulatory mechanisms are needed. Of these, EU Kids Online has classified Cyprus and Greece as low use, low risk, suggesting there is time to develop regulation. Poland, however, is classified as high use, high risk, so action here is more urgent. A relatively low level of engagement of NGOs with internet safety issues was also found in several high risk countries.

Educational context

- Cross-national differences in children's online use can be partly explained by different levels of general education: the higher the general education of a country, the higher its children's online use. At present, Southern European countries show considerably higher proportions of the population with only pre-primary and primary education compared with Northern, Central and Eastern European countries, where overall levels of education are significantly higher.²⁸

- The technical infrastructure of schools throughout Europe has increased substantially in recent years. Certainly, it seems likely that greater educational provision will aid both children and parents in developing online skills. However, as several national reports point out, internet penetration in schools is not the same as actual use by pupils. Most pupils are not permitted to use internet at schools without some kind of control by adults, and only in a few countries is it thoroughly integrated into education as a cross-curricular subject.

- It also appears that, in many countries, teachers provide little in the way of safety awareness and training to guide for pupils' internet use, though the range and adoption of new initiatives is now spreading.

Towards a multi-factorial explanation

To gain further insight into the differences across countries, Qualitative Comparative Analysis was used to gain 'in-depth insight in the different cases and capture the complexity of the cases' whilst still pursuing some level of generalisation.²⁹ As explained in Hasebrink et al (2009),³⁰ the EU Kids Online countries were compared on a range of dichotomised variables in an effort to distinguish high from average/low risk countries in terms of children's online experiences. The findings suggest that:³¹

- In two of the new use, new risk countries (Bulgaria and Poland), media and ICT literacy is lagging behind internet diffusion, resulting in online risk for children in a context of relatively few regulatory and awareness-raising initiatives. In three further new use, new risk countries (Estonia, Slovenia and Czech Republic), a somewhat different situation applies. While there are more safety initiatives in evidence, there is relatively little positive online content provided for children, and for this reason, it seems that online risk is high. A similar situation pertains in Norway, according to the comparative analysis.
- In two of the high use, high risk countries (Netherlands and UK), there are many initiatives and a fair degree of positive content. However, the scale and extent of children's activities online still appears to result in high risk, with children's use remaining ahead of the policy responses. A greater embedding of ICT literacy and safety education in schools might be helpful.
- In some lower risk countries (Germany, Greece, Ireland and Italy), the lower level of risk appears best accounted for by the combination of lower children's use plus a fairly high level of ISP safeguarding activities. By contrast, in other lower risk countries (Austria, Belgium and Denmark), sufficient availability of positive online content (possibly from larger language communities – Germany, UK, USA) appears to play a key role in securing lower degrees of online risk.

Recommendations for policy-makers

A central purpose of EU Kids Online's work has been to draw out the implications of the evidence base for policy-making. To focus these, we first scoped six distinct though intersecting policy domains in consultation with diverse stakeholders, national advisory boards and the Safer Internet Programme. Since evidence-based policy recommendations must be timely and relevant, in each domain we then sought to identify the current 'policy window' at national and European levels.³² Finally, after reviewing the available findings in comparative perspective, and noting methodological limitations and research gaps, we identified evidence-based policy recommendations designed to maximise children's online opportunities and to minimise their online risks, as follows.

E-Inclusion

- **E-Inclusion and Equality.** The 2006 Ministerial Riga Declaration³³ on ICT for an inclusive society promotes a broad definition of e-Inclusion but makes no specific provision for children. E-inclusion policy for children is largely focused on schools, and here considerable progress has been made. But, many children lack sufficient, flexible access to ICTs at school to explore the potential of the internet.
- Further, as noted when discussing changes from 2005-08, **children's internet use is greatly encouraged by their parents' internet use**, especially at home, so parents not yet online should be encouraged to use the internet. Social inequalities mean that not only do some lack access at home but they may also lack this parental support. Research suggests that e-inclusion policies should now target certain countries where children's internet use is relatively low (notably in Italy, Greece, Cyprus) and certain population segments (less well-off households, parents who are not online) if the remaining 25% of EU children are to get online.
- **Online opportunities are a matter of rights.** The UN Convention on the Rights of the Child asserts children's rights to express their views freely in all matters affecting them (Art.12), freedom of expression through any medium of the child's choice (Art.13), freedom of association and peaceful assembly (Art.15), protection of privacy (Art.16) and access to mass media that disseminate information and material of social and cultural benefit to the child, with particular regard to the linguistic needs of minority/indigenous groups and to protection from material injurious to the child's well-being (Art.17).
- One temptation is to seek all means of keeping children safe. But it is inherent to childhood and especially adolescence to take risks, push boundaries and evade adult scrutiny – **this is how children gain resilience**. On the one hand, genuine and unacceptable risks should be addressed and where possible prevented, but on the other hand, children learn to cope with the world through testing their capacities and adjusting their actions in the light of lessons learned. Balancing all these rights can be demanding, but all should be borne in mind to prevent safety proposals restricting children's rights and to prevent the promotion of online benefits neglecting possible risks.
- **Balancing empowerment and protection is a crucial task.** Research suggests that increasing online access, use and opportunities tends also, if inadvertently, to increase online risks.³⁴ Similarly, strategies to decrease risks can restrict children's internet use or opportunities more broadly, even at times contravening children's rights to communicate. As shown in the classification of countries by use and risk (Table 5), this association appears to hold not only for individuals but also across countries. Thus, it seems that going online for beneficial reasons (however defined) also results in an increase in risk. This can be redressed partly through media literacy and partly through interface design.
- It is proposed that each child climbs a **'ladder of online opportunities'**, beginning with information-seeking (of any kind), progressing through games and communication, taking on more interactive forms of communication and culminating in creative and civic activities.³⁵ One implication is that communication and games playing may not be 'time-wasting' but, instead, can provide a motivational step on the way to 'approved' activities. Another is that online resources should be designed so as to encourage children to progress from simpler to more complex and diverse activities. The evidence is that while many children communicate, search and play online, not so very many are, in practice, creative, productive, critical or civically engaged. Ensuring that all children get the opportunity to advance from simple to more complex activities needs encouragement, resources and support.
- There is growing support for the **positive online provision** of accessible and high quality contents and services for children that help children to develop to their fullest potential, affirm their sense of self, community and place, promote an awareness and appreciation of other cultures, and extend their capacities to be creative, to learn and to participate. Currently not all children benefit from such opportunities, for reasons of socio-demographic inequalities or national provision (eg, in small language communities), while good online resources can be difficult to locate (by children) and difficult to sustain (by providers). However, there are growing indications that positive online provision (provided it is valued and enjoyed by children), both directly benefits their development and also reduces online risks by encouraging valuable and valued activities.



Education and the role of schools

- **Greater internet use is associated with higher levels of education** at both country and individual levels. Improving educational achievement in general may therefore be expected to increase the extent and sophistication of internet use. Beyond this, and to embed the wider take up of online opportunities, media education should be recognised and resourced as a core element of school curricula and infrastructure.
- Schools are best placed to teach children the digital and critical literacy skills required to maximise opportunities and minimise risks. **Schools are also best placed to reach all children**, irrespective of socioeconomic status and other forms of inequality. For both these reasons, schools have a key role to play in encouraging and supporting creative, critical and safe uses of the internet, crucially throughout the curriculum but also at home or elsewhere.
- In certain countries, however, **there are gaps in provision or insufficient/outdated provision of ICT in schools**.³⁶ More widely, there are difficulties in ensuring that digital literacy in general, and internet safety in particular, is addressed as it arises across the curriculum (not simply in ICT classes) by teachers who have been recently and appropriately trained, and with adequate resources at their disposal. Further, in many countries, schools have tended to regard children's use of the internet at home or elsewhere (outside school) to be beyond their remit. Nonetheless, the resources of the school outstrip those of many parents, making schools the most efficient and effective way of advising children on use of the internet in any location.

