

# CHILDREN, RISK AND SAFETY ON THE INTERNET

Research and policy challenges in comparative perspective

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## Online opportunities

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This chapter analyses children's take-up of online opportunities and their outcomes, based on an analysis of the range and types of children's online activities. There are certain continuities between children's online and offline worlds – searching for information, entertainment and gaming and social networking online are, to a large extent, extensions or modifications of practices that are located in everyday life, that is, they are not particularly on one side or the other of the 'real'/'virtual' divide. But there is little question that the internet has not added to the breadth and depth of children's everyday opportunities.

The EU Kids Online research has shown that the internet usage of children in Europe involves constant negotiation of opportunities and risks which, if well balanced, will contribute to a meaningful life, a valued identity and satisfactory relations with others (Livingstone and Haddon, 2009a, p 4). Analysing internet usage in terms of opportunities and risks requires its examination through the conceptual lenses of structure and agency. Agency refers to freedom, choice, control and motivation; structure is the set of rules and resources. The starting point of this chapter is children's agency. Identifying children's online activities allows reflection on their knowledge, interests and motivations. Internet usage practices connect the agency side and its social context, within the structure of offline and online activity, which enables certain factors and restricts others.

Research on children's online activities employs the concept of a 'ladder of opportunities' (Livingstone and Helsper, 2007; Kalmus et al, 2009) in order to structure the types of activities in which children engage, in a systematic way. It suggests a progression through stages of use. According to this approach, progress is related to increasing skills and more complex internet usage. The 'ladder of opportunities' approach is based on the notion that children fall into groups based on the range of the opportunities they use, from information-related sources to communication, to more advanced uses, such as online content creation, practised by only a few.

While this framework has some merits, it should be noted that the analysis of EU Kids Online data in this chapter suggests that some of these activities should be grouped rather than considered in terms of a step-by-step advancement, and also, some activities might fit into more than one group, depending on the backgrounds of the children involved. This may be a reflection of how the internet's affordances have changed over time alongside shifts in the ways that children use the internet. However, the national variations presented below also suggest that we should perhaps seek a more nuanced picture, which might include multiple 'ladders of opportunities' rather than only one.

This chapter looks specifically at children's online activities in relation to the 17 activities asked about in the EU Kids Online survey, and analyses the average number of activities in which young people engage. It extends this examination by comparing and discussing the findings in Livingstone and Helsper's (2007) and Kalmus and colleagues' (2009) studies of the ladder of opportunities. Groups of activities in Europe and among different countries within the EU Kids Online project are examined in order to identify similarities and differences across countries. Opportunities are measured by listed activities. We acknowledge that it is not a complete list and this kind of activity-centred approach misses many nuances regarding different uses. However, these are sacrificed in favour of cross-national comparisons. Further research should investigate these differences in more detail.

### Average number of activities

Overall, children undertake nearly half (7.2) of the 17 activities in the survey (see Table 6.1). The number of activities young people engage in increases with age and with years of internet use. There are gender differences in terms of both older and younger boys being involved in a wider variety of activities than girls of the same ages. Differences in the averages, while always statistically significant, are smaller for younger children and become more pronounced over time.

While in most cases, older age increases the likelihood of the child using a particular application, there are a few differences. For example, fewer of the older girls play games against the computer, and fewer older girls had created a pet, character or avatar in the month before the survey.

Table 6.1, column 1 (content, contact and conduct, based on earlier work by EU Kids Online; see Livingstone and Haddon, 2009b) shows that among the three types of online opportunity, content-based activities are by far the most popular. Contact-based activities, using

