# Children's online behaviours in Irish primary and secondary schools

## RESEARCH REPORT

Marina Everri and Kirsty Park

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

## Contents

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Suggested reference:** Everri, M. & Park, K. (2018). C*hildren's online behaviours in Irish primary and secondary schools*. Research report. Zeeko, NovaUCD, University College Dublin.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

# Key findings

- Zeeko reached 244 schools and 35,867 children (18,131 males; 17,736 females) all over Ireland over a 16-month time framework.

- Younger generations go online at a younger age: the first access to Internet happens around 6 years.

- More than 60% of primary school children use tablets, computers, and games consoles to access the internet; older students use mainly smartphones (more than 90%), followed by computer and tablets. The usage of smartphones increases throughout the school years (from primary to secondary); while the use of tablets decreases. A slightly higher percentage of girls use smartphones to access the Internet, especially starting from 6th class.

- YouTube, Snapchat, and Minecraft are the favourite applications of primary school children; while secondary school students rated Snapchat, Instagram and YouTube as their favourite applications (only 21% indicated Facebook).

- Almost 70% of primary school children declared to know more than their parents about online apps and gaming. 56% declared to know more than their parents about social media.

- The majority of children in primary schools spend from 1-3 hours per day online during weekdays. There is a progressive increase throughout the primary school years in the amount of time spent online. Boys tend to spend slightly more time online than girls, especially during weekend days.

- The majority of children in both primary and secondary schools (range: 62%-77%) acknowledge cyberbullying as a highly risky behaviour.

- Children's perception of digital footprint (online data protection) as a risky issue decreased throughout the school years (from 43% to 31%).

- Younger children considered screen time as more serious than older children. Between 38% and 49% of students in secondary schools considered screen time as low to moderately serious.

- Both primary and secondary school children considered talking to strangers as a serious problem; however, the perception of risk decreased starting from 1st year of secondary school, when it was considered a moderately risky behaviour.

- In general, the perception of the different types of online risks was higher in the sample of females both in primary and secondary schools.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

- The percentage of children who identified themselves as being victims of cyberbullying ranged from 10% in 1st class to 18% in 6th year. Children that witnessed cyberbullying ranged from 20% in primary schools to 45% in 6th year. Starting from 5th class, the percentage of girls, victims of cyberbullying increased progressively reaching the 31% in 6th year.

- 24% of children attending 1st class and 53% of children attending 6th class played an online game with strangers. The number of children talking to strangers online increased progressively throughout primary and secondary school years, reaching 63% in 6th year.

- 28% of children in 1st class and 43% in 6th class played an over 18s game. Throughout primary school, boys played online games 4 times more than their female peers.

- Older students (6th year) showed the highest percentages of sexting behaviour, specifically: 30% sent sexually suggestive images, 22% shared sexts, 28% sexted a non-partner, 16% sexted someone they met online for the first time. Male adolescents presented higher percentages in all sexting behaviours.

- Differences between DEIS and NON-DEIS schools were observed, especially for what concerned the experience of risky online behaviours.

- Children in DEIS primary schools, considered digital footprint (online data protection) as more serious than their peers in NON-DEIS schools; while students in DEIS secondary schools perceived less risk when compared to their peers in NON-DEIS schools.

- Experiences of witnessing and being victims of cyberbullying is higher in both DEIS primary and secondary schools.

- Students in DEIS secondary schools showed higher levels of contacts with online strangers when compared with their peers in NON-DEIS throughout secondary school years (range: 33% - 65%). Males in DEIS schools showed higher percentages.

- The percentage of boys playing an over 18s game is higher in DEIS primary schools (e.g., 6th class, DEIS: 71% vs. NON-DEIS: 63%).

- In DEIS secondary schools, percentages of sexting behaviours are higher, especially for males and with respect to categories considered as riskier, such as sexting a non-partner and someone met online for the first time.

- Catholic and Multidenominational primary schools presented small differences on the differed areas we surveyed.

- Experiences of cyberbullying and sexting are reported by less than 15% of adolescents attending Catholic schools; however almost 30% have witnessed episodes of cyberbullying.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

## 1. Introduction

What is the state of the art of research on children's behaviours with respect to the Internet in Ireland? What do children know and feel when going online? Does their online behaviour change over the years, for instance in the transition from primary to secondary schools? In Ireland, as well as all in other countries around the world, there has been an increasing interest in investigating children's online behaviours, specifically children's habits, interests, opinions and emotions with respect to the Internet. Research studies currently available in Ireland have provided only a snapshot of the situation focusing either on primary or secondary school children, and on a limited period of time (see next paragraph). In the present report, we provide a comprehensive analysis of children's online behaviours carried out in both primary (from 1st to 6th class) and secondary schools (from 1st to 6th year) all over Ireland during 16 academic months.

## 2. Background

Extensive research investigations carried out in Europe over the last decade have provided a clearer picture of children's online behaviour identifying both risks and opportunities for children's health and development, more broadly [1]. Ireland, among other countries, has been involved in these studies[2], and the findings have been compared with those observed in other European countries.

The most interesting results can be summarised as follows: (a) the age in which Irish children (9-16 years) first access the Internet has decreased going from 9 years in 2011 to 8 years in 2015; (b) the access to internet happens mainly in private spaces such as homes (mainly bedroom for older teenagers); (c) smartphones are the most used devices to access the Internet on a daily basis; (d) most Irish children claim to know more about the Internet than their parents; (e) online risks such as cyberbullying is experienced by more girls than boys; (f) older adolescents (22%) receive sexual messages online, but very few are upset as a consequence; (g) 22% children had contact online with people never met offline.

A more recent research report[3] has provided further insights about Irish children's (8-13 years old) online behaviour, especially on online content preferences and screen time. Irish children preferred applications are Snapchat and Instagram, together with YouTube and instant messaging applications which support entertainment and sharing; 16% of children spend more than 4 hours online per day; and involvement in games for adults (over 18s) is reported by 64% of children attending primary schools.

Taken together these findings are informative; however, children's habits and media consumption change at such a rapid pace that there is a need for robust and up to date evidence base which systematically takes into account variations in terms of children's age, gender and background, while focusing on Irish social-cultural characteristics. The present report intends to tackle these aspects building upon the mentioned above research studies and investigating further children' self-reported preferences, perceptions, and experiences with the Internet.

---

[1]See reports part of Eukidsonline research project: http://www.lse.ac.uk/media-and-communications/research/research-projects/eu-kids-online

[2] O'Neill, B. & Dinh, T. (2015). Net Children Go Mobile: Full findings from Ireland. Dublin: Dublin Institute of Technology.

[3] Cybersafe Ireland Annual report, 2017.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*

### 3. Research

*3.1 Participants*

Zeeko started surveying schools in May 2016 and has been constantly monitoring children's behaviours with respect to the usage of the internet. The results presented here concern data collected between May 2016 and February 2018 corresponding to **16 academic months**, namely an entire school year (2016/2017) and one semester (2017/18). **244** schools (173 primary, 71 secondary) were reached by Zeeko: the majority were denominational (N=191), 40 interdenominational, and 13 multi-denominational. Schools were located in different parts of the country, with Dublin having 61 schools. The figure below shows the distribution of both primary and secondary schools in Irish counties (Figure 3.1).
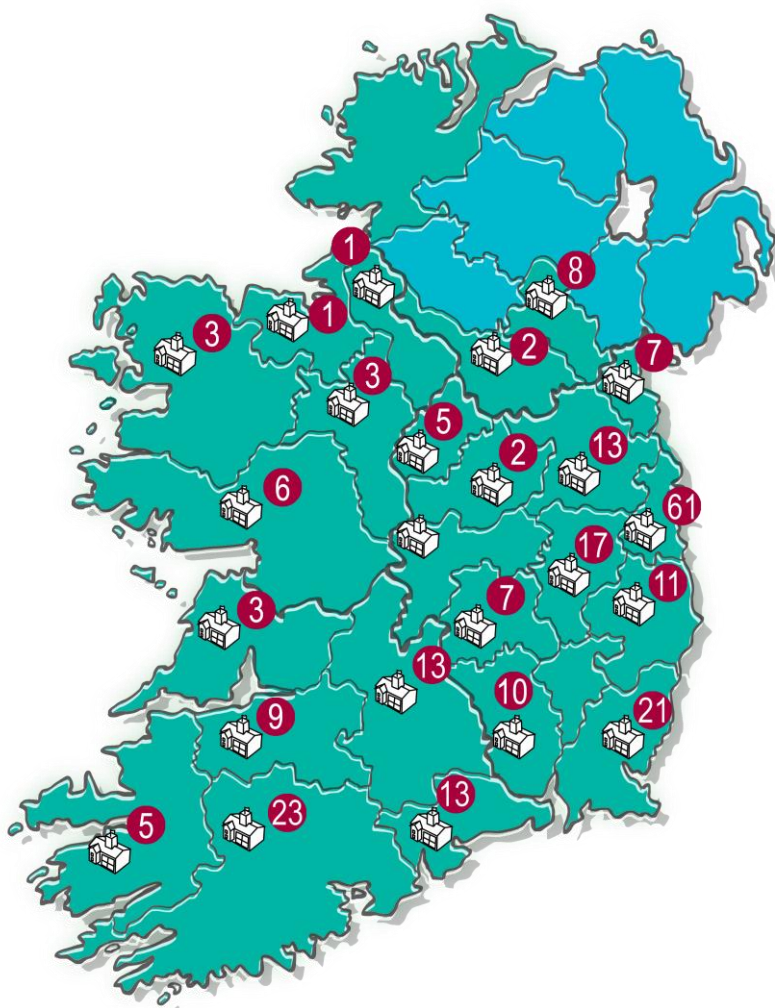


**Figure 3.1.** Number of schools reached all over Ireland

A total number of **35,867** children (18,131 males, 17,736 females) were reached (Figure 3.2). The sample of children in primary school was higher than the sample of secondary schools, however it was well-balanced for gender: in **primary schools** Zeeko reached **26,528** children (**13,252** boys and **13,276** girls); in secondary schools, **9,339** students (**4,460** females and **4,879** males) (Figure 3.2).

*Zeeko research report*
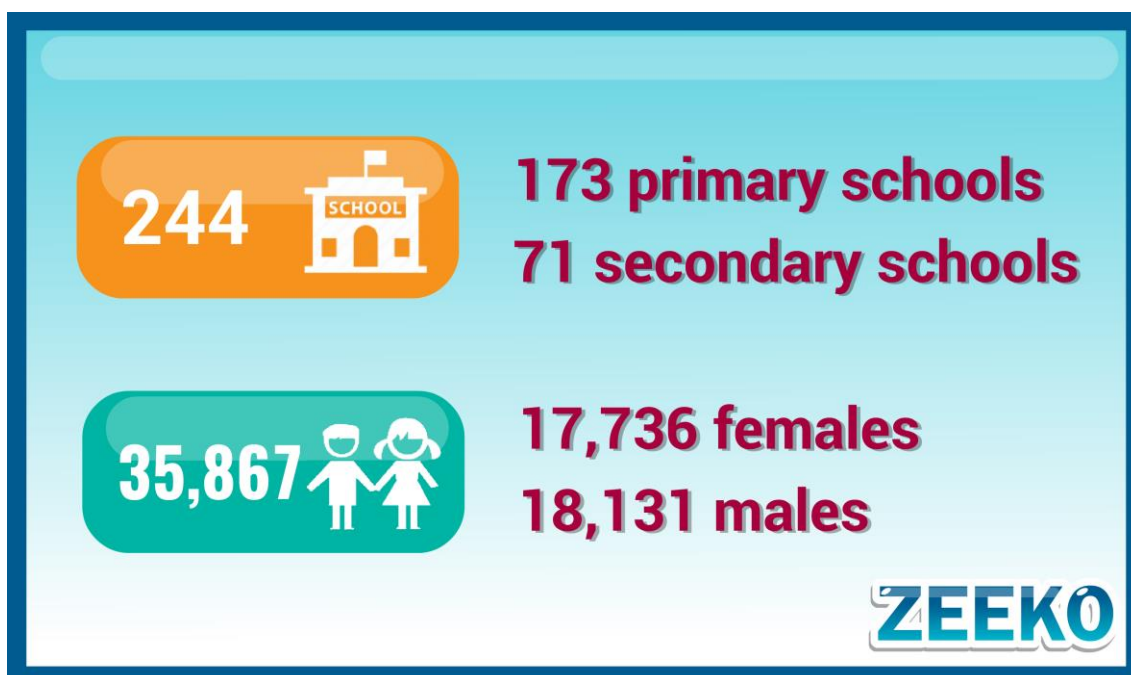*Children's online behavior in Ireland*
*2016-2018*

**ZEEKO**

*Marina Everri and Kirsty Park*

**Figure 3.2.** Number of schools and children reached for the research

Because we were interested in exploring the differences between schools having a different ethos/background, we selected two samples of children from the larger number of participants attending DEIS (*Delivering Equality of Opportunities in Schools*), Catholic, and Multidenominational schools.

The number of children reached in DEIS schools was **6,244** (4,399 in primary and 1,845 in secondary schools). In Catholic schools **23,851** attended primary classes and **4,912** secondary years; while in Multidenominational, primary school children were **2,057** and in secondary schools, **136**.

*3.2 Method and procedures*

Zeeko developed an online questionnaire and sent it to schools via emails (See appendices I and II). The questionnaire was administrated by teachers in classrooms. The completion of the questionnaire required 10 to 20 minutes and students could be assisted by their teacher in case they did not understand some questions. The items inserted in the questionnaire covered the contents illustrated in the table 3.1.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Table 3.1**. Research contents examined in the research

| ZEEKO | |
|---|---|
| **1. ACESS TO THE INTERNET:** | For this area we asked children to report the age in which they first accessed the Internet. |
| **2. DEVICE USAGE:** | A list of devices was provided to children; they had to report the kind and number of devices used daily. |
| **3. CONTENT PREFERENCES:** | A detailed list of applications was provided both considering the most used applications by primary and secondary school children and including different contents ranging from entertainment to education. |
| **4. KNOWLEDGE:** | We were interested in assessing children's perception of their level of knowledge with respect to the Internet when compared to their parents. |
| **5. SCREEN TIME:** | As reported by previous research, the time that children spend online is important to understand their habits and their capacity to balance time spent online and offline. |
| **6. RISKS:** | In this area we explored the perception of risks in four domains: a) Cyberbullying, (online aggressions); b) digital footprint (awareness to protect personal data and images), c) screen time (spending too long online), d) stranger danger (engaging in online conversations with persons met for the first time online). |
| **7.EXPERIENCES:** | This area is connected to the previous one, but pertained to the actual experiences children had online, such as aggression (seeing or being cyberbullied) talking/playing to/with stranger (stranger danger), playing an over 18s game (for younger children), sexting (for older children), etc. |

Analyses were carried out considering frequencies of children's self-reported behaviours to identify behavioural trends as well as statistics to identify children's behavioural trends in each area considering similarities and differences for: age, gender, different types of schools attended.

## 4. Results

In this section, we present the findings as organised in three parts: 1) Device usage and content preferences; 2) Online risks; 3) School differences. Each part includes paragraphs that discuss the research areas illustrated above.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

# PART 1

# Device usage & online content preferences

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

*4.1 At what age do children go online in Ireland?*

The first area we wanted to explore concerned the **age at which children go online**. We asked pupils in primary schools to indicate when they first started using the Internet. As shown in the figure below, most children stated they accessed the Internet at an early age, between 6 and 7 years (Figure 4.1). Children in 1st class stated they started earlier than their peers attending 6th class, signalling that younger children have access to the Internet earlier when compared to their older peers.
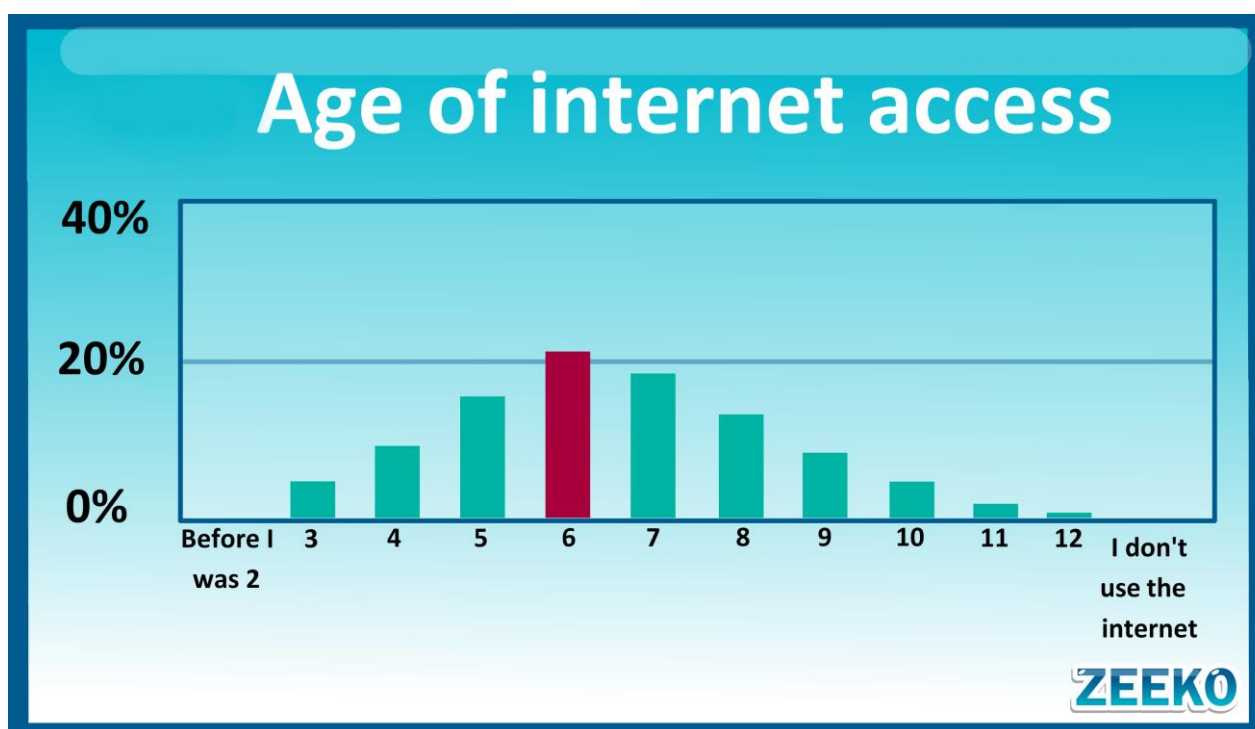


**Figure 4.1** Age of access to the internet – Primary schools

*4.2 What device do children use to go online?*

Children attending **primary schools used a tablet** (63%) to access the Internet, followed by smartphone, desktop, and game consoles. Almost 22% of primary school children used iPods compared to only 13% of secondary school students. A different trend emerged for **older students**, who used **smartphones** (93% secondary vs. 48% primary), followed by computers (55%) and tablets (47%). Small differences were observed between primary and secondary school students in the usage of games consoles (38%-40%) and Smart TVs (23%-24%) (Figures 4.2 and 4.3).
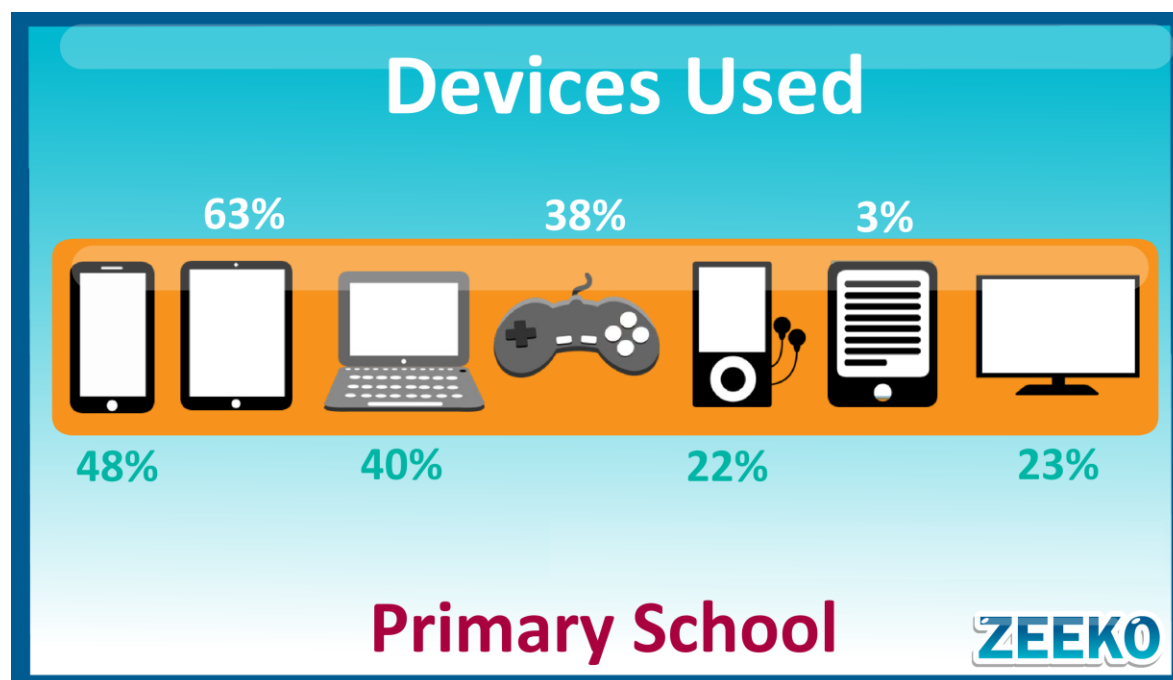
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