Awareness-raising

- Awareness-raising, described by the EC as '*actions that can contribute to the trust and confidence of parents and teachers in safer use of the Internet by children*'³⁷ is a central focus of its Safer Internet Action Plan, implemented across Europe through the Insafe network of national awareness-raising nodes. **Priorities for future awareness-raising at the country level** should concentrate, research suggests (see Table 1), on (i) countries identified by research as high risk (Estonia, the Netherlands, Norway, Poland, Slovenia, the UK); (ii) countries which have rapidly and recently adopted the internet, where access appears to exceed skills and cultural adjustment (Bulgaria, Estonia, Greece, Poland, Portugal), and (iii) countries where children's use exceeds parents' use (notably, Hungary, Malta, Poland, Romania).
- At the individual level, the priority now must be **awareness-raising among younger children** (and their parents and teachers) as they (rather than teenagers) are the fastest growing user group and little is known of their activities, skills or risks online. It seems that the internet is already a normal tool for children at the age of ten years and is increasingly becoming an attractive tool for many between 6 and 10 years old. It is likely that even younger children are getting online, but this is barely been researched. This emphasises the need to research younger children and to develop measures supporting safer internet use for all age groups.
- Additionally, research finds that, although girls and boys use the internet to a similar degree, strong differences in patterns of use and, therefore, patterns of risks persist, suggesting that awareness-raising and strategies to encourage coping and resilience should **address girls and boys differently**. Further, since it seems that online risks are disproportionately experienced by children from **lower socioeconomic status households**, where parents may be less resourced to support them, there is value in specifically targeting less privileged families, schools and neighbourhoods.
- Much awareness-raising has focussed on drawing the attention of children, parents and teachers to the risks of internet use. This effort must continue as internet use across Europe deepens and diversifies. It must also be **extended as new risks emerge**, especially on mobile, networked or other new platforms, in relation to peer-to-peer and user-generated content and services, and in relation to risks yet little researched (self-harm, stealth marketing, privacy/personal data abuse, addiction, and so forth).
- It must also **address the question of how children cope with risk** once encountered. In short, anticipating risks so as to prevent them is necessary but insufficient, since children also need **guidance on what to do after they have experienced a problem online**. Most children do not report problems to adults for fear of losing internet access or being punished, and realistic advice on what to do is in short supply, as are evaluations of which coping strategies are effective. The benefits of peer-to-peer awareness campaigns and initiatives involving young adults as mediators, based on the trust among young people, should be capitalised upon and extended.
- **Reaching the vulnerable**. In the USA, Wolak et al observe that, rather than worrying about youth in general, 'particular attention should be paid to higher risk youths, including those with histories of sexual abuse, sexual orientation concerns, and patterns of off- and online risk taking'.³⁸ To address the risks faced by a vulnerable minority in a proportionate manner without extending undue surveillance and restrictions to the occasionally naïve, sometimes risk-taking majority is undoubtedly a difficult problem for public policy. Wolak et al's research also finds that **victims are often also perpetrators**, and that **those vulnerable online may also be vulnerable offline**.
- Such findings complicate the task of awareness-raisers (and schools, child protection and others). As yet, little parallel research on vulnerability exists in Europe, and this must be a priority. Particularly, the relation between victims and perpetrators is yet to be understood clearly. Also, it is **unclear whether children 'at risk' online are those who are also disadvantaged or suffering substantial problems offline**. If they are, children who are vulnerable online may be least likely to have parents who can support them, so relying on parents to manage their internet use may further disadvantage those already 'at risk', perpetuating cycles of disadvantage.
- **Identifying the vulnerable**. Since children who are vulnerable offline may be already known to child protection services, these services should extend their protection to encompass online risks. But some research suggests there are also other groups who are vulnerable online³⁹ – possibly risk-takers, or children with poor family relations

or who are lonely or depressed; identifying these individuals is no easy task for educators and welfare professionals.

- In terms of present policy, **it is important to recognise** (i) that some children perpetrate online risks, whether from malice, playfulness or mere accident, (ii) that those who tend to experience online risks may also turn to generating further risks (perhaps hitting back at those who hurt them), (iii) that those who create risks may themselves also be victims, and (iv) that those who are vulnerable online are likely to lack adequate social and parental support offline.

Advising parents

- No-one doubts that **parents are responsible for their children's safety, online as offline**, and this is a responsibility they accept. But they may be unaware of the need to mediate their children's online activities, or they may lack the skills, knowledge or motivation to undertake this task. As part of the multi-stakeholder effort to maximise children's opportunities online and to minimise their risk, there is considerable speculation, and a growing body of evidence, regarding the degree to which parental mediation can be relied upon in policy terms. Arguably, the more parents undertake this task effectively, the less government, schools, industry or regulators need do. On the other hand, parents act within a broader social, economic and cultural context that is shaped by factors not of their making, and it is here that other stakeholders play a central role.
- High levels of parental anxiety regarding their children's internet use occur across Europe. However, since anxiety appears reduced if parents are themselves internet users and, further, since parents who use the internet mediate their children's internet use more, there are good grounds to encourage all parents to use the internet to support their children. The European parenting group, COFACE, outlines useful principles for supporting parents in their responsibility to keep their children safe online.⁴⁰
- Use of **filtering technology** has increased in recent years (Eurobarometer, 2008) but **filters remain difficult to choose and use** and much problematic content (eg, user-generated) is inadequately dealt with.⁴¹ Moreover, little is known of how consistently and appropriately parents employ these tools or whether, as popularly claimed, children can and do 'get around' them. Cultural differences mean that social and technical tools may be preferred by or more useful to parents in some countries compared with others. Generally, it seems clear that many parents find it difficult to know where to obtain guidance on supporting their child online, choosing a filter, assessing a website, reporting a problem, or setting rules. Therefore, a well-promoted, reputable, easy-to-use, publicly-funded 'one-stop shop' or parent portal in each country is greatly needed.
- **The limits of policies that rely on parents should be recognised.** First, rules and restrictions do not fit well with the ethos of modern parenting, especially in some countries: parents prefer to use social mediation (talking to, sharing the online experience with children), and wish to trust their child and not invade their privacy (especially as more children gain access in their own room). Moreover, it is unclear, on the present state of knowledge, that any of these strategies is particularly effective in reducing children's exposure to risk or increasing their resilience to cope, especially as it is known that few children tell their parents when they encounter online problems.
- However, the most recent work by EU Kids Online suggests that **different styles of parental mediation may be more effective in different cultural contexts**, depending in part of parental values and preferred styles of parenting.⁴² Thus, when designing parental awareness-raising and mediation strategies, local contexts matter.
- For instance, **in high risk countries** like Netherlands and Slovenia, analysis suggests that what makes the difference in accounting for high online risk, taking other factors into account, appears to be the relatively low use of technical tools. Increasing their use in these countries might reduce children's online risk. In the Czech Republic and Estonia, high risk is associated with relatively lower levels of social and restrictive mediation; hence it might be effective in these countries to promote parental discussion of internet use with their children, and to encourage them to set some rules and restrictions. In the UK, however, considerable efforts are already being made in terms of all forms of parental mediation, yet online risk remains high. This may be because children's usage of the internet is relatively advanced and innovative. A possible way forward might be to maintain awareness-raising and increase the provision and guidance of children towards positive opportunities online.
- In **lower risk countries**, the same comparative analysis suggests that parent-child discussions about the internet (ie, forms of social mediation) may be effective in keeping lower levels of online risk in Austria, Ireland, Cyprus, Portugal, Germany and Spain. In Belgium, France and Sweden, even though parents are relatively low on social mediation, they do use technical tools, and this may account for lower risks than one might otherwise expect given internet use; still, increasing social mediation, especially talking to their children more about internet use, would be advisable.
- Notwithstanding these suggestions, it remains **unproven that parental mediation strategies of any kind are effective** in reducing online risk. Thus while policy should empower parents to improve their use of all the available solutions; it should not rely on them, nor expect them to provide the stop gap solution where other regulatory strategies are insufficient.



Media literacy

- Increasingly prominent on the European agenda, policies to promote media literacy reflect the widespread sense that the technologically convergent, highly commercial, globalised online environment places considerable demands on individuals, here children, to manage competently and benefit from optimally, even sufficiently. The EC defines media literacy as **'the ability to access, analyse and evaluate the power of images, sounds and messages which we are now being confronted with on a daily basis and are an important part of our contemporary culture, as well as to communicate competently in media available on a personal basis. Media literacy relates to all media, including television and film, radio and recorded music, print media, the Internet and other new digital communication technologies.'**⁴³
- Formally included in the Audiovisual Media Services Directive (2007) and promoted by Unesco's Media Education Kit⁴⁴ and the European Media Literacy Charter,⁴⁵ media literacy bears an uncertain relation to awareness-raising and online safety, as supported by the EC Safer Internet Programme. At times, industry and government pronouncements suggest that child safety is central to media literacy. But educators, civil society organisations and many content providers, argue that media literacy is much wider. Thus they would include safety as just one component of a much broader agenda for public empowerment, creativity, civic participation and critical judgment in the online environment.
- On the one hand, research charts many ways in which children (and adults) are gaining knowledge, confidence and sophistication in their navigation of and contribution to the online environment. On the other hand, many appear to use the internet narrowly, lacking confidence or knowledge, unsure what the possibilities are, anxious about the risks.⁴⁶ For example, the interactive and creative online opportunities on offer can support learning, participation, communication, self-expression and fun. Yet some of these – for example, blogging or creating webpages – are only practised by a minority of young internet users across European countries, leaving the full potential of media education for enhancing pupils' creative digital skills far from being realised. Thus, media education should turn more attention to fostering children's creative participation in online environments.
- Research also shows that children (again, like adults) vary considerably in their ability to access, judge and navigate among the range of media contents and services. Many have a weak understanding of how contents are produced, disseminated, financed or regulated, undermining decisions about trustworthiness, authenticity or risk. Further, systems of selection, control and protection are little understood or used.⁴⁷
- Indeed, research in many countries suggests that media literacy programmes, like any other form of knowledge transfer, is generally **under-resourced and uneven in its implementation, and unequal in its adoption** by those of differential social status. As knowledge gap theories argue, low media literacy is also associated with other forms of social deprivation, so that media literacy initiatives are more effective at reaching the already information-rich than reaching the information poor. At an individual level, media literacy is also inconsistently translated into everyday practices, with a persistent gap between what people know and how they act.
- In terms of media literacy programmes and initiatives, it is now **vital to conduct thorough evaluations of the diverse media literacy initiatives** being developed. It is not yet known, crucially, whether media literacy brings real benefits in terms of protection against harm, take up for communication rights, enhancing active citizenship or creative and cultural expression and learning. Nor is it known which strategies work best for which groups or under which circumstances.
- It does seem, for instance, that peers have a substantial influence on how children take up the opportunity for creative online activities; also, young people discover new things to do with the internet mostly through their friends (Kalmus, 2007).⁴⁸ This suggests **the value of peer-to-peer teaching**, and this could be more effectively resourced and integrated as part of media education in schools.
- Several entertainment and communication related online activities lead to the take-up of more 'approved' opportunities, eg, searching for additional information or creative activities. Thus, instead of considering online games or instant messaging as a waste of time or even restricting using them, both parents and teachers could encourage **a wider array of child-centred activities** on the internet, to stimulate interest and self-directed learning.
- Given the lack of critical knowledge of the online environment, especially its political, commercial and safety dimensions, teachers should also give a higher priority to **guiding children in making informed choices online**. As the online environment – in terms of platforms, contents and services, as well as regulatory and cultural conditions of use – continues to change, this education must be continually revised and updated.
- As noted elsewhere, it must be recognised the encouraging creative participation will also bring risks, hence **risks and opportunities must be addressed together**. Furthermore, as with safety awareness and parental mediation, the limits of children's media literacy must be recognised. This is not to denigrate their abilities but rather to recognise the demands of a complex technological, commercial and, increasingly, user-generated environment. Hence the importance also of co-and self-regulation to complement and support children's media literacy.