**Table 6.1: Children's engagement in different online activities in the past month**

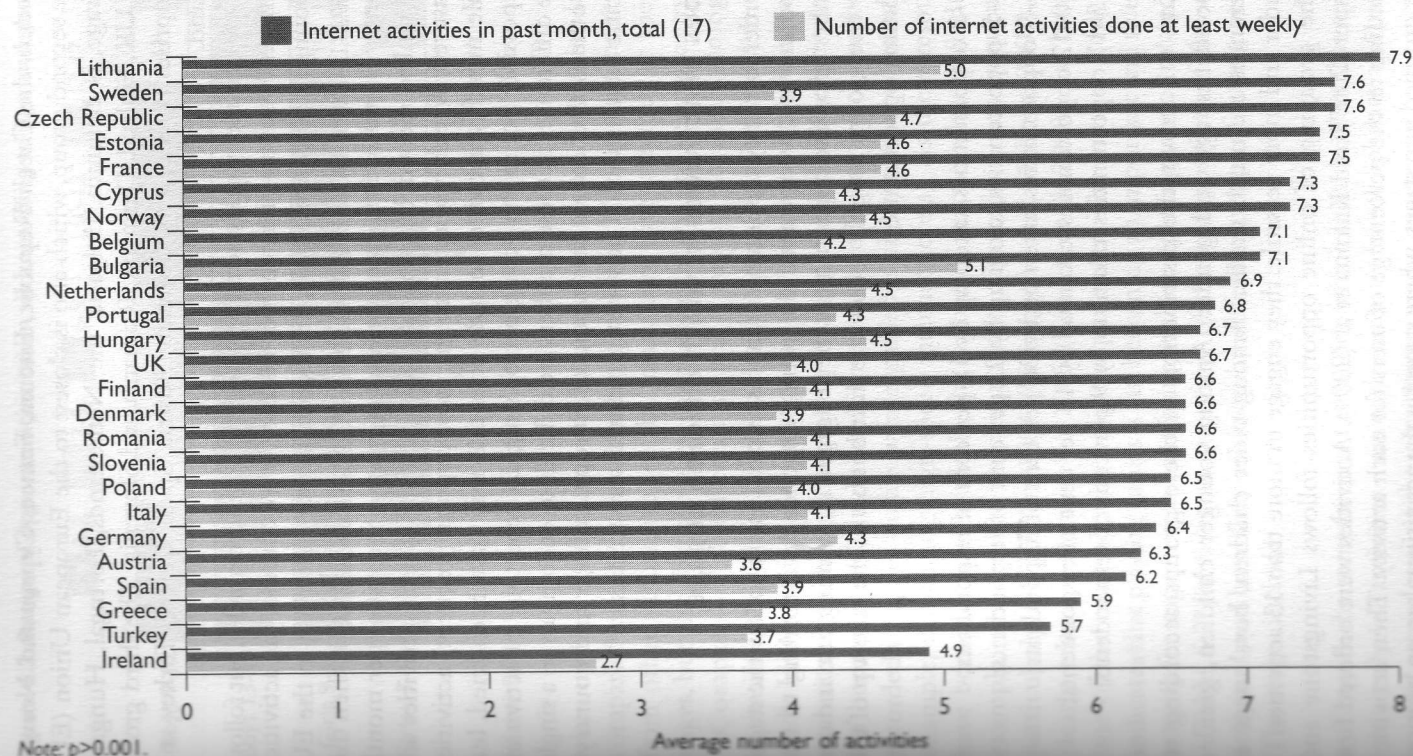
% of children who have done following activities in past month	Age 9-12		Age 13-16		Total
	Boys	Girls	Boys	Girls	
Average number of activities engaged in monthly (of all 17)	5.7	5.5	9.1	8.2	7.2
Content-based activities	78	81	87	90	84
Used the internet for schoolwork					
Played games on your own or against the computer	84	81	86	68	80
Watched video clips	65	64	87	84	76
Read, watched the news on the internet	37	35	59	57	48
Downloaded music or films	27	25	61	55	43
Contact/communication-based activities	42	46	75	76	61
Used instant messaging					
Visited social networking profile	39	41	80	80	61
Sent/received email	42	46	73	74	60
Played games with other people online	46	32	62	32	43
Used a webcam	23	25	36	37	31
Visited a chatroom	14	13	34	28	23
Conduct/peer participation activities	21	23	53	54	39
Put or posted photos, videos or music to share with others					
Put or posted a message on a website	17	18	43	39	30
Created a character, pet or avatar	19	17	20	12	17
Used file-sharing sites	10	8	29	21	17
Spent time in the virtual world	15	13	21	11	15
Written a blog or online diary	4	6	14	17	11

Note: All row differences for gender and age are statistically significant,  $p < 0.001$  (Chi-square tests).

the internet for communication, come second; conduct-based activities, requiring the initiative to generate own content, are the least frequent activities. There are significant differences regarding activities that demand more skill (either technical skills, for example, downloading music or films in the content category, or content-based skills, for example, reading/watching news). These activities are exploited by fewer, and taken up only when children get older.

The average number of activities young people engage in differs according to socioeconomic status. The highest socioeconomic status group engaged in 7.6 activities, the medium socioeconomic status group 7.3 activities, and children from the low socioeconomic status group engage in 6.7 activities on average ( $p < 0.001$ ). This indicates the relevance of the context of use in relation to the wider social structure.

Figure 6.1: Average number of online activities in the past month and in the past week, by country



We investigate the role of social context further when analysing country variations in the take-up of opportunities. The number of activities engaged in also corresponds to the length of time young people spend online. If more hours are spent online, then the range of activities increases. Young people who spend 30 minutes or less per day using the internet average 4.4 online activities; those who spend 3 hours or more per day online average 10.2 activities ( $p < 0.001$ ).