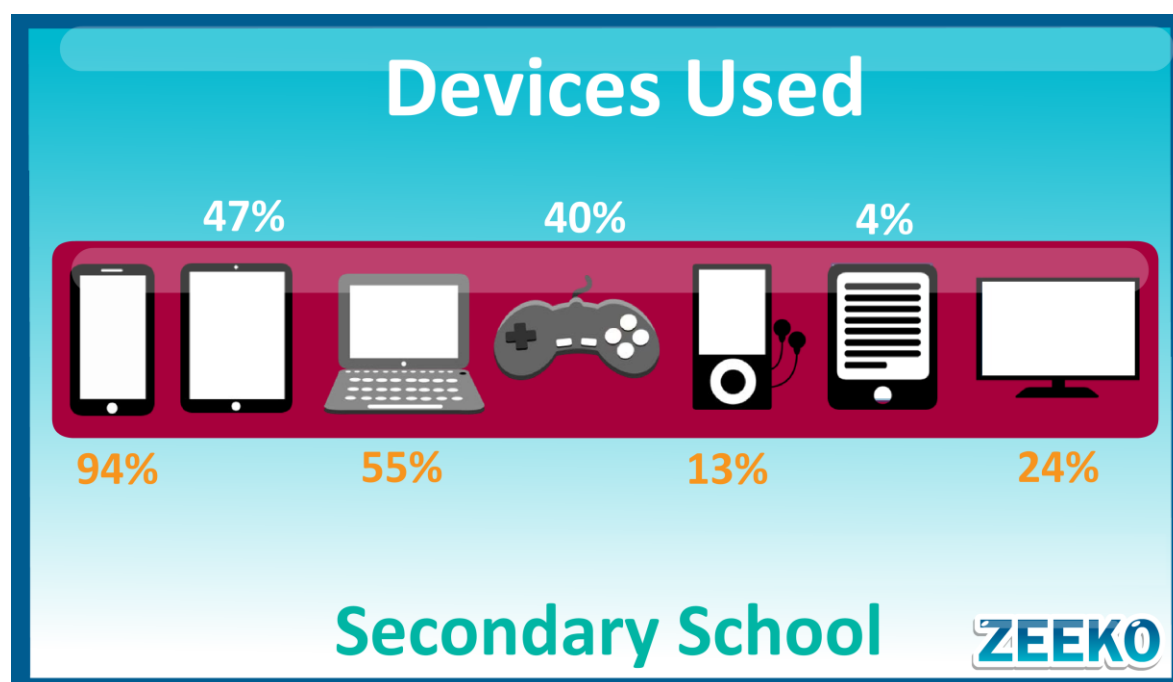**Figure 4.2** Devices used to access to the internet – Primary schools



**Figure 4.3** Devices used to access to the internet – Secondary schools

In the transition between primary and secondary schools, we observed **a progressive increase in the adoption of smartphones and a decrease in the use of tablets**. The highest variation happened between 5th class and 1st year of secondary school, when the majority of children usually adopt a smartphone.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

Considering **gender differences**, the number of boys (blue) **using games consoles** was double that of girls (red) both in primary and secondary schools (Figure 4.4).
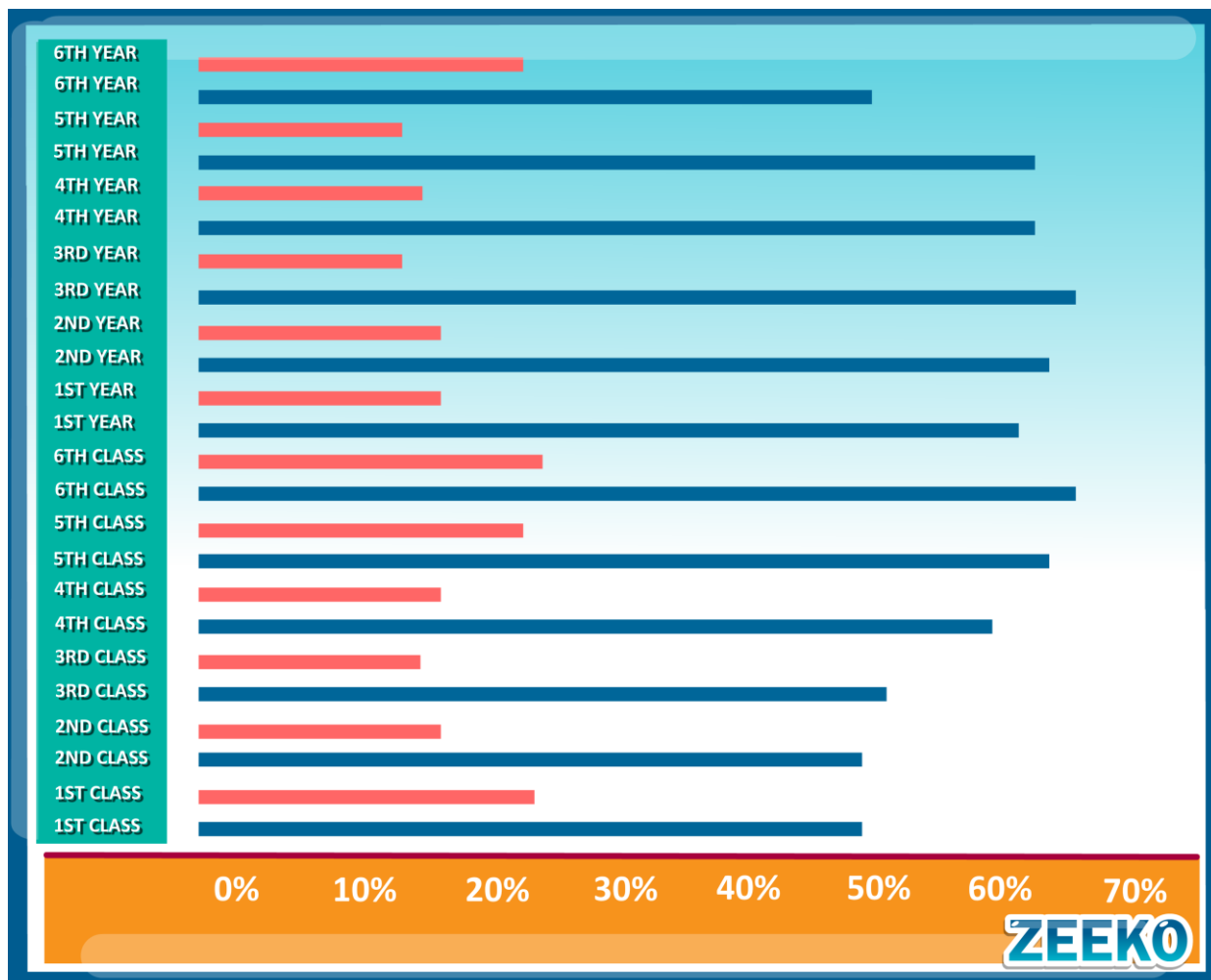


**Figure 4.4** Usage of games consoles to access the Internet and Gender differences – Primary and secondary schools. Girls (red) and Boys (blue).

The percentage of **girls using smartphones was slightly higher** than the percentage of boys, especially starting from 6th class, when the adoption of smartphones increased drastically, as shown in the figure below (Figure 4.5)
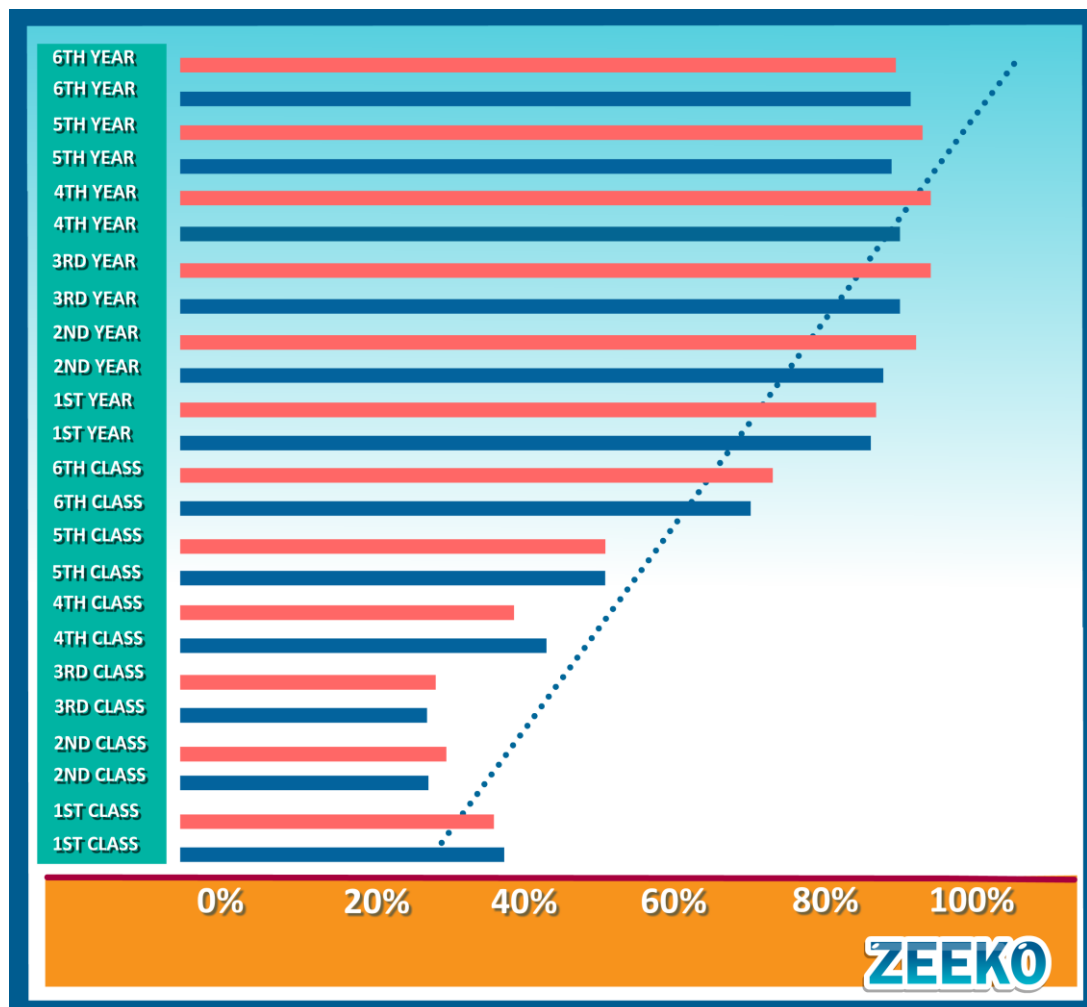
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*



**Figure 4.5** Usage of smartphones to access the Internet and Gender differences – Primary and secondary schools. Girls (red) and Boys (blue).

*4.3 What are children's favourite apps?*

We asked children to rate their **top favourite applications**: in both samples of primary and secondary schools, YouTube, Snapchat and Instagram were the most cited. A higher percentage of **secondary school students expressed a preference for Snapchat** (69%), followed by Instagram (46%), and YouTube (41%) (Figure 4.7). Facebook, Netflix, and Spotify are also of interest to secondary students, while primary school pupils preferred gaming apps like Minecraft (16%) and FIFA (12%) (Figure 4.6). There were no notable differences between boys and girls.
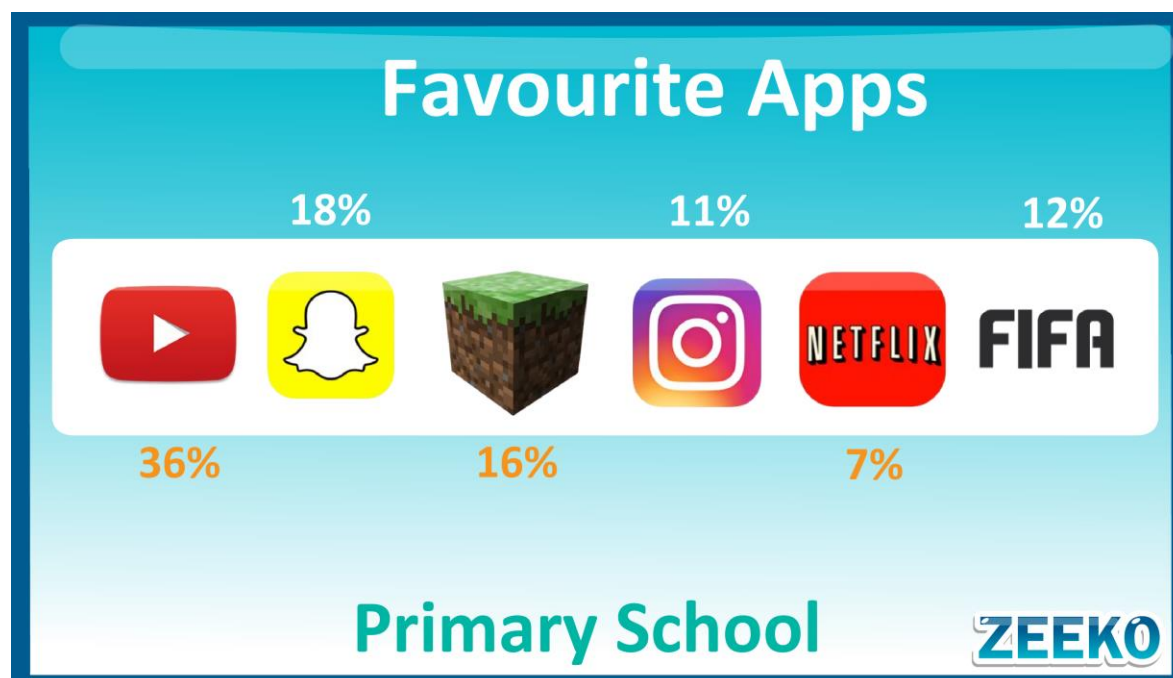
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Figure 4.6** Favourite applications – Primary schools



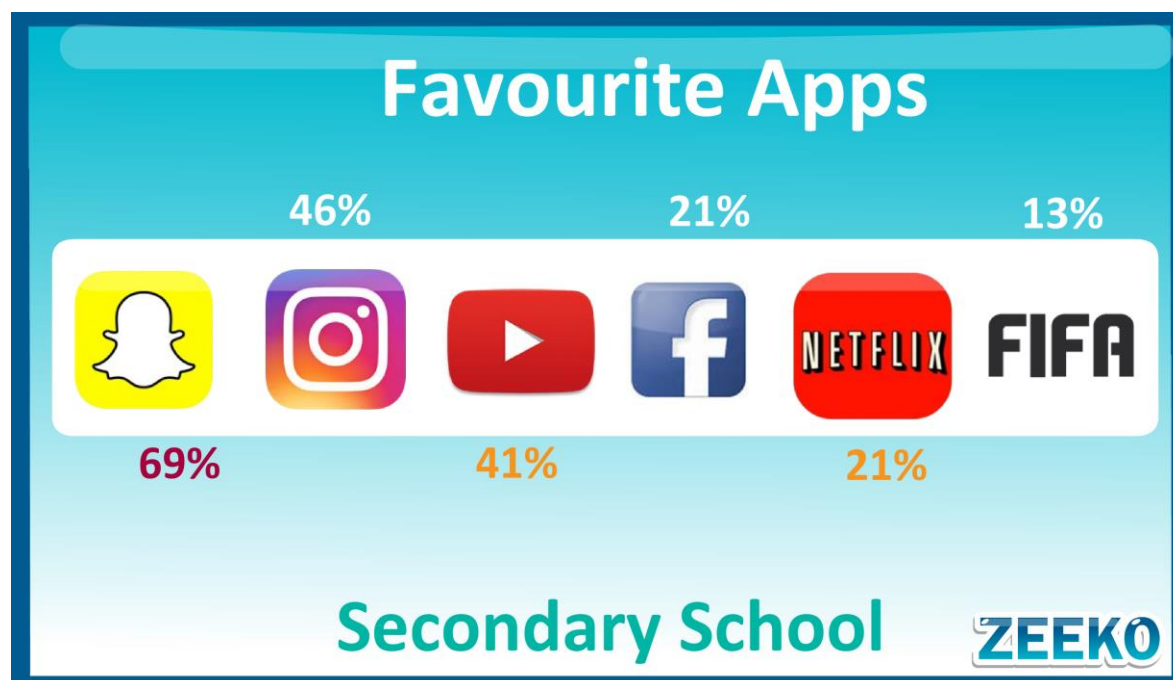**Figure 4.7** Favourite applications – Secondary schools

*4.4 What do children know compared to their parents?*

We were interested in exploring what young **children in primary schools** self-reported that they knew about: (a) applications, (b) online gaming, (c) social media, (d) and the Internet in general when compared to their parents. They **reported to know more than their parents about**

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**applications and online gaming** (respectively, 70% and 72%). Also, 56% and 48% of pupils in 6th class reported to know more about respectively, social media and Internet in general.

When looking at **gender differences** boys reported a higher level of knowledge compared to girls, especially on games and applications. Inversely, a higher number of girls than boys, especially in 6th class, stated to know more than their parents about social media (58% girls against 54% boys) (Figure 4.8).
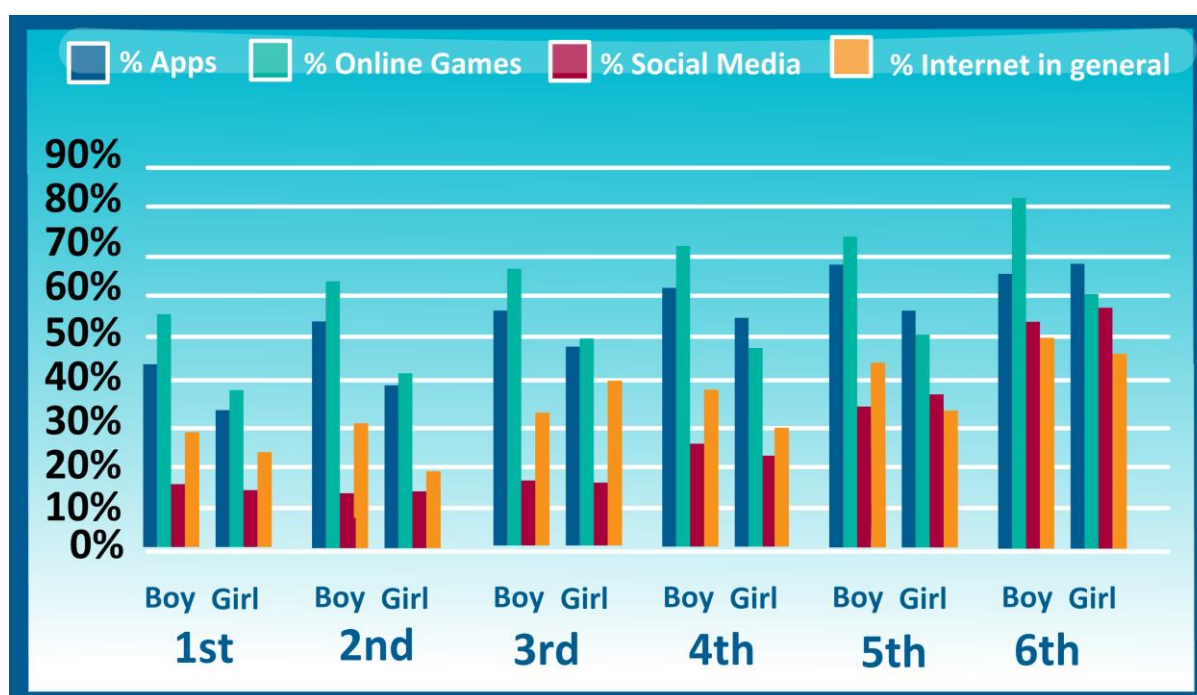


**Figure 4.8** Level of knowledge compared to parents and Gender differences – Primary schools

*4.5 How much time do children spend online?*

The majority of children in primary schools reported spending between 1 to 2 hours per day online during weekdays. There was a **progressive increase in the amount of time spent online throughout primary school years** as shown in the figure below (Figure 4.9). During **weekend days**, there was an increase in the number of hours spent online; 23% of children attending 6th class reported spending more than 5 hours online (Figure 4.10). Both during week and weekend days, higher percentages were observed in the sample of boys.
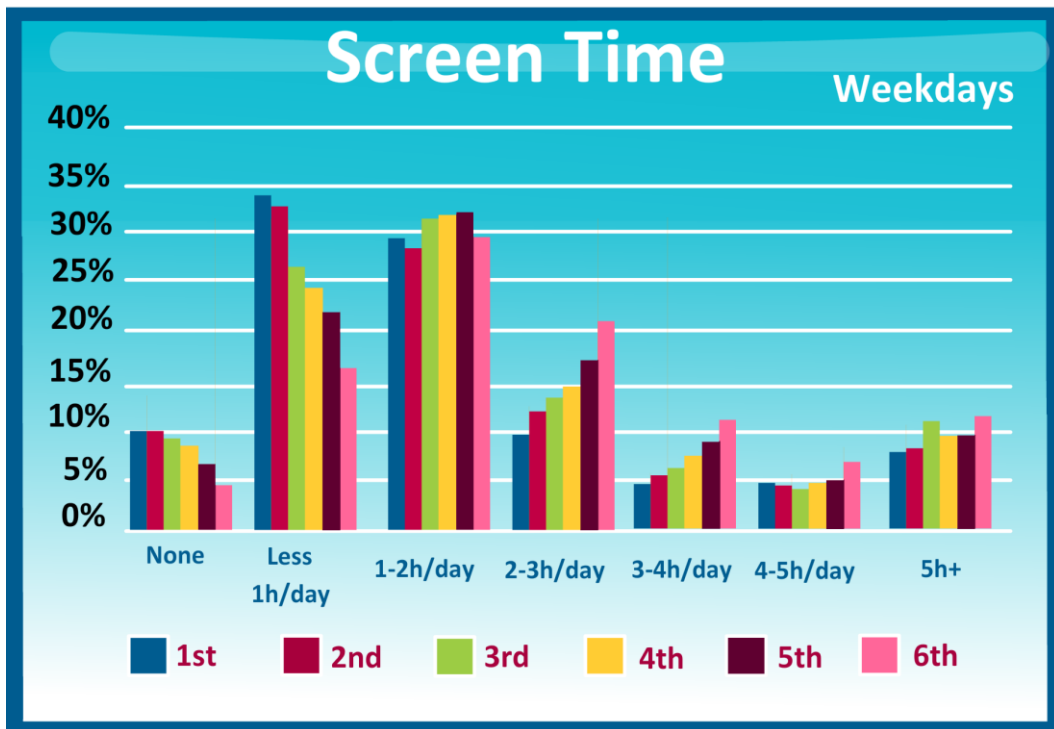
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

ZEEKO

**Figure 4.9** Screen time: Weekdays – Primary schools
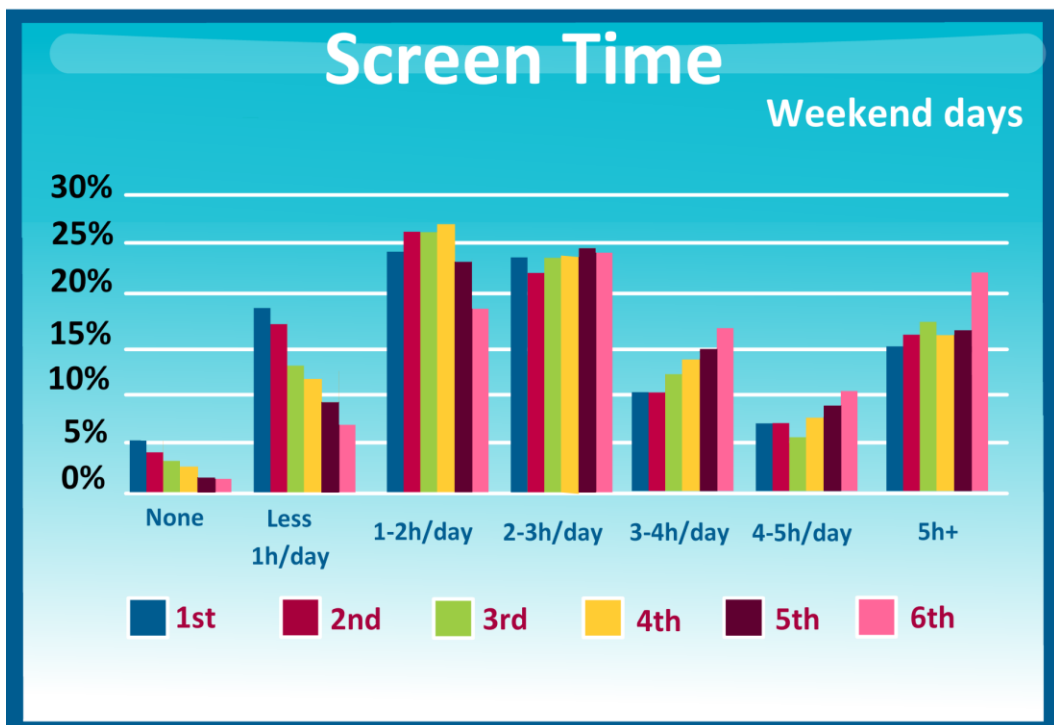


**Figure 4.10** Screen time: Weekend days – Primary schools

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

## Summary of device usage and online content

In Ireland, children first access the Internet at an early age (6 - 7 years) using different devices. In primary schools, children use mainly tablets, smartphone and console games; while in secondary schools, smartphones, computers and tablets are more prevalent. Girls use their smartphones slightly more than boys to access Internet. There are differences in content preferences between primary and secondary school children. Secondary students are more likely to favour Snapchat and Instagram than primary school children, and at higher levels than they prefer Facebook. Children reported to have a better knowledge than their parents of applications and games. Time spent online increased throughout schools years, especially during weekends.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

**ZEEKO**

*Marina Everri and Kirsty Park*

# PART 2

# Online Risks

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

*4.6 What is children's perception of online risks?*

Different kinds of potentially risky situations were considered in our analyses: Cyberbullying, (online aggressions); digital footprint (awareness to protect personal data and images), screen time (spending too long online), and stranger danger (engaging in online conversations with persons met for the first time online).