Co- and self-regulatory codes and practices

- Executive Opinion Surveys conducted by the World Economic Forum (2007)⁴⁹ suggest regulation of the internet is not well developed in Cyprus, Greece and Poland, and not yet sufficiently developed or enforced in Belgium, Bulgaria, the Czech Republic, Ireland, Italy, Portugal, Slovenia and Spain. Since evidence suggests that children in several of these countries encounter medium high levels of online risk, there are **good grounds to strengthen regulatory frameworks**.⁵⁰
- In several countries, and at the level of the EC (eg, Safer Internet Programme), **self-and co-regulatory initiatives are underway** to address content labelling and trust marks, age verification, social networking, moderation of interactive services, managing mobile services, and so forth.⁵¹ These are particularly important for **content that is not illegal but which, research suggests, can be harmful to children**.⁵² As research also shows, substantial proportions of children are encountering, often accidentally, pornographic, violent, hostile or racist content, and many lack the tools and skills by which they (or their parents) can prevent such exposure.
- **The effectiveness of self-regulatory provision in improving children's safety online is yet to be evaluated independently**, and the processes underpinning self-regulation are not always transparent. Nonetheless, such initiatives are much to be welcomed and supported. However, more efforts are needed in developing these. For example, not all ISPs provide specific or sufficient guidance for parents regarding their children's safety, and most parents do not know to seek this from their ISP, relying instead on friends and family.⁵³ Further, many children continue to encounter age-inappropriate content or conduct, necessitating urgent improvement to the functioning and the robustness of age-verification procedures.⁵⁴
- **An analogy is sometimes drawn between internet safety and road safety**, as children must learn to navigate both.⁵⁵ Teaching children how to cross roads – a task for schools, parents and communities – is well understood and widely supported. But society teaches children to cross roads safely (and adults to drive safely) only in an environment in which roads have been designed with safety in mind – they have traffic lights, width restrictions, road bumps, marked crossing points, and more. **This design is not only physical but also social**: the rules of the road are known, accepted and enforced; their very existence enables children to take care of themselves and to make sensible judgements about the behaviour of others. Children are also taught what to do, how to complain, report or get help if something goes wrong, all of which requires institutional provision.
- In short, **children can only be taught effectively how to manage the internet if the online environment is already regulated** – by law enforcement, interface and website design, search processes, content and service providers, online safety resources, and so forth.
- **Examples of online 'traffic safety'** include provision of filtering preferences, specification of child-friendly default settings, age verification systems, content rating and labelling, design standards (eg, kitemarks for filtering software), opt-in/opt-out points (eg, for 'adult' content), and so on. As each policy is developed, it must be researched to ensure the match with anticipated and actual user behaviour. It must also be evaluated for its effectiveness – not only in terms of usability but also in risk reduction outcomes and, equally important, in terms of any trade-off in restricting freedoms. Then it must be translated into guidance for users, both institutional and individual, for internet literacy depends on a transparent and interpretable environment, with rules and conventions understood by the users.
- One domain where further work is urgently required is that of the **use and abuse of children's personal information online**, raising issues of privacy, data protection, behavioural marketing – some of which are a concern for all adults, some of which require specific provisions and protections for minors. While a number of policy developments are underway, it should be noted that, insofar as there is research on these issues, it appears that children are largely unaware of how their personal data may be tracked, retained or used.
- It also appears that children rarely read or understand privacy policies, that the public/private boundaries of online interfaces are often opaque to them, that the tools provided to select privacy options are confusing or easily mismanaged by children. Much if not all of this also applies to their parents. Though some of this can be rectified through media literacy, for the most part, **better regulation and improved interface design is called for**.



Key gaps in the evidence base

Although the body of available studies continues to grow, there are significant gaps in the evidence base. We pinpoint these below, as recommendations for the future research agenda.⁵⁶

Too little focus on younger children

- Children of primary school age and even younger are increasingly gaining access to the internet. During the course of the EU Kids Online project there has been an increase in research on children younger than 12 but this age group remains a priority: they use the internet in substantial numbers (60% of 6-10 year olds online in EU27; see Table 1) and their online experiences may challenge their maturity to cope, especially with unanticipated risk. Of the available research focused on younger children, rather little concerns risk.
- It seems likely that even younger children are also online, both now and in the future. Having classified countries according to children's internet use (high/medium/low), EU Kids Online estimated the likelihood of children younger than six being online, using the 2008 Eurobarometer figures: since these are estimates only, they should be treated with caution; the point is to stress that little or nothing is yet known of younger children's use (Figure 14).
- At the same time, since teenagers continue to lead in depth and breadth of use, and since they are likely to take the most risks, continued research on teenagers is also important.

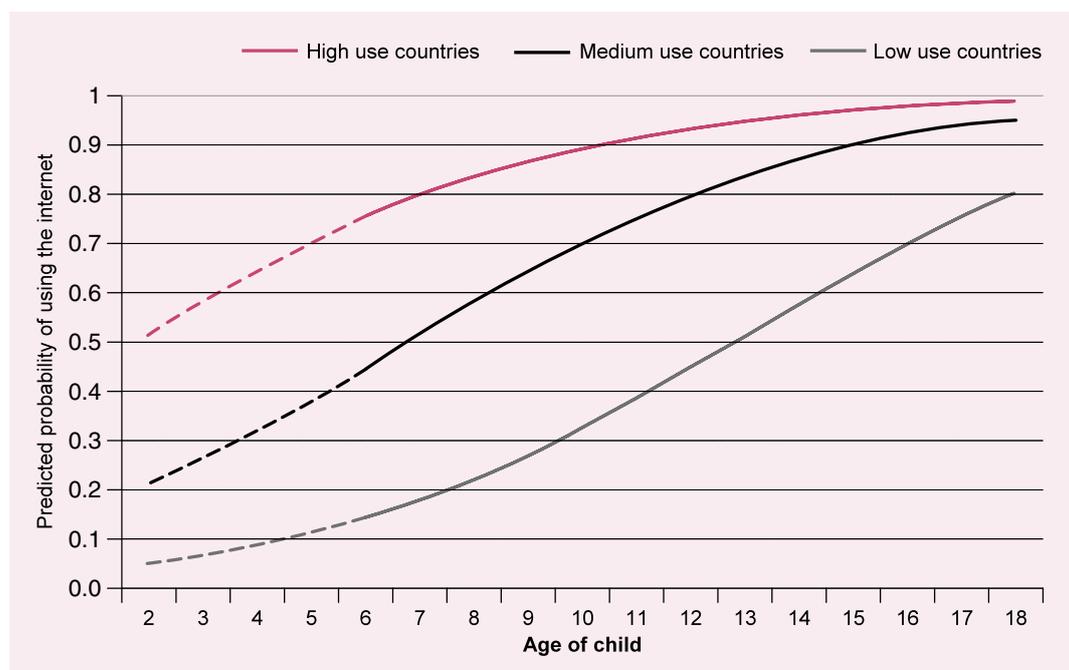


Figure 14: Children's likelihood of internet use by age and country type (based on 2008 Eurobarometer survey; estimated only for 0-6 year olds)

Overwhelming focus on the fixed internet

- Most research concerns the fixed internet. Online contents and services accessed via mobile phones, games consoles and other devices raise new challenges for research and policy that demand investigation, especially given implications for parental supervision and safety awareness.
- Much research concerns the use of websites (ie, web 1.0) rather than interactive, peer-to-peer, multi-user applications accessed via convergent platforms and emerging technologies (ie, web 2.0 or 3.0). Research on activities and norms associated with peer-to-peer exchange and user-generated content is urgent.