Communication activities are key to understanding the time children spend online – using the internet for communication is very common, especially among older children. The frequent popular debate about whether email is being replaced by social networking or instant messaging (see, for example, [www.emailisnotdead.com/](http://www.emailisnotdead.com/)) seems to be irrelevant in relation to European children: all three communicative activities are used almost equally. Sixty per cent of young people use email, 61 per cent use instant messaging, and 61 per cent use social networking sites. There are indications that use of social networking sites is the most age-dependent since the differences are greatest for younger and older children's use of this communication tool. However, the actual usage behind the figures needs further investigation.

As expected, the average number of internet activities and the average number of skills are strongly related (Pearson's correlation 0.231,  $p < 0.001$ ). Those children who report knowledge of the eight skills listed in the survey also engage regularly in an average of 10.9 activities online; children reporting no skills engage in an average of 4.7 activities. The correlation is even stronger for number of years online and number of online activities (Pearson's correlation 0.384,  $p < 0.001$ ). Young people who have been using the internet for five years or more show average take-up of 9.3 activities; young people who have used the internet for less than a year engage in only 4.8 activities.

The analysis in the next section shows that if the number of online activities is smaller, these activities are likely to be related to content and to contact/communication opportunities, in that order. Activities related to online conduct, where the child becomes an active agent shaping the online environment by contributing content, is in most cases taken up only if the more straightforward activities are well established.

### Average number of activities across countries

Figure 6.1 shows that there are some quite large differences across countries. Countries can be grouped according to the number of activities in which children engage. The most active group is Lithuania,

Sweden, the Czech Republic, Estonia, France, Cyprus and Norway. The second group, which also is closest to the European Union (EU) average, is Belgium, Bulgaria, the Netherlands, Portugal, Hungary, the UK, Finland, Denmark, Romania and Slovenia. The third group comprises Poland, Italy, Germany, Austria, Spain, Greece, Turkey and Ireland.

If we consider weekly activities, the differences are smaller, but follow a different country hierarchy. For instance, if we consider the activities of young people in Bulgaria, per month, the range is close to the EU average; if we look at Bulgarian children's activities per week, then this country is ranked first. For Sweden, for range of activities per month it is ranked second, but it is ranked very low if weekly activities are measured. Weekly use refers to the most popular (frequent) activities while monthly activities include ones that may have been tried, but are possibly not in the young person's regular repertoire of activities. The differences in these numbers are difficult to encompass in a single hypothesis that covers the whole of Europe; context and country-specific reasons should be investigated in future studies.

### Types of activities in which children engage

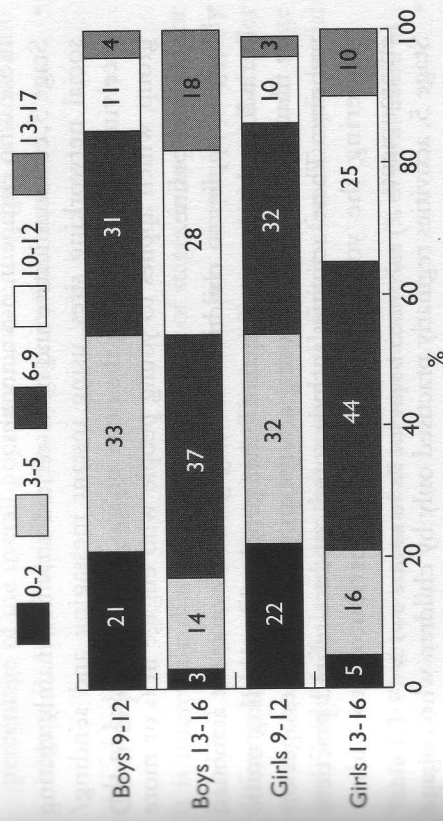
In order to clarify the argument in this section, and to follow the stages of online use, we grouped the young respondents according to the number of online opportunities they engaged in, forming sum indices. The five groups roughly follow the distribution of the take-up of the 17 online opportunities:

- 0-2 opportunities, taken up by 12 per cent of respondents;
- 3-5 opportunities, taken up by 23 per cent of respondents;
- 6-9 opportunities, taken up by 36 per cent of respondents;
- 10-12 opportunities; taken up by 19 per cent of respondents;
- 13-17 opportunities; taken up by 9 per cent of respondents.

Figure 6.2 shows the distribution of these groups according to respondents' age and gender. Among younger children, gender differences are much smaller. Among older children, boys' usage is broader and more versatile: they engage in more than 13 activities.