*4.6.1 Cyberbullying*

The perception of **cyberbullying as a risky condition was very high**. The majority of children in both primary and secondary schools acknowledged this behaviour as harmful (Figure 4.6.1) (range from 59% to 77%).
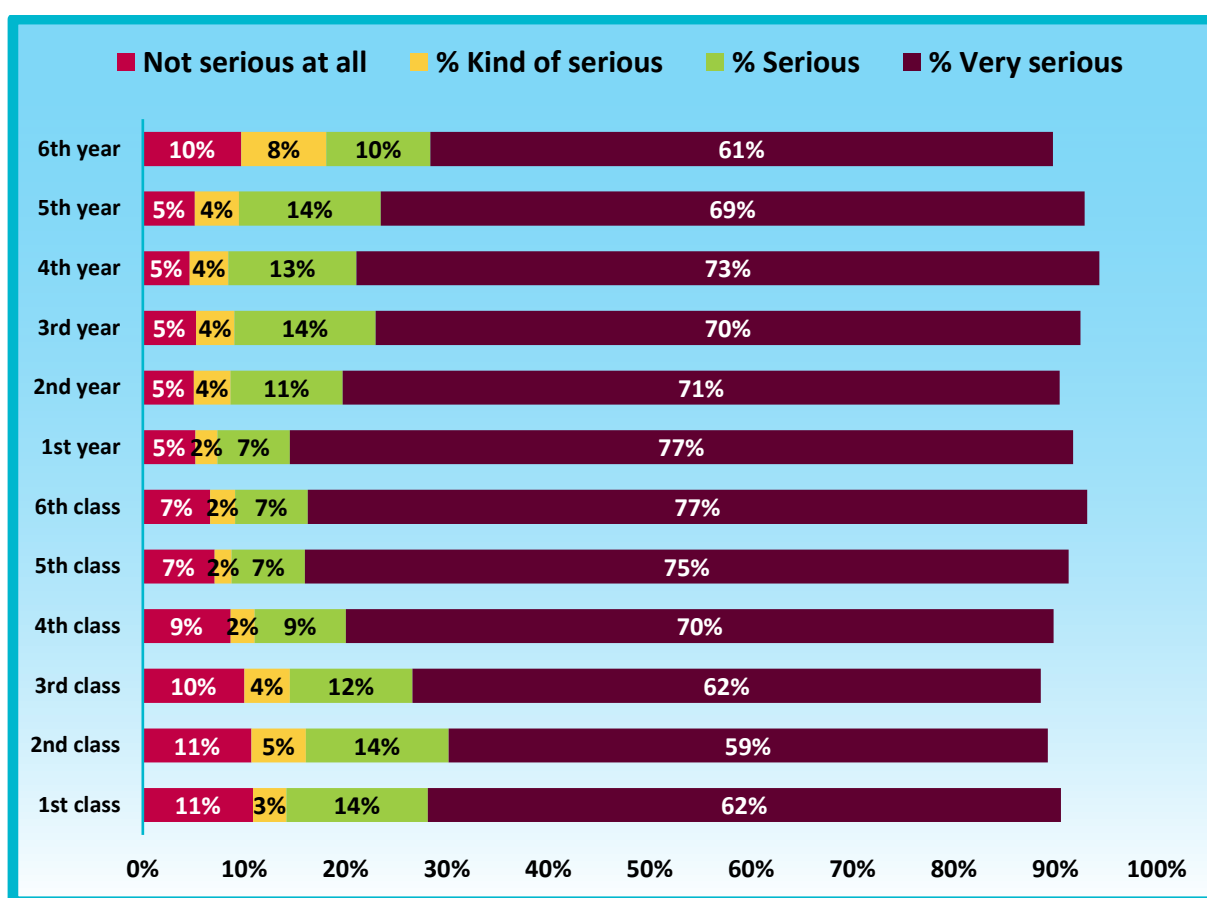


**Figure 4.6.1.** Perception of risks – Cyberbullying: primary and secondary schools[4]

---

[4] Percentages do not add up to 100% here as this graph also represents those who skipped the question.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

When looking at **gender differences**, the **perception of risk was higher in girls** than in boys. Starting from 4th class, and throughout the school years, the discrepancy between boys and girls increased (Figures 4.6.2). For instance, in secondary schools 56% of 6th year male adolescents considered cyberbullying as 'very serious' compared to 72% of females attending the same year (Figure 4.6.3).
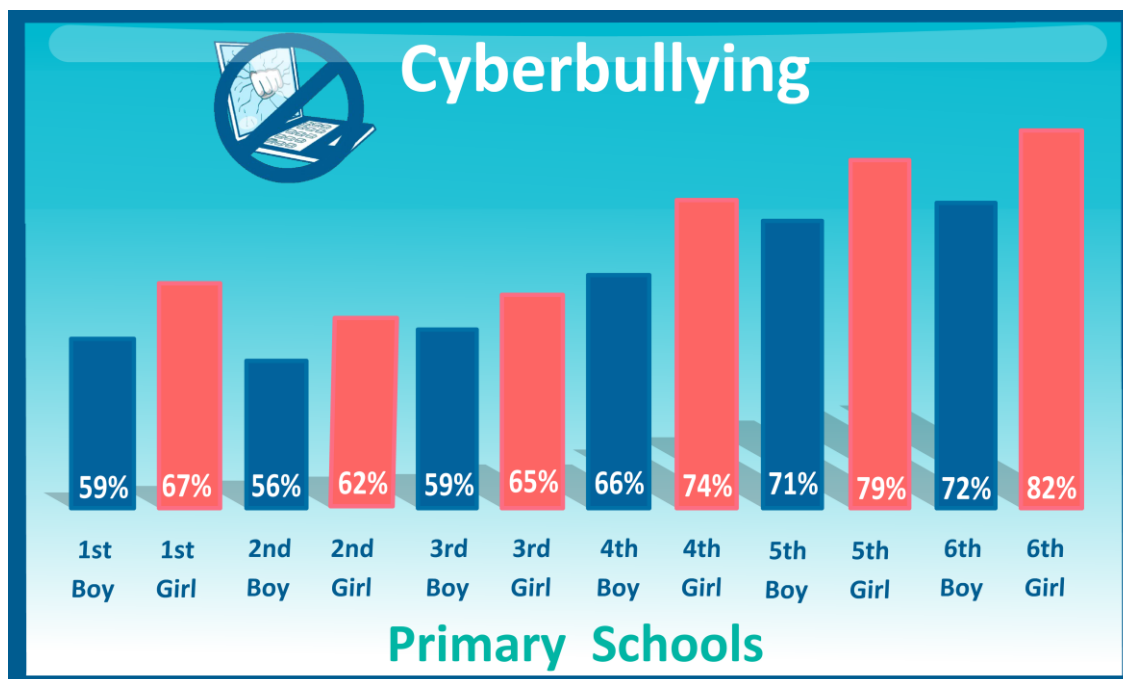


**Figure 4.6.2.** Perception of risks: Cyberbullying as 'very serious' and Gender differences – Primary schools
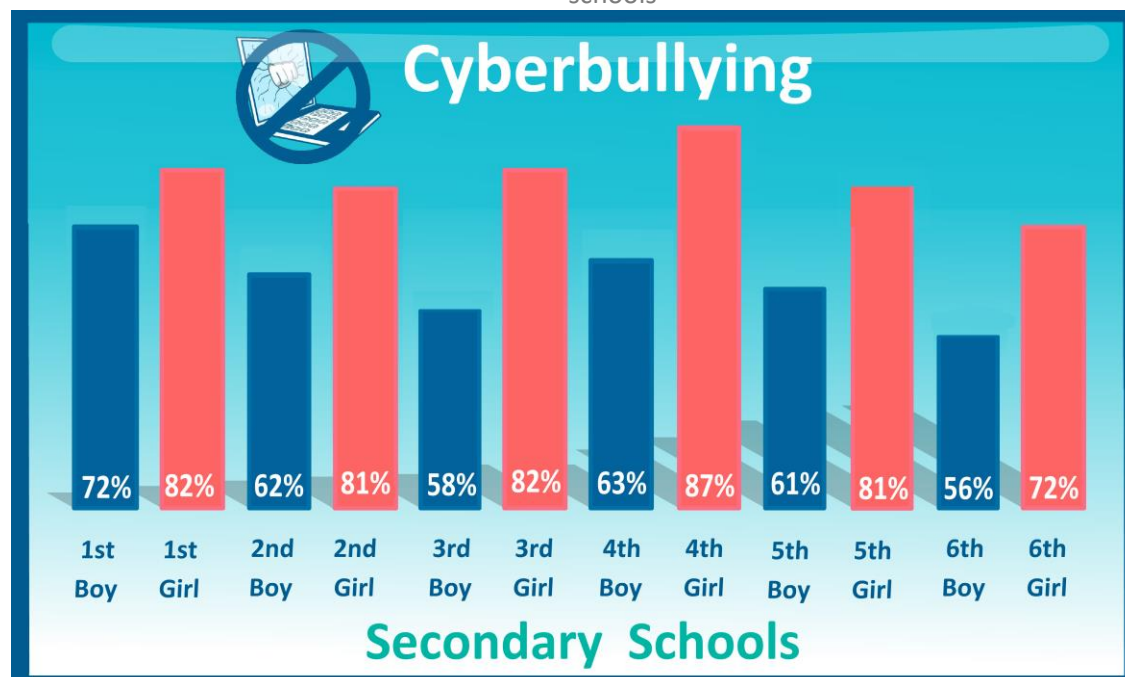


**Figure 4.6.3.** Perception of risks: Cyberbullying as 'very serious' and Gender differences – Secondary schools

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

### 4.6.2 Digital footprint

The perception of risk concerning **digital footprint** refers to children's awareness of protecting their personal data (name, images, identification of location, etc.) when accessing the Internet. Almost half of our sample of primary and secondary students considered this issue as 'very serious'. However, **when entering secondary school, the level of risk perception decreased**: from 52% of children in 5th class considering this as 'very serious' to 30% of adolescents in 6th year (Figure 4.6.4).
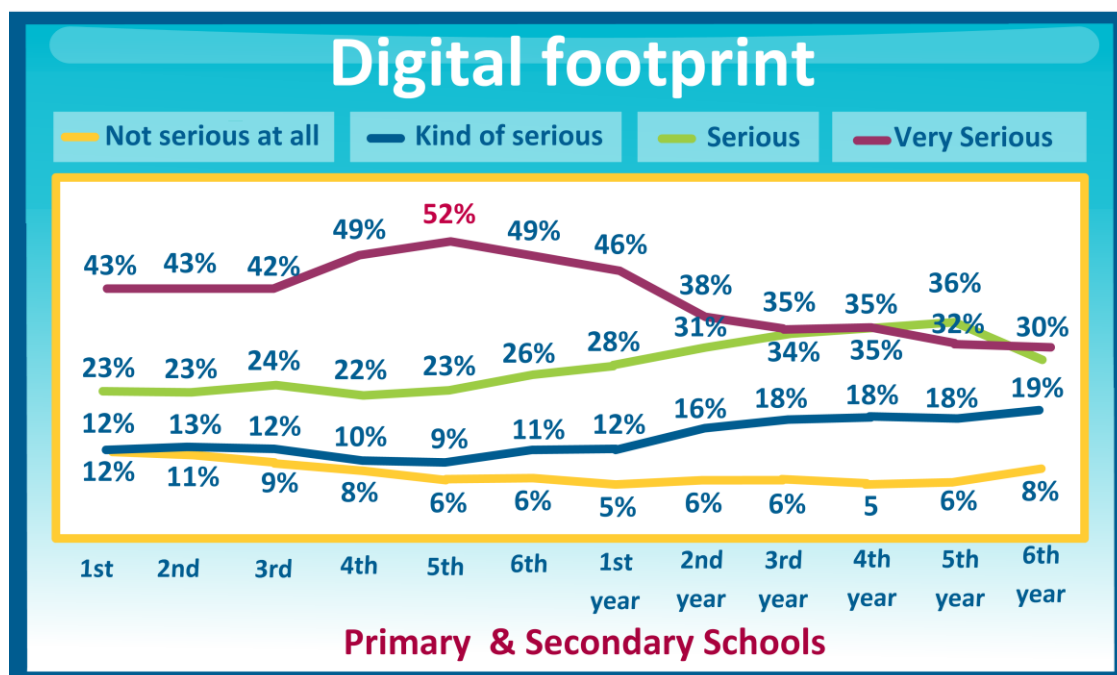


**Figure 4.6.4.** Perception of risks: Digital footprint – Primary and secondary schools

The number of **females both in primary and secondary** schools that perceived this behaviour serious **was higher than males** throughout the school years.

### 4.6.3 Screen time

**Younger children considered screen time more serious** than older children. Between 38% and 49% of students in secondary schools reported that spending too long online is a moderately serious risk; less than 6% of students attending secondary school years think that it is a 'very serious' risk (Figure 4.6.5).
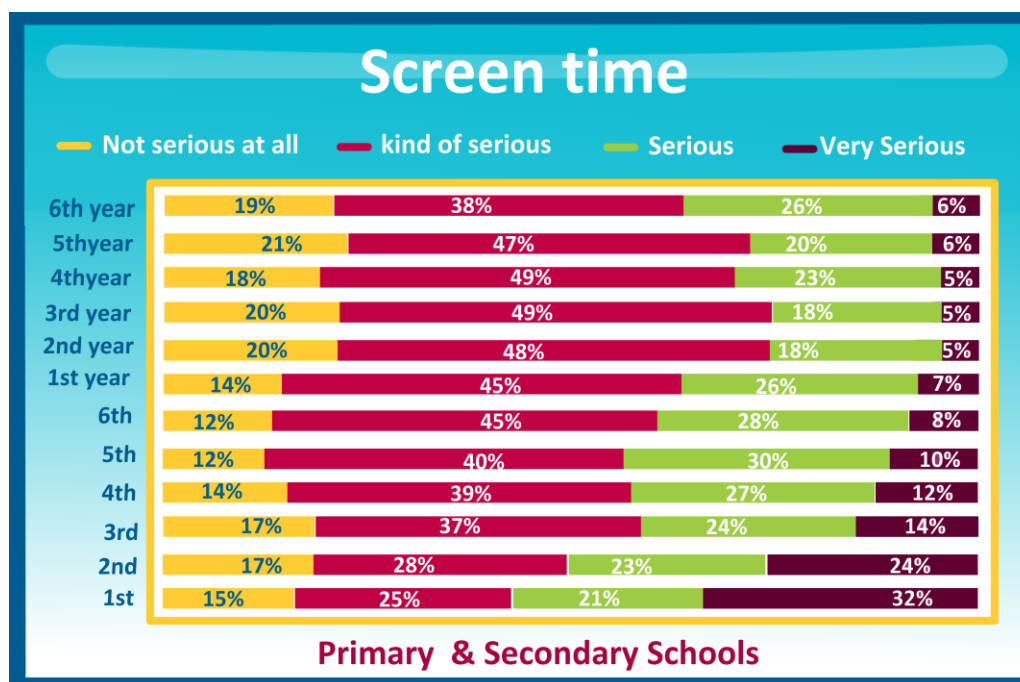
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Figure 4.6.5.** Perception of risks: Screen time – Primary and secondary schools

Females were also more likely to see too much screen time as serious in comparison to males.

### 4.6.4 Stranger danger: speaking with strangers online

This area concerns the examination of the risks deriving from c**hildren engaging in conversations with persons met for the first time online**. Younger children considered this issue as more serious than older children. As showed in the figure below (Figure 4.6.6), there is a progressive **decrease in the perception of the level of risk** in the transition from primary to secondary school. More than 40% of children in 1st and 5th class considered contact with strangers online as very dangerous; only 24% of teenagers attending the 2nd year and 17% attending the last year of secondary school considered stranger danger as very serious (Figure 4.6.6). **Females also showed higher percentages** than males for perceiving risk in stranger danger.
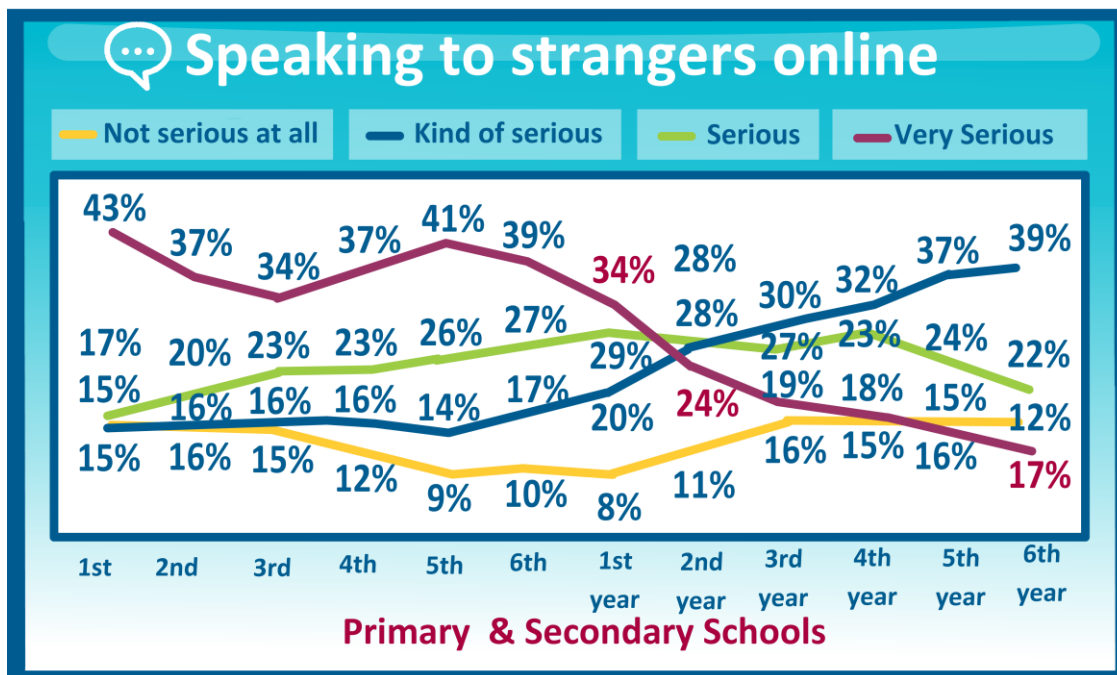
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Figure 4.6.6.** Perception of risks: Screen time – Primary and secondary schools

***Summary of perception of risks***

For the most part, children and teenagers have an adequate perception of online risks and online aggressive behaviours were reported as being particularly risky. However, there were segments of the sample who saw no risk in certain behaviours with children reporting that they saw each risk as being 'not serious at all' (e.g., screen time). As for data protection, screen time and stranger danger, younger children tend to consider these as risky behaviours, while in the transition to secondary school their perception seemed to be re-calibrated. In other words, children in primary schools are aware of the need to protect their personal data and that strangers can represent a threat; while adolescents attending secondary schools consider these aspects as less risky. In general, both children and adolescents do not seem to be alarmed by spending too long online.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

*4.7 Have children had risky experiences online?*

In this section we examined whether children had direct experience with the online risks we illustrated in the above section. In addition, we focused on one area of analysis for primary school children only concerning online gaming to examine their access to over 18s games; and one area of analysis for secondary school students only to investigate sexting behaviours, i.e. sending text and images with sexually suggestive content or explicit nude content.