Gaps in evidence for online opportunities

- Evidence regarding access and frequency of use is fairly plentiful, but much less is known of how children use the internet. Especially urgent questions concern:
 - Skills of navigation and search, content interpretation and, especially vital, critical evaluation – all important for media literacy and online learning.
 - User-generated content creation and other forms of networking – increasingly important for identity, sociality, creativity and civic participation.
- Particularly in countries where research is generally sparse, and in countries new to the internet, these gaps are substantial:
 - For example, little is known of online opportunities in Bulgaria, the Czech Republic or Slovenia; perhaps surprisingly, such gaps also exist in Germany and the Netherlands, where otherwise there is a good body of research.
 - Nordic countries pay more attention to civic participation, research on social networking is concentrated in Denmark, Norway, Sweden and the UK, little is known of gaming cultures especially in Southern Europe.

Gaps in evidence for online risks

- There is a fair body of research on content (mainly pornographic and/or violent), contact (mainly from strangers) and privacy risks, especially in Northern Europe, but this requires updating and deepening in most or all countries. Particularly little research on risks was found in some countries (Bulgaria, Estonia, the Netherlands, the Czech Republic, Portugal, Slovenia) despite indications that some of these are 'high risk' countries. Research is growing on cyberbullying and peer/conduct risks.
- Certain risks remain little researched, despite their importance on the public agenda. These include challenging content (eg, self-harm, suicide, pro-anorexia, drugs, hate/racism), user-generated content, gambling, addiction, illegal downloading, and commercial risks (sponsorship, embedded or viral marketing, use of personal data, GPS tracking).
- Little is known about how children (or parents) respond to online risk. Future research must focus not only on incidence but also on any long-term consequences of online risk, including evaluating the effectiveness of children's coping strategies. It must also acknowledge that some children seek out or perpetrate risks, thus requiring different strategies for awareness and protection.
- Few indicators are available by which to identify particularly vulnerable or 'at risk' children within the general population, though, as noted earlier, it seems likely that those who are vulnerable offline may also be vulnerable online, that victims and perpetrators may be one and the same, and that these are precisely the children who also lack parental or other forms of support.⁵⁷ Too little of the research tracking children's exposure to risk draws on the insights of clinicians, child protection or even law enforcement agency's knowledge of victims.

Gaps in role of adult mediators – parents, teachers, others

- Research is beginning to identify clear styles of parental mediation or regulation, but research on which strategies are used by parents in different countries is often lacking. In particular, little is known about the effectiveness of these different strategies in terms of reducing risk (preferably without also reducing opportunities).
- Most research on parenting relies on asking parents or teachers about children's use of the internet at home or school, neglecting children's often different perspectives on the internet, risks, adult supervision and coping. Social desirability effects may be strong – with parental concern leading them to exaggerate safety practices.
- The research agenda should now encompass evaluations of the effectiveness of forms of mediation – technical solutions, parental mediation, media literacy, other awareness and safety measures – not just in terms of the ease of implementation but more importantly in terms of their impact on risk reduction. This may vary for different groups of children and in different countries or cultural contexts.
- Similar observations may be made regarding the mediating role of teachers – more research is needed on teachers' skills and literacy, their mediating practices in the classroom, and the effectiveness of their role in improving children's risk awareness and online safety.
- A minority of children also use the internet in libraries, computer clubs, cybercafés and so forth. The role and expertise of the supervising adults in such locations has been barely examined.



Good research practice methodologies

Researchers, policy makers, industry, child protection experts and others are increasingly reliant on empirical research to guide their understanding of online use, risk and issues as they affect children and families in Europe and elsewhere. In this section, we note the key methodological issues involved in studying children and online technologies across countries so as to guide the commission, design, conduct and use of evidence in this field.

Although the EU Kids Online network has identified a fair body of research on children's internet use across Europe, this report has outlined how key gaps in the evidence base persist, and future research could be better designed. There are many debates regarding methodology, complicating the task facing researchers of children's online activities.

For both the conduct of research, and the development of 'evidence-based policy', good practice depends on expertise in the design, conduct, evaluation and use of research findings. Such expertise is not always accessible, and academic knowledge, research cultures and policy agendas may not fit well together.

Evidence regarding children's use of the internet and online technologies in Europe relies on four specific areas of expertise:

- General methodological issues, including qualitative, quantitative and mixed-method approaches to social science.
- Methodological and ethical issues involved in research with children.
- New issues that arise in relation to online technologies, whether the application of familiar methods to a new domain or the development of new techniques.
- Collaborative and comparative methods required for conducting research in multiple countries.

Available resources

While many researchers and research users are expert in specific one or more of these areas, few are expert in all. EU Kids Online produced two reports on methodology, one conceptual, one practical, together with a range of additional online resources to guide researchers:

For researchers, funders and all who use research findings, EU Kids Online has developed good practice resources to guide the conduct of research as follows.

- To find out the latest methodological discussions in each these four areas, see Lobe, B, Livingstone, S, and Haddon, L (Eds) (2007) *Researching Children's Experiences Online across Countries: Issues and Problems in Methodology*.
- For good research practice guidance, Frequently Asked Questions are answered at www.eukidsonline.net (select 'Methodological resources'). These contain agreed principles, common practice, questions to consider, pitfalls to avoid, further resources and researchers' experiences. The FAQs can also be downloaded as the report, Lobe, B., Livingstone, S., Ólafsson, K., Simões, J. (2008) *Best Practice Research Guide: How to Research Children and Online Technologies in Comparative Perspective*.
- To see the original questionnaires or interview schedules used in recent European and American research (in several languages), see our website select 'Methodological resources'.

An overview of these follows below.

General methodological issues

Research is designed to answer questions through direct, fair and independent investigation. It should conform to public standards of ethics and objectivity, drawing on the cumulative wisdom of the research community to produce new insights. And it can be understood at three

Method	Research goal	Nature of Data	Sampling	Data analysis
Survey	Generalisation, distribution, stratification	Quantitative – many respondents	Probabilistic, quota or representative sampling	Statistical analysis, tabulation, summation
Experiment	Causality, demonstration of effect	Quantitative – moderate number of respondents	Probabilistic, with sample divided between treatment and control groups	Statistical comparisons
In-depth interview	Search for meaning and understanding, phenomenological	Qualitative – few respondents	Snowball, convenience or purposive sample	Analysis of text, talk, video, audio
Focus group	Search for meaning with focus on group dynamics	Qualitative – small/moderate number of groups	Snowball, convenience or purposive sample	Analysis of text, talk, video, audio
Fieldwork, participant observation	Search for meaningful patterns of action in context	Qualitative – participants in one or more case studies	Situated research, centred on a specific case, site or context	Analysis of observations, talk, photos, time use

Table 6: Varieties of research method used to research children and the internet

levels of inquiry: (i) *epistemology*: the nature or theory of knowledge (eg, positivist or critical); (ii) *principles* of investigation: sampling/ measurement theories, evaluation, ethics, etc; (iii) *operationalisation*: rules and procedures for the specific methods used.⁵⁸

While each of these is elaborated in the Methodological Issues Review, we note a few points here. First, there is a wide range of methods used in the field of children's internet use, most of which employ standard social science techniques as mapped in Table 6.⁵⁹

For each method, there are tried-and-tested best practices available, as described and illustrated in our Best Practice Research Guide.

Note, however, that differences of opinion regarding methodology can be strongly principled and hotly contested. Researchers expert in or committed to one method can be highly critical of the approach taken by others. However, we also discern a growing consensus regarding the value of multi-method research over purely quantitative or purely qualitative approaches.

Researchers and research users should know the criteria by which to evaluate research results:

- Quantitative methods are evaluated in terms of *generalisability* (where sampling and measurement may or may not permit point estimates and/or clear relationships among variables), and this depends on the adequate minimisation of both random errors (through statistical testing) and systematic errors (through control over the research process). Also important are *reliability* (measuring accurately and without changes so that findings can be repeated) and *validity* (measuring exactly what is intended, using appropriate indicators for the object of study).⁶⁰
- Measures also exist for qualitative research, including *credibility* (researcher expertise, clear and appropriate use of methods), *dependability* (consistency of findings over time), *transferability* (relevance beyond the sample/situation studied), *confirmability* (comparability with other findings, auditability by other experts) and member checking (ie, checking of findings with respondents).⁶¹

Qualitative and quantitative methods are often, usefully, combined using a variety of triangulated or complementary designs, as outlined in the *Review*.⁶² These are particularly valuable when working with children to ensure quality criteria are adequately met.

Last, we note that no matter how well conducted the research design, data collection and analysis of findings, the value of a research project also depends on how it manages to communicate the results to those that can use them. In this respect, as in others, research in the field of children's internet use, especially that publicised other than in peer-reviewed articles, should be precise regarding methodological procedures, careful not to inflate moral panics, and reflexively aware of how specific findings relate to the wider research and policy context.