The grouping of online opportunities follows Livingstone and Helsper (2007) and Kalmus et al (2009). Activities were ordered first according to the percentage of users for each activity. Then activities were grouped into stages, where stage 1 is the activities taken up by most young internet users, and stage 5 represents the least frequent activities,

Figure 6.2: Range of opportunities taken up according to age and gender



Note:  $p > 0.001$ .

taken up only by the users engaging in more than 13 activities. If we compare these activities according to children's take-up with the results from other studies, we see that many uses have stabilised at specific stages, but also that there are fluctuations in the online environment.

Comparison of different stages is subject to methodological limitations: they differ in relation to the types of use surveyed in each study. However, it is clear that in the five or six years previous to the current survey, the structure of the young people's online environment has become increasingly multi-media based. Many of the activities recorded in earlier studies were regarded as highly resource bound (for example, demanding high-speed internet access). As these resources have become more available, the nature of practices has shifted. For example, we see that watching video clips online, not frequent or particularly relevant in 2004 (Livingstone and Helsper, 2007), and clearly resource-sensitive in 2005 (Kalmus et al, 2009), has become one of the most popular online experiences. The current study also indicates that playing games is fast becoming an important and relevant activity for stage 1 users, competing with or replacing school-related use.

Table 6.2 provides an overview of the composition of the stage activities and how they are used by different groups of young people. The stages include:

- Stage 1, the most frequent activities, which include users that engage in only 1-2 activities – use of the internet for schoolwork and playing solo games against the computer.

- Stage 2, watching video clips, which applies to more than half of those who engage in 3–5 activities.
- Stage 3, communicative and news-related activities, mainly visiting social networking sites, using instant messaging and sending/receiving email. Watching the news online is also included in this group, which applies to young people who engage in 6 or more activities online.
- Stage 4 applies to children who engage in 10 or more activities, including playing games against other people, downloading music or films, posting photos, using a webcam or posting messages on websites. These activities include some conduct-related practices rendering the young people active contributors to online environments.
- Stage 5, activities regularly practised only by children who engage in 13 or more online activities. Although visiting chatrooms, using file-sharing sites, creating characters, spending time in virtual worlds

**Table 6.2: Opportunities taken up, by frequency with which children do the activity (%)**

Stage		No of opportunities taken up (%)							Average
		0-2	3-5	6-9	10-12	13-17	13-17	Average	
1	Used the internet for schoolwork	68	78	87	92	95	95	84	
	Played games on their own or against the computer	61	77	78	86	93	93	80	
2	Watched video clips	19	61	87	97	99	99	76	
3	Visited social networking profile	3	31	73	94	99	99	61	
	Used instant messaging	3	29	73	94	98	98	61	
	Sent/received email	5	31	71	90	97	97	60	
	Read/watched the news on the internet	8	30	52	70	84	84	48	
4	Played games with other people online	6	29	42	65	92	92	43	
	Downloaded music or films	2	17	45	75	90	90	43	
	Put or posted photos, videos or music to share with others	1	8	39	73	92	92	39	
	Used a webcam	1	11	29	55	77	77	31	
	Put or posted a message on a website	0	5	27	57	89	89	30	
5	Visited chatroom	1	3	19	42	80	80	23	
	Used file-sharing sites	1	2	12	34	68	68	17	
	Created a character, pet or avatar	1	6	14	27	58	58	17	
	Spent time in the virtual world	1	5	12	24	57	57	15	
	Wrote a blog or online diary	0	1	5	20	52	52	11	

Note: Shading indicates those opportunities taken up by more than 50% in the relevant column;  $p > 0.001$ .

and writing blogs or a diary are generally practised by only a small percentage of the overall population, more than half of those who engage in 13–17 activities also engage in these activities.

## Country comparisons

It is interesting that while this grouping of stages is appropriate for EU-level analysis, each of the countries in our sample has a slightly different ladder of opportunities. These differ in relation to the order of take-up of opportunities and the percentage of users in each stage (see Table 6.3). It seems that contextual factors, for example, social

**Table 6.3: First two stages of all surveyed countries (% of total users in brackets)**

	Stage 1 (%)	Stage 2 (%)
Austria	Games against computer (79)	Video (79) Schoolwork (67)
Belgium	Games against computer (80)	Video (84) Schoolwork (76)
Bulgaria	Games against computer (91)	Schoolwork (74) Instant messaging (89)
Cyprus	Games against computer (87)	Video (86) Schoolwork (80)
Czech Republic	Games against computer (82)	Schoolwork (86)
Denmark	Games against computer (88)	Video (88) Schoolwork (83)
Estonia	Games against computer (78)	Video (91) Schoolwork (81)
Finland	Games against computer (80)	Video (80) Schoolwork (71)
France	Games against computer (77)	Read-watched news online (88) Video (81)
Germany	Schoolwork (85)	Video (80) Games against computer (76)
Greece	Games against computer (94)	Video (84) Schoolwork (76)
Hungary	Games against computer (80)	Video (75) Schoolwork (72)
Ireland	None of the activities is taken up by more than 50% of young people who engage in 0-2 activities	Video (76) Games against computer (74) Schoolwork (58)
Italy	Schoolwork (83) Games against computer (78)	Video (77)