*4.7.1 Witnessing and being victims of cyberbullying*

We asked children in both primary and secondary schools whether they witnessed and/or experienced **cyberbullying.** In both cases, we observed a **progressive increase of this experience throughout the school years**. As for **witnessing cyberbullying**, between 20% to 30% of children in primary schools, and 30% to 45% in secondary schools witnessed episodes of online aggression. Children **victims of cyberbullying** ranged from 10% in 1st class to 18% in 6th year (Figure 4.7.1).
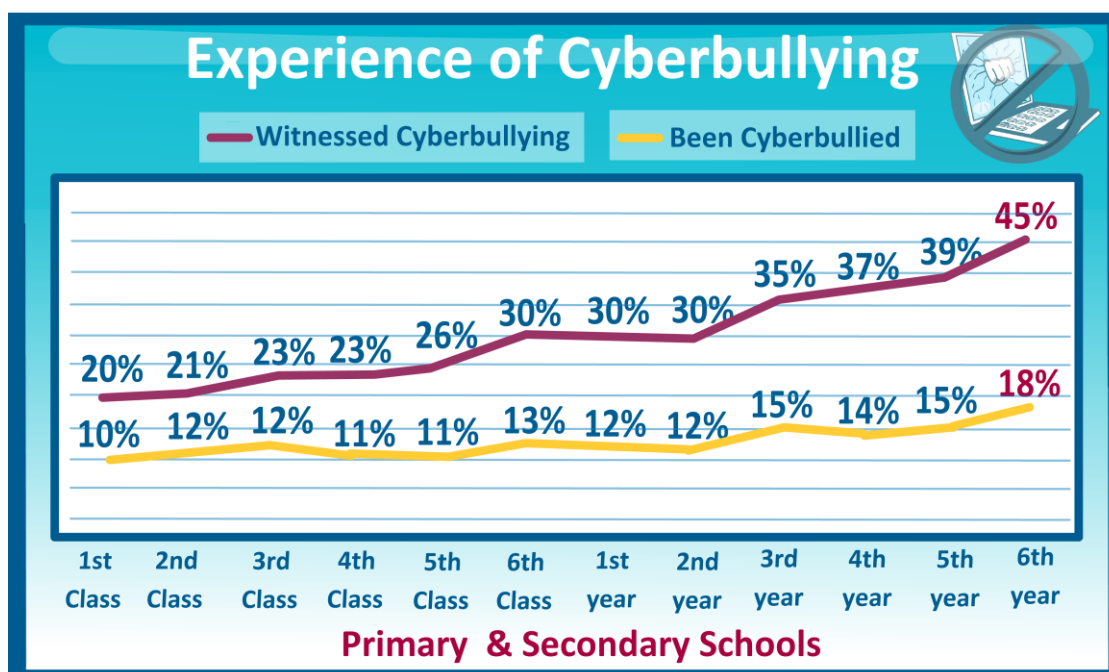


**Figure 4.7.1.** Experience of cyberbullying – Primary and secondary schools

The percentage of **girls that both witnessed and were victims of cyberbullying was twice as high as the percentage of their male peers**. This difference was observable starting from 5th class. In the sample of younger children (1st to 4th class) the percentage of boys that witnessed and were cyberbullied were slightly higher than the percentage of girls (Figure 4.7.2).

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

**ZEEKO**

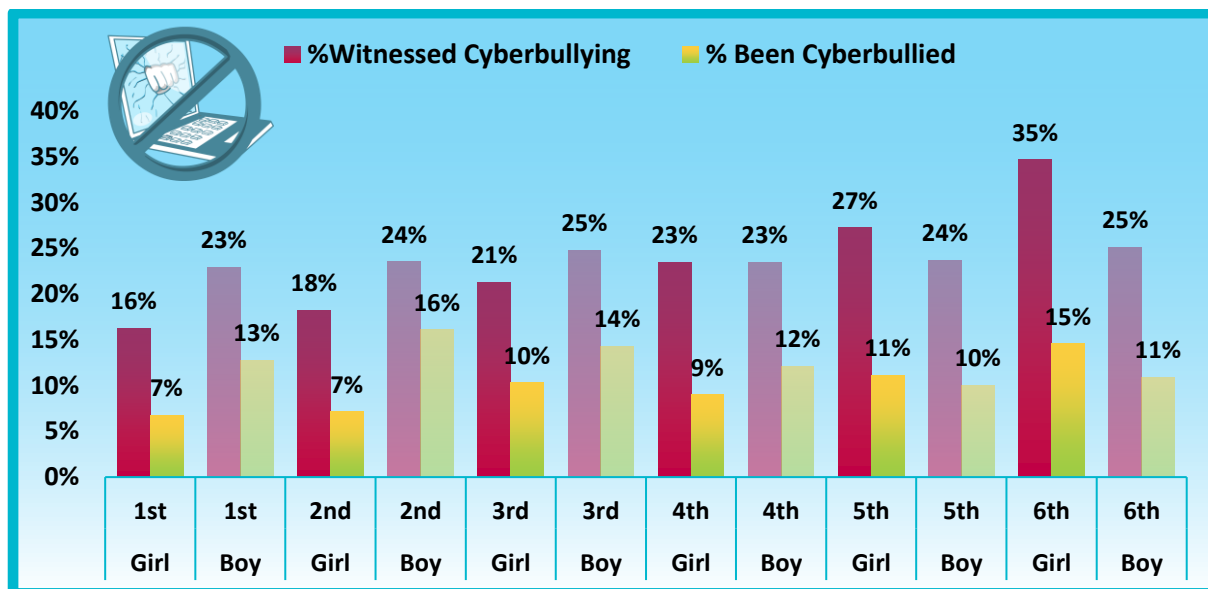*Marina Everri and Kirsty Park*

**Figure 4.7.2.** Experience of cyberbullying and Gender differences – Primary schools

In 6th year of secondary schools, **females that witnessed cyberbullying were 60%;** while those victims of **online aggressions were 31%** (against 37% and 11% of their male peers) (Figure 4.7.3).
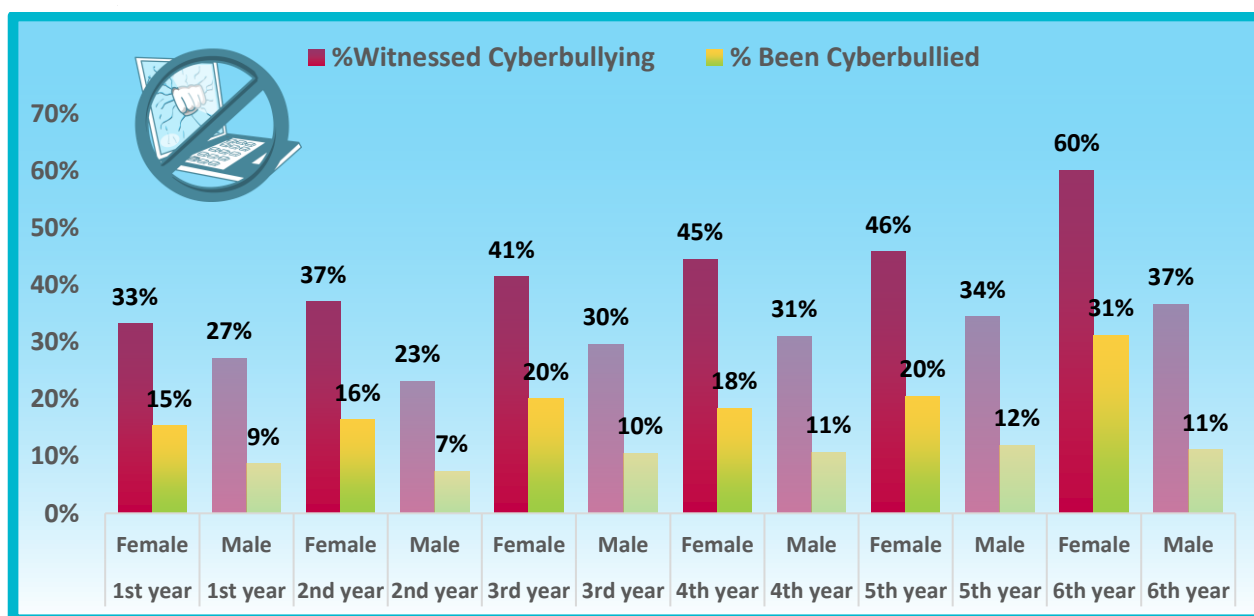


**Figure 4.7.3.** Experiencing cyberbullying and Gender differences – Secondary schools

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

*4.7.2 Speaking with strangers online*

This section aimed to assess the contacts of children with persons met online for the first time (strangers). **Students in secondary school had more contacts with strangers online**, specifically: 50% of male and 32% of females versus 28% of boys and 11% of girls in primary school. Speaking with strangers online increased progressively throughout primary and secondary school years culminating in 62% for students attending 6th year (Figure 4.7.4)
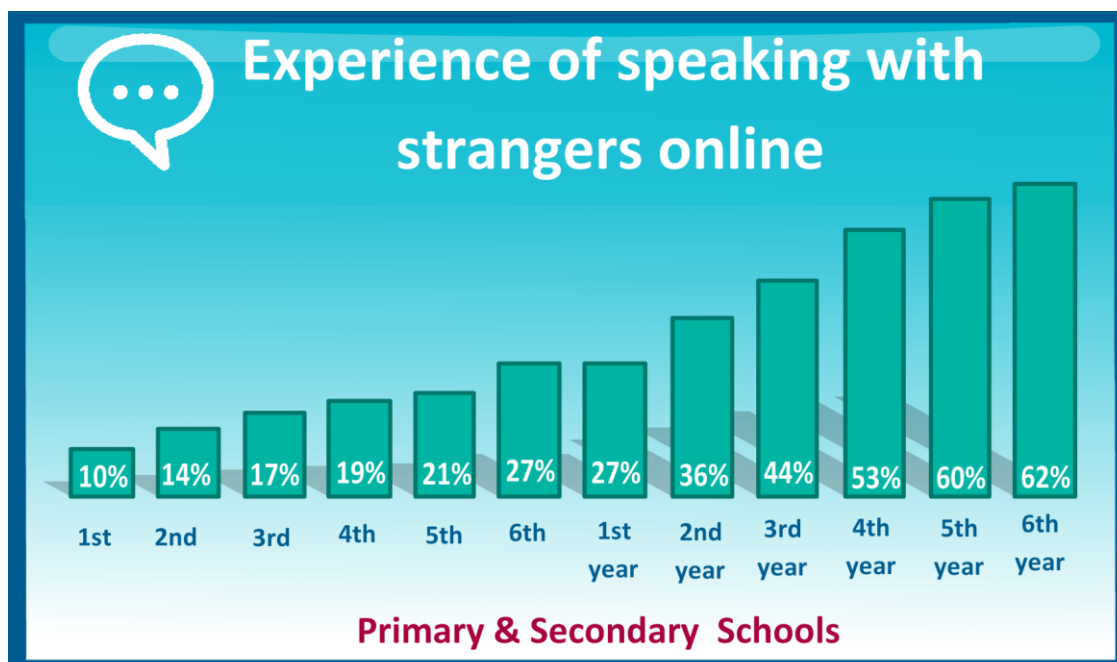


**Figure 4.7.4.** Experience of speaking with strangers online – Primary and secondary schools

When looking at gender differences **more male than female adolescents attending secondary schools were engaged in conversations with strangers** online (for instance, 65% versus 59% in 6th class) (Figure 4.7.5).
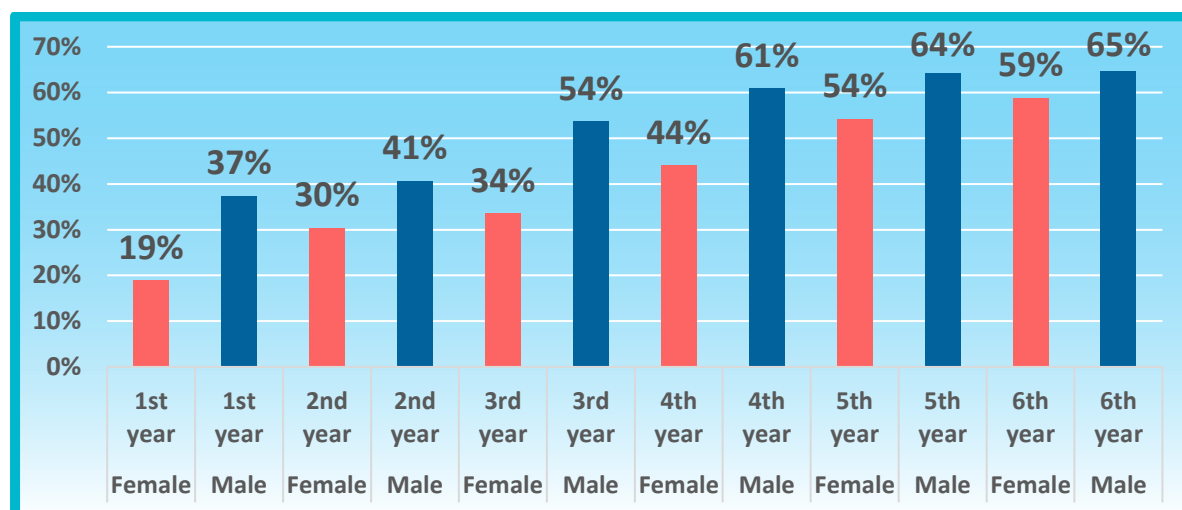
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*

**Figure 4.7.5.** Experience of speaking with strangers online and Gender differences – Secondary schools

*4.7.3 Online gaming in primary schools*

The percentage of children that reported playing **online games with strangers** ranged from 24% in 1st class to 53% in 6th class (Figure 4.7.6).
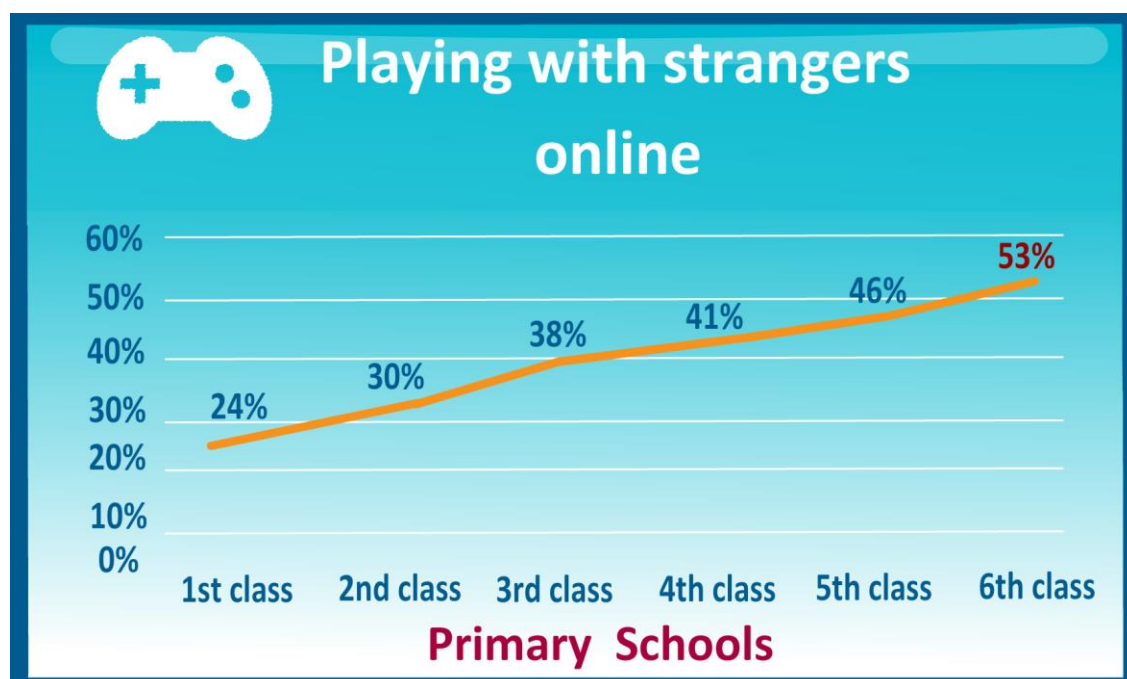


**Figure 4.7.6.** Experience of playing with strangers online – Primary schools

**Playing with strangers was an activity practiced by boys mainly** (58% boys versus 26% girls). The number of boys playing with strangers went from 32% in 1st class to 72% in 6th class; on the contrary the number of girls went from 13% to 33% (Figure 4.7.7)

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*
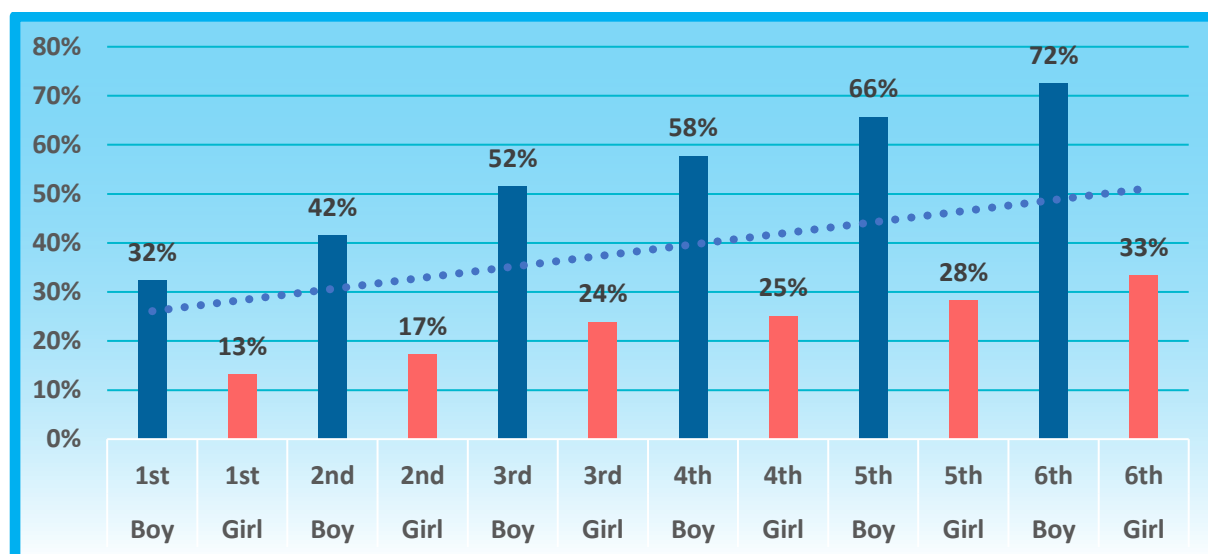
**Figure 4.7.7.** Experience of playing with strangers online and Gender differences – Primary schools

As for **playing an over 18s game**, 48% of boys and 12% of girls in primary school reported to play these games. Looking at the self-reported trend during primary school years, there was a progressive increase in the number of boys involved in this activity: for instance, in 6th class 64% of boys versus 18% of girls reported to play an over 18s game (Figure 4.7.8).



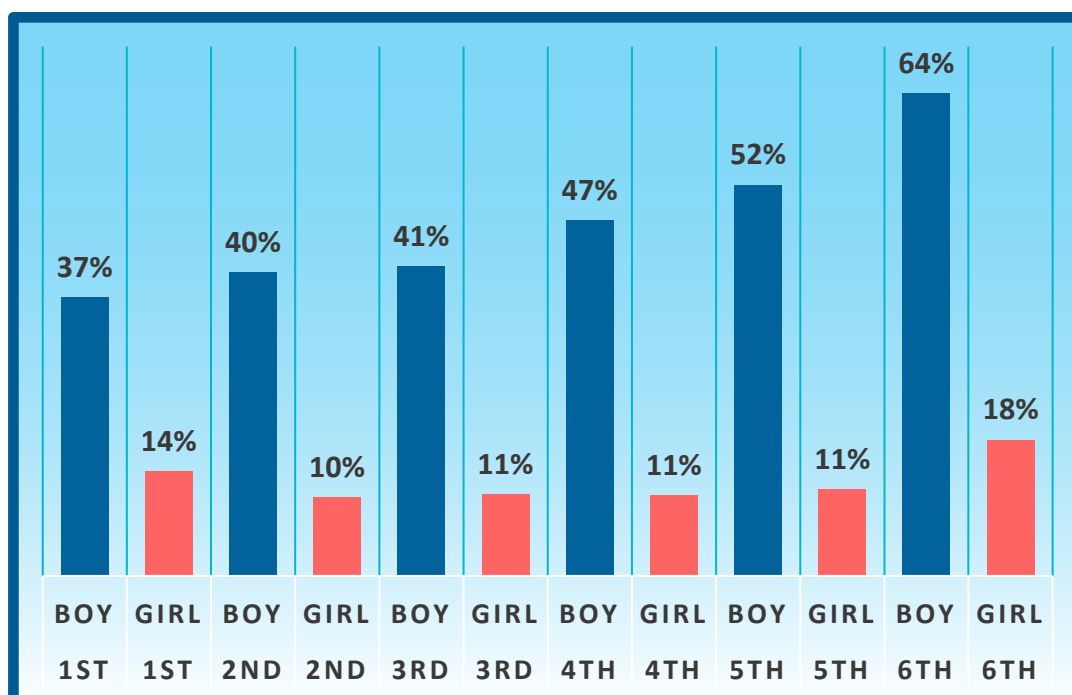**Figure 4.7.8.** Experience of playing an over 18s game and Gender differences – Primary schools

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

*4.7.4 Sexting behaviour in secondary schools*

The analyses on this topic was carried out with a sample of secondary students only. We asked students to report whether they sent sexually suggestive texts or nude/semi-nude images, shared them, sexted non-partners or sexted someone they met for the first time online.

**Sexting behaviour increased throughout secondary school years**: 36% of adolescents attending 6th year self-reported to send text messages with sexually suggestive contents. Older students (6th year) presented the highest percentages also in other behaviours related to sexting: 30% sent images, 22% shared sexts, 28% sexted a non-partner, and 16% sexted someone met online for the first time.