Research with children

Research on children's internet use can easily reproduce rather than question commonplace assumptions regarding their sophistication but also their vulnerability in the digital world. It can also all too easily impose adult perspectives that obscure children's understandings.

Hence, researchers seek multiple ways of distancing the research from adult assumptions, especially from media-led moral panics, and they increasingly advocate the adoption of child-centred methods that allow children to speak for themselves in the research process. This requires the developing of specific practices to address the power inequality when adults research children, both methodological and ethical. This shift is marked linguistically by the move from research 'on' to research 'with' children.⁶³

Usefully, a wealth of practical and creative strategies have been developed to ensure that research with children is informative, insightful, sensitive and sound. These are identified in some detail in the Frequently Asked Questions on how to work with children, including many researchers' experiences, ways of phrasing questions and approaches to difficult issues (eg, time estimation, asking about sensitive topics), together with the provision of specific questionnaires and interview schedules used in good research practice.

Researching online activities

Research is moving away from the technologically determinist assumption that the internet is external to and so simply impacts on society, instead recognising that social, economic and cultural processes shape the meaning and uses of online technologies. Simple cause-effect questions are being replaced by multidimensional analysis of the contexts and consequences of internet-related practices. This recognises the continuities as well as the differences between off and online environments, encouraging also research designs that examine the relation between off and online activities.

To a considerable degree, traditional methods can be applied to children's internet use as to their other everyday activities. Children can be surveyed or interviewed about the internet much as they are about playgrounds or school or television. However, new methods are also being developed, though these are still at an early stage.⁶⁴ The online environment permits the collection of diverse digital formats (emails, blogs, web-pages, etc). New methods such as online surveys and focus groups, virtual ethnography and new forms of participant observation are being developed. The implications for research ethics and criteria of evaluation are still being debated.



Cross-national comparative research

Cross-national comparative research must balance and interpret similarities and differences in findings from one nation to the next, while avoiding banalities, stereotypes and misunderstandings. This is demanding because findings must be carefully contextualised if they are to be meaningful, requiring detailed information beyond the immediate focus of research. And researchers must recognise with the often-considerable differences within nations when summarising findings at the country level.

Comparative research is also difficult in practical terms: one must decide which countries to include, contend with linguistic and cultural differences in both the research topic and among the researchers, and establish equitable practices of collaboration. Conceptually, there is a growing preference for transnational over cross-national approaches, in recognition of the flow and passage of ideas, media or practices across national borders.⁶⁵

Though demanding, in an age of globalisation and, relevant here, with policy often organised on regional/European as well as national levels, cross-national research is increasingly important. Without it, one risks assuming countries are either similar or different when they are not or missing the possibility that lessons learned in one country can be useful in another.⁶⁶

Best practice research guide

To move from theory to practice, EU Kids Online has worked to translate the above methodological debates and insights into a Best Practice Research Guide. This is primarily designed for new researchers, experienced researchers new to this domain, those commissioning or evaluating research, students and interested others. It takes the form of Frequently Asked Questions, for this is how researchers express their need for guidance. Each answer covers: what's the issue? common practice; questions to consider; pitfalls to avoid; further resources; researchers' experiences.

The Guide does not purport to offer definitive or absolute 'right' answers, for research practice is variable. Differences in research culture, academic discipline and practical experience all result in contestation over the optimal conduct of research. But this does not mean no guidance can be given, and the Guide was devised in the spirit of collaboration, to pass on our understanding of the literature, best practice insights, hard-won experiences and, at times, lessons learned from painful mistakes.

The FAQs, listed on the right and available in full at www.eukidsonline.net, are sequenced according to the five steps of the research process (Figure 15):

- Designing the research
- Sampling and recruitment of participants
- Data collection
- Analysis of data
- Reporting the findings.

Frequently Asked Questions Designing the research

- FAQ 1: When is it better to do qualitative or quantitative research?
- FAQ 2: How do I design a project with multiple data sources?
- FAQ 3: When is it best to use focus group, in-depth interviews or observations?
- FAQ 4: How should quantitative research be evaluated?
- FAQ 5: How should qualitative research be evaluated?
- FAQ 6: How young a child can one work with?
- FAQ 7: In comparative research, how do I choose which countries to compare?
- FAQ 8: When is it best to use a longitudinal design?

Sampling and Recruitment

- FAQ 9: How do we sample children for qualitative research?
- FAQ 10: How do you sample children for quantitative research?
- FAQ 11: Is it OK to interview parents as informants on their children?
- FAQ 12: How can I recruit particular subgroups of children?
- FAQ 13: What are the ethical issues involved in researching children?
- FAQ 14: Should I provide incentives for children to take part in the research?

Methods of data collection

- FAQ 15: What are the best ways to interview children?
- FAQ 16: What are the best ways to construct a survey questionnaire?
- FAQ 17: How do I order the questions in a survey or interview?
- FAQ 18: What are some good tips for phrasing questions in a survey to children?
- FAQ 19: How should I refer to children's media/activities?
- FAQ 20: How do you adjust data collection methods for different age groups?
- FAQ 21: Who should interview children – what difference does it make?
- FAQ 22: How do I ask children questions about time use?
- FAQ 23: What's the best way of asking children sensitive questions?
- FAQ 24: What's the best way to ask about parental mediation?
- FAQ 25: Is it better to research children at home, at school or elsewhere?
- FAQ 27: How do we maximise the reliability and validity of children's answers?
- FAQ 28: What shall I do if a child respondent seems to be at risk?
- FAQ 29: What do I need to know to do research with children online?
- FAQ 30: What are the key issues when collecting data in more than one country?

Approaches to data analysis

- FAQ 31: What are some good approaches to analysing qualitative data?
- FAQ 32: What are some good approaches to analysing quantitative data?
- FAQ 33: How do I bring qualitative and quantitative data together?
- FAQ 34: How do I compare data from parents and children?

Reporting the findings

- FAQ 35: How do I report my qualitative data?
- FAQ 36: How do I report my quantitative data?
- FAQ 37: How shall I compare my findings with research by others?
- FAQ 38: How can I ensure my findings are not misunderstood?
- FAQ 39: Should I give feedback on the findings to my interviewees?

Figure 15: Frequently asked questions addressed by the EU Kids Online Best Practice Research Guide

Challenges facing evidence-based policy

As will be evident from the foregoing, there are some significant challenges and emerging issues to be faced by this new and often demanding field of research.

Keeping up to date

- Findings quickly become out of date, as the technologies, the institutions that promote and regulate them, and children's own practices all continue to change. Research findings – especially those tied to specific technologies/platforms (rather than child/parent practices) – must be regularly updated.
- This is a transitional moment. Today's children are growing up with a new array of services, many of them labelled by the umbrella term 'web 2.0', while the orientation of much regulation and research is still focused on questions of access and use in a 'web 1.0' world.
- We found few longitudinal studies, most research only providing a snapshot of current uses. However, certain topics and even specific questionnaire items are usefully being repeated across studies, this enabling comparison across place and time. Well-planned tracking studies are needed to reveal long-term consequences of online technologies.
- The research agenda does not always align with policy needs, with studies focusing on the identification of problems but less often designed to evaluate particular policy solutions. This can create a generalised sense of concern without effectively guiding the policy agenda, partly because this agenda is not always accessible to the research community.

Research standards

- Children's internet use, especially regarding risks, is complex. Much research focuses narrowly on particular aspects of online experience and neglects wider contexts of use. We advocate multiple theoretical perspectives and complementary research methods to understand children's internet use in the round.
- Research is sometimes poorly reported, missing basic information necessary to evaluate claims. The quality, rigour and public accessibility of evidence needs strengthening. Thus the entire process from design and sampling through to evaluation and reporting is the subject of our *Best Practice Research Guide*.
- The interpretations offered for findings often imply comparisons between offline and online activities or risks. Yet little research directly compares, or even includes, questions about children's lives offline (for example, comparing bullying with cyberbullying), impeding assessment of how the internet may be reconfiguring children's opportunities and risks.

Sensitive issues

- The research agenda is heavily led by media/moral panics. While incidence of risky behaviours, as presented in this report, is indicative, there is little known of actual harm to children, whether criminal (eg, incidence of abuse or abduction), medical (eg, incidence of youth suicide or self-harm), psychological or other.
- Research often takes its lead from adult concerns and can be insufficiently responsive to children's perspectives (for example, they are more worried by bullying, identity abuse and spam than pornography or even stranger danger). However, pursuing children's perspectives on a range of risks is ethically difficult to explore directly with children.
- More discrimination is needed as regards the nature of online risk – just what type or severity violence or pornography do they encounter, in what contexts are inappropriate contacts experienced? Nor is much known of the consequences of such experiences. But again, it is ethically difficult to inquire into such matters with children, and it is practically difficult to conduct follow up in the long term.