(continued)

**Table 6.3: First two stages of all surveyed countries (% of total users in brackets) (continued)**

	Stage 1 (%)	Stage 2 (%)
Lithuania	Games against computer (84)	Instant messaging (80)
Netherlands	Games against computer (78)	Video (88) Schoolwork (77)
Norway	None of the activities is taken up by more than 50% of young people who engage in 0-2 activities	Video (89) Schoolwork (75)
Poland	Schoolwork (91) Games against computer (78)	Stage 2 cannot be separated from stage 3 Video (71) Visited social networking site profile (58) Instant messaging (68) Sent/received email (58) Read/watched news (61) Played games with people (51) Download music, films (49)
Portugal	Schoolwork (90)	Games against computer (79) Video (77)
Romania	Schoolwork (87) Games against computer (81)	Instant messaging (82) Video (77)
Slovenia	Games against computer (78)	Video (86)
Spain	Schoolwork (83) Games against computer (78)	Video (78)
Sweden	Games against computer (69)	Video (90)
Turkey	Schoolwork (91) Games against computer (88)	Stage 2 cannot be separated from stage 3 Video (59) Visited social networking site profile (44) Instant messaging (45) Sent/received email (44) Played games with people (47) Download music, films (40) Put (or posted) photos, videos or music to share with others (40)
UK	Schoolwork (92) Games against computer (80)	Video (75)

Note:  $p > 0.001$ .

structure differences, have a strong influence on what is popular, what is permitted and what is encouraged and supported in a particular country.

In most of the countries surveyed, stages 1 and 2 include games, videos and schoolwork (in different orders); however, in Bulgaria, France, Poland, Romania and Turkey, stage 2 includes other important activities. The most popular activities are social networking, instant messaging and watching news, showing that although content-related activities lead the ladder of opportunities on average in EU countries, communication-related activities are becoming increasingly important in some countries in the early stages of internet use.

Table 6.3 illustrates that although in many countries, stage 1 consists of gaming, the eventual take-up of other services may outnumber the total number of players. In Lithuania, Sweden and Slovenia, schoolwork does not figure in stages 1 and 2; the figures suggest that school-related use will continue to be slow in these countries.

The stage activities in different countries also vary in other ways, indicating that in some countries differences among uses are bigger, but this depends on the overall distribution of stages in each country. Figure 6.3 provides an overview of the differences, showing that distribution varies widely across countries. Those countries most different from the norm are Ireland, where very few children engage in a broad range of activities, and Lithuania, where 16 per cent of young people engage in 13 or more activities. In France, Bulgaria, the Czech Republic and Sweden there are also high percentages of children using 13 or more activities. Denmark stands out for the largest average group, with 49 per cent use of 6-9 activities. The Czech Republic, Cyprus, Estonia, the Netherlands and Sweden have the smallest percentage of internet users, engaging in only 0-2 activities.

## Conclusion

This examination of children's internet practices shows that they are related to many real-life activities, ranging from schoolwork to discussing the health of a pet with peers. It is claimed that any kind of internet usage subtly alters rather than replaces existing practices (Runnel, 2009); therefore, understanding the various wider contexts of such use is increasingly relevant.

This chapter is a first step towards understanding these contexts. The different internet uses of boys and girls, and younger and older children, show that the number of internet-related practices they engage in increases over time. However, we also see that there is no clear hierarchy of uses, but rather alternate paths in terms of stages of online opportunities. These choices are supported and influenced by numerous mediators - peers, parents, the school system, and also cultural background, social fashions and public acceptance of different activities.

The choices about online opportunities differ most by country. Schoolwork-related use, a clear trigger of internet use in earlier years, is being paralleled by activities such as watching videos and playing games. Internet use among children may vary in different countries because of particular national contexts, including available resources (for example, the quality of the internet provision) and existing rules (different restrictions on children, peer norms, common understandings of what

is popular, etc). However, the analysis in this chapter highlights many unanswered questions regarding context, variations and implications about future use. A more detailed examination is needed to analyse how internet practices are not isolated within the online environment.

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