Analyses on **gender differences** showed **higher percentages in the group of males** (Figure 4.7.9) than in the group of females (Figure 4.7.10) for all five types of sexting behaviours considered. Looking at adolescents attending 6th year, the highest values concerned sending sext messages (41% of males versus 26% of females), sending nude or semi-nude images (33% of males versus 23% of females) and sexting a non-partner (32% of males versus 22% of females). Small differences were observed in the number of males and female adolescents sharing sext (e.g., 24% versus 20% in 6th year).
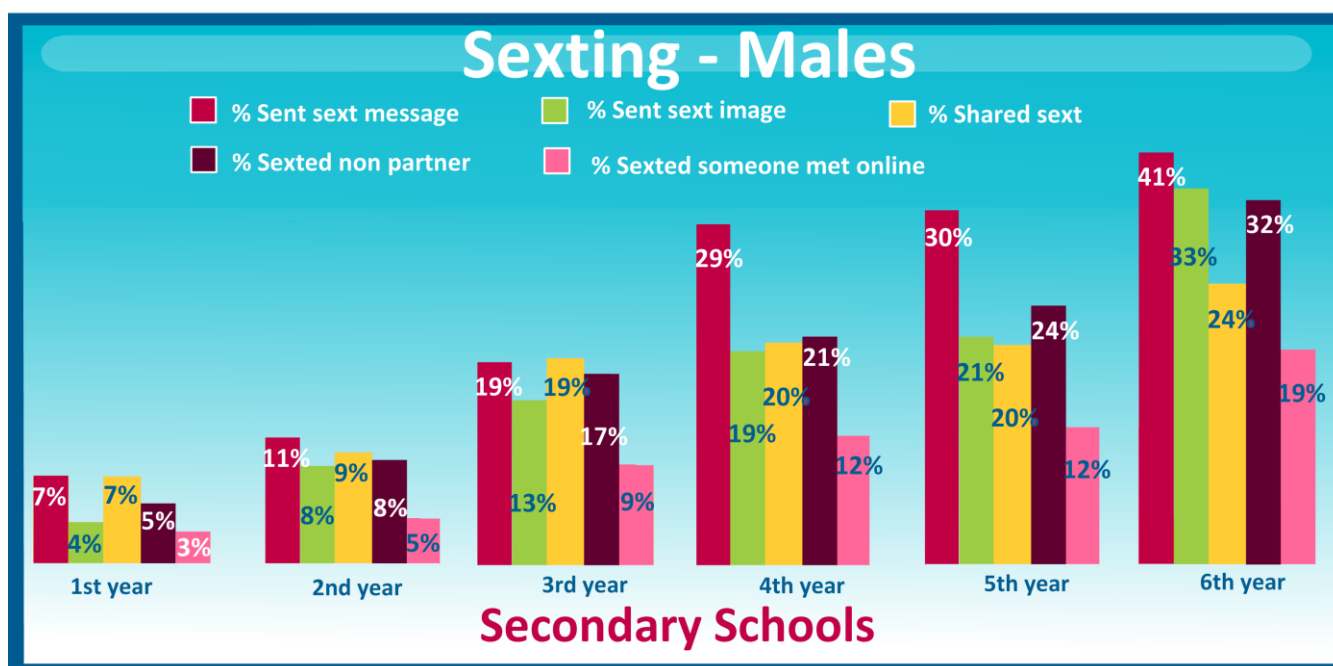


**Figure 4.7.9.** Experience of sexting and Gender differences: Males – Secondary schools
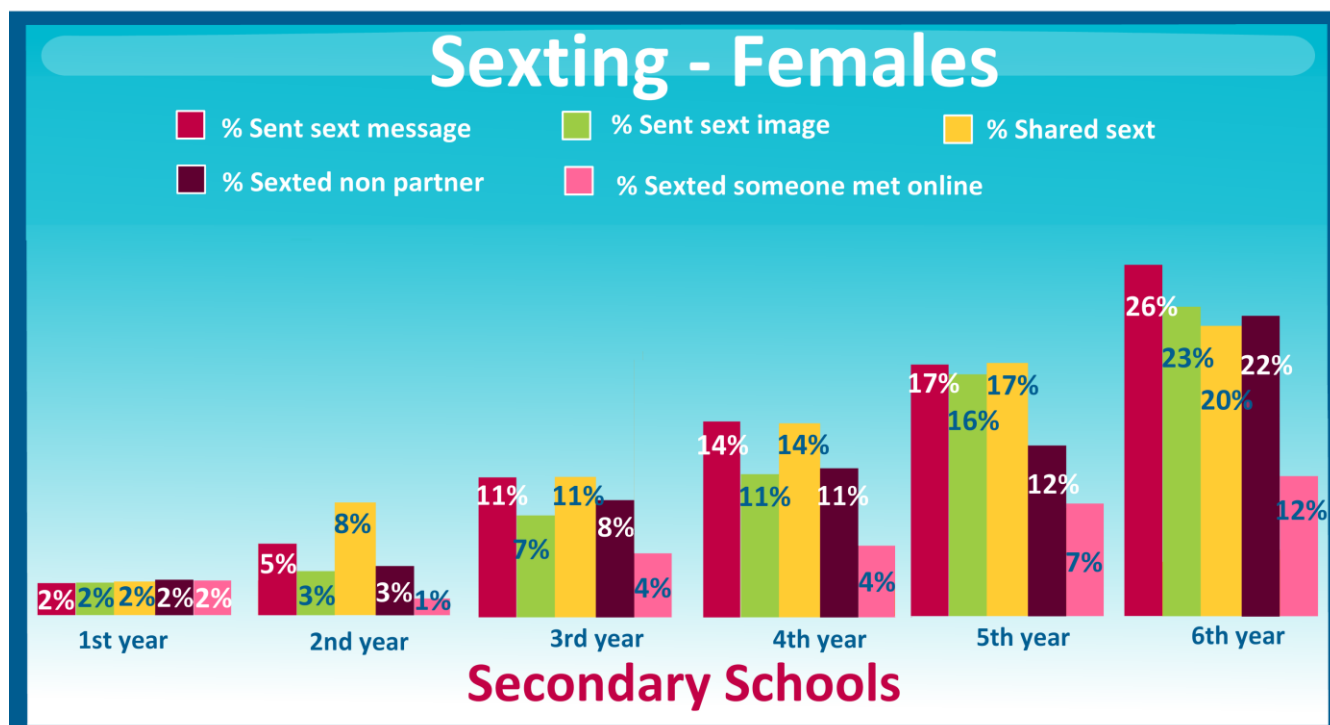
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Figure 4.7.10.** Experience of sexting and Gender differences: Females – Secondary schools

### Summary of risky experiences online

Children are involved in potentially risky online activities, such as seeing and being victims of online aggressions as well as speaking with strangers online, both in primary and secondary schools. Risky experiences increase throughout primary and secondary school years. In primary schools, almost 50% of children are involved in gaming activities based on online interactions with strangers; similarly, almost 60% of boys play an over 18s game. In secondary schools, sexting and engagement in conversations with persons met for the first time online increase progressively from 1st to 6th year. Gender differences are substantial in all the online experiences considered: In primary schools, boys are more involved than girls in playing with strangers and in playing over 18s games. In secondary schools a higher number of females than males see and are victims of online aggressions; while a higher number of males than females are involved in talking to strangers online and in some sexting behaviours. Interpretation of these results is provided in the conclusion section.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

# PART 3

# School differences

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*

*4.8 Behavioural trends when looking at children attending different schools*

  *4.8.1 DEIS schools*

Since 2005 schools located in communities at risk of social and economic disadvantage have received special funds to support children's learning and education. **DEIS (Delivering Equality of Opportunities in Schools)** schools are present all over Ireland. The number of children reached by Zeeko was **6,244**, the majority attended **DEIS primary schools** (N= 4,399), while 1,845 attended **DEIS secondary schools**.

**Access to the Internet with different devices** in DEIS primary and secondary schools was similar to the trend observed in the other schools (NON-DEIS)[5]: Children in primary schools primarily used tablets and smartphones, while secondary school students used smartphones, computer and tablets. Small differences were observed in secondary schools (e.g., 92% in DEIS schools and 94% in NON-DEIS used smartphones) except for the usage of console games (47% in DEIS and 38% in NON-DEIS). The **usage of smartphones to access the internet was higher in the sample of children attending DEIS schools** (54% vs. 47%) (Figure 4.8.1)
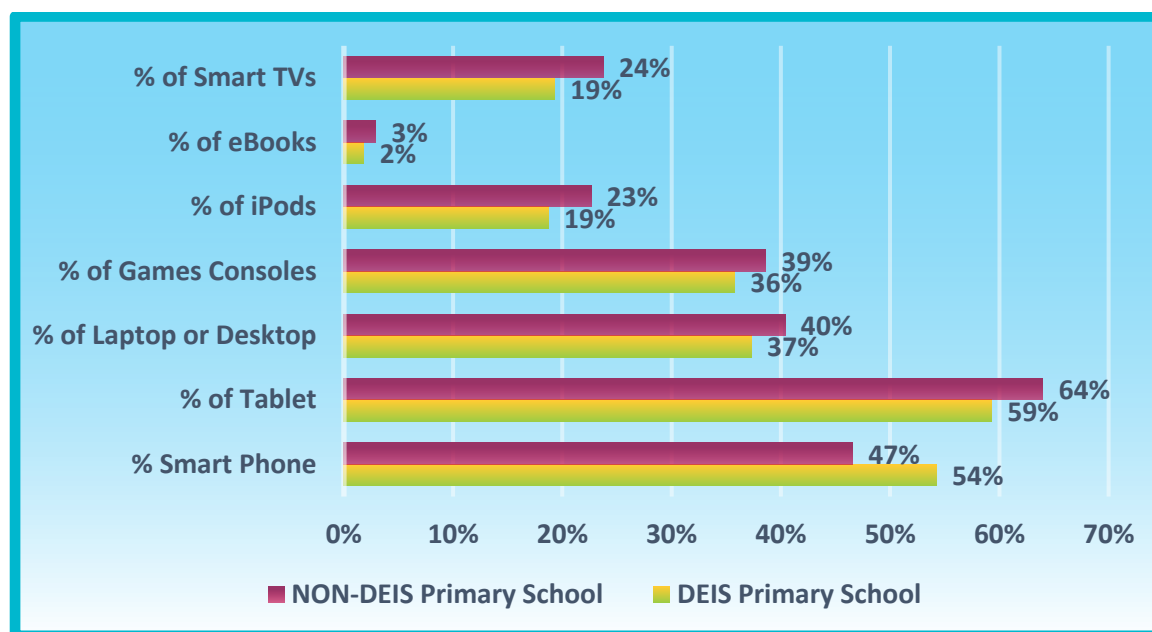


**Figure 4.8.1.** Usage of device to access the Internet – DEIS and NON-DEIS PRIMARY schools

Also, a higher number of girls than boys attending DEIS primary schools used smartphones (respectively, 57% and 51%).

30% of children in DEIS primary schools reported spending **1 to 2 hours online per day** and 14% more than 5 hours during weekdays; this percentage was higher than what was self-reported by children attending other schools (9%) (Figure 4.8.2).

---

[5] The comparison of the percentages between children attending DEIS schools and children attending the rest of the schools we surveyed are intended to be descriptive rather than inferential.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*
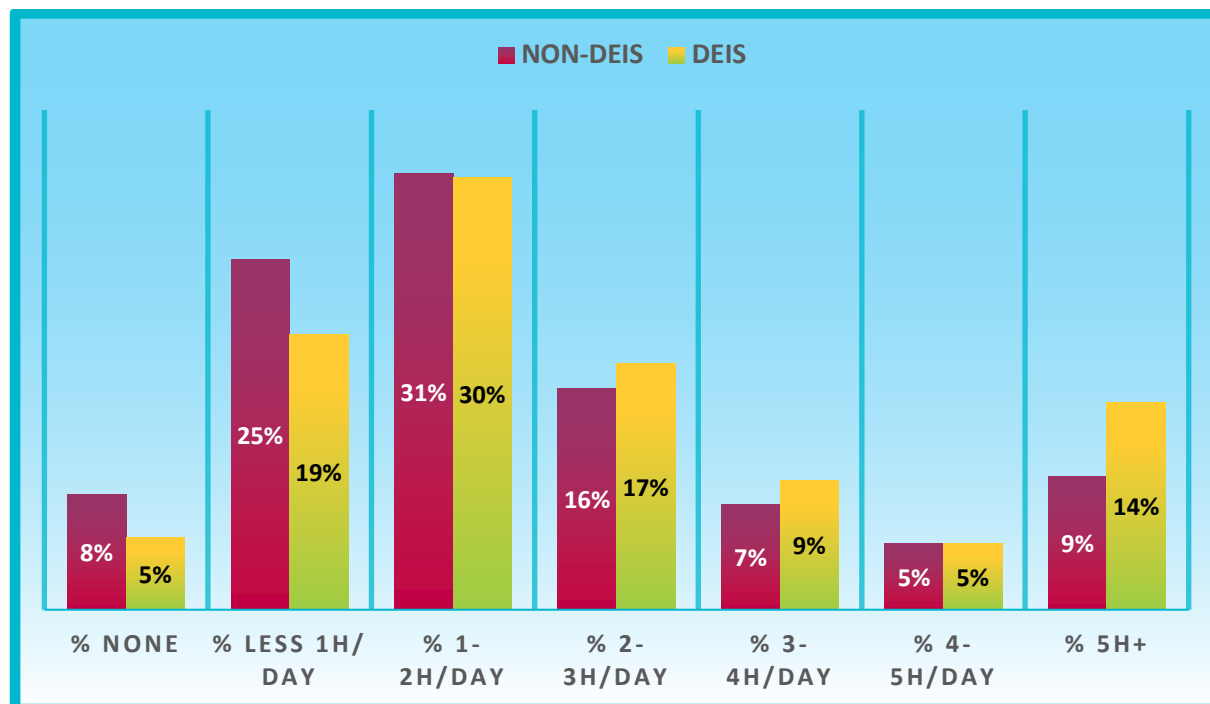
*Marina Everri and Kirsty Park*

**Figure 4.8.2.** Time spent online weekdays – DEIS and NON-DEIS PRIMARY schools

During weekends, 24% of children in DEIS schools spent more than 5 hours per day online (18% in NON-DEIS schools) (Figure 4.8.3).
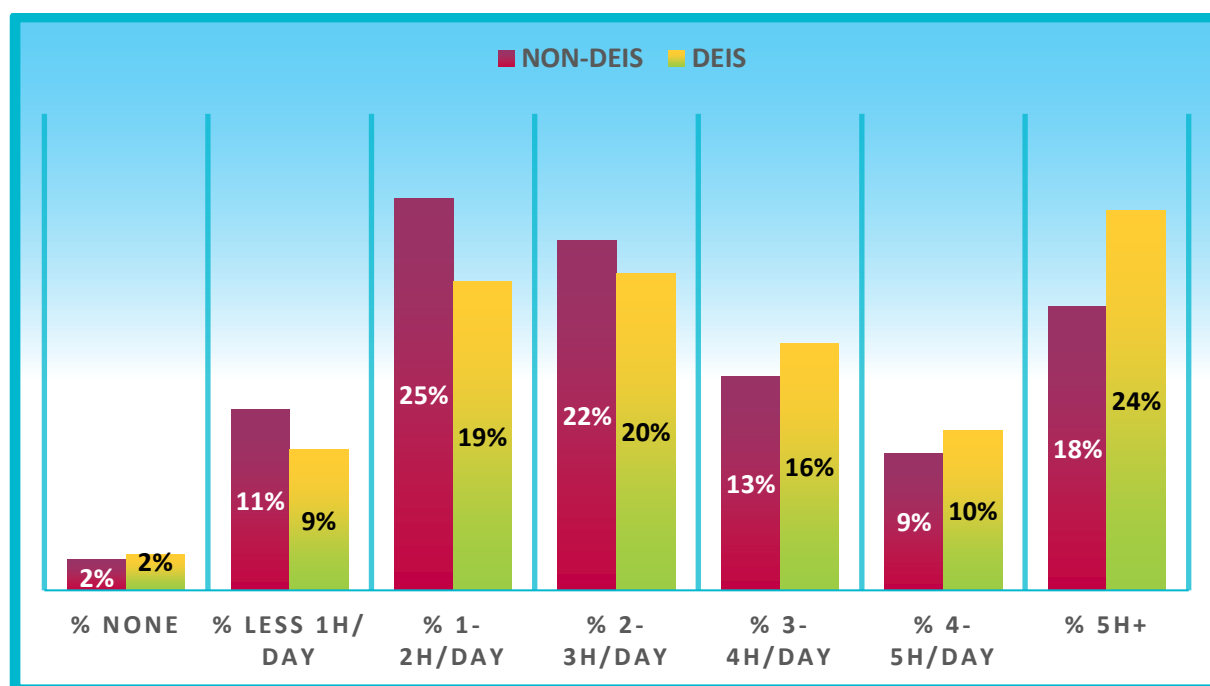


**Figure 4.8.3.** Time spent online weekend days – DEIS and NON-DEIS PRIMARY schools

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

Boys tended to spend slightly more time online than girls both during weekdays and weekends. Specifically, 30% of boys and 20% of girls reported that they spent more than 5 hours per day online during weekends (21% and 15% in NON-DEIS schools).

The self-reported **level of knowledge compared to parents** was lower when compared to the rest of sample of children attending other schools. Children attending DEIS primary schools reported to know more than their parents especially about online games (47%) and applications (43%) (Figure 4.8.4).
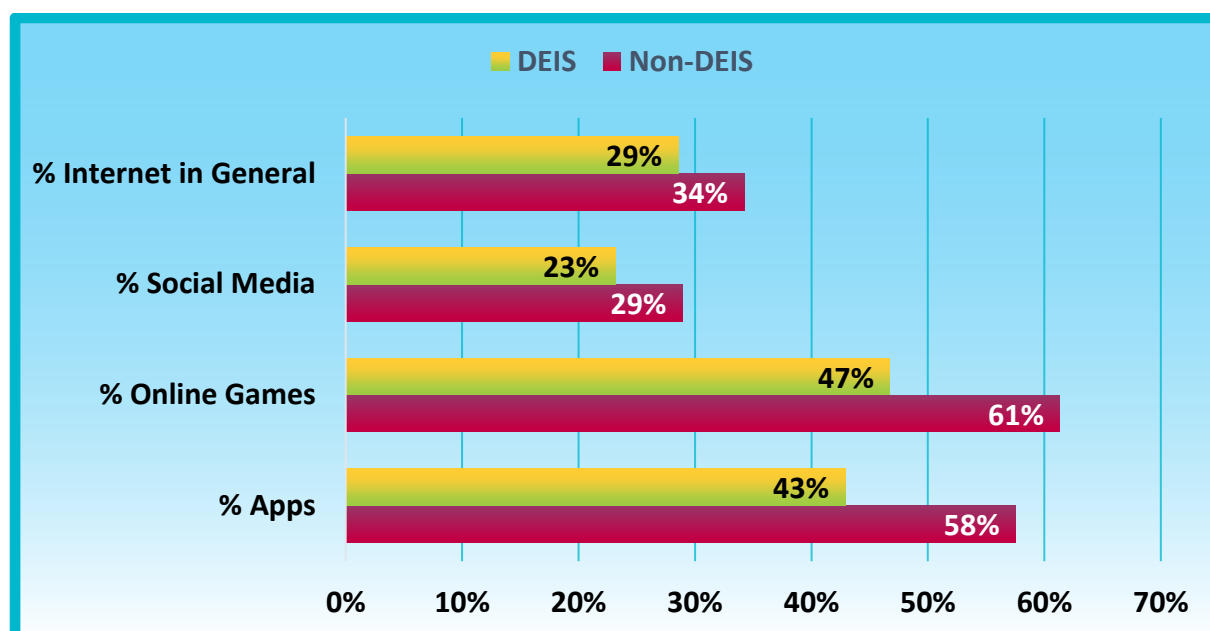


**Figure 4.8.4.** Level of knowledge compared to parents – DEIS and NON-DEIS PRIMARY schools

The **perception of risks for children in DEIS primary and secondary schools** was adequate, as observed in the rest of the sample of participant children. Cyberbullying was evaluated as a 'very serious' risk by 68% of children in DEIS primary schools and 72% of children in DEIS secondary schools. Similarly, **online protection of personal data (digital footprint)** was considered as risky by children in both DEIS primary and secondary schools. Almost 50% of children in DEIS primary schools evaluated digital footprint as a very serious issue, differently from older children in DEIS secondary schools (36%). Lastly, there were small differences with the rest of the sample of children (NON-DEIS schools) (Figure 4.8.5).

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*
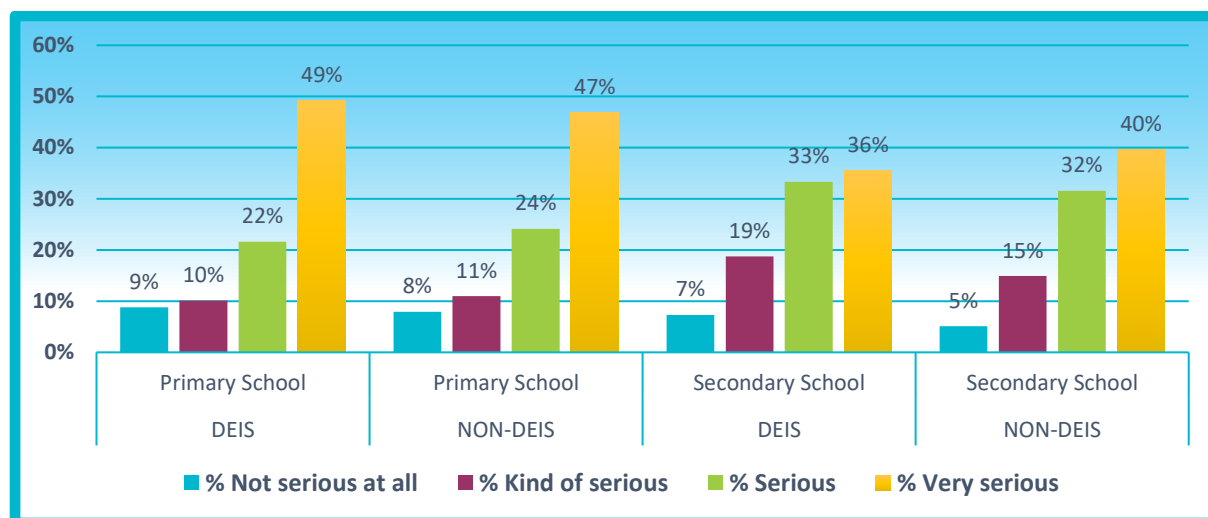
**Figure 4.8.5.** Perception of risks: Digital footprint – DEIS and NON-DEIS primary and secondary schools

As discussed in part II of the report, children considered **spending too long online** as a moderately serious risk compared to other forms of risks, such as cyberbullying. In the sample of children attending DEIS schools, the same trend was observed; however, they tended to slightly underestimate this risk: 17% and 21% respectively in primary and secondary schools evaluated screen time as 'not serious at all' (Figure 4.8.6).