Views from outside Europe

In order to 'see Europe from the outside' and so help situate the European findings in a wider context, EU Kids Online established an International Advisory Panel of research experts. The panel was invited to relate the network's findings to their own part of the world. Brief summaries of their responses follow below.⁶⁷

Professor Mimi Ito, University of California Humanities Research Institute, USA

Japan, not unlike many other countries, has seen a variety of concerns about safety and risk in young people's online behaviour. The centrality of the mobile internet in the online communication of young people gives Japan a unique context. Japan was the first country to see widespread adoption of the mobile Internet, which was introduced in 1999 with the NTT DoCoMo i-mode service. When young people began adopting mobile phones and the mobile Internet, moral panic resulted, including concerns about social isolation, befriending strangers, sexual liaisons for money with older men organised by teenage girls through websites (deai-kei). Other concerns included phishing, spamming and fraud. While the early years of the PC internet in Japan had centred on hobby and interest groups, mobile communication was an intimate space of friendship and romance, and the idea of strangers entering that space was seen as problematic. These concerns led to new legislation, passed in 2003: the 'Legal Plan to Address Entrapment of Children through Internet Dating Industries.' It criminalised the use of online sites to arrange dates with minors, and further legislation necessitated age verification.⁶⁸

Professor Lelia Green, ARC Centre of Excellence for the Creative Industries and Innovation and Edith Cowan University, Australia

There is a growing concern in Australia about people who may prey upon children, and also a concern about some children's desires to explore the web unfettered, leading to policy decisions that attempt to shift the 'duty of care' from parents over to regulators like the Australian Communications and Media Authority (ACMA). Measures include a proposal to make all Internet Service Providers filter out sites blacklisted by the ACMA, something that causes discontent among civil libertarians. While the traditional approach has been to place an emphasis on parental monitoring and education, the proposed legislation tries to relocate the anxiety concerning access, privacy and surveillance to relationships between the government and Internet providers. Much about content deemed 'inappropriate' or 'illegal' remains cloudily defined. Parts of the legislation still look sketchy, and its consequences remain to be seen. For instance, only one of the six filters recently tested could detect questionable content in streaming media transmitted using RTSP, while two filters seemed able to check emails transmitted using STMP. Blocking certain websites is no longer a guarantee of 'safe internet'; if it ever was. While the Australian situation is less 'liberal' than the British one, the political rhetoric does link it in some ways with European legislation by claiming, for instance, that the current plan to filter all Internet content aims to replicate protocols that are in place in Britain and Sweden. Detractors draw parallels with China, Saudi Arabia and Iran, instead.

Associate Professor Angeline Khoo, National Institute of Education, Nanyang Technological University, Singapore

In Singapore, as in Europe, there seems to be a growing bedroom culture, accompanied by worries around child safety, especially around potential harm from excessive gaming, as well as concerns about the risks of cyberbullying and sexual predation on the internet. Research attempts to map young people's use of the internet reveal that more than 80% of children between 10 to 14 years use the internet, that 17% have met with people they got to know online, 90% would download content regardless of copyright as long as it is free, and 65% would not report illegal sites or sites containing sexual and paedophilic content for fear of parents thinking they had intentionally sought out such content. The potential effects of excessive videogaming remains on the research agenda, as does a concern with cyberbullying. Efforts to promote cyber-safety messages include cyber-wellness programmes from the Ministry of Education, schools being encouraged to develop internet safety education programmes and the appointment of special committees by the government. One initiative provides advice on public education programmes and promotes media literacy, facilitating greater industry co-regulation. Another researches the social, ethical, legal and regulatory implications of rapidly growing digital interactive media.

Professor Kathryn Montgomery, School of Communication, American University, Washington DC, USA

In the USA, policy discussions and debates related to children and the Internet have been revitalised by the arrival of the Obama administration in Washington. Three most salient issues are online safety, online privacy and food marketing. In 2008, attorneys general in 49 states and the District of Columbia focused their attention on social networking platforms, arriving at a series of agreements with companies to add safety features. Online privacy has been a concern of the Children's Online Privacy Protection Act (COPPA). Consumer groups have called on the Federal Trade Commission to investigate data collection and behavioral targeting practices by major USA companies, including Microsoft, Google, and social networking software companies. In response, the Commission has held several workshops to address the issue, and has promulgated a set of 'Online Behavioral Advertising Privacy Principles.' Childhood obesity and food marketing remain on the agenda of the FTC and the U.S. Department of Health and Human Services and a recent bill includes a mandate for the establishment of an Interagency Working Group on Food Marketed to Children, charged with studying and developing recommendations for standards for food marketing directed to children under the age of 17.

Cathy Wing, Director, Community Programming, Media Awareness Network

Canada is one of the most wired nations in the world, with close to 98% of youth aged 9-13 and 99% of youth aged 14-18 having internet access at home. Over the past decade, Canada's strategy to address internet issues has preferred self-regulation over legislation. The Government of Canada's 2001 booklet, 'Illegal and Offensive Content on the Internet: The Canadian Strategy to Promote Safe, Wise and Responsible Internet Use', emphasises public and private sector initiatives to build public awareness and to provide tools that will educate and empower Internet users of all ages. This collaborative approach forms the foundation for the work of organisations such as Media Awareness Network whose research on young people and the Internet has informed policy development and awareness and education initiatives. Although Canada's regulatory response to the internet has been to favour a hands-off approach, there is no guarantee that this model will continue forever. As technologies converge and new issues arise, regulators and governments are revisiting existing guidelines. For example, the Canadian Radio-television and Telecommunications Commission, Canada's broadcast regulator, is currently re-evaluating its role in the area of new media. In addition, the Canadian Teacher's Federation is strongly advocating for criminalisation of cyber bullying, which remains a key concern in Canada.



Reflections on the network

EU Kids Online has not been a conventional research project, for its agenda was set by policy more than by research demands and because its funding provided resources for meetings and dissemination, rather than for primary data collection or analysis. Since networks of researchers and stakeholders are now common across diverse specialist domains, especially in Europe, we reflect here on our approach so as to share our experiences with others engaged in or contemplating a similar enterprise.

It should be recognised that multi-national collaborations are difficult – because of the obvious demands of travel and distance, along with differences in language and resources, and also because of subtle differences of research culture and working norms. The potential for misunderstanding findings or contexts or imposing a stereotyped or dominant lens on ‘other’ countries is significant; frequent and open dialogue across network members is vital.⁶⁹

EU Kids Online had a relatively ‘flat’ management structure:

- The coordinator (Livingstone and Haddon)
- Leaders for each work package: WP1 Data Availability (Staksrud); WP2 Research Contexts (Stald); WP3 Cross-national Comparisons (Hasebrink); WP4 Methodologies (Lobe); WP5 Policy Recommendations (de Haan); WP6 Dissemination (Ponte); WP7 Management (Livingstone/Haddon)
- National teams in each of the 21 countries: these were of variable size and composition and suited to national circumstances; and each nominated a key contact person.⁷⁰

Working arrangements encompassed some key elements:

- A detailed work plan/ timetable with clearly specified tasks and outcomes for work packages
- Network meetings approximately six-monthly with some small meetings in between
- A formal network agreement specifying members’ rights and responsibilities
- Regular liaison with the Safer Internet Programme and International Advisory Board

- The main administrative and management burden sustained by the Coordinator
- Flexibility in workload (especially, in which members contributed to specific work packages)
- Support for national and international dissemination (academic, policy, media)
- Encouragement for the participation of young/new scholars
- Group-ware online working facilities and very frequent email exchanges.

We note that the work had to be flexibly managed for the important reason that apart from the coordinator, network members contributed because of intellectual engagement, common commitment and considerable goodwill; the project budget did not permit any financial recompense for their time and efforts. Such an arrangement, though not uncommon, carries a significant risk to achieving the network goals and this should be clearly recognised.

Reports, publications and other outputs

EU Kids Online Reports to the Safer Internet Programme⁷¹

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- Hasebrink, U., Livingstone, S., Haddon, L., Kirwil, L. and Ponte, C. (2007) *Comparing Children's Online Activities and Risks across Europe: A Preliminary Report Comparing Findings for Poland, Portugal and UK*.
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Quantitative project success indicators