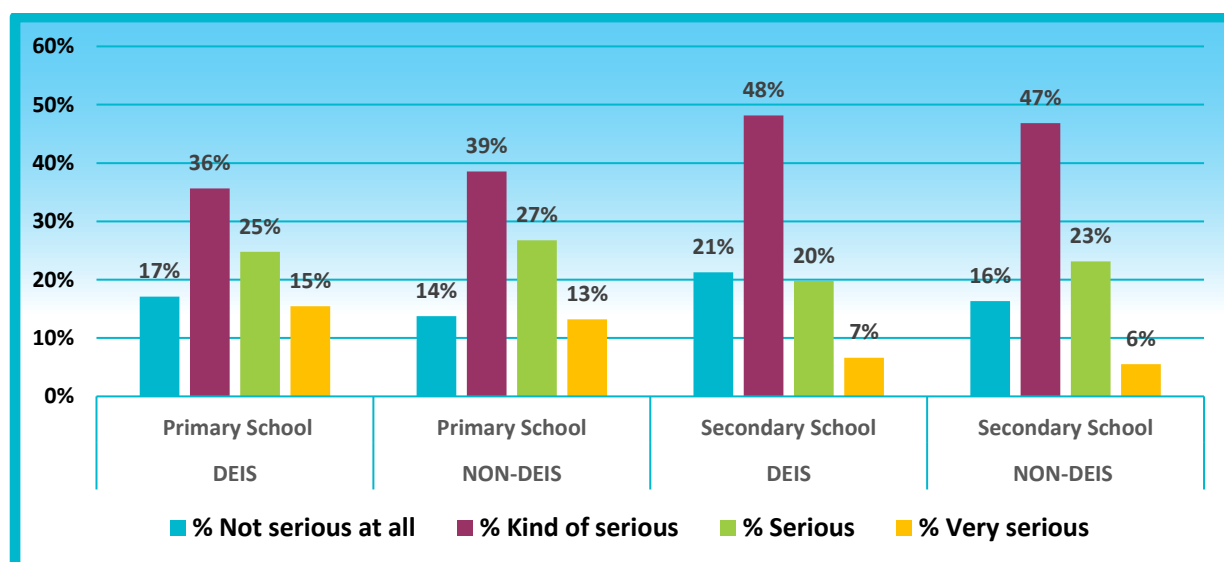**Figure 4.8.6.** Perception of risks: Screen time – DEIS and NON-DEIS primary and secondary schools

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Speaking to strangers** online was evaluated a 'very serious' risky behaviour by 39% of children in DEIS primary schools. In DEIS secondary schools, 30% considered this as a medium to low risky behaviour. Differences with the rest of the sample were relatively small (Figure 4.8.7).
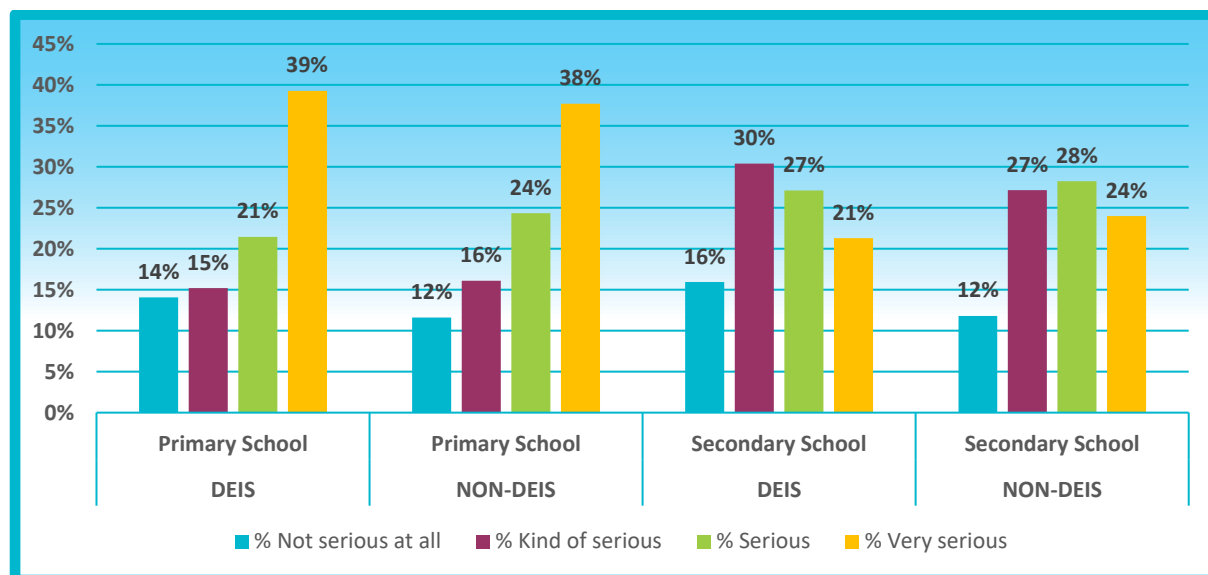


**Figure 4.8.7.** Perception of risks: Screen time – DEIS and NON-DEIS primary and secondary schools

Almost half of the **girls** of our sample **attending DEIS primary schools** (47%) considered engaging in conversations with persons met for the first time online as 'serious' versus 30% of boys attending the same schools. This trend reflected what was observed in the previous findings about gender differences: girls and female adolescents tend to evaluate online risks as more dangerous than their male peers.

*Summary of online content preferences and risk perception of children attending DEIS schools*
A higher number of children attending DEIS schools access the Internet using smartphones and spend more time online during weekdays and weekends in comparison with children from non-DEIS schools. The perception of online risks of children attending DEIS schools do not substantially differ from the trend observed in the larger sample of children attending other kinds of schools. Also, females attending DEIS schools are more concerned about online risks than their male peers. Cyberbullying is considered as a 'very serious' risk also by children attending DEIS schools; on the contrary, spending too long online is not evaluated as a serious risk.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

**ZEEKO**

*Marina Everri and Kirsty Park*

**When considering the online experiences** of children attending DEIS primary and secondary schools with **cyberbullying** (witnessing and being victims), the frequencies of these behaviours were slightly higher than those observed in the group of their peers attending non-DEIS schools. Witnessing online aggressions was reported by 28% of children in DEIS primary schools, a percentage that increased reaching the 38% in secondary schools (Figure 4.8.8).



**%Witnessed Cyberbullying** ■ **% Been Cyberbullied**

| | DEIS PRIMARY SCHOOL | NON-DEIS PRIMARY SCHOOL | DEIS SECONDARY SCHOOL | NON-DEIS SECONDARY SCHOOL |
|---|---|---|---|---|
| %Witnessed Cyberbullying | 28% | 24% | 38% | 33% |
| % Been Cyberbullied | 13% | 11% | 15% | 13% |

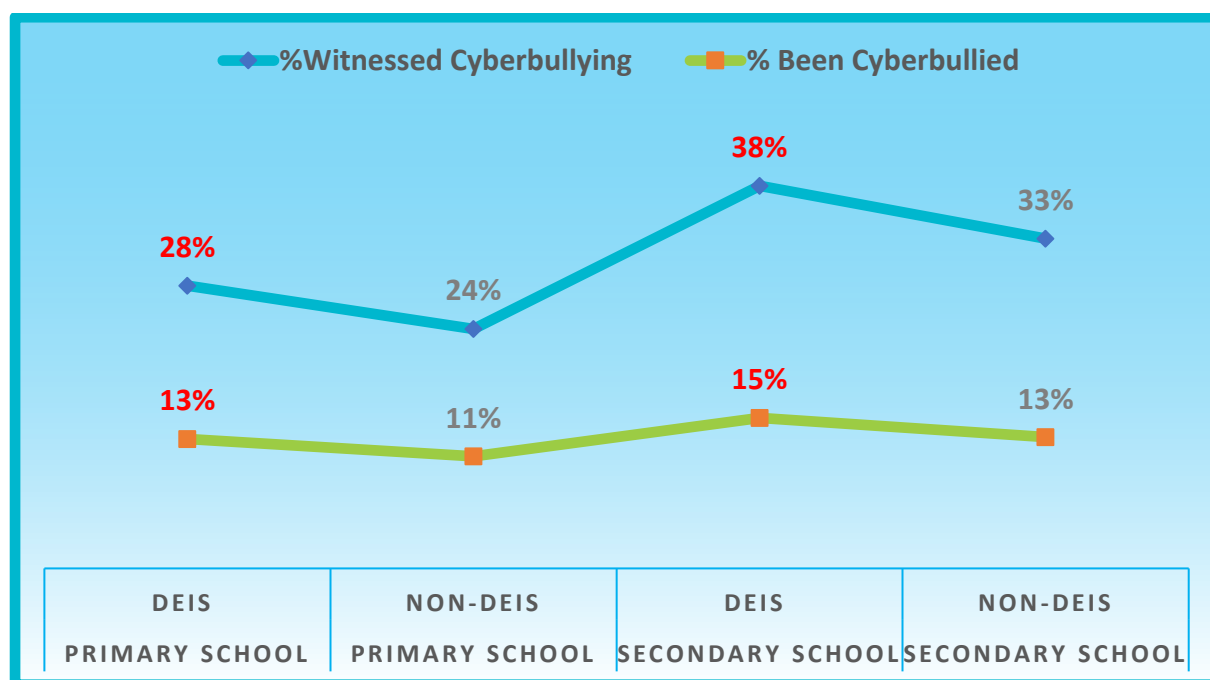**Figure 4.8.8.** Experience of cyberbullying – DEIS and NON-DEIS primary and secondary schools

Looking at **gender differences**, 46% of **females attending DEIS secondary schools** declared to have witnessed episodes of **online aggression** and 22% of being **victims of cyberbullying**; these percentages were higher than those observed in the sample of females attending other secondary schools (Figure 4.8.9).
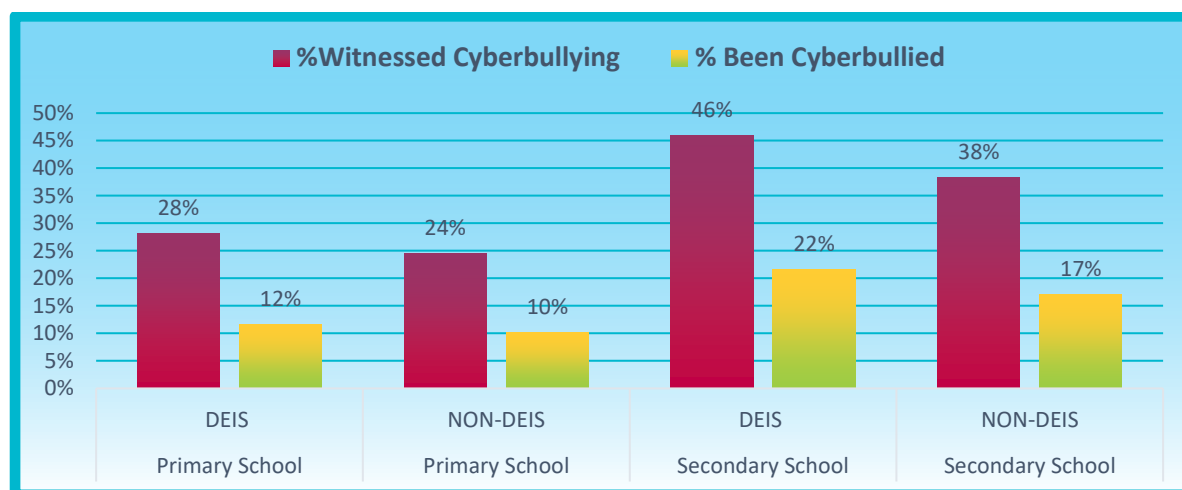
*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Figure 4.8.9.** Experience of cyberbullying: FEMALES – DEIS and NON-DEIS primary and secondary schools

The number of **male children and adolescents** experiencing cyberbullying was higher in the sample of DEIS primary and secondary schools (Figure 4.8.10).
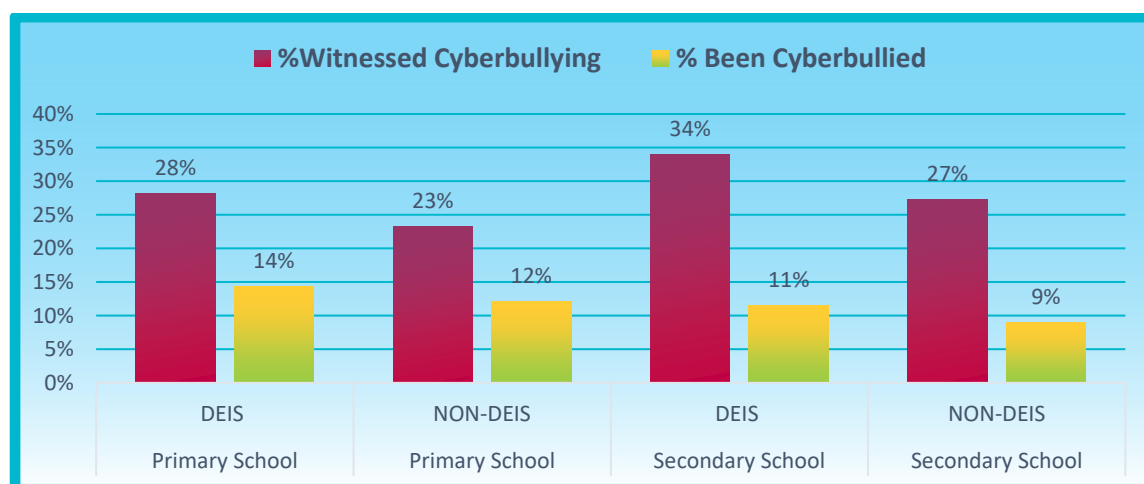


**Figure 4.8.10.** Experience of cyberbullying: MALES – DEIS and NON-DEIS primary and secondary schools

As for the **experience** of **speaking to strangers online**, 20% of children in DEIS primary schools reported that they had conversations with people they met for the first time online. In secondary schools, 48% of adolescents reported that experience (against 40% in the larger sample). Analyses concerning **gender differences** for this thematic area confirmed that males had more conversations with strangers online than girls. In DEIS secondary schools, both males and females had higher percentages than their peers, and, in general, **males in DEIS schools rated higher** than females both in primary and secondary schools (55% vs. 37%) (Figures 4.8.11 and 4.8.12)

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*
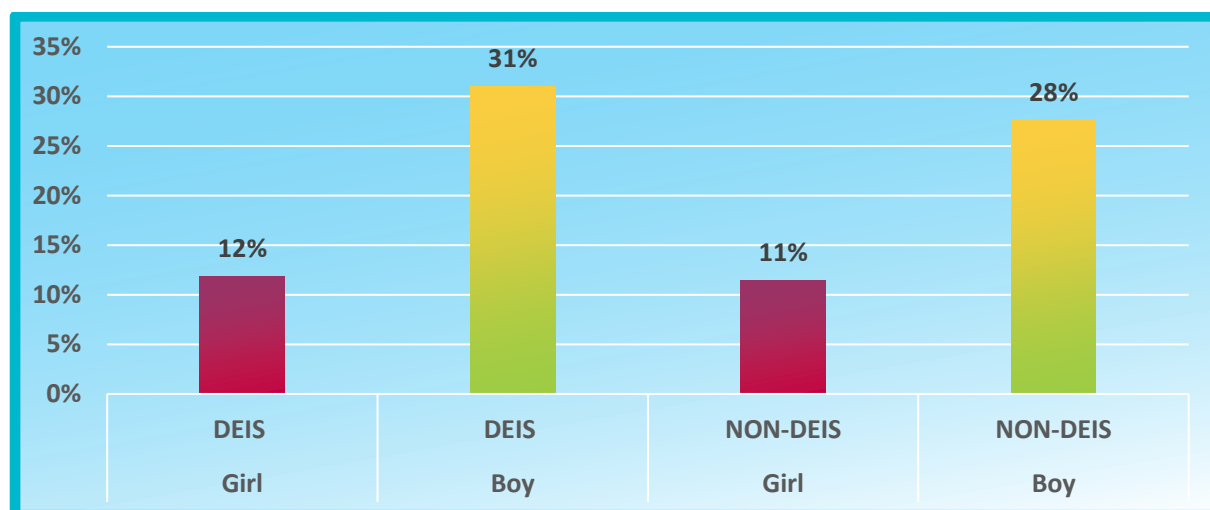
**Figure 4.8.11.** Experience of speaking to strangers online and Gender differences – DEIS and NON-DEIS PRIMARY schools



**Figure 4.8.12.** Experience of speaking to strangers online and Gender differences – DEIS and NON-DEIS SECONDARY schools

As for **playing with strangers online** only the sample of primary school children was considered: 42% of children in DEIS school declared to play with strangers (same compared to the larger sample). The number of DEIS school's **girls** engaging in online games with strangers was less than half the number of boys (26% vs. 61%) (Figure 4.8.13).

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

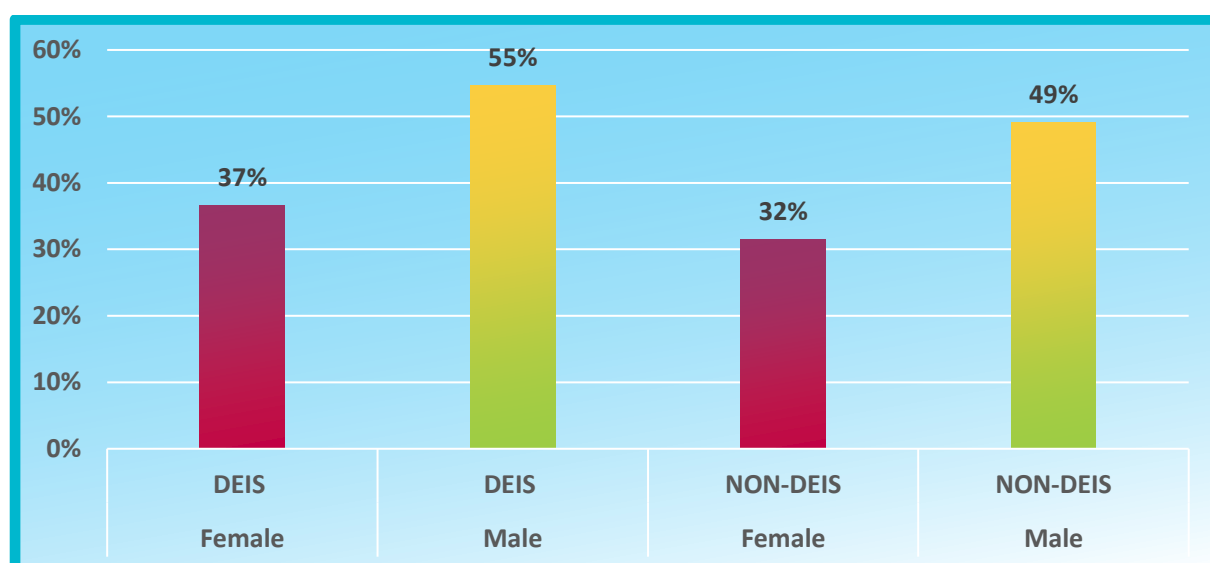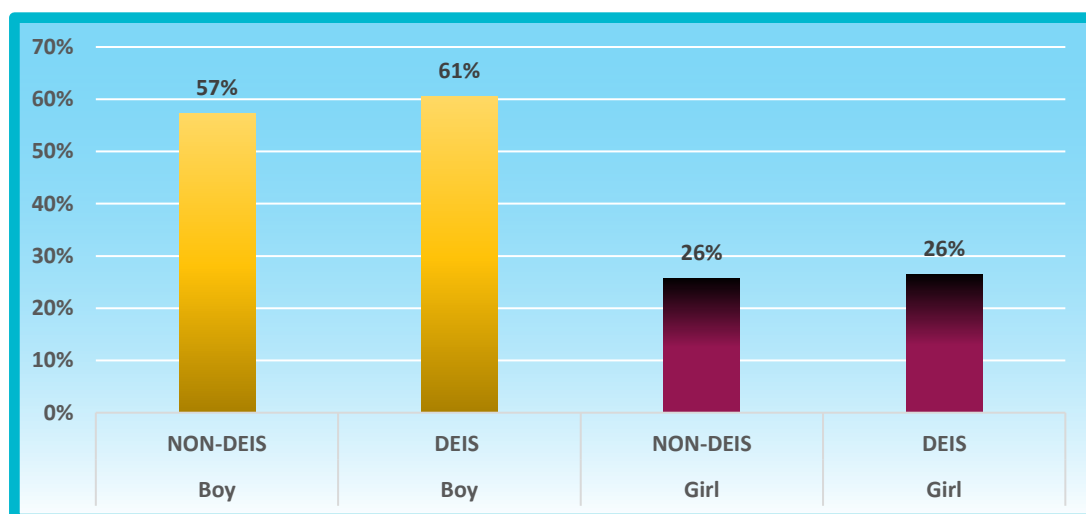**Figure 4.8.13.** Experience of playing with strangers online and Gender differences – DEIS and NON-DEIS PRIMARY schools

**Playing an over 18s game** was an activity reported by 34% of children attending DEIS primary schools (31% in the sample of children attending other schools). Almost 60% of children from the sample of DEIS schools (57% boys versus 15% of girls) reported playing an over 18s game (against 47% of boys in NON-DEIS schools).

In the sample of **secondary school students attending DEIS schools**, we investigated whether adolescents were involved in **sexting behaviours**. As noted for the overall sample of secondary school children, sexting behaviour showed an increase throughout secondary school years. In DEIS schools, percentages were higher in all typology of sexting behaviour ranging from sending sexually explicit text messages to sharing nude/semi-nude photo/video sent to adolescents by someone else to sending sexually suggestive images to someone met online for the first time (range: 8% for sending nude/semi-nude images to someone met online - 17% for sending sexually suggestive messages) (Figure 4.8.14).

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*
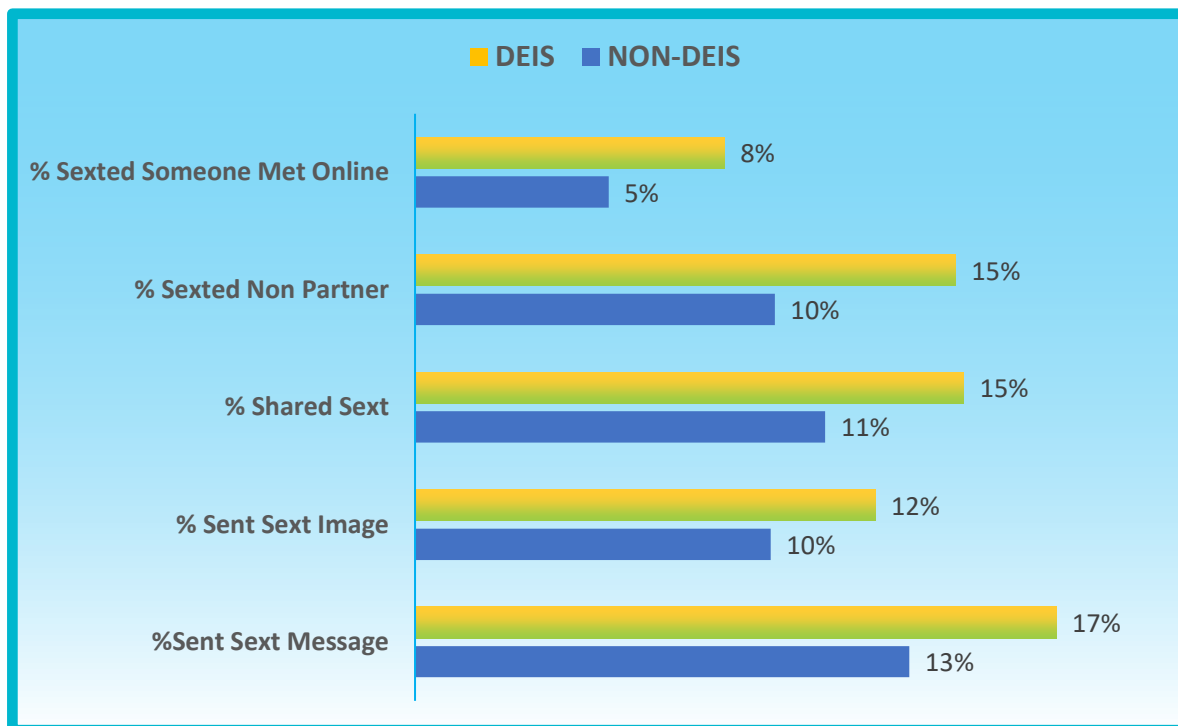
**Figure 4.8.14.** Experience of sexting – DEIS and NON-DEIS SECONDARY schools

Looking at **gender differences**, **males in DEIS schools showed higher frequencies** of sexting behaviours than females. In DEIS schools, 21% sent sexually suggestive messages, 18% sexted a non-partner and 17% shared or showed a friend a nude/semi-nude image that was sent to them by someone else (Figure 4.8.15).

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

**ZEEKO**

*Marina Everri and Kirsty Park*
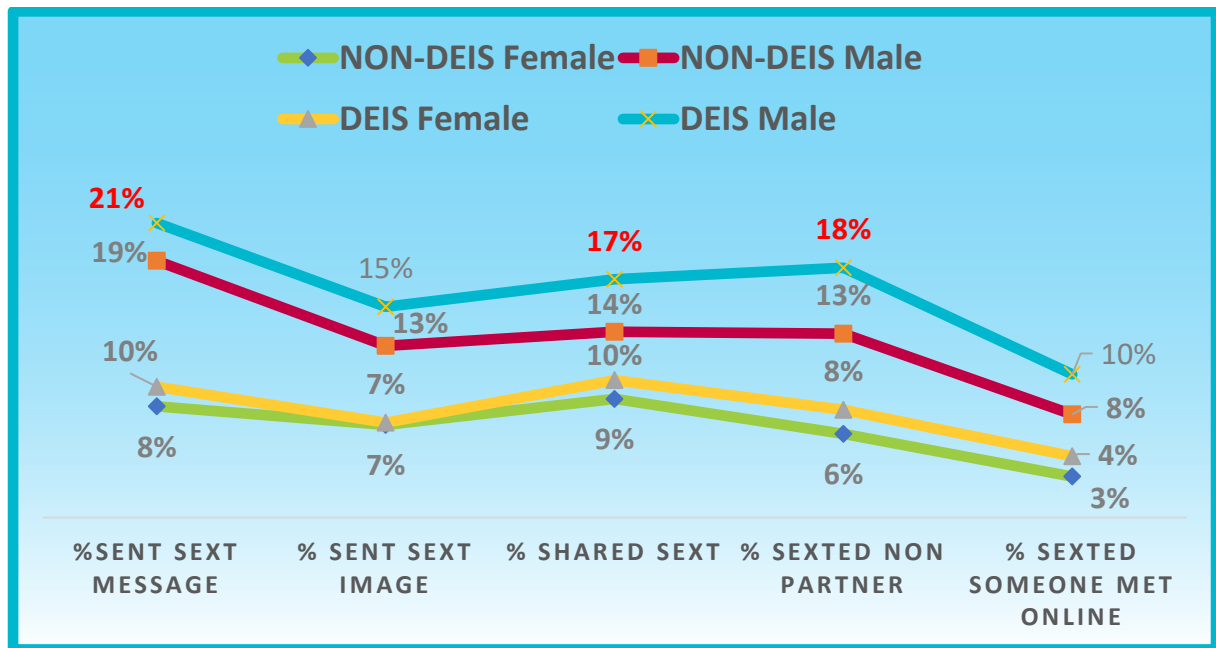
**Figure 4.8.15.** Experience of sexting and Gender differences – DEIS and NON-DEIS SECONDARY schools

***Summary of risky online experience of children attending DEIS schools***

A higher number of children and adolescents attending DEIS schools have potentially risky experiences online, especially for what concern cyberbullying and sexting. In addition, females in DEIS schools engage in gaming, talk to strangers, and experiment with online sexuality less than males; while they witness and are victims of online aggression more than males.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

*4.8.2 Catholic and Multi-denominational: Primary schools*

In this last set of analyses, we focused on samples of children attending Multidenominational (N= 2,193) and Catholic schools (N= 28,763). In this paragraph we focus on the behavioural trends of children in primary schools only (Catholic, N= 23,851; Multidenominational, N=2,057); while in the next, we will illustrate the analyses on secondary school students.

Children in both **Multidenominational and Catholic primary schools used different devices to access the Internet**: tablet, smartphone, laptop and console games. The trend observed in the two groups was similar. Children in Multidenominational primary schools presented slightly higher percentages in the usage of different devices to access the Internet, except for smartphones (46% in MD[6] 48% CA) and iPods (20% MD and 22% CA) (Figure 4.8.1).
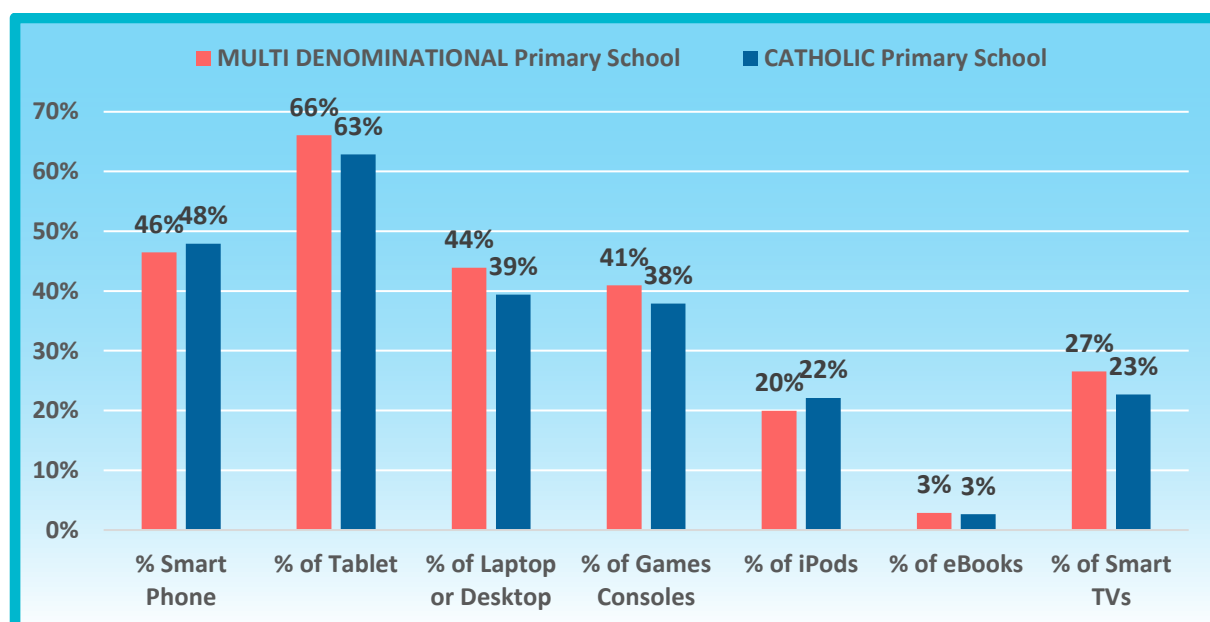


**Figure 4.8.1.** Devices used to access the Internet – Catholic and Multidenominational PRIMARY schools

As for the **age of access to the internet** and **time spent online** no differences were found. For the reported **level of knowledge about the Internet compared to parents**: a slightly higher number of children in Catholic schools reported a better knowledge than their parents, especially concerning applications and online games (respectively, 58% and 62% in CA schools; 54% and 60% in MD schools).

The **perception of cyberbullying** as a highly risky behaviour was observed in the samples of children attending both types of schools (Figures 4.8.2).

---

[6] MD stands for Multidenominational and CA for Catholic schools.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

**ZEEKO**

*Marina Everri and Kirsty Park*
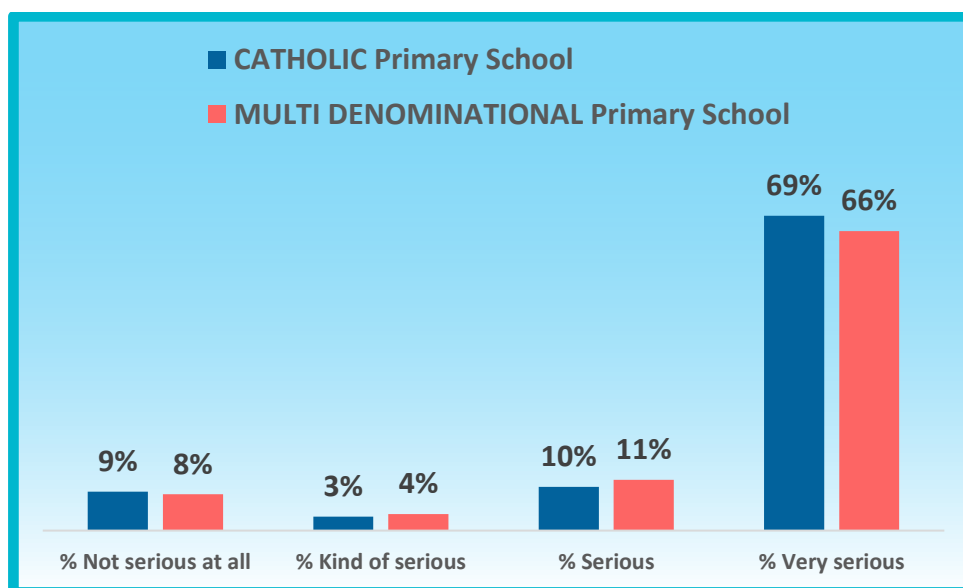
**Figure 4.8.2.** Perception of risks: Cyberbullying – Catholic and Multidenominational primary schools

The importance of **protecting personal data** (**digital footprint**) was acknowledged by young children: almost half of the pupils attending Catholic schools (48%), and 42% attending Multidenominational schools reported that digital footprint was a 'very serious' issue (Figure 4.8.3).



**Figure 4.8.3.** Perception of risks: Digital footprint – Catholic and Multidenominational primary schools [7]

A similar trend was observed in children's answers concerning the evaluation of the level of risk deriving from **speaking to strangers online** (4.8.4).

---

[7] Percentages do not add up to 100% here as this graph also represents those who skipped the question.

*Zeeko research report*
*Children's online behavior in Ireland*
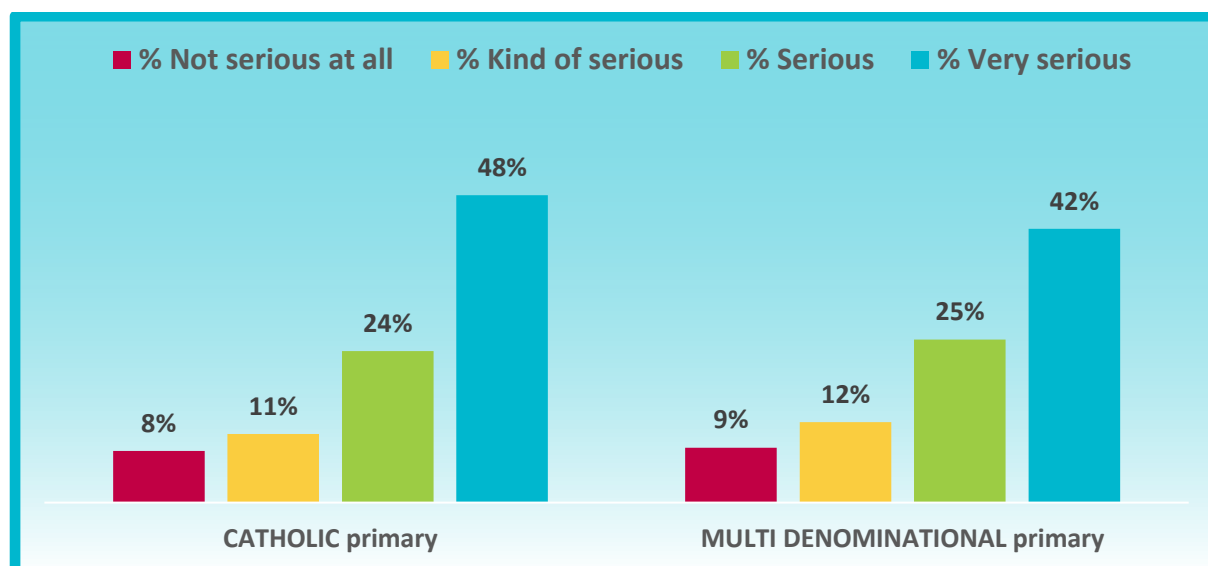*2016-2018*

*Marina Everri and Kirsty Park*
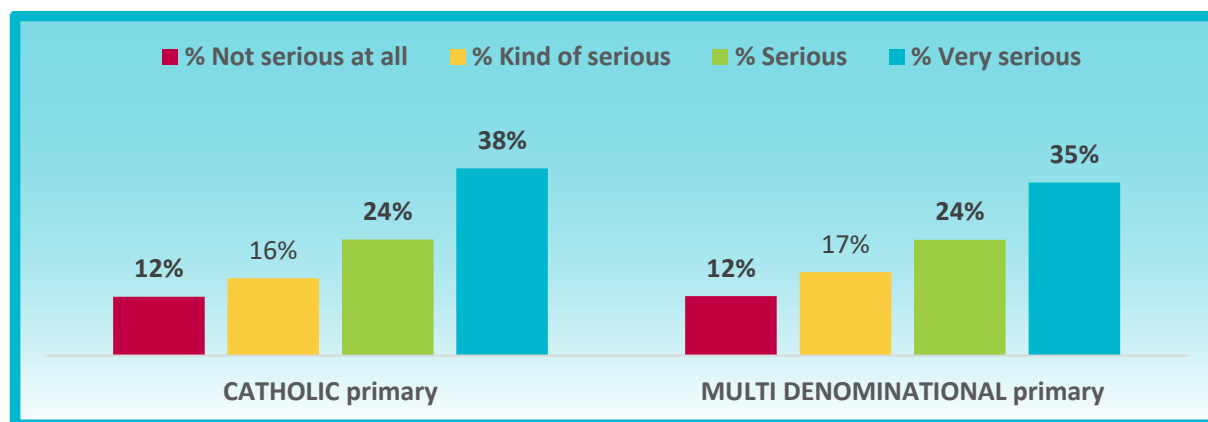
**Figure 4.8.4.** Perception of risks: Speaking to strangers online – Catholic and Multidenominational primary schools[8]

As for the risk of **spending too long online** (screen time), children's evaluations clustered around a medium to low level of risk, confirming that screen time is not considered as a harming behaviour (4.8.5).
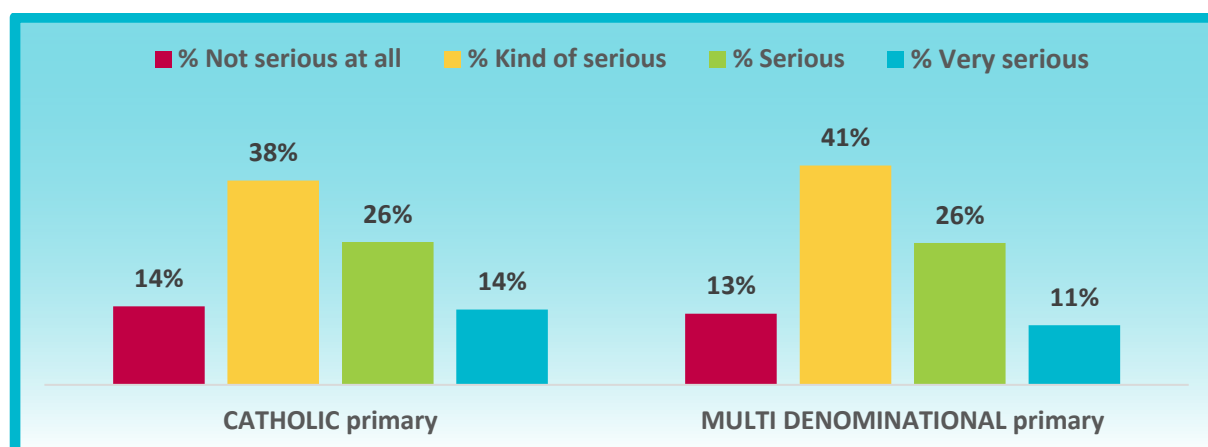


**Figure 4.8.5.** Perception of risks: Screen time – Catholic and Multidenominational primary schools

Analyses concerning **gender differences in the two samples** confirmed that girls considered all these situations as being riskier than boys.
**Experiences of witnessing cyberbullying** were reported by 25% of children attending both Catholic and Multidenominational primary schools. The experience of **being cyberbullied** was similar in both groups (Figure 4.8.6).

---

[8] Percentages do not add up to 100% here as this graph also represents those who skipped the question.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*
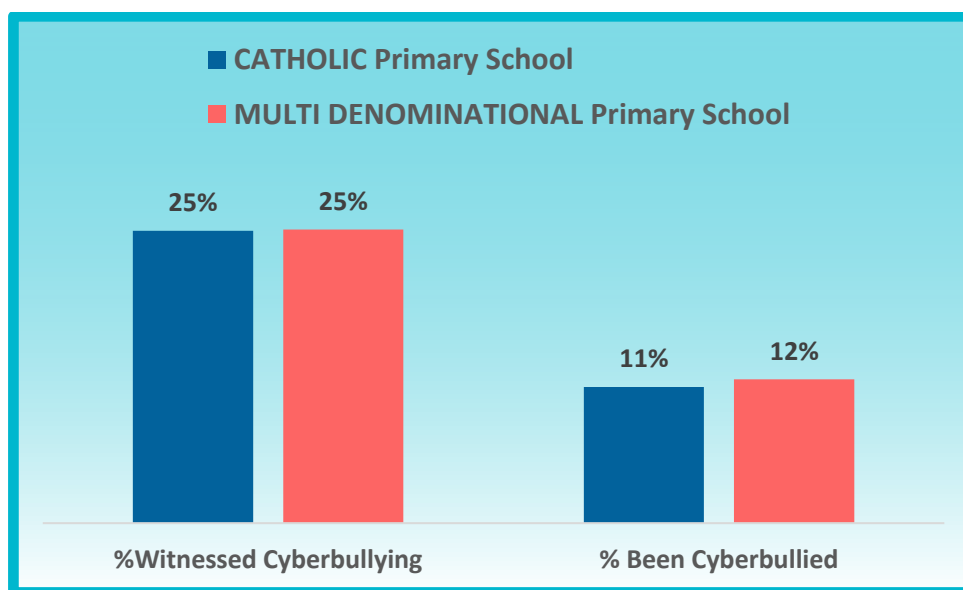
**Figure 4.8.6.** Experience of cyberbullying – Catholic and Multidenominational primary schools

In terms of **gender differences for the experience of cyberbullying**, very small variations were observed between boys and girls attending both Multidenominational and Catholic schools, as shown in the figure below (Figure 4.8.7).



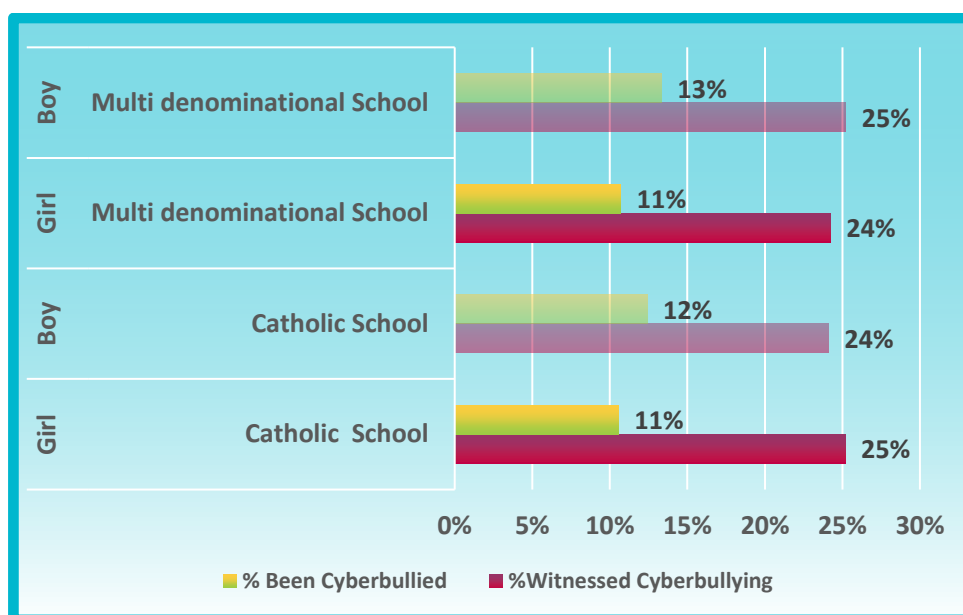**Figure 4.8.7.** Experience of cyberbullying and Gender differences – Catholic and Multidenominational primary schools

The experience of engaging in online conversations with persons met for the first time (**speaking to strangers**) was slightly higher in the sample of children attending Multidenominational schools: 22% versus 20%.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

ZEEKO

*Marina Everri and Kirsty Park*

Involvement in **online gaming with strangers** was reported by 45% of children in Multidenominational and 41% in Catholic primary schools. When children were asked whether they played an over 18s game, percentages were higher in the group of pupils attending Catholic schools than Multidenominational schools (respectively, 32% and 27%). The analyses on gender differences for this activity confirmed that participation in over 18s games (and gaming in general) is mainly a boy activity (Figure 4.8.8).
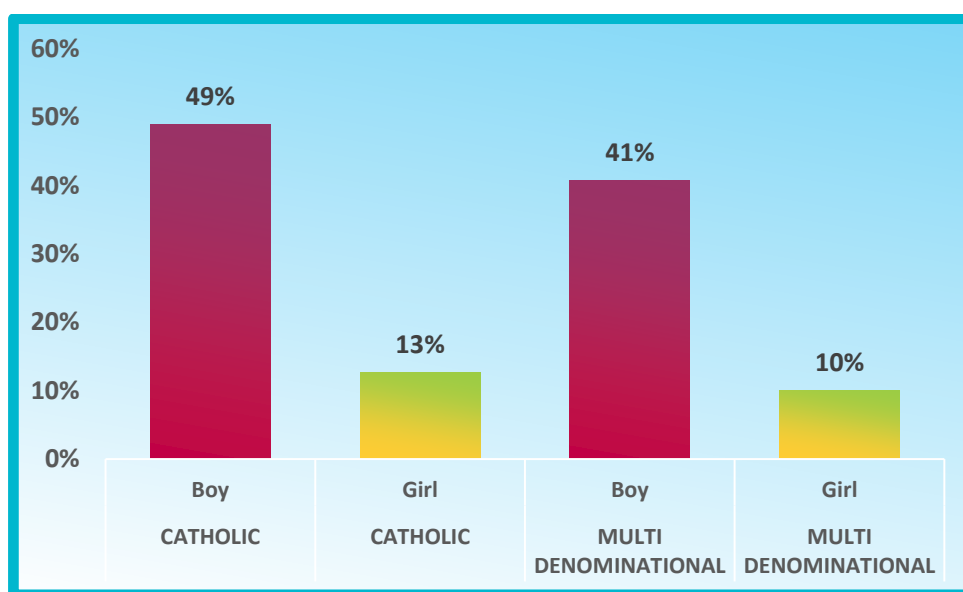


**Figure 4.8.8.** Experience of playing an over 18s game and Gender differences – Catholic and Multidenominational primary schools

*Summary of Catholic and Multidenominational primary schools*
When considering samples of children attending Catholic and Multidenominational primary schools, only small differences emerge. A slightly higher number of children in Catholic schools uses smartphone to access Internet and claims to know more than their parents about applications and online games. Also, the perception of risks is slightly higher in Catholic primary schools. Experiences of potentially risky situations are similar in both samples except for playing with strangers, which is higher in Multidenominational schools, and playing an over 18s game, which is more frequent among Catholic school pupils.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

### 4.8.3 Catholic and Multidenominational: Secondary schools

The sample of Multidenominational secondary schools was very small (N=136) and did not include responses from 3rd year or 6th year as only the classes who received Zeeko seminars completed the survey. In Catholic secondary schools, Zeeko reached 4,912 students. While conclusions that may be drawn from this work are limited, we are presenting an overview of the analysis here to outline what was found and how future research is needed to address some of these ambiguities.