- By the end of 2008 there had been over 226,000 external visits to the EU Kids Online website, often accompanying the release of each new report. There are national project websites in Austria, Belgium, Germany, Greece, Poland, Portugal and Spain.
- Subscriptions to the electronic newsletter from researchers, regulators, industry and charities have grown steadily since the start of the project, reaching 616, from many different countries, by November 2008.
- In addition to many individual presentations at academic and policy/public conferences, EU Kids Online has organised panel sessions at the conferences of International Communications Association, the Association of Internet Researchers, European Communication Research and Education Association, International Association of Media and Communication Researchers, among others.
- EU Kids Online members have presented at a range of non-academic conferences (eg, Broadcasting Commission of Ireland, Barnardo's Tomorrow's Child Conference, Byron Review on Children's Safety on the Internet, Norwegian Police and Social Workers, Estonian Union for Child Welfare) and in many workshops in the participating countries.
- Organisations from industry (telcos, ISPs, software developers), trade associations, media agencies, NGOs, school bodies, parents' associations, the police, national ministries (eg, Austrian Ministry of Social Affairs and Ministry of Education, Dutch Ministry of Economic Affairs, Norwegian Ministry of Government Administration and Reform) and regulators have been addressed by the various EU Kids Online national teams.
- EU Kids Online members regularly addressed national Awareness Nodes as well as the EC Safer Internet Forum in Luxembourg, and participated in a range of activities on Safer Internet Day 2007/8/9.
- The network contributed to Safer Internet Programme consultations – on *Safer Internet and Online Technologies for Children*, and on *Age Verification, Cross Media Rating and Online Social Networking*.
- EU Kids Online has twice sent delegates to and presented at the Internet Governance Forum, in Rio and Hyderabad, and was represented at the Ministerial conferences in Leipzig (2007) and Prague (2009).
- National teams have met with national advisory boards in Austria, Germany, Greece, Netherlands, Portugal, Slovenia, Spain and UK, and have maintained informal dialogues with relevant stakeholders across Europe
- EU Kids Online has received substantial media coverage on TV, on radio, in the press and online, focused on its contributions to Safer Internet Day. A search using Google analytics reveals references to EU Kids Online on 5000+ websites in 18 languages – Norwegian, Icelandic, Swedish, Estonian, Slovenes, German (Austria, Germany) Dutch, Indian, Spanish Portages and Greek.
- Involvement in the EU Kids Online project inspired a number of national teams to organise their own research in this field – for example, Greece, Portugal, Slovenia and Spain. Several Masters' dissertations have addressed the research gaps identified in the EU Kids Online project.



Looking ahead to EU Kids Online II

After three years identifying, reviewing, and drawing out key research and policy implications for the existing knowledge base in Europe, much has been learned, as set out in the foregoing pages. However, it is also apparent that much remains to be understood, especially given the pace of technological and social change. For policy deliberations to be soundly evidence-based, rigorous and directly comparable multi-national research is vital so as to identify pan-European similarities and regional or country-specific factors.

During 2008, the 2005-8 Safer Internet Plus Programme called for 'knowledge enhancement projects that aim to increase the knowledge relevant to the issue of safer online technologies', specifically to strengthen the knowledge base by conducting 'a comparable quantitative study of children's use of online technologies, with a mapping of parents' views of their children's use of online technologies'.⁷³ The EU Kids Online network, coordinated by the London School of Economics and Political Science, is pleased to have been awarded a contract for this work, from 7/2009 – 6/2011.

Aims and objectives

The aim is to enhance the knowledge base for children's and parents' experiences and practices in relation to risky and safer use of the internet and new online technologies in Europe, in order to inform the promotion of a safer online environment for children.

The objectives are as follows:

- To design a thorough and robust survey instrument appropriate for identifying the nature of children's online access, use, risk, coping and safety awareness.
- To design a thorough and robust survey instrument appropriate for identifying the nature of parental experiences, practices and concerns regarding their children's internet use.
- To administer the survey in a reliable and ethically-sensitive manner to national samples of internet users aged 9-16, and their parents, in member states.
- To analyse the results systematically so as to identify both core findings and more complex patterns among findings on a national and comparative basis.
- To disseminate the findings in a timely manner to a wide range of relevant stakeholders nationally, across Europe, and internationally.
- To identify and disseminate key recommendations relevant to the development of safety awareness initiatives in Europe.
- To identify any remaining knowledge gaps and methodological lessons learned, to inform future projects regarding the promotion of safer use of the internet and new online technologies.
- To benefit from, sustain the visibility of, and further enhance the knowledge generated by, the EU Kids Online network.

For further information on this project, or to sign up to receive regular email updates, visit www.eukidsonline.net

Annex 1: Project deliverables

Number	Title	Date	Level
D1.1	Report: Data Availability	T12	Public
D1.2	Repository/links to data	T3 (on-going)	Public
D2	Report: Cross-Cultural Contexts of Research	T30	Public
D3.1	Preliminary Report: 3-Country comparison	T12	Public
D3.2	Report: Cross-National Comparisons	T24	Public
D4.1	Preliminary Report: Methodological Issues Review	T12	Public
D4.2	Best Practice Research Guide	T24	Public
D5	Report: Summary and Recommendations	T36	Public
D6.1a	Alert 1	T3	Public
D6.1b	Alert 2	T9	Public
D6.1c	Alert 3	T15	Public
D6.1d	Alert 4	T21	Public
D6.1e	Alert 5	T27	Public
D6.1f	Alert 6	T33	Public
D6.1g	Alert 7	T39	Public
D6.2	Website	T3 (on-going)	Public
D6.3	Conference	T36	Public
D6.4	Book manuscript (and published version)	T36 (T39)	Confidential
D6.5	Final Report	T36	Public
D7.1	Work plan	T3	Confidential
D7.2	Network Members' Agreement	T3	Confidential
D7.3a	6 Monthly Progress Report 1	T6	Confidential
D7.3b	6 Monthly Progress Report 2	T18	Confidential
D7.3c	6 Monthly Progress Report 3	T30	Confidential
D7.4a	Annual Report 1	T12	Public
D7.4b	Annual Report 2	T24	Public
D7.5	Report: Project Evaluation	T36	Public

Note I: The project start date was July 2006 (T1); the end date was June 2009 (T36).

Note II: All public deliverables can be freely accessed from www.eukidsonline.net



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Endnotes

- ¹ On average, 75% of 6-17 year olds in the EU27 use the internet: this comprises 60% of 6-10 year olds, 84% of 11-14 year olds and 86% of 15-17 year olds. See Eurobarometer. (2008) *Towards a Safer Use of the Internet for Children in the EU: A Parents' Perspective*. Luxembourg: European Commission.
- ² Source: www.census.gov. Internet statistics (dated 31/12/08) retrieved 6/3/09 from www.internetworldstats.com/stats9.htm#eu
- ³ European Union Internet Statistics updated for 31/12/08. Usage figures from sources published by Nielsen//NetRatings, ITU, GfK, local NICs etc. Retrieved 6/3/09 from www.internetworldstats.com/stats9.htm#eu
- ⁴ Eurostat, January 2007.
- ⁵ EU27 figures (from parents of 6-17 year olds) from Eurobarometer (2008), *ibid*.
- ⁶ EU25 data (from guardians of 6-17 year olds), *Eurobarometer 64.4 – Special No. 250: Safer Internet* (2005).
- ⁷ EU27 figures (use frequency recalculated as ever/never) – Eurobarometer (2008). EU25 figures – Eurobarometer 64.4 (2005).
- ⁸ Capacent Gallup (2009) Öruggr internetnotkun hjá barnafjölskyldum – Viðhorfskönnun [Safe internet use in families with children – a survey]. Reykjavík: Capacent Gallup.
- ⁹ For children, see Medietilsynet (2008) Trygg bruk undersøkelsen 2008 [Safe use of the internet 2008]. Fredrikstad, Medietilsynet. For parents, see SAFT (2006). SAFT 2006 Parent and Children survey. 2004-2006: Norwegian Action Plan for Children, Youth and the internet and the European Commission Safer Internet Action Plan: Norwegian Media Authority.
- ¹⁰ This does not mean access is equivalent across Europe. In 2005, children could go online from an average 2.8 locations in Sweden and 2.7 in Denmark, twice as many as in Italy (1.3) or Bulgaria, Greece and Spain (all 1.4).
- ¹¹ Hasebrink, U., Livingstone, S., Haddon, L. and Olafsson K. (2009) *Comparing Children's Online Opportunities and Risks across Europe: Cross-national Comparisons for EU Kids Online* (2nd edition). Available at www.eukidsonline.net. National reports (21 countries) are also available at this website.
- ¹² Given an EU27 average of 75% children online, countries were classified as either low (< 65%), medium (65-85%) or high (> 85%).
- ¹³ For the full report of this work package, see Staksrud, E., Livingstone, S., Haddon, L. and Olafsson K. (2009) *What Do We Know About Children's Use of Online Technologies? A Report on Data Availability and Research Gaps in Europe* (2nd edition), available at www.eukidsonline.net, together with reports on research by country.
- ¹⁴ The EU Kids Online website provides full details of quality criteria and the coding frame.
- ¹⁵ We do not here include physical/health consequences of internet use, including addiction (although see Widyanto, L., Griffiths, M. (2007). Internet Addiction: Does it really exist? (Revisited). In J. Gackenbach (Ed.), *Psychology and the internet: intrapersonal, interpersonal, and transpersonal implications* (2nd ed., pp. 127-149). Amsterdam: Elsevier/Academic Press.)
- ¹⁶ There are various ways of classifying member states in geographical terms: here we adopt that employed by the EC Safer Internet Programme.
- ¹⁷ See 'Cyberbullying: Coping with Negative and Enhancing Positive Uses of New Technologies, in Relationships in Educational Settings', at www.cost.esf.org/domains_actions/isch/Actions/Cyberbullying
- ¹⁸ Stald, G. and Haddon L. (2008) *Cross-Cultural Contexts of Research: Factors Influencing the Study of Children and the Internet in Europe*. At www.eukidsonline.net. National reports on research and funding contexts are also posted here.
- ¹⁹ See Haddon, L. and Stald, G. (forthcoming) A Comparative Analysis of European Press Coverage of Children and the Internet. *Journal of Children and Media*.
- ²⁰ See Hasebrink et al (2009), op cit.
- ²¹ Strictly speaking, disclosing personal information is not a risk itself but is rather a behaviour likely to lead to risks. Hence, it is not included in the risk classification (Table 2).
- ²² These are detailed in Hasebrink et al (2009), with full citations in the national reports at www.eukidsonline.net. Note that we do not offer this classification as a definitive statement of country characteristics but rather as an indicative guide for policy-makers, based on available evidence.
- ²³ Optem (2007). *Safer Internet for Children: Qualitative Study in 29 European Countries*. See http://ec.europa.eu/information_society/activities/sip/docs/eurobarometer/qualitative_study_2007/summary_report_en.pdf
- ²⁴ See Livingstone, S. and Bober, M. (2005) *UK children go online: Final report of key project findings*. London: LSE Research Online. At <http://eprints.lse.ac.uk/399/>
- ²⁵ Livingstone, S. and Bovill, M. (Eds). (2001). *Children and their Changing Media Environment: A European Comparative Study*. Erlbaum.
- ²⁶ See Kirwil, L., Garmendia, M., Garitonandia, C. and Martinez, G. (forthcoming) Parental mediation. In S. Livingstone and L. Haddon (Eds.), *Kids Online*. Bristol: The Policy Press..
- ²⁷ World Economic Forum. (2007). Executive Opinion Survey 2006 2007. World Economic Forum. Retrieved from: www.insead.edu/v1/gitr/wef/main/analysis/showdatatable.cfm?vno=2.18.
- ²⁸ OECD (2007) *Education at a glance. Paris: OECD*. See also *European Social Survey Round 3* (2006).
- ²⁹ Rihoux, B. (2006). Qualitative Comparative Analysis (QCA) and related systematic comparative methods: recent advances and remaining challenges for social science research. *International Sociology*, 21(5), 679-706.