In terms of similarities, smartphones were used by more than 90% of students to access the internet (93% in Catholic schools and 90% in Multidenominational). Most adolescents in both samples rated cyberbullying as a highly risky situation (70% in Catholic; 74% in Multidenominational), and females in Catholic schools were more likely to see this as a highly risky situation (82% vs 77%). When it comes to **protecting personal data** (**digital footprint**) 39% of adolescents attending Catholic secondary schools saw it a 'very serious' compared to 32% in Multidenominational.

**Speaking to strangers together with screen time** were considered medium to low risk situations by students attending both Catholic and Multidenominational secondary schools. When asked about speaking to strangers online, 50% in Catholic schools perceived speaking to strangers online as serious or very serious compared to 45% in Multidenominational schools. 17% in Catholic schools said screen time is not serious at all, while 25% in multidenominational pupils reported the same. As for **speaking to strangers online** 57% of adolescents in Multidenominational secondary schools reported that experience compared to 40% in Catholic schools. Overall, this was more common among males than females.

There were also large differences observed in the areas of sexting and cyberbullying: 44% of children attending multidenominational secondary schools reported having witnessed cyberbullying compared to 32% in Catholic schools. Being cyberbullied was experienced by a smaller number of adolescents, namely 26% and 13%. Not surprisingly a **higher number of females** reported having witnessed and being victims of online aggressions: In Catholic secondary schools, 37% witnessed cyberbullying and 17% were victims; in Multidenominational schools, more than half of the girls of our sample witnessed cyberbullying (59%) and 38% were victims.

Lastly, we examined **sexting behaviour**. The number of adolescents that reported their involvement in sexting ranged from 14% to 6% in Catholic schools and from 31% to 12% in Multidenominational schools. The analysis of **gender differences** confirmed the trend observed in part II of the report: sexting is more common among male than female adolescents. Indeed, in Catholic schools, the number of female adolescents reporting this behaviour was generally low (from 3% to 8%) while in Multidenominational it ranged from 8% to 23%.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

### Summary of Catholic and Multidenominational secondary schools

Adolescents in Catholic schools have an adequate perception of risks, especially about cyberbullying and digital footprint; while talking to strangers online and spending too long online are considered moderate to low risks. Almost 20% of adolescents do not consider screen time as a risk. Experiences of cyberbullying and sexting are reported by less than 15% of adolescents attending Catholic schools; however almost 30% have witnessed episodes of cyberbullying.

Considering the small sample of students and the impossibility to reach 3rd and 6th year students in Multidenominational secondary schools, our results cannot be generalised as the schools covered may indeed be outliers. However, these findings highlight the need to further assess the experiences and perceptions of multidenominational secondary students.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

### 5. Conclusions

The results of our research provided a clearer and up to date picture of the digital lives of today's children and teenagers attending primary and secondary schools in Ireland. The examination of children's usage of devices, preferences, risk perceptions, and online experiences throughout primary and secondary school years can complement previous research findings as well as provide new insights that can support key stakeholders' practices (parents, teachers, policy makers, media/tech industry). Implications of our findings and recommendations are discussed in the next paragraph.

As for **device usage and online content,** our results confirmed that children in Ireland are growing up online and showing an expected and progressive increase with age in using smartphones and social media. Boys are much more likely than girls to use games consoles to go online throughout primary and secondary school. It is also notable that applications like Youtube and Snapchat are popular in primary schools despite the terms of usage for these app stating the minimum age for usage is 13 years. This signals that children are using apps ignoring age limits. Similarly, children disregard age limits when playing online games, since the majority (especially primary school boys) reported to play over 18s games. This is not surprising since children's growth and normative development is based on challenging norms, regulations, and limits defined by their caregivers and adults, more broadly. However, if this is clear to parents when interacting and communicating with their children face to face with bargains and negotiations happening in these situations, there is less parental awareness when it comes to children's norm-breaking in the online world.

**Screen time progressively increased throughout primary and secondary school years**, particularly during weekends and among boys. This result confirms that time dedicated to the usage of technologies has become 'simply time', given the ubiquitous presence of portable devices in everyday-life routines and tasks, especially when children enter adolescence. This can drive children to develop problems with concentration and organization of their time for both school tasks and works and their leisure time extra-school. The organisation of time is an important developmental task during child development, and the scaffolding function of adult caregivers and educators is central in supporting a healthy use of the time, being it related to either leisure or school activities, offline or online.

Part of making healthy decisions involves evaluating risks. The results of the survey allowed us to understand **how young people evaluate risky situations online**. Cyberbullying was the issue seen as most serious among both primary and secondary school children, which is not surprising considering the strong focus on anti-bullying initiatives within Irish schools. The perception of risk around digital footprint decreased during secondary school, despite the fact that this is an issue which is more likely to negatively impact on older children in the areas of work, education and extra-curricular activities. Screen time was seen as less of a risk with age, which may be related to both the relaxing of rules around screen time in the home as children are given more freedom as they get older and the capacity of managing both online and offline time in a more efficient way. Talking to strangers online is seen as progressively less important with age, which quite likely reflects the normalisation of interacting with strangers online which can occur with adolescence and increased independence. However, it is still important to make sure that teenagers are aware that there can be danger in interacting with strangers even if it becomes a relatively positive or normal experience as an adult.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

We observed a **progressive increase in the experiences of both witnessing and being cyberbullied** throughout primary and secondary school, with girls more likely than boys to have experiences of cyberbullying, especially in secondary schools. **Talking to strangers online also progressively increased throughout primary and secondary school** and was more prevalent among males. These results indicate the need to take into account gender differences when interpreting children's online behaviours: females continue to be victims of aggressions online significantly more than males, and males explore more than females with relationships, searching for new encounters online. This reflects traditional gender stereotypes in which females become the target of aggressions for their presumed vulnerability; while males explore more with online relationships with strangers including sexting. Indeed, we found that males were also more likely to send sext messages and images than females. While experimenting with sexuality and expanding social networks are part of a healthy adolescent development, the taking and sharing of images of those under the age of 17 is illegal. If children, as well as their adult caregivers, are not aware of the consequences of these behaviours, there might be negative implications that could widely affect children's wellbeing and reputation. As discussed in the recommendation section, from an educational point of view more should be done to take into consideration the specific developmental needs of males and females, their knowledge, risk perception, and coping strategies.

**There were mostly small areas of difference between DEIS and non-DEIS schools**. DEIS primary students tended to use more smartphones and less tablets to access Internet, which may indicate that DEIS students move to using smartphones at a slightly younger age, probably also for the fact technologies other than phones (e.g., computers and tablets) are unaffordable for some families. Additionally, DEIS students were more likely to spend more time on screens and had slightly higher levels of cyberbullying and sexting behaviours. This may indicate that DEIS programmes are having a positive impact in reducing disadvantage in at risk communities as we only observed small differences; however, children are still exposed to risks and may be more vulnerable in coping with them.

**There were not major differences between Catholic and Multidenominational primary schools**. Catholic showed slightly higher levels of perceived risk and less involvement in playing with strangers; however, a certain number were involved in over 18s games. This signals that playing adults' games is part of today's children culture, especially among boys, regardless the ethos of the school attended. Online gaming per se is not negative; for instance, there are several games that can support children's cognitive development, problem-solving, and learning more broadly, such as Minecraft. However, playing games designed for adults can be distressing for some children and have implications for their social-emotional wellbeing. In addition, most parents are not aware of the content of these games and monitoring these activities can be challenging. As discussed in the next section, educational contexts (schools, families) should favour the development of a 'game culture' in which gaming can be a pleasant while engaging and safe experience.

Our sample of **Multidenominational secondary schools** was small and limited in scope, thus we cannot provide detailed interpretations about the higher levels of cyberbullying and sexting behaviours we observed in these schools. It is likely that children and adolescents in multidenominational schools are encouraged to explore and experiment more with the Internet and technologies, which allows them to develop better online skills and harness the opportunities offered by technologies, but also to encounter more risks and harm. Differently, children and adolescents in Catholic schools might have more restrictions and regulations to access technologies both at home and school, thus they encounter less risks but also lack the opportunities. However,

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

this hypothesis needs further research which can investigate the trends observed using larger and representative samples of children attending schools with different ethos and more specific measures of children's coping skills, parental mediation practices and parenting styles.

**There are several limitations to this research**. We used a convenient sample of children, which was not stratified and our survey was mainly focused on the identification of risks more than opportunities offered by the Internet and technologies, more broadly. We did not collect the point of view of parents and teachers. Representative samples of children living in different Irish counties and having different social-economic backgrounds would allow for a more comprehensive analysis. In addition, measures concerning children's social emotional wellbeing 'online and offline', family functioning and parenting styles could provide a more comprehensive understanding of children's online behaviours. Better instruments and mixed-method research are also needed: Zeeko's survey[9] was exploratory and items were limited. Large-scale quantitative surveys should be integrated with qualitative self-report instruments, such as with interviews and focus groups, but also with observational tools which allow researchers to grasp children's 'actual' use of technologies in their everyday-life environments[10].

### 6. Recommendations

This research report suggests that more should be done in Ireland (as well as elsewhere) to make the Internet a *better and safer place* for children. As outlined in the background section, previous studies carried out in this country stressed that it is time for key **stakeholders** (children and their families, schools, media and tech industry, governmental institutions) **to take the responsibility to cooperate** and develop better programs that go in the same direction[11]. Consistently, our findings can be a starting point to support stakeholders in working in that direction.

- **Schools** should start from early age (e.g., junior infants) to develop curricula in which children are encouraged to talk about Internet, technologies, and their online practices. Media literacy should become integral part of STEM programs, so that children can develop better skills to deal with the online world since very early age. Screen time, as well as cyberbullying and sexting, should be topics covered within the SPHE (Social, Personal and Health Education) curriculum in every school. This would ensure that serious risks such as cyberbullying and sexting are accompanied by better skills to cope with them once they will be encountered. Also, screen time (underestimated by children and overestimated by adults) can be tackled by supporting children in developing a better organisation of their everyday time as well as in learning how to coordinate online and offline activities. Similarly, online gaming, which is a popular activity among young children (especially boys) should be included in formal education programs instead of being marginalised as leisure activity. Minecraft is an exemplar case of an educational game that can productively stimulate children's creativity, reasoning and problem solving. The gender gap observed in the usage of technologies and the Internet can be reduced using online games. Girls can be assisted in

---

[9] The questionnaire was developed by Zeeko in 2015 and distributed in schools. The authors of the report carried out the analyses and provided interpretations and discussions of the results.

[10] Everri, M. (2017). *Adolescents, Parents, and Digital Media: Looking for the pattern that dis/connects. MSCA final research report*. LSE online repository.

[11] Safer Internet Centres, coordinated by the European platform 'Better Internet for Kids' (www.saferinternetforkids.eu), have recently launched a campaign on internet safety #SaferInternet4EU consisting of a series of initiatives all over Europe.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

playing with educational and action games that can stimulate their learning; boys can facilitate this process making them more "expert" in the field. Peer-learning is another educational strategy that can make children more competent in the usage of todays' technologies. In summary, if schools start to educate children at an early age, they will be prepared to deal with the future digitalization of our societies and cope with risks as well as understand and harness the opportunities in a safe way.

- **Parents and children** should have more resources to learn and cope with technologies and the Internet. Schools can be an important source of information not only for children but also for parents in the field of technologies. The lack of knowledge often drives parents to restrict (e.g. banning smartphone use) or disregard what children do online; in either cases, as a consequence, children are left alone in coping with their online experiences. From our findings it is clear that adolescents experience aggressions, experiment with sexuality and look for connections with strangers. This is not new, since adolescents have always done this in the past: these behaviours are part of developmental tasks which allow children to transit into adulthood. Therefore, the fact that children are living their lives and go through developmental tasks *also through the Internet*, should not be a cause for concern; however, making sure that children understand the consequences and have the necessary tools to cope with them is fundamental for their wellbeing and reputation. Parents should become curious about their children's interests in the online world (as well as offline world), talk to them, and take the chance to engage in conversations about their online activities every time it is possible. Parents will never know everything and will be never able to control everything particularly since children want to keep their own secrets and do not want parents to intrude into their private lives. This is part of 'parent-child role game'. However, if parents work to build a trusting relationship with their children when they are very young, also relying on the support of educational agencies, children will be more confident in talking and sharing their experiences with adults. In this sense, the connection and cooperation between families and schools should be strongly supported by both parts for the sake of children's growth and wellbeing.

- **Media and tech industry** are as responsible as schools and families in making children's experiences with digital media enriching and safer. They should orient the development of their products toward more efficient software that allow users to have control on: a) time management, b) the persons they engage with online, c) systems that can easily signal to competent institutions (e.g., Garda, helplines, parents, etc.) suspicious, threatening, or harming situations. The conditions of usage of online platforms is also extremely relevant: the tech industry should make sure that users (both children and their parents) understand and know what happens to their data by making clear, concise, and understandable statements about data protection and treatment. The possibility for media and the tech industry to work for children's protection while providing them with products that can entertain and/or educate them relies on their willingness to collaborate directly with their users, including children, and coordinate with competent educational and governmental institutions that are able to identify children's needs as well as guarantee that their rights are acknowledged and respected.

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

- **Policy makers**. In the Open Policy debate this year[12], the Irish government expressed a strong commitment to continue to invest in the development of programs that can provide children with better and safer experiences with technologies. The empirical evidence provided here shows that there is still important work to be done. Our findings can orient policy makers in making better decisions aligned with children's current experiences and needs, vulnerabilities and strengths. For instance, schools should have more resources to integrate in their STEM and SPHE[13] curricula topics related to digital media, including online risks and opportunities. Teachers should have more training opportunities to both improve their media literacy skills and be able to assist children in a more conscious use of technologies. In addition, more efforts should be put in overcoming the current disconnect between schools and families. Programs that favour a better coordination between these educational institutions, for instance focusing on media literacy and using technologies as facilitators of parent-child-teachers interactions, allow children to find well-informed interlocutors in both contexts and find support if needed to cope with online issues during their development. Lastly, monitoring media and tech industry in the treatment, retention, and usage of data of young users (as well as older ones) should become a priority for governmental institutions. Last month (25th May 2018) the European Union issued the new General Data Protection (GDPR)[14] regulation, which introduced important changes in data privacy of EU citizens. We hope this will be the occasion for both national and international policy makers to focus also on children's data protection, specifically addressing the best programs that can allow them to harness the potential of current technologies while being safe and protected.

---

[12] Open Policy Debate on Online Safety, 8th March:, 2018 https://www.dccae.gov.ie/en-ie/communications/topics/Internet-Policy/online-safety/Pages/Internet-Safety.aspx

[13] STEM (Science Technology Engineering Mathematics); SPHE (Social Personal and Health Education) curriculum.

[14] See https://www.eugdpr.org/

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Appendix I – Questionnaire for Primary School**

## Profile

* 1. What class are you in?

- ◯ 1st
- ◯ 2nd
- ◯ 3rd
- ◯ 4th
- ◯ 5th
- ◯ 6th

* 2. Are you a boy or a girl?

- ◯ Boy
- ◯ Girl

* 3. What age were you when you first started to use the internet?

- ◯ Before I was 2.
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9
- ◯ 10
- ◯ 11
- ◯ 12+
- ◯ I don't use the internet.

## Internet Use - Devices

* 4. What <u>devices</u> do you use to access the internet, play games online, use apps etc.?
*(Pick as many answers as you like.)*

- ☐ Smartphone
- ☐ Tablet
- ☐ Laptop/Desktop
- ☐ Games Console
- ☐ Ipod
- ☐ E-book
- ☐ Smart TV
- ☐ I don't access the internet

## Top Favourite Apps, Sites, Games, Social Media

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

* 5. What are your top 3 favourite apps, websites, online games or social media sites?

| | Favourite |
|---|---|
| 1st | |
| 2nd | |
| 3rd | |

Other (please specify)

---

### Internet Use - Parents Knowledge

* 6. Do you think you know more than your parents about

| | Yes | No |
|---|---|---|
| Apps | ○ | ○ |
| Online Gaming | ○ | ○ |
| Social Media | ○ | ○ |
| Internet in General | ○ | ○ |

### Internet Use

* 7. How much screen time do you usually get:
*E.g.: TV, phone, computer, video games, etc.*

| | None | Less 1 h/day | 1-2 h/day | 2-3 h/day | 3-4 h/day | 4-5 h/day | 5+ h/day |
|---|---|---|---|---|---|---|---|
| Weekdays | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Weekends | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

### Internet Use

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**ZEEKO**

* 8. How serious are the following?

| | Not serious at all | Kind of serious | Serious | Very serious |
|---|---|---|---|---|
| Spending too long online | ○ | ○ | ○ | ○ |
| Cyberbullying | ○ | ○ | ○ | ○ |
| Talking to a person you met first online | ○ | ○ | ○ | ○ |
| To be careful with the posts, photos and videos you put online | ○ | ○ | ○ | ○ |

* 9. Have you ever...

| | Yes | No |
|---|---|---|
| Been cyberbullied? | ○ | ○ |
| Experienced cyberbullying happening to people around you (school, friends, family, etc)? | ○ | ○ |
| Spoken / chatted to a stranger online? | ○ | ○ |
| Played with/against a stranger online | ○ | ○ |
| Played an over 18's game | ○ | ○ |

* 10. What is a digital footprint?

○ It's when a stranger talks to you online.  ○ It's a track of everything you do online.

○ It's a footprint on your device screen.  ○ Do not know.

**Appendix II – Questionnaire for Secondary School**

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

**Thank you for participating in our survey. This survey is 100% confidential and completely anonymous so please answer honestly.**

**Your input is very important to us**

**Thanks again :)**

## Profile

* 1. Gender

○ Male

○ Female

* 2. What year are you in?

○ 1st year

○ 2nd year

○ 3rd year

○ 4th year

○ 5th year

○ 6th year

## Internet Use - Devices

* 3. What devices do you use to access the Internet, play games online, use apps etc.?
*(Pick as many answers as you like)*

☐ Smartphone

☐ Tablet

☐ Laptop/ Desktop

☐ Game Console

☐ iPod

☐ eReader

☐ Smart TV

☐ I don't use the Internet

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

## Apps, Websites, Online Games, Social Media

* 4. What are your top 3 favourite apps, websites, online games or social media sites?

|  | Favourite |
|---|---|
| 1st | |
| 2nd | |
| 3rd | |

Other (please specify)

* 5. Are there any apps, websites, online games or social media sites that you/ your peers use that you would consider unsuitable, inappropriate or dangerous?

☐ Yes

☐ No

☐ If yes, please specify

## Screen Time

* 6. How much screen time do you usually get on;
*e.g. TV, phone, computer, video games etc.*

|  | None | Less 1 h/day | 1-2 h/day | 2-3 h/day | 3-4 h/day | 3-4 h/day | 4-5 h/day | 5+ h/day |
|---|---|---|---|---|---|---|---|---|
| Weekdays | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Weekends | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

*Zeeko research report*
*Children's online behavior in Ireland*
*2016-2018*

*Marina Everri and Kirsty Park*

Internet Use

* 7. How serious are the following?

| | Not serious at all | Kind of serious | Serious | Very serious |
|---|---|---|---|---|
| Spending too long online | ○ | ○ | ○ | ○ |
| Cyberbullying | ○ | ○ | ○ | ○ |
| Talking to a person you first met online | ○ | ○ | ○ | ○ |
| To be careful with the posts, photos and videos you put online | ○ | ○ | ○ | ○ |

* 8. Have you ever...

| | Yes | No |
|---|---|---|
| Been cyberbullied? | ○ | ○ |
| Experienced cyberbullying happening to people around you (e.g. peers, friends, family etc.)? | ○ | ○ |
| Spoken/ chatted to a stranger online? | ○ | ○ |
| Physically met up with someone who you first met online | ○ | ○ |

* 9. Have you ever...

| | Yes | No |
|---|---|---|
| Sent a sexually suggestive message? | ○ | ○ |
| Sent a nude/ semi-nude photo/ video of yourself? | ○ | ○ |
| Sexted someone who is not your boyfriend/ girlfriend? | ○ | ○ |
| Sent a nude/ semi-nude photo/ video of yourself to someone you met online? | ○ | ○ |
| Shared or showed a friend a nude/ semi-nude photo/ video that was sent to you by someone else? | ○ | ○ |