- ³⁰ See also Hasebrink, U., Olafsson, K. and Stetka, V. (forthcoming). Commonalities and differences. How to learn from international comparisons of children's online behaviour? *International Journal of Media and Cultural Politics*.
- ³¹ Bauwens, J., Lobe, B., Segers, K. and Tsaliki, L. (forthcoming) A shared responsibility: similarities and differences in the factors that shape online risk experiences for children in Europe. *Journal of Children and Media*.
- ³² For a fuller discussion of the policy context and policy developments regarding children and the internet, see de Haan, J. and Livingstone, S. (2009) *EU Kids Online: Policy Recommendations*. At www.eukidsonline.net
- ³³ 'e-Inclusion means both inclusive ICT and the use of ICT to achieve wider inclusion objectives. It focuses on participation of all individuals and communities in all aspects of the information society.' See http://ec.europa.eu/information_society/events/ict_riga_2006/doc/declaration_riga.pdf
- ³⁴ Livingstone, S. and Helsper, E. J. (in press) Balancing opportunities and risks in teenagers' use of the internet: The role of online skills and family context. *New Media and Society*, 11(6).
- ³⁵ Livingstone, S. and Helsper, E. J. (2007) Gradations in digital inclusion: Children, young people and the digital divide. *New Media and Society*, 9(4): 671-696. <http://eprints.lse.ac.uk/2768>
- ³⁶ Eurydice. (2005). *Key Data on Education in Europe*. Brussels: Eurydice. Retrieved from: www.okm.gov.hu/doc/upload/200601/key_data_2005.pdf.
- ³⁷ See Annex I, point 3 of the Multiannual Community Action Plan on Promoting Safer Use of the Internet
- ³⁸ See Wolak, J., Finkelhor, D., Mitchell, K. J. and Ybarra, M. L. (2008). Online 'predators' and their victims. *American Psychologist*, 63(2), 111-128. Also, Finkelhor, D. (2008). *Childhood Victimization: Violence, Crime, and Abuse in the Lives of Young People*. Oxford: Oxford University Press.
- ³⁹ See Internet Safety Technical Task Force. (2008). *Enhancing Child Safety and Online Technologies: Final Report of the ISTTF to the Multi-State Working Group on Social Networking of State Attorney Generals of the United States*. Cambridge, MA: Berkman Center for Internet and Society, Harvard University.
- ⁴⁰ See <http://coface-eu.org/en/upload/WG%20EDUCATION/WG4-2009-Position-SaferInternet-EN.pdf>
- ⁴¹ See *SIP-Bench Synthesis Report* (2008), at www.sip-bench.eu/sipbench.php?page=results2008
- ⁴² Kirwil, L. (forthcoming) The role of individualistic-collectivistic values in childrearing culture for European parents' mediation of internet. *Journal of Children and Media*. See also the Qualitative Comparative Analysis reported in B Lobe et al's chapter The role of parental mediation in explaining cross-regional variation in the experience of children's online risk, in the book *Kids Online* (The Policy press, forthcoming).
- ⁴³ See http://ec.europa.eu/comm/avpolicy/media_literacy/index_en.htm.
- ⁴⁴ See http://portal.unesco.org/ci/en/ev.php-URL_ID=23714&URL_DO=DO_PRINTPAGE&URL_SECTION=201.html.
- ⁴⁵ For the European Media Literacy Charter see www.euromedialiteracy.eu/index.php?Pg=charter. See also the EC's Expert Group on Media Literacy at http://ec.europa.eu/comm/avpolicy/media_literacy/expert_group/index_en.htm and Council of Europe's statement at www.coe.int/T/E/Com/Files/Ministerial-Conferences/2005-kiev/texte_adopte.asp
- ⁴⁶ See Livingstone, S. (2008). Internet literacy: Young people's negotiation of new online opportunities. Available from <http://mitpress.mit.edu/dml>. In T McPherson (Ed), *Unexpected Outcomes and Innovative Uses of Digital Media by Youth*. MacArthur Foundation Series on Digital Media and Learning (pp101-121). Cambridge, Mass: The MIT Press.
- ⁴⁷ See Buckingham, D. with others (2005) *The media literacy of children and young people: A review of the research literature*. London: Ofcom, at www.ofcom.org.uk/advice/media_literacy/medlitpub/medlitpubrssi/ml_children.pdf.
- ⁴⁸ Kalmus, V. (2007). Estonian Adolescents' Expertise in the Internet in Comparative Perspective. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 19(1).
- ⁴⁹ www.insead.edu/v1/gittr/wef/main/analysis/showdatatable.cfm?vno=2.18.
- ⁵⁰ See also the review, evaluation and recommendations of the Youth Protection Round Table's *Toolkit*, at www.yprt.eu/transfer/assets/final_YPRT_Toolkit.pdf
- ⁵¹ See Pricewaterhouse Coopers (2009) *European Framework for Safer Mobile Use by Younger Teenagers and Children*, at www.gsmeurope.org/documents/PwC_Implementation_Report.pdf. See also EC Social Networking Task Force (2009) *Safer Social Networking Principles for the EU*. Luxembourg: EC.
- ⁵² Regarding pornography, see Peter, J. and Valkenburg, P. M. (2006). Adolescents Exposure to Sexually Explicit Online Material and Recreational Attitudes Toward Sex. *Journal of Communication*, 56, 639-660. For a review, see Millwood Hargrave, A., Livingstone, S. (2009). *Harm and Offence in Media Content: A Review of the Empirical Literature* (2nd ed.). Bristol: Intellect Press.
- ⁵³ As shown in Eurobarometer (2008), op cit.
- ⁵⁴ See Youth Protection Round Table's *Toolkit*, op cit.
- ⁵⁵ See Criddle, L. (2006). *Look Both Ways: Help Protect Your Family on the Internet*. Redmond, Washington: Microsoft Press. For a swimming



- pool analogy, see Byron, T. (2008). *Safer Children in a Digital World: The Report of the Byron Review*. London: DCSF and DCMS.
- ⁵⁶ Note that the absence of empirical research on a particular topic, group or country may not point to a significant gap: a country may learn from the experience of others without conducting its own research.
- ⁵⁷ See Internet Safety Technical Task Force. (2008). Op cit.
- ⁵⁸ Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (2nd ed.). Thousand Oaks, Cal: Sage.
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- ⁷⁰ At any one time network members comprised some 60 people, mainly researchers but some from NGOs, spanning expertise in media education, digital literacy, child psychology, youth media, sexuality, media globalisation, adolescence and identity, legal and regulatory perspectives, ethics, citizenship, gender, consumption, family studies, minorities, childhood studies and, also crucial, qualitative and quantitative methods, including expertise in handling large data sets and in comparative analysis.
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- ⁷² For complete listing, including conference presentations, see www.eukidsonline.net. Full texts may be available from individual authors on request.
- ⁷³ See http://ec.europa.eu/information_society/activities/sip/docs/call_2008/sip_call_text_en_2008.pdf



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Forthcoming book: Kids Online: Opportunities and Risks for Children

Sonia Livingstone and Leslie Haddon (Editors), The Policy Press

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